INWOOD'S TABLES for the Purchasing of Estates, &c.

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INWOOD'S TABLES

OF INTEREST AND MORTALITY

FOR THE PURCHASING OF ESTATES

VALUATION OF PROPERTIES

INCLUDING

ADVOWSONS ASSURANCE POLICIES COPYHOLDS DEFERRED ANNUITIES FREEHOLDS GROUND RENTS IMMEDIATE ANNUITIES LEASEHOLDS LIFE INTERESTS MORTGAGES PERPETUITIES RENEWALS OF LEASES REVERSIONS SINKING FUNDS

ETC. ETC.

Tbirtieth Edition, Revised and Extended

BY

WILLIAM SCHOOLING, F.R.A.S.

WITH LOGARITHMS OF NATURAL NUMBERS

AND

THOMAN'S LOGARITHMIC INTEREST AND ANNUITY TABLES



LONDON

CROSBY LOCKWOOD AND SON 7 STATIONERS' HALL COURT, LUDGATE HILL

1913

NOTE

TO THE

THIRTIETH EDITION.

THE present edition, besides retaining the additions to the preceding issue, has been carefully revised, and in it, thanks to the courtesy of correspondents, a few errors of the press will be found corrected.

Should any user of the book discover a mistake in even a single figure, the Publishers will be greatly obliged by having their attention called to it.

WILLIAM SCHOOLING.

17 OLD QUEEN STREET, Westminster, S.W.

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PREFACE

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TWENTY-SIXTH EDITION

In response to requests received since the issue of the Twenty-fifth Edition of this work, Tables I. and XVII. of the Twenty-fourth and earlier editions are now given here, in similar form to that in which they there appeared. Thev have, however, been extended to many more rates of interest, and Table XVII. has been extended to longer terms of years than formerly. The old Table I, will be found in the present edition on pp. xx to xxxi, and the old Table XVII. on pp. xxxii to xxxix. The former of these two Tables, it may be pointed out, appears also for integral years to a larger number of decimal places in the Tables showing the present value of $\pounds I$ per annum (pp. 50 to 85, and 92 and 03). The present value of the reversion of a perpetuity appears to a larger number of decimal places on pp. 05 to 98.

The values in the Table for purchasing of leases, estates, or annuities (pp. xx to xxxi) do not agree, so far as halfyears are concerned, with the Twenty-fourth edition. The method formerly adopted assumed interest to be convertible momently or continuously. This supposition, however, is not usually employed, but in practice the value of a lease or annuity certain, say for $22\frac{1}{2}$ years at 6 per cent. per annum, would be considered to be equivalent to the value of a lease or annuity certain for double the term (or 45 years), at half the rate of interest (or 3 per cent. per annum). This value would be equal to $12^{2}59$, whilst the value given in old editions of 'Inwood' is $12^{1}74$ only, the latter representing the value of an annuity of I for $22\frac{1}{2}$ years, computed at such a rate of interest convertible momently as would be equivalent to an actual or effective rate of 6 per cent. per annum. The value assigned in practice of 12259 is based upon a rate of interest at 3 per cent. per half-year, which is equal to an effective annual rate of 609, or £6 1s. 10d. per cent. per annum (see pp. 18 and 122). It will be recognised therefore that in conformity with the usual practice the values now given for integral years assume interest to be convertible *annually*, and the values for the half-years assume it to be convertible *half-yearly*.

In response to a suggestion that the present value of $\pounds I$ and of $\pounds I$ per annum at 15 per cent. per annum would be found convenient by mining engineers and others, a table giving these values has been computed, and is given on p. xl.

The method adopted was as follows. The present value of $\pounds I$ per annum due at the end of 100 years was calculated by the aid of Gray's 24 figure logarithms, true to fifteen places of decimals; multiplying this amount by the rate of interest gives the arithmetical complement of the present value of $\pounds I$ due at the end of 100 years; adding these two items together and deducting unity gives the amount of $\pounds I$ per annum at the end of 99 years, and this process was continued to the end of the Table. In multiplying by the rate of interest it was convenient to employ Tate's Arithmometer, by means of which the necessary multiplications and additions were performed with the greatest ease.

The results were checked every ten years, and the number of decimal places was reduced from time to time, the result being brought true to nine places when, at the end of the calculations, the first year was reached.

In the present edition a few errors, which have been discovered since the publication of the last edition, have been corrected.

WILLIAM SCHOOLING.

PREFACE

TO THE

TWENTY-FIFTH EDITION

IN the present edition of this work, many extensive additions have been made, and the book has been entirely reset; the size of the page has been enlarged, to allow of a more convenient arrangement of the Tables; the whole of it has been carefully revised; and the Tables have been placed in logical sequence. The volume now contains 336 pages demy 8vo, as compared with 308 pages crown 8vo in the last edition.

The principal alterations and additions may be briefly recorded. The Interest Tables, which were formerly scattered throughout the book, are now all brought together. The amount and present value of $\pounds I$ and of $\pounds I$ per annum at the same rate of interest all appear on the same page, instead of each of these items at varying rates of interest being tabulated separately. For most purposes this is more convenient, but on pp. 86–93 abbreviated Tables appear in the old form.

Throughout the book any Table that occupies two pages is arranged so that the whole of it may be seen at one opening—a detail that adds much to the convenience of using the Table.

The Rates of Interest for which Tables were previously given were 2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4, $4\frac{1}{2}$, 5, 6, 7, 8, 9, 10. These are all retained, and six other rates—1, $1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$, $2\frac{1}{4}$, $2\frac{3}{4}$ —have been added.

Five places of decimals are given instead of four, as was the case for some of the rates in previous editions.

The abbreviated Tables in the old form are given at $3\frac{1}{4}$, $3\frac{3}{4}$, $4\frac{1}{4}$, $4\frac{3}{4}$, and $5\frac{1}{2}$ per cent., in addition to the 18 rates mentioned above.

The present value of Perpetuities and of the Reversion to a Perpetuity are given in very much greater detail than before, both as regards the rates of interest and the number of decimal places.

The Tables dealing with the Renewals of Leases are given at more rates of interest, while the Miscellaneous Tables, such as those on pp. 104, 105, 124, etc., are extended.

The Sinking Fund Table is now given for 20 different rates of interest to 6 places of decimals for every year from 1 to 100, as compared with 10 rates of interest to (mostly) 4 places.

The Tables showing the Value of an Annuity yielding interest at one rate, and providing for replacing capital at another rate, now occupy six pages instead of less than two, and are given to 5 places of decimals instead of 2, as well as at many more rates of interest.

On pp. 122 and 123 some important Tables appear dealing with Interest payable half-yearly, quarterly, and monthly, together with a Table of constant factors for finding the values of Annuities payable half-yearly, quarterly, and monthly from the values of yearly annuities. These are quite new to the book.

The decimals of $\pounds I$ are given for every farthing instead of for every penny, and the decimals of a year are given in more detail.

In the Mortality Tables and the combined Mortality and Interest Tables, very many additions of much importance have been made.

Apart from more numerous Tables and lower rates of interest, the values of the benefits according to the Healthy Males Table of the Institute of Actuaries and the Government Experience Table of 1883 are introduced. These Tables are of the greatest value, and many of the items deduced from them are tabulated in considerable detail.

Among the Mortality Tables the English No. 3 also appears; while here, as throughout the book, all kindred tables appear on consecutive pages.

Users of the book will find reference to it facilitated, if by a glance at the Table of Contents they grasp the order in which the contents are arranged. It will be seen to be—

- I. Interest apart from lives.
- 2. Lives apart from interest.
- 3. Interest in connection with single lives.
- 4. Interest in connection with two lives.
- 5. Interest in connection with three lives.
- 6. Logarithmic tables.

In each of the divisions 3, 4, 5, the same order is maintained. The additions in the parts of the book dealing with Interest and Mortality combined are too numerous for detailed record. Everything of any value in former editions is retained, while additions have been made that bring the whole thoroughly up to date as regards both the Mortality Tables and the rates of Interest employed.

In addition to this, care has been taken to supply such data in the Tables, and such explanations and examples in the Introduction, as to make it a perfectly simple matter to calculate the values of benefits for other ages or at other rates of interest than are contained in the Tables.

If any required information is not found in the Tables, a reference to the part of the Introduction dealing with the subject in question will probably show how the information may readily be arrived at.

Special attention may perhaps be called to the Premium Conversion Tables on pp. 185 and 186, and to the explanation of them given in the Introduction. The Annual Premium Table is given in a novel form, which, it is believed, offers considerable advantages. Both the Conversion Tables will be found very convenient for many purposes, and readers unfamiliar with such tables would do well to spend a few minutes in grasping their nature, which is quite simple.

The Post Office Annuities are given in less detail than before, and the average rates of Insurance Companies for annuities and assurances are added.

A Table of Logarithms of Natural Numbers has been introduced in order to facilitate calculation, and especially to enable use to be made of the extremely valuable Logarithmic Tables of Interest by M. Fédor Thoman without reference to any other book. Logarithms are very easy to use, and every one engaged in calculations should avail himself of the enormous advantages they offer.

M. Thoman's Tables have been printed from stereotype plates, in which any errors that have been noticed have been corrected, but they have not been re-checked for this edition.

The difficulty of ensuring accuracy in so vast a number of figures will be well understood, and it can scarcely be hoped that no errors exist. Very great care has been taken in calculating and checking the Tables, and in reading and re-reading the proofs, but as there are considerably more than a quarter of a million figures in the book, the entire absence of errors is improbable. Any users of the book who come across even a single mistake would confer a benefit by reporting it to the PUBLISHERS for correction in future editions.

The great majority of the calculations have been made by Tate's Arithmometer. Even with this powerful aid the preparation of the book, involving the formation of many fresh Tables and the checking of many existing ones, has been an arduous task; without an efficient calculating machine it would have been scarcely practicable.

In former editions the headings of the Tables rather suggested the limitation of their use to one specific purpose, whereas most of the Tables are available for many purposes. The headings of the Tables are now stated in a more general form, and in the Introduction examples are given of some of the various uses to which they may be put. In consequence, some habitual users of 'Inwood' may, perhaps, miss the familiar heading, and at first fail to recognise a well-known Table in its new garb. To obviate any inconvenience of this kind, and to increase the facility with which the book can be consulted, a full and specially arranged Table of Contents (pp. xi-xvi) has been prefixed, by reference to which any information needed may at once be found. An extensive collection of Examples has also been supplied (pp. 42–48), in which the actual working of every Table is illustrated.

The book, as it now stands, serves innumerable purposes, but any suggestions (to be addressed to the PUBLISHERS) tending to increase its usefulness and convenience will be greatly appreciated and carefully considered, with a view to their adoption in future issues.

In regard to such of the Tables in the book as are based on the Healthy Males Tables of Mortality, I am greatly indebted to the Council of the Institute of Actuaries, who have kindly given permission for the use in this volume of their valuable copyrights.

WILLIAM SCHOOLING.

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Present Value of \mathcal{L}_1 Present Value of \mathcal{L}_1 per Annum	15	xl	{ xix { 10,12
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TABLE FOR THE PURCHASING OF LEASES, ESTATES, OR ANNUITIES FOR TERMS OF YEARS CERTAIN

PRESENT VALUE OF THE REVERSION OF A PERPETUITY

PRESENT VALUE OF ONE POUND AND OF ONE POUND PER ANNUM

For Examples see pages xviii, xix. For Explanations see pages 10, 12, 13. ù

EX	A	M	Ρ	L	ES	
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OF THE USE OF TABLES ON PAGES XX-XI

(1) Find the price to be paid for a lease yielding a clear annual rent of $\pounds_{1,32}$ for $25\frac{1}{2}$ years in order to make $3\frac{1}{2}$ per cent. on the purchase price.

£1 per	annum	for	$25\frac{1}{2}$ years		$= \pm 10.777$	xxin
£132	"	"	"	=16 [.] 777 × 13	3 ² = ²²¹⁴ .564	
				or 132×16 =	= 2112	xxiii
				$132 \times \frac{1}{2} =$	= 66	XXIII•
				$132 \times \frac{1}{4} =$	=33	xxiii
				$132 \times 16\frac{3}{4}$ =	$= \pounds_{2211}$	

There is a difference of \pounds_3 :564 or \pounds_3 115. 3*d*. due to the fact that 16³/₁ equals only 16.75c, whereas the correct figure is 16.777. The difference between these two is .027, and this multiplied by 132 gives 3.564, the difference between the two answers.

(2) Find the present value of an annuity of £80 to run for 65 years certain such that the purchaser will obtain interest at 4%.

1	per	annum	for	65	years	=	£23°047	XXX
8o	-	,,	,,		,,	=23.042 × 80=	1843.760	
						or 23×80=2	(1840	xxx

The explanation of the difference between the two answers is given under example (1).

Such transactions as these two imply that if the purchaser drew interest on his capital at the rate assumed and invested the balance of the annuity at compound interest, this balance at the end of the term would amount to the purchase price and so replace the capital invested. Thus, to take the last example :---

The annual income = £80.000 4 % on price £1843.760 = 73.750 The annual balance = £6.250 £6.250 per annum accumulated for 65 years =6.250 × 294.968 = £1843.550

This amount agrees closely with the value found, and would agree exactly if more places of decimals were used in the calculation. 71

EXAMPLES

(3) Find the present value of a perpetual income of \pounds_{25} per annum to commence 30 years hence so that the investment may yield 5 per cent. Value of reversion to a perpetuity of $\pounds I = \pounds 4.628$ $f_{25} = 4.628 \times 25 = 115.700$ xxxvi ,, •• •• or $25 \times 4^{\frac{3}{1}} = f_{11815s}$. xxxvi The difference between the answers is explained under example (1). The nature of reversions is explained on pp. 13, 14. (4) Find the present value of $\pounds_{1,000,000}$ due at the end of 100 years at 15 %. The present value of 1 in 100 years = \pounds 0000009 xI ,, 1,000,000, ,,) = .9This example is principally given to show the startling fact that a modest 18s. would at 15 % compound interest accumulate in 100 years to the vast amount of $f_{1,000,000}$. (5) Find the present value of \pounds , 40 per annum to be received for 20 years certain so that the purchaser would obtain 15 %. \pounds_{1} per annum for 20 years = $\pounds_{0.2593315}^{6.2593315}$ xł Other examples of the working of the tables in this book are given on pp. 42-48.

TABLE for the PURCHASING of Leases, Estates, or Annuities, for terms of years certain at Bates from $1\frac{1}{2}$ to 10 per cent. Interest which the Purchaser may thereby make of his money									
Years	Years' Purchase	$\frac{1}{2}\%$	Yeare' Purchase	$\frac{3}{4}\%$	Years' Purchase	2%	Yeare' Purchase	$\frac{1}{4}\%$	Years
1	•496	1	•496	12	·495	12	•494	12	12
I	·985	1	•983	I	·980	I	•978	I I	I
Iż	1.428	Iż	I'474	I [±] 2	1.470	Iż	1.467	Iģ	Iż
2	1.950	2	1.949	2	1.942	2	1.934	2	2
22	2 445	22	2 4 30	~2	2.42/	2	2 410	22	22
3	2.912	3	2.090	3	2.264	3	2.270	24	3
32 4	3.854	28	3.831	32	3.808	34	3.785	34	32 4
4 첫	4.336	41 41	4.309	41	4.283	41	4.257	41	4 4
5	4.783	$4\frac{3}{4}$	4.748	$4\frac{3}{4}$	4.213	44	4.679	44	5
5월	5.260	51	5.222	5‡	5.184	5 ¹ / ₄	5.146	51	5 ¹ / ₂
6	5.697	53	5.649	5 ³ / ₄	5.001	51	5.224	51	6
01/2	6.171	61	6.119	6	6.067	6	6.010	6	61/2
7	0.200	02	6.535	02	6:022	02	6.866	62	7
12	7009		7.000	/	0 933	7	0 800		72
81	7.052	72	7 405	72	7.325	73	7.247	74	81
02	8.361	81	8.260	81	8.162	81	8.066	8	02
9 0금	8.823	83	8.717	83	8.613	81	8.510	81	삶
10	9.222	91	9.101	9	8.983	9	8∙866	83	10
) IO를	9.681	94	9.554	9 ¹ / ₂	9.428	9 ¹ / ₂	9.306	91/4	IO
11	10.021	10	9.927	IO	9.787	9 ⁸ / ₄	9.649	94	11
1112	10.227	101	10.326	101	10.228	IO	10.083	10	II
12	10.008	II	10.740	IO4	10.222	101	10.415	105	12
122	11.359	117	11.184	112	11.015	11	10.843	104	12 ₂
13	11.732		11.538	115	11.348	117	11.104	112	13
132	12.100		12.222	12	12:106	12	11 50/	12	132
14	12.988	13	12.758	123	12.533	121	12.314	121	14
15	13.343	131	13.093	13	12.849	124	12.012	12	15
15=	13.784	134	13.524	I 3 =	13.271	131	13.025	13	153
16	14.131	141	13.851	134	13.228	13 <u>1</u>	13.313	131	ıõ
16 ¹ / ₂	14.269	14호	14.278	14 <u>1</u>	13.992	14	13.720	134	16 <u>1</u>
17	14.908	15	14.292	142	14.292	144	13.998	14,	17,
172	15.341	154	15.019	15	14.704	144	14.400	142	17章
10	15.073	154	15.327	154	14.992	15	14.008	144	Ið
102	10 103	161	16:046	16	15.678	152	15.222	151	102
101	16.853	163	16.461	161	16.082	16	15.715	15	101
20	17.169	174	16.753	164	16.321	161	15.964	16	20
20 급	17.592	171	17.163	$17\frac{1}{4}$	16.750	163	16.350	161	20분
21	17.900	18	17.448	$17\frac{1}{2}$	17.011	17	16.200	161	21
21	18.319	181	17.854	174	17.405	17호	16.972	17	$2I\frac{1}{2}$
22	18.021	187	18.130	184	17.658	174	17.203	174	22
$22\frac{1}{2}$	19.037	19	10.533	103	18.047	10	17.500	172	22 <u>1</u> 2
23	19.331	194	10:300	104	18.677		17.803	172	23,
232	20:020	20	19 200	101	18.014	104	18.380	181	232
24	20.430	201	19.855	193	19.294	191	18.755	183	241
25	20.720	$20\frac{3}{4}$	20.109	20	19.523	191	18.962	19	252

EXAMPLES.—A lease or annuity for 14 years to make 2 per cent. and to get back the principal is worth 12:106, or 12 years' purchase of the *clear* annual rent. At 3 per cent. it is worth 11:296, or $11\frac{1}{4}$ years' purchase.

TABLE for the PURCHASING of Leases, Estates, or Annuities, for terms of
years certain at Rates from $1\frac{1}{2}$ to 10 per cent. Interest which the
Purchaser may thereby make of his money

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Years	Years' Purchase 2	<u>1</u> %	Years' Purchase 2	$\frac{3}{4}\%$	Years' Purchase	3 %	Years' Purchase 3	$\frac{1}{2}\%$	Years
12	•494	코	•493	12	•493	12	•491	12	$\frac{1}{2}$
I	•976	I	·973	I,	·971	I	•966	I	I
Iż	1.463	Iĝ	1.460	Iż	1.426	12	1.449	I2	1 <u>1</u> 2
2	1.922	2	1.920	2	1.013	2	1.000	2	2
2_{2}^{+}	2.409	22	2.400	2 ☆	2.391	$2\frac{1}{2}$	2.374	24	2 <u>1</u> 2
3	2.856	$2\frac{3}{4}$	2.842	$2\frac{3}{4}$	2.829	$2\frac{3}{4}$	2.802	284	3
31/2	3.331	31	3.312	31/4	3.299	31	3.267	34	3 ¹ / ₂
4	3.762	34	3.739	34	3.212	34	3.673	34	4
4 ¹ / ₂	4.531	i 4 🛓	4.200	44	4.180	4 <u>4</u>	4.130	4‡	4월
5	4.646	44	4.013	42	4.280	42	4.212	4호	5
51	5.100	5	5.072	5	5.036	5	4.964	5	5 ¹ / ₂
6	5.208	52	5.462	52	5.417	52	5.329	5	6
61	5.962	6	5.012	6	5.866	57	5.709	54	61
7	6.349	04	6.289	04	6.230	04	6.115	0	7
72	6.900	04	0.730	04	0.02	04	0.540	02	73
8	7.170	77	7:094	7	7.020	7	6.874	63	8
81	7.615	72	7.534	72	7.454	72	7.298	74	81
9	7.971	8	7.878	0	7.780	74	7.000	7 ²	9
9 ¹ / ₂	8.410	02	8.311		8.213	04	8.023	01	91
10	8.752	04	8.040	04	8.530	02	0.31/		10
101	9.182	9‡	9.000	9	8.950	9	8.724	84	10g
II,	9.214	9 <u>호</u>	9.382	9 2	9.253	94	9.002	9	II
112	9.941	10	9.802	94	9.005	94	9.401	93	Πş
12	10.228	104	10.104	10	9.954	10	9.003	94	12
122	10.079	$10\frac{4}{4}$	10.210	102	10.300	104	10-054	10	$12\frac{5}{2}$
13	10.983	II	10.802	104	10.032	104	10.303	102	13
13 [±]	11.398	II	11.514		11.034	. 11	10.090	104	13 [≜]
14	11.691	114	11.491	112	11-290	114	10.921	11	14
143	12.100	12	11.091	12	11.028	114	11 290		142
15	12.301	122	12-15/	124	11 930	12	11 31/	112	15
15g	12.785	124	12.551	123	12.323	$12\frac{-}{4}$	11.002	12	152
10	13.055	13	12'005	124	12.501	122	12.094	12	10
102	13.452	135	13.192	1 34	12 939	13	12 454	122	102
17	13/12	134	13 435	132	12.528	124 124	12:004	12	173
172	14 104	14	13 017	- 54	13 330	1.28	13:100	- 3	-/2 -0
18	14.353		14.049	14	13/54	134	13 190	134	10 781
102	14 739	144	14'444	142	14 119	14	13 333	132	102
19	14 9/9	15	14 040	1544	14 524	1/3	14.047	1/	101
193	15.530	154	15.227	151	14.877	15	14.212	141	20
20	15 309	16	15 2-7	- J4 151	15.220	TEL	14.542	1/1	201
202	15.904	161	15 391	152	15 229	104 154	14 545	142	202
21	10 105	164	16.120	161	15.761	123	15.021	15	214
212	16.765	163	16.344	16 ¹	15-037	16	15.167	151	22
223	17.120	17	16.692	163	16.276	16 <u>1</u>	15.483	15	22吉
222	17.222	171	16.870	17	16.444	161	15.620	15=	22
221	17.600	174	17.225	171	16.777	168	15.920	16	23
24	17.885	18	17.401	17층	16.936	17	16.058	16	24
24	18.238	181	17.740	174	17.262	171	16.361	161	24=
25	18.424	181	17 908	18	17.413	1712	16.482	16 <u>1</u>	25

For Explanations and Examples see pp. xviii., xix. Tables continued on pp. xxii. to xxxi.

 TABLE for the PURCHASING of Leases, Estates, or Annuities, for terms of years certain at Rates from 1½ to 10 per cent. Interest which the Purchaser may thereby make of his money

		- 410	umber may	UNUTOD	J MANACOI				
Years	Years' Purchase	$\frac{1}{2}\%$	Years' Purchase	$\frac{3}{4}\%$	Years' Purchase 2	%	Years' Purchase 27	$\frac{1}{4}\%$	Years
25월	21.122	21	20.499	$20\frac{1}{2}$	19.894	20	19.324	19 <u>1</u>	251
26	21.399	21 ¹ / ₂	20.746	203	20.151	20	19.223	19월	20
20-2	21.800	$21\frac{9}{4}$	21.132		20.492	20 <u>3</u>	19.880	20	202
27	22.008	22	21.3/2	214	20.707	204 21	20.072	20	271
4/3 08	22 400	222	21/34	224	21 074	21	20:608	202	28
20 281	23.121	23	22.365	22 ¹ /22 ¹ /2	21 201	214	20.022	202 21	283
20	23.376	23호	22.592	22급	21.844	213	21.132	21 ¹ / ₄	29
20 ¹ / ₂	23.767	234	22.966	23	22.202	22	21.474	$2I\frac{1}{2}$	29 <u>1</u>
30	24.016	24	23.186	$23\frac{1}{4}$	22.396	22 _	21.645	214	30
301/2	24 404	24쿨	23.226	23호	22.750	224	21.983	22	30늘
31	24.646	244	23.770	234	22.938	23	22.147	224	31
31 ¹ 2	25.031	25	24.136	24 สู้	23.287	232	22.480	223	312
32	25.207	254	24.344	242	23.468	23 <u>5</u>	22.038		32
322	25 040	254	24.707	244	23 013	234	22 900	23	3~2
33	26.257	20	24.908	25	23.989	24	23.110	23	224
2/	26.482	261	25.462	254	24 329	244	23.587	232	332
34	26.856	264	25.817	25	24.835	243	23.905	24	341
35	27.076	27	26.007	26	24.999	25	24.046	24	35
351	27.446	27늘	26.359	26 <u>1</u>	25.331	25 1	24.360	$24\frac{1}{4}$	351
36	27.661	274	26.543	26 <u>1</u>	25.489	251	24.495	24 <u>1</u> 2	36
361	28.028	28	26.890	27	25.817	254	24.804	24 ⁸ / ₄	36 <u>1</u>
37	28.237	284	27.009	27	25.969	26	24.934	25	37
372	28.901	203	27.413	272	20.294	204	25.239	254	372
30	20.166	207	27.580	27 <u>*</u>	20.441	20 <u>÷</u>	25.303	25	30
20	29 100	297 207	28.005	28	26:002	204	25'004	254	202
39	29.722	297	28.431	281	27.210	271	26.079	26	39
40	29.916	30	28.594	28 <u>1</u>	27:355	27 1	26.194	26 <u>1</u>	40
40	30.270	30 <u>1</u>	28.927	29	27.667	273	26.486	26	40분
41	30.429	301	29.085	29	27.799	274	26.595	261	41
41 ¹ 2	30.810	3034	29.414	29늘	28.107	28	26.883	27	41 <u></u>
42	30.994	31	29.568	29호	28.235	281	26.988	27	42
423	31 342	314	29.993	30	28.539	281	27.272	274	42 ½
43	31.521	313	30.042	30	28.002	284	27.372	274	43
432	32.041	314	20.204	201	20.080	29	27.052	274	432
44	32.382	321	30.826	303	29 000	201	28:022	28	44
45	32.552	321	30.966	31	29.490	29 <u>2</u> 201	28.115	28	412
45	32.891	328	31.281	311	29.782	208	28.386	28 1	45
46	33.056	33	31.416	31	29.892	30	28.474	28흡	46
461	33.392	331	31.728	314	30.181	314	28.742	28 ⁸ / ₄	461
47	33.223	33월	31.859	314	30.287	304	28.826	28 <u>8</u>	47
471	33.882	34	32.102	32	30.221	301	29.089	29	47 ¹ / ₂
48	34.043	34	32.294	$32\frac{1}{4}$	30.623	302	2 9 .170	29 <u>1</u>	48
402	34 371	344	32.298	32g	30.924	31	29.429	29 <u>1</u>	482
49	34 545	342	32 /21	324	21.052	31	29.500	295	49
50	35.000	344	33.141	231	31 330	211	20.834	208	493
00	1 33	55	1 33 - 7-	(331	J . 4~4	1 3.2	~ ~ ~ 54	~74	1 20

EXAMPLES.—A lease or annuity for $49\frac{1}{2}$ years to make $2\frac{1}{4}$ per cent. and to get back the principal is worth 29.761 or $29\frac{3}{4}$ years' purchase of the *clear* annual rent. At $3\frac{1}{2}$ per cent. it is worth 23.443 or $23\frac{1}{2}$ years' purchase.

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TABLE for the FORCHASING of Leases, Estates, or Annuities, for terms of years certain at Rates from $1\frac{1}{2}$ to 10 per cent. Interest which the Purchaser may thereby make of his money										
Years	Yeare' Purchase 2	$\frac{1}{2}\%$	Years' Purchase 2	$\frac{3}{4}\%$	Years' Burchase	%	Years' Purchase 3	$\frac{1}{2}\%$	Years	
25 ¹ / ₂ 26	18.772	18 <u>8</u> 10	18.242	18 <u>1</u> 18 <u>1</u>	17.734	$17\frac{8}{4}$	16.777	$16\frac{3}{4}$	25 ¹ / ₂	
26 ¹ / ₂	19.293	19 ¹ / ₄	18.730	183	18.105	181	17.170	177	20 261	
27	19.464	$19\frac{1}{2}$	18.883	19	18.327	18	17.285	171	27	
$27\frac{1}{2}$	19.801	19 <u>8</u>	19 ·2 06	191	18.636	18 <u>a</u>	17.568	17 <u>-</u>	27 ¹ ₂	
28	19.962	20	19.321	191	18.764	18 <u>3</u>	17.667	17幕	28	
$28\frac{1}{2}$	20.297	204	19.668	194	19.062	19	17.943	18	$28\frac{1}{2}$	
29 201	20.454	20	19.806	194	19.188	19 <u>4</u>	18.036	18	29	
292	20.020	204	20.240	20 201	19.485	19 <u>5</u>	18:305	10 <u>7</u> 181	29 <u>3</u>	
201	20 930	211	20.555	204	19 000	192	18 592	102	30	
302	21.305	$2I_{\frac{1}{2}}^{4}$	20.081	20 <u>5</u> 20 ⁸	20.000	20	18 050	182	302	
31 ¹ / ₂	21.712	218	20.981	21	20.286	20 ¹ / ₂	18.004	19	317	
32	21.849	$2I\frac{3}{4}$	21.100	21	20.389	$20\frac{1}{2}$	19.069	19	32	
32½	22.160	$22\frac{1}{4}$	21.396	2I ½	20.669	20 ³ /4	19.320	191	$32\frac{1}{2}$	
33	22.292	22 <u>1</u>	21.209	21 <u>1</u>	20.766 .	$20\frac{8}{4}$	19.390	19월	33	
33 ₂	22.598	22 ¹ / ₂	21.799	214	21.040	21	19.636	194	33 ¹ / ₂	
34	22.724	224	21.906	22	21.132	21	19.701	194	34	
342	23 025	23	22.202	$22\frac{1}{4}$	21.487	215	20:001	20	34ŝ	
25 251	22:442	271	22.573	224	21 407	213	20 001	201	35	
302	23.556	23 <u>1</u>	22.670	22	21.832	214	20.200	204	352 26	
361	23.848	234	22.945	23	22.001	22	20.210	201	361	
37	23.957	24	23.036	23	22.162	$22\frac{1}{4}$	20.571	$20\frac{1}{2}$	37	
37 <u>1</u>	24.244	24 <u>1</u>	23.306	23 <u>1</u>	22.421	22 <u>1</u>	20.794	20 3/4	37 ¹ / ₂	
38	24.349	24 ¹ / ₄	23.393	23늘	22.492	22 <u>1</u>	20.841	$20\frac{3}{4}$	38	
38 ²	24.031	244	23.658	234	22.741	22 ⁸ /4	21.059	21	381	
39	24.730	244	23.740	234	22.808	224	21.103	21	39	
392	25.008	25	24.000	24	23.052	23	21.315	212	393	
403	25.276	25	24 0/0	24	23 113	23	21 333		40	
402	25.466	25	24.407	244	23.412	23	21.500	212	402 11	
413	25.735	253	24.658	244	23.646	23	21.802	213	41 41	
42	25.821	254	24.727	244	23.201	234	21.835	218	42	
42 ¹ / ₂	26.085	26	24.973	25	23.930	24	22.033	22	42 ¹ / ₂	
43	26.166	$26\frac{1}{4}$	25.038	25	23.982	24	22.063	22	43	
43 ¹ / ₂	26.426	261	25.280	25	24.206	24 <u>1</u>	22.255	$22\frac{1}{4}$	43 ¹ / ₂	
44	20.504	205	25'341	254	24.254	244	22.283	$22\frac{1}{4}$	44	
442	26.822	207	25.626	253	24 4/4	242	22 471	222	442	
40	27:084	204	25.860	204	24 319	242	22 493	222	43	
472	27.154	27	25.024	26	24.775	244 24	22.701	223	422	
46금	27.401	27 1	26.152	261	24.986	25	22.880	23	461	
47	27:467	$27\frac{1}{2}$	26.203	$26\frac{1}{4}$	25 025	25	22·899	23	47	
47 ¹ / ₂	27.711	$27\frac{8}{4}$	26.427	26 <u>1</u>	25.231	$25\frac{1}{4}$	23.074	23	47 ¹ / ₂	
48	27.773	$27\frac{3}{4}$	26.475	26 <u>1</u>	25.267	$25\frac{1}{4}$	23.091	23	48	
48출	28.012	28	26.695	268	25.469	25 <u>1</u>	23.261	$23\frac{1}{4}$	48 <u>1</u>	
49	28.071	28	20.740	204	25.202	25	23.277	234	49,	
492 50	28.262	281	26.007	27	25 720	254	23.443	232	493 50	
- <u>5</u> ~	20 302	1 2 G 4		~/	∎ ~3/3°	~74	~ 3 4 3 0	-22	וייכי	

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For Explanations and Examples see pp. xviii., xix. Tables continued on pp. xx., xxi. and on pp xxiv. to xxxi.

TABLE for the PURCHASING of Leases, Estates, or Annuities, for terms of years certain at Rates from $1\frac{1}{2}$ to 10 per cent. Interest which the Purchaser may thereby make of his money.

Years	Years' Purchass 1	<u>1</u> %	Purchase 1	$\frac{3}{4}\%$	Years' Purchase	2 %	Years' Purchase 2	1 %	Years
5T	25.468	252	22.554	221	21.788	218	20.156	201	5T
52	25.020	26	22.000	332	22.145	221	20.420	20 ¹	52
52	25 929	261	24.258	24	22.405	224	20.778	202	50
22	30 303	302	34 330	344	32 493	342	30 770	304	22
54	30.931	304	34.750	344	32.030	$32\frac{2}{4}$	31.079	31,	54
55	37.271	371	35.132	354	33.122	331	31.373	314	55
56	37.706	374	35.214	351	33.202	$33^{\frac{1}{2}}$	31.660	318	56
57	38.134	28 <u>1</u>	35.886	36	33.828	334	31.942	32	57
58	28.556	38 <u>1</u>	36.252	36‡	34.145	$34\frac{1}{1}$	32.217	321	58
50	28.071	30	36.611	361	34.456	24	32.486	221	50
60	20.280	202	26.064	27	24.261	242	22:740	108	60
6-	39 300	392	30 904	37	34 702	344	34 749	324	6-
10	39.784	394	37.311	374	35.000	35	33.000	33	01
02	40.191	40춫	37.022	374	35-353	351	33.228	337	02
03	40.22	40호	37.987	38	35.640	354	33.204	331	63
64	40.958	4I	38.312	384	35.921	36	33.745	$33^{\frac{8}{4}}$	64
65	41.338	$4I_{4}^{1}$	38.641	387	36.192	36 <u>1</u>	33.980	34	65
66	41.712	418	28.020	30	36.468	261	24.211	211	66
67	12:081	12	30.272	201-	26.722	268	24.426	241	67
68	12:010	42	20.570	201	26.004	27	24.656	342	68
60	42.802	428	20.881	40	27.240	271	24.871	344	60
70	42.002	424	40'178	401	37 249	3/4	34 0/1	344	70
10	43 133	434	40 1/0	404	37 499	3/2	35 002	35	/0
71	43.202	433	40.470	402	37.744	374	35.588	35‡	71
72	43.842	434	40.720	40 <u>°</u>	37.984	38	35.490	35호	72
73	44.185	444	41.038	4 ¹	38.220	38	35 687	354	73
74	44.214	44호	41.312	41 <u>4</u>	38.451	381	35.879	36	74
75	44.842	444	41.287	4I ¹ /2	38.677	38 <u>8</u>	36.068	36	75
76	45.164	457	41.855	418	38.800	30	36.252	26 ¹	76
77	45.482	45	42.118	42	30.112	20	26.422	261	77
78	45.705	158	42.376	421	20.330	201	26.600	261	78
70	46.102	46	42.620	122	20.220	201	26.281	368	70
80	46.407	461	42.880	42	20.24	399	30 701	304	19
00	40 407	402	42 000	43	39 743	394	30 950	37	00
81	40.202	404	43.125	43	39'946	40	37.112	37	81
82	47'002	47	43.300	434	40.143	40	37.276	374	82
83	47.292	474	43.003	43 <u>늘</u>	40.336	40 <u>1</u>	37.434	371	83
84	47.579	47호	43.830	434	40.226	40 <u>1</u>	37.588	371	84
85	47.861	474	44.065	44	40.711	404	37.739	374	85
86	48.130	48 <u>1</u>	44.290	44 ¹	40.803	41	37.886	28	86
87	48.412	48	44 511	441	41.072	41	38.031	28	87
88	48.682	48	44.728	44	41.247	411	28.172	281	88
80	18:018	10	11:042	15	41.410	411	28:210	304	80
	40.210	401	45.152	45	41.419	412	28.445	307 281	09
90	49 2.0	474	45.050	434	44 507	412	30 445	302	90
91	49.408	493	45.350	454	41.752	414	38.222	382	91
92	49'722	494	45.201	452	41.914	42	38.706	384	92
93	49.972	50	45.700	454	42.072	42	38.832	384	93
94	50.219	50 4	45.956	46	42.228	424	38.956	39	94
95	50.402	50 <u></u>	46.148	404	42.380	42불	39.077	39	95
96	50.202	503	46.337	461	42.529	42늘	39.195	391	06
97	50.938	51	46.523	461	42.676	428	39.310	301	07
98	51.170	511	46.706	46	42.820	42\$	39.423	301	ó 8
00	51.399	51	46.885	47	42.960	43	39.534	301	60
100	51.625	519	47 061	47	43.008	43	39.642	30	100
)	, <u> </u>	1 2-4	1	1	1 -5 -50	-75	1 37 44	574	1-20

EXAMPLES.—A lease or annuity for 75 years to make $1\frac{1}{2}$ per cent. and to get back the principal is worth 44.842 or $44\frac{3}{4}$ years' purchase of the *clear* annual rent. At 2 per cent. it is worth 38.677 or $38\frac{3}{4}$ years' purchase. (xxiv)

TABLE for the FORCHASING of Leases, Estates, or Annuities, for terms of years certain at Rates from $1\frac{1}{2}$ to 10 per cent. Interest which the Purchaser may thereby make of his money.										
Years	Years' Purchase	$2\frac{1}{2}\%$	Years' Purchase	$2\frac{3}{4}\%$	Years' Purchase	3%	Years' Purchase	3 1/3 %	Years	
51	28.646	28 <u>8</u>	27.248	$27\frac{1}{4}$	25.951	26	23.629	23 ⁸ /4	51	
52	28.923	29	27.492	27쿨	26.166	261	23.796	23 <u>3</u>	52	
53	29-193	297	27.729	274	26.375	261	23.957	24	53	
24	29 45/	292	27.900	28	26.578	201	24.113	24	54	
55	20:065	294	20 105	204	20.774	204	24.204	244	55	
57	30.210	30 ¹	28.617	202	26.965	27	24.410	242	50	
58	30.448	301	28.825	202	27.151	274	24.550	243	57	
59	30.681	304	29.026	204	27.506	271	24.000	244	50	
60	30.909	31	29.223	291	27.676	273	24 010	244	59	
61	31.130	311	29.414	201	27.840	27 -	25.067	25	61	
62	31.347	311	29.600	291	28.000	284	25.186	25	62	
63	31.228	31 ¹ 2	29.781	29 3	28.156	281	25.300	251	63	
04	31.264	314	29.957	30	28.306	28 <u>1</u>	25.411	251	64	
05	31.905	32	30.158	30‡	28.423	$28\frac{1}{2}$	25.218	25쿨	65	
00	32.101	32‡	30.292	301	28.595	28 <u>1</u>	25.621	25늘	66	
68	32.352	327	30.428	302	28.733	284	25.721	25 <u>8</u>	67	
60	32 530	322	30.010	305	28.807	284	25.817	254	08	
70	32.898	3-4	20.010	304	20.122	29	25.910	20	09	
71	22.071	22	21.065	31	29123	29	20.000	20	70	
72	33.240	33	31.207	211	29.240	294	20.087	20	71	
73	33.405	333	31.345	314	29 303	297	20.171	207	72	
74	33.266	331	31.479	31-4	29.593	201	26.331	261	73	
75	33.723	334	31.010	311	29.702	29	26.407	261	5	
76	33.876	34	31.237	318	29.808	208	26.480	261	76	
77	34.025	34	31.861	314	29.910	30	26 551	261	77	
78	34.121	34‡	31.982	32	30.010	30	26.619	26 <u>1</u>	78	
79	34.313	341	32.099	32	30.102	30	26.685	26 <u>8</u>	79	
00	34 452	342	32.213	321	30.501	304	26.749	$26\frac{3}{4}$	80	
82	34.507	342	32.324	322	30.292	30‡	26.810	264	81	
82	24.848	244	32.432	322	30.381	305	26.870	264	82	
84	34.074	344	32 337	1 228	30.407	303	20.928	27	84	
85	35.096	35	32.730	324	30.031	202	27.027	27	85	
86	35.216	351	32.836	328	30.210	208	27:080	27	86	
87	35.333	351	32.031	33	30.786	308	27.130	271	87	
88	35.446	351	33.023	33	30.860	30	27.187	27	88	
89	35.222	35ई	33.115	33	30.935	31	27.234	$27\frac{1}{4}$	89	
90	35.666	354	33.199	33 ¹ / ₄	31.005	31	27.279	271	90	
91	35.271	354	33.284	33호	31.020	31	27:323	274	91	
92	35.875	354	33.366	33	31.136	317	27.365	271	92	
93	35 975	30	33.447	332	31.200	314	27.406	$27\frac{1}{2}$	93	
24	36.100	361	33 525	332	31.202	312	27.445	27호	94	
3 2	26.262	261	33 001	352	31 323	314 311	4/ 404	272	95	
90 I	36.354	361	33.075	228	31 301	う1 <u>う</u> 211	27.520	27 <u>술</u>	90	
38	36.443	361	33.817	334	31 433	31 <u>1</u>	27:500	272	97	
<u>60</u>	36.529	$36\frac{1}{2}$	33.885	34	31.547	311	27.623	271	00	
100	36.614	36 <u>1</u>	33.921	34	31.299	31 =	27.655	27	100	
1	1							-14		

TABLE for the PURCHASING

For Explanations and Examples see pp. xviii., xix. Tables continued on pp. xx. to xxiii., and on pp. xxvi. to xxxi.

TABLE for the PURCHASING of Leases, Estates, or Annuities, for terms of years certain at Bates from $1\frac{1}{2}$ to 10 per cent. Interest which the Purchaser may thereby make of his money

Years	Years' Purchase	8	Years' Purchase	$\frac{1}{2}\%$	Years' Purchase	5 %	Years' Purchase	3%	Years
	*490	늘	•489	1	•488	늘	•485	12	크
ľ	·962	ĩ	957	Ĩ	·952	1	·943	I	Ĩ
되	1.445	\mathbf{I}_{2}^{1}	1.435	1 <u>1</u>	1.428	Ił	1.414	Il	Il
2	1.886	2	1.873	14	1.859	1 <u>3</u>	1.833	14	2
2 <u>1</u>	2.322	$2\frac{1}{4}$	2.340	2불	2.323	$2\frac{1}{4}$	2.290	2	2 <u>1</u>
3	2.775	$2\frac{3}{4}$	2.749	$2\frac{3}{4}$	2.723	$2\frac{3}{4}$	2.673	234	3
$3\frac{1}{2}$	3.236	31	3-205	31	3-175	31	3.112	3	3 ¹ / ₂
4	3.630	3∛	3*588	31/2	3.246	3호	3.462	31/2	4
4월	4.081	4	4.033	4	3.982	4,	3.893	4	4월
5	4.42	4호	4.390	4출	4.329	4‡	4.212	41	5
5월	4.893	5	4.825	4 3	4.757	44	4.626	44	5월
6	5.242	5榬	5.128	54	5.076	5	4.912	5	6
6 <u>1</u>	5.674	54	5.282	23	5.492	53	5.317	5‡	$6\frac{1}{2}$
7	6.002	6	5.893	6	5.786	54	5.282	5 <u>\$</u>	7,
7 2	6.425	03	6.300	04	6.191	02	5.909	0	7₫
8	6.733	6 <u>å</u>	6.296	61/2	6.463	6	6.210	64	8
8늘	7.146	7축	6.999	7	6.856	04	6.283	0	8 <u>5</u>
9	7*435	7 2	7.209	7‡	7.108	7	0.802	0 <u>4</u>	9,
9 호	7 839	74	7.001	74	7.489	73	7.102	74	9 2
10	8.111	°.	7.913	0	7722	74	7.300	74	10
10 <u>5</u>	8.500	8층	8.295	ð <u>∔</u> 01	8.092	8	7.708	74	10克
II,	8.700	84	8.529	0 <u>2</u>	8.666	07 03	7.992	0 91	II
	9.140	94	8.901	9	8.862	01 88	8.284	01 81	113
12	9.305	92	0.481	9 0 ¹	0.212	여분	8.202	83	12
122	0.086	94 10	0.682	92 0 ³	0.204	94 01	8.852	83	122
12 ¹	10.223	10 ¹	10.030	10	0.732	0 ²	0.164	01	12 ¹ / ₂
14	10.203	101	10.223	101	0.800	10	0.202	01	-32 IA
I4금	10.022	11	10.260	101	10.227	10]	9.594	9 1	I4吉
15	11.118	II	10.740	10 <u>3</u>	10.380	10 ¹ / ₃	9.712	94	15
15=	11.460	II	11.074	11	10.608	10 <u>3</u>	10.000	10	15
τŏ	11.652	113	11.234	III	10.838	104	10.100	10	16
10 ¹ / ₂	11.994	12	11.559	II	11.146	II	10.383	1012	163
17	12.166	121	11.407	1134	11.274	Π_4^1	10.422	10 ¹ / ₂	17
$17\frac{1}{2}$	12.499	I 2 글	12.023	12	11.223	II	10.244	104	17글
18	12.659	124	12.160	121	11.690	II&	10.828	107	18
18 ¹ / ₂	12.985	13	12.467	I21	11.979	12	11.084	II	18 <u>1</u>
19	13.134	134	12.293	121	12.085	12	11.128	117	19
19½	13.421	135	12.891	13	12.365	12	11.404	II	19 ¹ / ₂
20	13.200	135	13.008	13	12.462	122	11.470	IIż	20
$20\frac{1}{2}$	13.900	14	13.298	131	12.733	124	11.200	114	$20\frac{1}{2}$
21	14.029	14,	13.402	132	12.821	124	11.264	114	21
21 ¹ / ₂	14.331	14‡	13.686	134	13.083	13	11.991	12	$21\frac{1}{2}$
22	14.421	14 <u>5</u>	13.784	134	13.103	134	12.042	12	22
222	14'745	14	14.058	14	13.417	132	12.259	124	223
23	14.857	144	14.148	1 4‡	13.489	13	12.303	124	23
23 ¹ / ₂	15.143	15	14.413	I4출	13.734	13	12.512	122	231
24	15.247	154	14.495	142	13799	134	12.250	125	24
242	15.520	123	14 753	147	14:030	14	12/51	121	242
125	15.022	1 1 2 2	14 020	144	14 094	⊢ 14	12/03	1 1 4	145

EXAMPLES.—A lease or annuity for 13 years to make $4\frac{1}{2}$ per cent. snd to get back the principal is worth 9.683 or $9\frac{3}{4}$ years' purchase of the *clear* annual rent. At 5 per cent. it is worth 9.394 or $9\frac{1}{2}$ years' purchase.

TABLE for	the PURCHASING of Leases, Estates, or Annuities, for terms of
years	certain at Rates from 13 to 10 per cent. Interest which the
	Purchaser may thereby make of his money

Years	Years' Purchase	7%	Years' Purchase	3%	Years' Purchase) %	Years' Purchase	0 %	Years
12	•483	$\frac{1}{2}$	-481	$\frac{1}{2}$	•478	12	•476	12	12
I	°935	1	•926	I,	·917	I,	.909	I	I
12	I'40I	12	1.388	IŞ	1.324	고	1.362	IŻ	Iş
2	1:000	14	1.783		1.759		1.730		2
22	2.250	$2_{\bar{4}}$	2.220	24	2.195	27	2.105	27	$2\frac{1}{2}$
3	2.024	22	2.277	2 ² 2	2.231	22	2.487	23	3
31	3.057	3	3.001	3	2.940	3	2.893	3	32
4	3.301	32	3.312	34 22	3.240	57 28	3.170	21	4
42	4.100	34	2.003	54 A	2.800	54	3 3 3 3 4	32 3월	412 E
5	4.501	4	4.280	41	4.264	41	4.152		5
52	4.767	42	4 300	42 4분	4 204	44	4 - 33	44	52
61	5.121	51	4.003	5	4.841	48	4.697	48	61
7	5.389	51	5.206	51	5.033	5	4.868	44	7
7월	5.759	54	5.559	51	5.370	51	5.190	51	7월
8	5.971	6	5.747	$5\frac{3}{4}$	5.235	51	5.335	51	8
81	6.326	$6\frac{1}{4}$	6.083	6	5.854	54	5 637	54	8 <u>1</u>
9	6.212	61	6.247	61	5.992	6	5.759	54	9
91월	6.855	$6\frac{3}{4}$	6.267	61	6.297	61	6.043	6	9 ¹ / ₂
10	7.024	7	0.210	6월	6.418	02	6.145	며	10
$\mathbf{IO}_{\overline{2}}^{\perp}$	7:349	74	7.015	7	6.702	63	6.411	0 <u>5</u>	10ģ
II	7:499	721	7.139	7	6.805	0 4	0.495	02 68	11
	7.810	74	7.420	73	7.074	7	6.814	68	113
12	7'943 8'24T	81 81	7.530	12 74	7.414	/T 7-	7.047	7	12
T2	8.258	81 81	7:004	8	7 4 4	71	7.102	7	12
▲3 121	8.643	84	8.165	8 <u>1</u>	7.726	73	7.322	71	-3 13 ¹ /2
- 32 IA	8.745	83	8.244	81	7.786	73	7.367	71	14
I4등	9.018	9	8.492	83	8.011	8	7.571	7호	14 1 2
15	9.108	9	8.559	81	8.001	8	7.606	71	15
15층	9.368	9분	8.794	8 <u>3</u>	8.272	81	7.796	74	15호
ıõ	9.447	9 ¹ / ₂	8.851	$8\frac{3}{4}$	8.313	81	7.824	73	16
16 <u>1</u>	9.695	9 <u>å</u>	9.074	9	8.211	81	8.001	8	16章
17	9.763	9 ³ +	9.122	9	8.544	8층	8 022	8	17
171	10.000	10	9.332	91	8.731	04	0.107	07	1/2
18	10.020	IO	9.372	9‡	8.750	84	8.201	07 01	10
IO2	10.582	102	9'571	92	8:050	9	8.265	81	102
19	10.330	101	0.202	92	0.112	0	8.500	81	102
192	10.221	101	0.818	03	0'120	0 1	8.514	81	20
201	10 394	108	0.007	10	0.282	01	8.647	8	201
202	10.800	103	9 99/ 10.012	10	0.202	01	8.649	8	21
211	11.031	114	10.182	101	9.437	9	8.773	84	21 _
22	11.001	II	10.301	101	9.442	91	8 772	8 <u>å</u>	22
221	11.248	IIF	10.360	101	9 578	91/2	8.887	9	$22\frac{1}{2}$
22	11.272	111	10.371	101	9.280	9 ¹ / ₂	8.883	9	23
22	11.450	TIF	10.21	101	9.707	94	8.991	9	23 ¹ / ₂
24	11.469	111	10.229	10 <u>1</u>	9.707	9 <u>8</u>	8.982	9	24
24 ¹	11.638	114	10.621	104	9.826	9 <u>3</u>	9.084	9	242
25	11.624	113	10.622	101	9.823	9ĵ	9.077	9	1 25

For Explanations and Examples see pp. xviii., xix. Tables continued on pp. xx. to xxv. and on pp. xxviii. to xxxi.

TABLE for the PURCHASING of Leases, Estates, or Annuities, for terms of years certain at Rates from $1\frac{1}{2}$ to 10 per cent. Interest which the Purchaser may thereby make of his money										
Years	Years' Purchase	4%	Years' Purchase	4 ¹ / ₂ %	Years' Purchase	5 %	Years' Purchase	6 %	Years	
25 ¹ / ₂	15.894	16	15.078	15	14.323	14 <u>1</u>	12.976	13	$25\frac{1}{2}$	
20 261	15.983	16 16 ¹	15.147	154	14:375	· 14를 · 14를	13.003	$13 \\ 13\frac{1}{4}$	20 26 1	
27	16 330	161	15.451	I 5 1	14.643	144	13.211	134	27	
271	16.287	1612	15.686	154	14.857	144	13.387	131	27 ¹ / ₂	
28	16.014	164	15.743	154	14.998	15	13.400	132	28	
202	16.984	17	15 9/1	16	15.141	15 <u>1</u>	13.201	132 131	203	
29 <u>1</u>	17.228	171	16.243	16 <u>1</u>	15.341	151	13.753	13 ⁸ /4	29 ¹ / ₂	
30	17.292	174	16 289	164	15.372	154	13.262	134	30	
30 <u>5</u>	17.530	173	16.203	105	15.202	155	13.920	14	302	
31월	17.820	1/2	16.752	163	15.779	15 <u>8</u>	13 929	14	31승	
32	17.874	174	16.789	164	15.803	154	14.084	14	32	
$32\frac{1}{2}$	18.099	18	16.990	17	15.982	16	14.226	144	$32\frac{1}{2}$	
33	18.148	184	17.023	17	16.003	16 161	14.230	144	33	
332 34	18.411	181	17.247	174	16.103	161	14 307	144	332	
34 ¹ / ₂	18 624	181	17 436	171	16.360	161	14.499	141	34 ¹	
35	18.665	184	17.461	171	16.374	161/4	14.498	141	35	
355	18.872	184	17.644	174	16.536	161	14.623	14월	353	
30	10.110	19	17.843	1/4	16.702	16	14.021	142	30 361	
37	19.143	191	17.862	174	16.711	164	14.737	144	37	
$37\frac{1}{2}$	19-339	19 <u>1</u>	18.034	18	16.861	16 <u>8</u>	14.851	14 <u>8</u>	37 ¹ / ₂	
38	19.368	194	18.050	18	16.868	164	14.846	144	38	
302	19.550	192	18.210	10 4 181	17.013	17	14.955	15	302	
39 ¹ / ₂	19.770	194	18.391	181	17.157	171	15.053	15	39 ¹ / ₃	
40	19.793	194	18.402	181	17.129	17 1	15.046	15	40	
40 ¹ / ₂	19.973	20	18.557	181	17.294	171	15.146	154	40 ¹ / ₂	
41 41-	20.168	20 20‡	18.500	102	17-294	17-	15.138	152		
42	20.186	204 201	18.724	182	17.423	17=	15.225	15 <u>1</u>	412	
42 ¹ / ₂	20.326	$20\frac{1}{4}$	18.869	18 <u>å</u>	17.548	171	15.316	151	42 ¹ / ₂	
43	20.371	20 ¹ / ₄	18-874	184	17.546	171	15.306	$15\frac{1}{4}$	43	
43 [†]	20.230	20 <u>2</u>	19.015	19	17.000	174	15-393	155	43 ₂	
44 44 ^늘	20.709	202 208	19.155	19 19 ¹ / ₄	17.779	178	15.466	15	44	
45	20.720	20 8	19.156	191	17.774	174	15.456	151	45	
45 ¹ / ₂	20.876	21	19.288	19 <u>1</u>	17.886	18	15.232	15 <u>=</u>	45 ¹ / ₂	
40	20.992	21	19.288	194	17.980	18	15.524	15=	46	
402	21 043	21	19.415	192	17.981	18	15.580	152	402	
47 ¹ / ₂	21.190	217	19.538	191	18.085	18	15.661	154	47호	
48	21.192	21 <u>1</u>	19.536	191	18.077	18	15.650	154	48	
48 ¹ / ₂	21.338	$2I\frac{1}{4}$	19.655	194	18.177	18 <u>1</u>	15.719	153	48 ¹ / ₂	
49 40분	21.341	214 214	19.051	194	18.264	10 <u>4</u> 184	15.708	154	49	
50	21.482	21 <u>1</u>	19.762	194	18.256	181	15.762	154	50	

EXAMPLES.—A lease or annuity for 40 years to make 4 per cent. and to get back the principal is worth 19793 or $19\frac{3}{4}$ years' purchase of the *clear* annual rent. At 6 per cent, it is worth 15'046 or 15 years' purchase,

TABLE for the PURCHASING of Leases, Estates, or Annuities, for terms of											
years certain at fates from 1_2 to 10 per cent. Interest which the Purchaser may thereby make of his money											
	Years' f	7 0	Veare'		Vears'		Veere' 7	0			
Y ears	Purchase	/%	Purchase &	3 %	Purchase	9%	Purchase L	0%	Years		
$25^{\frac{1}{2}}$	11.814	114	10.809	10 <u>8</u>	9.934	10	9.169	$9\frac{1}{4}$	$25\frac{1}{2}$		
20	11.820	114	10.810	104	9.929	10	9.191	9 ‡	26		
202	11.079	12	10.030	11	10.033	10	9.247	91	20 ²		
271	12.132	12	10 935	11	10.02/	10	9'237	94 01	271		
28	12.137	121	11.021	11	10.110	10	0.302	74 01	28		
28 ¹ ₂	12.275	$12\frac{1}{4}$	11.163	II	10.202	101	9.380	74 9등	28 ¹ / ₃		
29	12.278	12 <u>1</u>	11.128	$II\frac{\hat{1}}{4}$	10.198	10 <u>1</u>	9.370	91	29		
29 <u>±</u>	12.409	I 2 1/2	11.264	II	10.283	10 <u>1</u>	9.438	9월	$29\frac{1}{2}$		
30	12.409	122	11-258	114	10.224	IOŻ	9.427	9호	30		
302	12.534	122	11.357		10.323		9.490	9출	30 ¹ / ₂		
31년 31년	12.020	123	11.320	114	10.343	102	9.479	92	31		
32	12.647	123	11.432	112	10.400	101	9.526	92 03	312		
$32\frac{1}{2}$	12.759	124	11.223	112	10.475	101	9.281	9 ¹ / ₂	32 ¹ / ₂		
33	12.754	124	11.214	111	10.464	101	9.269	9 ¹ / ₂	33		
33 ¹ / ₂	12.860	123	11.202	II	10.229	IOż	9.620	91	$33\frac{1}{2}$		
34	12.854	124	11.287	II	10.218	101	9.609	9 <u>1</u>	34		
342	12.955	13	11.005	114	10.578	103	9.055	94	342		
33 271	12.940	13	11.728	114	10 307	102	9 044	94	35		
302	13.035	13	11 720	113	10.023	102	9.007	94	352		
361	13.126	13	11.786	113	10.664	104	9.716	94 98	361		
37	13.117	13	11.775	114	10 653	104	9.706	94	37		
37 ¹ / ₂	13.503	134	11.840	$II\frac{8}{4}$	10.202	104	9.742	9 8	$37\frac{1}{2}$		
38	13.193	134	11.829	$11\frac{8}{4}$	10.601	104	9.733	9 3	38		
302	13.275	134	11.820	12	10.730	104	9.700	94	383		
39 301	13.203	134	11.036	12	10 720	104	9757	9 <u>7</u>	39 201		
40	13.332	134	11.925	12	10.757	104	9.779	94 94	40		
40 ¹ / ₂	13.405	I 3 ¹ / ₂	11.979	12	10.797	104	9.808	97	40층		
41	13.394	131	11.967	12	10.787	104	9.799	94	41		
41출	13.464	132	12.018	12	10.823	104	9.826	9 <u>4</u>	41 ¹ 2		
4Z	13.452	132	12:007	12	10.813	104	9.817	97	42		
422	13 510	1 32 1 2	12:042	12	10.828	104	0.824	94	422		
43 43	13.200	13	12.088	12	10.870	107	9.034	94	43 43 ¹ /2		
44	13.558	131	12.077	12	10.861	104	9.849	974 97	44		
44 ¹ / ₂	13.017	131	12.119	12	10.890	П.	9.870	94	44 <u>1</u> 2		
45	13.606	131	12.108	12	10.881	II	9.863	94	45		
451	13.662	134	12.148	$12\frac{1}{4}$	10.909	II	9.882	10	452		
40	13.050	134	12.137	124	10.000		9.875	10	40		
402	13.602	134	12.164	124	10.018	11	9.887	10	402		
47층	13.742	I 3 ⁸ / ₄	12.199	121	10.941	II	9.903	10	47층		
48	13.730	134	12.189	121	10.934	II	9.897	10	48		
) 48 ¹ / ₂	13.778	134	12.222	I 2 1/4	10.956	II	9.912	10	48 ¹ / ₂		
49	13.262	134	12.313	12 <u>1</u>	10.948	II	9.906	10	49		
49∄	13.812	134	12.243	124	10.969	II	9.920	10	49 ¹ / ₂		
50	13.901	134	12.233	124	10.902	11	9.915	10	50		

For Explanations and Examples see pp. xviii., xix. Tables continued on pp. xx. to xxvii. and on pp. xxx., xxxi.

TABLE for the PURCHASING of Leases, Estates, or Annuities, for terms	of
years certain at Rates from $1\frac{1}{2}$ to 10 per cent. Interest which the	
Purchaser may thereby make of his money.	

Years	Years' Furchase	4%	Purchase 4	$\frac{1}{2}\%$	Years' Purchase	5 %	Years' Furchase	3 %	Years
51 52	21.617 21.748	$2I\frac{1}{2}$ $2I\frac{3}{4}$	19.868 19.969	19 ³ / ₄ 20	18.339 18.418	181 181 181	15.813 15.861	154 154	51 52
53 54 55	21.873 21.993 22.109	21 <u>4</u> 22 22	20.000 20.159 20.248	20 20 ¹ / ₄ 20 ¹ / ₄	18.493 18.565 18.633	100 181 182	15.950 15.991	16 16 16	53 54 55
56 57	22·220 22·327	$22\frac{1}{4}$ $22\frac{1}{4}$	20·333 20·414	201 201 201	18.699 18.761	184	16.029 16.065	16 16	56 57
58 59 60	22·430 22·528 22·623	225 225 225 225	20·492 20·567 20·638	20호 20호 20호 20호	18.820 18.876 18.929	18 <u>4</u> 19 19	16.131 16.161	$10 \\ 16\frac{1}{4} \\$	50 59 60
61 62	22.715 22.803	22 ⁸ /4 22 ⁸ /4	20.706 20.772	20 ³ / ₄ 20 ³ / ₄	18.980 19.029	19 19	16·190 16·217	$10\frac{1}{4}$ $16\frac{1}{4}$	61 62
03 64 65	22.887 22.969 23.047	23 23 23	20.834 20.894 20.951	20 4 21 21	19.075 19.119 19.161	19 19 19 ¹ / ₄	16·266 16·289	$10\frac{1}{4}$ $16\frac{1}{4}$ $16\frac{1}{4}$	63 64 65
66 67	23·122 23·194	23 231 231	21.006	2I 2I	19·201 19·239	19 ¹ / ₄ 19 ¹ / ₄	16.310 16.331	$16\frac{1}{4}$ $16\frac{1}{4}$ 16^{1}	66 67
69 70	23-204 23-330 23-395	$\begin{array}{c} 23\overline{4} \\ 23\overline{4} \\ 23\overline{2} \end{array}$	21,100 21,156 21,202	21 $21\frac{1}{4}$ $21\frac{1}{4}$ $21\frac{1}{4}$	19 ⁻²⁷⁵ 19-310 19-343	194 194 194 194	16·368 16·385	$10\frac{1}{4}$ $16\frac{1}{4}$ $16\frac{1}{2}$	69 70
71 72 72	23·456 23·516 22·572	$\begin{array}{c} 23\frac{1}{2} \\ 23\frac{1}{2} \\ 22\frac{1}{2} \\ 22\frac{1}{2} \end{array}$	21·246 21·288	$2I_{4}^{1}$ $2I_{4}^{1}$ $2I_{4}^{1}$	19·374 19·404	19 ¹ / ₄ 19 ¹ / ₂	16.401 16.412 16.430	16 ¹ / ₂ 16 ¹ / ₂ 16 ¹ / ₂	71 72 72
73 74 75	23.628 23.680	23 ⁸ / ₄ 23 ⁸ / ₄	21·367 21·404	$21\frac{4}{4}$ $21\frac{1}{4}$ $21\frac{1}{2}$	19:459 19:485	192 192 192	16·443 16·456	16 <u>2</u> 16 <u>1</u> 16 <u>1</u>	73 74 75
76 77 78	23·731 23·780 23·827	234 234 234 234	21.439 21.473 21.505	$2I\frac{1}{2}$ $2I\frac{1}{2}$ $2I\frac{1}{2}$	19·509 19·533	19 ¹ / ₂ 19 ¹ / ₂ 10 ¹ / ₂	16.468 16.479 16.490	16 ¹ / ₂ 16 ¹ / ₂	76 77 78
79 80	23.872 23.915	234 24	21·536 21·565	21 21 21	19·576 19·596	19 ¹ / ₂ 19 ¹ / ₂	16·500 16·509	16 ¹ / ₂ 16 ¹ / ₂	79 80
81 82 83	23 · 957 23 · 997 24·036	24 24 24	21·594 21·621 21·647	21출 21호 21호 21호	19·616 19·634 19·651	19 [±] / ₂ 19 [±] / ₄ 19 [±] / ₄	16.518 16.526 16.534	16 <u>1</u> 16 <u>1</u> 16 <u>1</u>	81 82 83
84 85	24.073 24.109	24 24	21.671 21.695	$21\frac{3}{4}$ $21\frac{3}{4}$	19.668 19.684	19 ⁸ / ₄	16·542 16·549	$16\frac{1}{3}$ $16\frac{1}{3}$	84 85
87 88	24.143 24.176 24.207	24 24 24 24 4 24 4	21.740 21.760	$21\frac{4}{4}$ $21\frac{3}{4}$ $21\frac{3}{4}$	19.099 19.713 19.727	194 194 194 194	16.562	103 163 163	80 87 88
89 90	24·238 24·267	$24\frac{1}{4}$ $24\frac{1}{4}$ 24^{1}	21.780 21.799	$21\frac{8}{4}$ $21\frac{8}{4}$	19.740 19.752	19 ⁸ / ₄ 19 ³ / ₄	16.573 16.579	$16\frac{1}{2}$ $16\frac{1}{2}$	89 90
91 92 93	24 295 24 323 24 349	24 24 24 24 4 24	21.835 21.852	$21\frac{4}{4}$ $21\frac{3}{4}$ $21\frac{3}{4}$	19.775 19.786	19400 194 191	16·588 16·593	1012 1612 1612	91 92 93
94 95 06	24·374 24·398	$\begin{array}{c c} 24\frac{1}{4} \\ 24\frac{1}{2} \\ 24\frac{1}{2} \\ 24\frac{1}{2} \end{array}$	21.868 21.883 21.807	$2I\frac{3}{4}$ 22 22	19'796 19'806 10'815	194 194 194	16.297 16.601 16.605	16 ¹ / ₂ 16 ¹ / ₃	94 95 06
97 98	24.443 24.465	242 243 243 243	21.911 21.925	22 22 22	19.824 19.832	194 194 194	16.608 16.611	16 ¹ 16 ¹ 16 ¹	90 97 98
99 100	24·485 24·50	24호 24호	21.938 21.950	22 22	19.840 19.848	194 194	16.615 16.618	16 <u>1</u> 16 <u>1</u>	99 100

EXAMPLES.—A lease or annuity for 70 years to make 4 per cent. and to get back the principal is worth 23.395 or 23½ years' purchase of the *clear* annual rent. At 6 per cent. it is worth 16.385 or $16\frac{1}{2}$ years' purchase.

TABLE for the PURCHASING of Leases, Estatee, or Annuities, for terms of years certain at Rates from 1¹/₂ to 10 per cent. Interest which the Purchaser may thereby make of his money.

Year6	Years' Purchase	7 %	Yeare' Purchase	8 %	Years' Purchase	9 %	Years' Purchase 10	%	Years
ET.	12.822	T 2 3	12:252	1 121	10.024	II	0.023	10	51
51	12.862	1 2 2	12:272	12-	10.085	TT	0.020	10	52
50	12.800	14	12.288	121	10.000	TT	0.036	TO	52
33	13.090	14	12 200	124	10 990	11	9 930	10	54
54	13 910	14	12 304	124	11.014	11	9 942	10	54
55	13 940	14	12 319	124	11 014		9 947	10	55
50	13.963	14	12.332	12	11.022	11	9.952	10	50
57	13.984	14	12.344	124	11.029	11	9.950	10	5%
58	14.003	14	12.350	124	11.030	11	9.900	10	50
59	14'022	14	12.307	127	11.042	11	9.904	10	59
60	14.039	14	12.377	122	11.049	11	9'907	10	00
61	14.055	14	12.386	121	11.023	II	9.970	10	61
62	14.070	14	12.394	$12\frac{1}{2}$	11.028	II	9.973	10	62
63	14.084	14	12.402	12월	11.065	II	9.975	10	63
64	14.098	14	12.409	121	11.066	II	9.978	IO	64
65	14.110	14	12:416	12 <u>1</u>	11.020	II	9.980	10	65
66	14.131	14	12.422	I21	11.073	II	9.981	ю	66
67	14.132	14 <u>1</u>	12.428	I 2 등	11.077	II	9.983	10	67
68	14.142	14	12.433	12 ¹ /2	11.079	II	9.985	10	68
60	14.152	14	12.438	I2	11.082	II	9·986	10	69
70	14.160	14	12.443	I2	11.084	11	9.987	IO	70
17	14.160	TAL	12:447	121	11.087	τT	0:088	10	71
71	14 109	144	12 44/	122	11.080	1 11	9,000	10	72
74	14 1/0	144	12.451	121	11.001	11	9.000	10	72
13	14 103	144	12 433	122	11'002	1 71	9 990	10	73
74	14 190	141	12:450	122	11.092	11	9 991	10	4
15	14 190	14 <u>4</u>	12 401	123	11 094		9 992	10	73
70	14.202	14	12.404	122	11.095	11	9.993	10	70
77	14.508	144	12.407	122	11.097	11	9'994	10	77
78	14.213	14	12.409	122	11.098	11	9.994	10	70
79	14.218	14	12 471	123	11.099	11	9.995	10	79
80	14.222	144	12.474	122	11.100	11	9.995	10	00
81	14.226	14 <u>1</u>	12.475	I21/2	11.101	II	9.996	10	81
82	14.230	14 <u>1</u>	12.477	121	11.105	II	9.996	10	82
83	14.234	14 <u>1</u>	12.479	121	11.105	II	9.996	10	83
84	14.237	14 <u>1</u>	12.481	121	11.103	II	9.997	10	84
85	14.240	14 <u>1</u>	12.482	I 2 ½	11.104	II	9:997	10	85
86	14.243	14 <u>1</u>	12.483	121	11.104	II	9.997	10	86
87	14.246	14 <u>1</u>	12.485	121	11.102	II	9.997	IO	87
88	14.249	14 <u>1</u>	12.486	12	11.102	11	9.998	10	· 88
80	14.251	14 <u>1</u>	12.487	12 <u>1</u>	11.100	II	9.998	10	89
00	14 253	14 <u>1</u>	12.488	12-	11.100	II	9.998	10	90
OT .	14.255	141	12.480	12=	11.102	II	9.998	10	0I
02	14.257	141	12.480	12	11.102	II	9.998	10	92
02	14.250	141	12.400	12	11.102	II	9.999	10	03
93	14.261	14	12.401	12	11.108	II	9.999	10	94
94	14.262	141	12.402	12	11.108	II	9.999	10	95
93	1,1264	1/1	12:402	121	TITON	TT	0.000	TO	66
90	14 204	1/1	12 492	122		11	0.000	το	
97	14-200	1 - 4 ²	12 493	123	11 109	11	9 999	to	1 %
98	14.207	1/1	12:493	122	11.109	11	0.000	το	
99	14 203	1/1	12:494	123	11 109	1 11	9 999	TO	1 100
100	14'209	I 14∰	12.494	122	1 11.109	11	9 999	10	1 100

For Explanations and Examples see pp. xviii., xix. Tables continued on pp. xx. to xxix.

The Present Value of the REVERSION OF A PERPETUITY after any given Term not exceeding 100 Years											
After Years	Ysars' Purchase	<u>1</u> 2%	Years' Purchase	$\frac{3}{4}\%$	Ysars' Purchass	2%	Years' Purchass 2	$\frac{1}{4}\%$	After Years		
1 2	65.681 64.711	$65\frac{8}{4}$ $64\frac{3}{4}$	56·160 55·194	56 1 551	49.020 48.058	49 48	43.466 42.510	43 ¹ / ₂ 42 ¹ / ₃	I 2		
3 4	63 754 62 812	63 ³ 4 62 ⁸ 4	54·245 53·312	54 54 53 4	47 116 46 192	47 46 1	41 575 40 660	41 <u>1</u> 40 <u>3</u>	3 4		
5	61.884	62	52.395	$52\frac{1}{2}$	45.287	45 ¹ / ₄	39.765	39 ⁸ / ₄	5		
7	60.068	60	50.608	512 502	44.399	44호 43호	38.034	39 38	7		
8	59.181	59 1	49.738	49 ³ / ₄	42.675	42 <u>Å</u>	37.197	374	8		
9 10	58.300	502 572	48.042	49 48	41.017	414 1	30.379	303 358	9 10		
II	56.296	561	47.215	47 1	40.213	401	34.795	$34\frac{8}{4}$	II		
12	55.759	551	46.403	461	39.425	391	34.030	34	12		
13 14	54.935	55	45.005	452	38.052	384	33.281	334	13		
15	53.323	53 1	44.020	44	37.121	$37\frac{1}{4}$	31.832	314	15		
16	52.235	$52\frac{1}{2}$	43.292	43 1	36.422	36 <u>1</u>	31.132	31 <u>1</u>	16		
17	51.759	51 <u>3</u>	42.548	42 ¹ / ₂	35.708	354	30.447	30 <u>층</u> 20월	17		
19	50 994 50 24 I	51 50 1	41'097	41 <u>4</u> 41	34.322	35 341	29 777	294	19		
20	49 498	49 ¹ / ₂	40.390	40 <u>1</u>	33.649	$33\frac{3}{4}$	28.481	28 <u>1</u>	20		
21	48.767	484	39.695	39 <u>4</u>	32.989	33	27.854	274	21		
22	48.040	40	39.013	39 38 1	32.342	32 <u>‡</u>	27.241	2/1 263	22		
24	46.636	46 <u>1</u>	37.682	$37\frac{3}{4}$	31.086	31	26.055	26	24		
25	45.947	46	37.034	37	30.472	301/2	25.482	25 ¹ / ₂	25		
20	45.268	451	30.397	30 <u>5</u>	29.879	30	24.921	25 24 ¹	20 27		
28	43.940	442	35.126	354 354	28.719	294 28 <u>3</u>	23.837	234	28		
29	43.291	434	34.221	341	28.156	28	23.312	$23\frac{1}{4}$	29		
30	42.051	424	33.957	34	27.004	27호	22.799	224 221	30		
32	42 021	42 41 <u>1</u>	33'3/3	337 327	26.532	27 261	22 297	213	31		
33	40.788	401	32.235	$32\frac{1}{4}$	26'011	26	21.327	$2I\frac{1}{4}$	33		
34	40.185	40 ¹ / ₄	31.680	$3I\frac{3}{4}$	25.201	25 <u>1</u>	20.858	20 ²	34		
26	30.000	392	20.600	314	23 001	45 241	10.020	202 20	26		
37	38.430	$39_{38\frac{1}{2}}$	30.024	30	24'031	24	19.511	19 <u>1</u>	37		
38	37.862	$37\frac{3}{4}$	29.557	29 <u>1</u>	23.559	23 ¹ / ₂	19.081	19	38		
39 40	37.302	374	29.040	29 28 1	23.097	23 22 ⁸	18.221	10 <u>7</u> 18 <u>1</u>	39		
41	36.208	36 <u>1</u>	28.058	28	22.201	221	17.849	178	41		
42	35.673	354	27.575	$27\frac{1}{2}$	21.765	21 <u>Å</u>	17.457	$17\frac{1}{2}$	42		
43	35.145	354	27.101	27 263	21.339	$21\frac{1}{4}$	17.072	17 16ª	43		
44	34.114	34	26.177	26 ⁴ / ₄	20.210	20 ¹ / ₂	16.329	164	44		
46	33.010	33 ¹ / ₂	25.726	25 <u>8</u>	20.108	20	15.970	16	46		
47	33.113	33	25.284	251	19.713	194	15.619	I5 ¹ / ₂	47		
40	32.024	323	24 049	24급 24급	19'32/	19 <u>4</u> 10	15.275	153 15	40 40		
50	31.667	317	24 002	24	18.576	181	14.610	14 <u>1</u>	50		

EXAMPLES.—The perpetuity of an annuity of $\pounds 1$ per annum after 14 years is worth in present money: At $1\frac{1}{2}$ per cent., $\pounds 54 \cdot 123$ or 54 years' purchase; at 2 per cent., $\pounds 37 \cdot 894$ or 38 years' purchase.
The	The Present Value of the REVERSION OF A PERPETUITY after any given Term not exceeding 100 Years									
After Years	Years' Purchase	$2\frac{1}{2}\%$	Years' Purchase	$2\frac{3}{4}\%$	Years' Purchase	3 %	Years' Purchase	3 ½%	A fter Years	
I 2 3 4	39.024 38.073 37.144 36.238	$ \begin{array}{r} 39 \\ 38 \\ 37\frac{1}{4} \\ 36\frac{1}{4} \end{array} $	35·390 34·443 33·521 32·624	$\begin{array}{c} 35\frac{1}{2} \\ 34\frac{1}{2} \\ 33\frac{1}{2} \\ 32\frac{1}{2} \\ 32\frac{1}{2} \end{array}$	32·362 31·420 30·505 29·616	$\begin{array}{c} 32\frac{1}{4} \\ 31\frac{1}{2} \\ 30\frac{1}{2} \\ 20\frac{1}{2} \end{array}$	27.605 26.672 25.770 24.898	$\begin{array}{c c} 27\frac{1}{2} \\ 26\frac{3}{4} \\ 25\frac{3}{4} \\ 25 \end{array}$	1 2 3 4	
5 6 7 8	35·354 34·492 33·651 32·830	35 ¹ / ₄ 34 ¹ / ₂ 33 ⁴ / ₈ 32 ⁴ / ₈	31.751 30.901 30.074 29.269	$3I_{4}^{3}$ 31 30 $29\frac{1}{4}$	28.754 27.916 27.103 26.314	$28\frac{3}{4}$ 28 27 $26\frac{1}{4}$	24.056 23.243 22.457 21.697	$ \begin{array}{c} -5 \\ 24 \\ 23\frac{1}{4} \\ 22\frac{1}{2} \\ 21\frac{3}{4} \end{array} $	5 6 7 8	
9 10 11 12	32·029 31·248 30·486 29·742	$32 \\ 31\frac{1}{4} \\ 30\frac{1}{2} \\ 29\frac{3}{4} \\ 30\frac{1}{2} \\$	28.486 27.724 26.982 26.259	$28\frac{1}{22}$ $27\frac{3}{4}$ 27 $26\frac{1}{4}$	25.547 24.803 24.081 23.379	$ \begin{array}{c} 25\frac{1}{2} \\ 24\frac{3}{4} \\ 24 \\ 23\frac{1}{2} \end{array} $	20.964 20.255 19.570 18.908	21 20 $\frac{1}{4}$ 19 $\frac{1}{2}$ 19	9 10 11 12	
13 14 15 16	29:017 28:309 27:619 26:945	29 281 271 271 27	25·557 24·873 24·207 23·559	25 ¹ 23 24 ³ 24 ⁴ 24 ¹ 23 ¹ 2	22.697 22.037 21.395 20.772	$ \begin{array}{c} 22\frac{3}{4} \\ 22 \\ 21\frac{1}{2} \\ 20\frac{3}{4} \\ \end{array} $	18·269 17·651 17·054 16·477	$18\frac{1}{4}$ $17\frac{3}{4}$ 17 $16\frac{1}{2}$	13 14 15 16	
17 18 19 20	26·288 25·647 25·021 24·411	$26\frac{1}{4}$ $25\frac{3}{4}$ 25 $24\frac{1}{2}$	22:929 22:315 21:718 21:136	$\begin{array}{c} 23\\ 22\frac{1}{4}\\ 21\frac{3}{4}\\ 21\frac{1}{4}\\ \end{array}$	20.167 19.580 19.010 18.456	$ \begin{array}{c c} 20\frac{1}{4} \\ 19\frac{1}{2} \\ 19 \\ 18\frac{1}{2} \\ 18\frac{1}{2} \\ \end{array} $	15·920 15·382 14·862 14·359	$ \begin{array}{c} 16 \\ 15\frac{1}{2} \\ 14\frac{3}{4} \\ 14\frac{1}{4} \\ 14\frac{1}{4} \\ \end{array} $	17 18 19 20	
21 22 23 24	23.815 23.235 22.668 22.115	$\begin{array}{c} 23\frac{2}{4} \\ 23\frac{1}{4} \\ 22\frac{3}{4} \\ 22 \\ 22 \\ 21\frac{1}{4} \end{array}$	20.571 20.020 19.484 18.963	$20\frac{1}{2}$ 20 $19\frac{1}{2}$ 19 19	17.918 17.396 16.890 16.398	$ \begin{array}{c} 18 \\ 17\frac{1}{2} \\ 17 \\ 16\frac{1}{2} \\ 16\frac{1}{2} \\ 16\frac{1}{2} \end{array} $	13.873 13.404 12.951 12.513	$13\frac{3}{4}$ $13\frac{1}{2}$ 13 $12\frac{1}{2}$	21 22 23 24	
25 26 27 28 20	21 570 21 049 20 536 20 035	21_{2} 21 20_{2}^{1} 20 10^{1}	17.961 17.481 17.013 16.557	10 <u>2</u> 18 17 <u>1</u> 17 17	15.456 15.006 14.569	10 15 ¹ / ₂ 15 14 ¹ / ₂	12.090 11.681 11.286 10.904		25 26 27 28 20	
30 31 32 33	19.070 18.605 18.151 17.708	19^{1} $18\frac{1}{2}$ $18\frac{1}{4}$ $17\frac{3}{4}$	16·114 15·683 15·263 14·855	$16^{15\frac{8}{4}}$ $15\frac{1}{4}^{15\frac{1}{4}}$ $14\frac{3}{4}$	13.733 13.333 12.945 12.568	$13\frac{4}{4}$ $13\frac{1}{4}$ 13 13 $12\frac{1}{2}$	10.179 9.835 9.503 9.181	104 94 92 91	30 31 32 33	
34 35 36 37	17·276 16·855 16·444 16·043	$17\frac{1}{4}$ $16\frac{3}{4}$ $16\frac{1}{2}$ 16	14.457 14.070 13.694 13.327	$14\frac{1}{2}$ 14 $13\frac{3}{4}$ $13\frac{1}{4}$	12·201 11·846 11·501 11·166	124 114 115 115 114	8.871 8.571 8.281 8.001	84 84 82 81 84 8	34 35 36 37	
38 39 40 41	15.651 15.270 14.897 14.534	$15\frac{8}{4}$ $15\frac{1}{4}$ 15 $14\frac{1}{2}$	12.971 12.623 12.286 11.957	$ \begin{array}{c} 13 \\ 12\frac{1}{2} \\ 12\frac{1}{4} \\ 12 \end{array} $	10 [.] 841 10 [.] 525 10 [.] 219 9 [.] 921	$10\frac{3}{4}$ $10\frac{1}{2}$ $10\frac{1}{4}$ 10	7.730 7.469 7.216 6.972	784 712 714 74	38 39 40 41	
42 43 44 45	14·179 13·834 13·496 13·167	$ \begin{array}{c} 14\frac{1}{4} \\ 13\frac{3}{4} \\ 13\frac{1}{2} \\ 13\frac{1}{4} \end{array} $	11.637 11.325 11.022 10.727	II <u>3</u> II <u>1</u> II IO <u>3</u>	9·632 9·351 9·079 8·815	94 94 9 84 84	6·737 6·509 6·289 6·076	$ \begin{array}{c} 634\\ 612\\ 614\\ 6 \end{array} $	42 43 44 45	
46 47 48 49 50	12.846 12.533 12.227 11.929 11.638	$ \begin{array}{c} I 2 \frac{8}{4} \\ I 2 \frac{1}{2} \\ I 2 \frac{1}{4} \\ I 2 \\ I 1 \frac{8}{4} \end{array} $	10.440 10.161 9.889 9.624 9.366	$10\frac{1}{2}$ $10\frac{1}{4}$ 10 $9\frac{1}{2}$ $9\frac{1}{4}$	8·558 8·309 8·067 7·832 7·604	8121 8121 8121 8121 8121 8121 714 714 714	5·871 5·672 5·480 5·295 5·116	5 ⁸ 4 5 ⁸ 4 5 ¹ 2 5 ¹ 4 5	46 47 48 49 50	

For Explanations and Examples, see pp. xviii. and xix. Tables continued on pp. xxxiv.-xxxix.

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тце	Term not exceeding 100 Years									
After Years	Years' Purchase	$\frac{1}{2}\%$	Years' Purchase 1	$\frac{3}{4}\%$	Years' Purchase	2 %	Years' Purchase 2	$\frac{1}{4}\%$	After Years	
51 52 53 54 55	31·199 30·738 30·284 29·836 29·395	$\begin{array}{c} 31\frac{1}{4}\\ 30\frac{1}{4}\\ 30\frac{1}{4}\\ 29\frac{1}{2}\\ 29\frac{1}{2} \end{array}$	23·589 23·183 22·784 22·393 22·007	$23\frac{1}{2}$ $23\frac{1}{4}$ $22\frac{1}{4}$ $22\frac{1}{2}$ 22	18.212 17.855 17.505 17.162 16.825	181 1734 171 171 171 164	14·289 13·974 13·667 13·366 13·072	$ \begin{array}{r} 14\frac{1}{4} \\ 14 \\ 13\frac{3}{4} \\ 13\frac{1}{4} \\ 13\frac{1}{4} \\ 13 \end{array} $	51 52 53 54 55	
56 57 58 59 60	28.961 28.533 28.111 27.696 27.286	$29 \\ 28^{\frac{1}{2}} \\ 28 \\ 27^{\frac{3}{4}} \\ 27^{\frac{1}{4}} \\ 27^{\frac{1}{4}} $	21.629 21.257 20.891 20.532 20.179	$ \begin{array}{r} 21\frac{3}{4} \\ 21\frac{1}{4} \\ 21 \\ 20\frac{1}{2} \\ 20\frac{1}{2} \\ 20\frac{1}{4} \end{array} $	16·495 16·172 15·855 15·544 15·239	$16\frac{1}{2}$ $16\frac{1}{1}$ $15\frac{3}{4}$ $15\frac{1}{2}$ $15\frac{1}{2}$	12.784 12.503 12.228 11.959 11.695	$ \begin{array}{r} 12\frac{8}{4} \\ I2\frac{1}{2} \\ I2\frac{1}{4} \\ I2 \\ I2 \\ $	56 57 58 59 60	
61 62 63 64 65	26.883 26.486 26.094 25.709 25.329	$ \begin{array}{r} 27 \\ 26^{\frac{1}{2}} \\ 26 \\ 25^{\frac{3}{4}} \\ 25^{\frac{1}{4}} \\ 25^{\frac{1}{4}} \\ \end{array} $	19·832 19·491 19·156 18·826 18·502	$19\frac{3}{4} \\ 19\frac{1}{2} \\ 19\frac{1}{2} \\ 19 \\ 18\frac{3}{4} \\ 18\frac{1}{2} \\$	14·940 14·647 14·360 14·079 13·803	$ \begin{array}{r} 15 \\ 14\frac{3}{4} \\ 14\frac{1}{4} \\ 14 \\ 13\frac{3}{4} \end{array} $	11·438 11·186 10·940 10·700 10·464	$ \begin{array}{c} I I \frac{1}{2} \\ I I \frac{1}{4} \\ I I \\ I 0 \frac{3}{4} \\ I 0 \frac{1}{2} \end{array} $	61 62 63 64 65	
66 67 68 69 70	24·955 24·586 24·222 23·864 23·512	25 24 ¹ / ₂ 24 ¹ / ₄ 23 ¹ / ₄ 23 ¹ / ₂	18·184 17·871 17·564 17·262 16·965	181 173 175 175 174 17	13.532 13.267 13.006 12.751 12.501	$ \begin{array}{r} 13\frac{1}{2} \\ 13\frac{1}{4} \\ 13 \\ 12\frac{8}{4} \\ 12\frac{1}{2} \\ \end{array} $	10·234 10·009 9·788 9·573 9·362	$ \begin{array}{c} IO_{4}^{1} \\ IO \\ 9_{4}^{8} \\ 9_{2}^{1} \\ 9_{4}^{1} \\ 9_{4}^{1} \\ 9_{4}^{1} \\ 9_{4}^{1} \\ \end{array} $	66 67 68 69 70	
71 72 73 74 75	23.164 22.822 22.485 22.152 21.825	23 ¹ 22 ³ 22 ¹ 22 ¹ 22 ¹ 21 ³ 21 ³	16·673 16·386 16·105 15·828 15·555	$ \begin{array}{r} 16\frac{3}{4} \\ 16\frac{1}{2} \\ 16 \\ 15\frac{8}{4} \\ 15\frac{1}{2} \\ \end{array} $	12·256 12·016 11·780 11·549 11·323	124 12 114 115 115 114	9•156 8·955 8·758 8•565 १•377	94 934 841 812 812 812	71 72 73 74 75	
76 77 78 79 8 0	21 • 503 21 • 185 20 • 872 20 • 563 20 • 259	$2I\frac{1}{23}$ $2I\frac{1}{4}$ $20\frac{1}{2}$ $20\frac{1}{2}$ $20\frac{1}{4}$	15·288 15·025 14·766 14·513 14·263	$ \begin{array}{c} 15\frac{1}{4} \\ 15 \\ 14\frac{3}{4} \\ 14\frac{1}{2} \\ 14\frac{1}{4} \\ 14\frac{1}{4} \end{array} $	11·101 10·883 10·670 10·461 10·255	$ \begin{array}{c} I I \\ I I \\ I O_{\frac{1}{2}}^{\frac{1}{2}} \\ I O_{\frac{1}{4}}^{\frac{1}{2}} \end{array} $	8·192 8·012 7·836 7·663 7·495	8 ¹ 4 8 7 ⁸ 4 7 ⁸ 4 7 ¹ 2 7 ¹ 2	76 77 78 79 80	
85 90 95 100	18·806 17·457 16·204 15·042	$18\frac{3}{4}$ $17\frac{1}{2}$ $16\frac{1}{4}$ 15	13.078 11.991 10.995 10.081	13 12 11 10	9·289 8·413 7·620 6·902	9 ¹ 4 8 ¹ 2 7 ⁴ 7	6·706 6·000 5·368 4·803	$6\frac{3}{4}$ 6 $5\frac{1}{4}$ $4\frac{3}{4}$	85 90 95 100	

EXAMPLES.—The perpetuity of an annuity of $\pounds 1$ per annum after 65 years is worth in present money: at $1\frac{3}{4}$ per cent. $\pounds 18$ 502, or $18\frac{1}{2}$ years' purchase; at $2\frac{1}{4}$ per cent. $\pounds 10.464$, or $10\frac{1}{2}$ years' purchase.

The	The Present Value of the REVERSION OF A PERPETUITY after any given Term not exceeding 100 Years								
After Years	Yeara' Purchase 2	$\frac{1}{2}\%$	Yeara' Purchase 2	$\frac{3}{4}\%$	Years' Purchass	3 %	Yeara' Purchase 3	$\frac{1}{2}\%$	After Years
51 52 53 54 55	11·354 11·077 10·807 10·543 10·286	$ \begin{array}{c} I I \frac{1}{4} \\ I I \\ I 0 \frac{3}{4} \\ I 0 \frac{1}{2} \\ I 0 \frac{1}{2} \\ I 0 \frac{1}{4} \end{array} $	9.116 8.872 8.634 8.403 8.178	9 8 4 10 10 10 10 10 10 10 10 10 10 10 10 10	7·382 7·167 6·958 6·756 6·559	$7^{\frac{1}{2}}_{7^{\frac{1}{4}}}_{7^{\frac{3}{4}}}_{6^{\frac{1}{2}}}$	4·943 4·776 4·614 4·458 4·307	5 441010 44101 414	51 52 53 54 55
56 57 58 59 60	10.035 9.790 9.552 9.319 9.091	10 9 ⁸⁴ 9 ¹ 2 9 ⁴ 9 ⁴ 9	7:959 7:746 7:539 7:337 7:141	8 7410141 77 74 74	6·368 6·182 6·002 5·828 5·658	$ \begin{array}{c} 6\frac{1}{4} \\ 6\frac{1}{4} \\ 6 \\ 5\frac{34}{5} \\ 5\frac{34}{4} \end{array} $	4·162 4·021 3·885 3·754 3·627	4 4 4 3 3 4 8 4 8 4 8 4 8 4 8 4 8 4	56 57 58 59 60
61 62 63 64 65	8.870 8.653 8.442 8.236 8.035	8 8 8 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	6·950 6·764 6·583 6·407 6·235	7 64191-121 621-12 64	5°493 5°333 5°178 5°027 4°880	5 ¹ / ₁ 5 ¹ / ₄ 5 5	3·504 3·386 3·271 3·160 3·054	3121 31121 3114 34 3	61 62 63 64 65
66 67 68 69 70	7·839 7·648 7·462 7·280 7·102	7 7 7 7 7 4 8 4 8 4 1 9 1 4 7 7 7 7	6·068 5·906 5·748 5·594 5·444	6 6 5 ³⁴ 12 5 ¹²	4.738 4.600 4.466 4.336 4.210	4 4 4 4 4 4 4 4 4 4 4 4 4 4	2·950 2·851 2·754 2·661 2·571	3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	66 67 68 69 70
71 72 73 74 75	6·929 6·760 6·595 6·434 6·277	7 641 61 61 61 61 4	5·299 5·157 5·019 4·884 4·754	5 ¹ / ₄ 5 ¹ / ₄ 5 4 ⁸ / ₄	4·087 3·968 3·853 3·740 3·632	4 3 ³ 4 3 ⁴ 3 3 ⁴ 3 ⁴	2·484 2·400 2·319 2·241 2·165	$\begin{array}{c} 2\frac{1}{2} \\ 2\frac{1}{2} \\ 2\frac{1}{2} \\ 2\frac{1}{4} \\ 2\frac{1}{4} \\ 2\frac{1}{4} \\ 2\frac{1}{4} \end{array}$	71 72 73 74 75
76 77 78 79 80	6·124 5·975 5·829 5·687 5·548	6 6 5 ⁸⁴ 5 ⁸⁴ 5 ² 5 ²	4.626 4.503 4.382 4.265 4.151	4 4 4 4 4 4 4 4 4 4 4 4	3·526 3·423 3·233 3·227 3·133	312 312 34 34 34 34 34 34 34	2·092 2·021 1·952 1·886 1·823	$ \begin{array}{c} 2 \\ 2 \\ 2 \\ 2 \\ I \frac{3}{4} \end{array} $	76 77 78 79 80
85 90 95 100	4 [.] 904 4.334 3.831 3.386	5 4 ¹ / ₄ 3 ⁴ / ₂ 3 ² / ₂	3.624 3.164 2.763 2.413	$\begin{array}{c} 3\frac{1}{2}\\ 3\frac{1}{2}\\ 2\frac{3}{4}\\ 2\frac{3}{2}\\ 2\frac{1}{2} \end{array}$	2·702 2·331 2·011 1·734	$ \begin{array}{c} 2\frac{3}{4} \\ 2\frac{1}{4} \\ 2 \\ 1\frac{3}{4} \\ 1\frac{3}{4} \end{array} $	1 · 535 1 · 292 1 · 088 · 916	I 1/2 I 1/4 I I	85 90 95 100

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For Explanations and Examples, see pp. xviii. and xix. Tables continued on pp. xxxii., xxxiii. and xxxvi.-xxxix.

The l	The Present Value of the REVERSION OF A PERPETUITY after any given Term not exceeding 100 Years								
After Years	Years' Purchase	4 %	Years' Purchase	$\frac{1}{2}\%$	Years' Purchase	5 %	Ysars' Purchase	3%	After Years
I	24.038	24	21-265	$2I\frac{1}{4}$	19.048	19 781	15.723	154 148	I
2	23 114	221	10.423	10 ¹	17.277	17	12.004	144	2
3	21-370	214	18.635	183	16.454	161	13.202	131	Å
	20.548	20 ¹ /2	17.832	17	15.671	158	12.454	12-	3
ŏ	19.758	198	17.064	17	14.924	15	11.749	113	6
7	18.008	19	16.330	16 <u>1</u>	14.214	141	11.084	11	7
8	18.267	18 <u>1</u>	15.626	15 <u>å</u>	13.537	13 <u>1</u>	10.427	$10\frac{1}{2}$	8
9	17.565	17호	14.953	15	12.892	13	9.865	94	9
10	16.889	17	14.310	141	12.278	121/4	9.302	9≟	10
11	16•240	16 <u>1</u>	13.693	I 3 ⁸ /4	11.694	114	8.780	84	11
12	15.615	I 5 ¹ / ₂	13.104	13	11.137	114	8.283	81	12
13	15.014	15	12.239	121	10.000	IO	7.814	74	13
14	14.437	142	11.999	12	10.101	10	7.372		14
15	13.002	14	11-403	112	9.020	92	0.954		15
IO	13.348	134	10'988	11	9.162	24	6.780	05 61	10
17	12.034	124	10.515	102	8.210	81	0.109	- 04 - 2	17
10	12 341	114	0.620	10	7.015	8	5.200	5 <u>4</u>	
20	11.410	111	9.214	91 91	7.538	7분	5'197	51	20
21	10'071	11	8.818	83	7.170	71	4.003	5	21
22	10.549	105	8.438	81	6.837	64	4.625	43	22
23	10.143	IO_{4}^{1}	8 074	8	6.211	6	4.363	41	23
24	9.753	9 ^a / ₄	7.727	74	6.201	$6\frac{1}{4}$	4.116	4	24
25	9.378	9 ¹ / ₂	7:394	7 - 5	5.906	6	3.883	34	25
26	9.012	9	7.076	7	5.625	54	3.663	34	26
27	8.670	84	6.771	$6\frac{8}{4}$	5.357	5 ¹ / ₄	3 4 5 6	31/2	27
28	8.337		6.479	61	5.102	5	3.261	31/4	28
29	8.010	0 43	6'200	0 ⁴ / ₄	4.859	44	3.076	3	29
30	7.708		5 933	0	4'028	44	2.902	3	30
31	7.412		5.078	54	4.407	42	2.738	2%	31
32	6.852	63	5.433	52	4-197	47	2-583	22	32
33	6.580	61	3 199	34 5	3 997	28	2 430	27	33
34	6.335	$6\frac{2}{4}$	4.761	48	3.626	34	2.168	24	34
26	6.002	6	4.556	41	3.453	21	2.046	2	26
37	5.857	54	4.360	4	3.289	31	1.030	2	30
38	5.632	54	4 172	44	3.132	31	1.821	18	38
39	5.416	5월	3.993	4	2.983	3	1.718	IA	39
40	5.207	54	3.821	34	2.841	2 3 4	I ·620	II	40
41	5.002	5	3.656	34	2.706	2 <u>8</u>	1.259	Ił	41
42	4.814	44	3 499	31/2	2.212	21	1.442	II	42
43	4.629	42	3.348	34	2.454	2 ¹ / ₂	1.360	I <u>1</u>	43
44	4.421	42	3.204	34	2.337	24	1.583	I	44
45	4'200	44	3.000	5	2'220	24	1.511		45
40	4.115	4	2.934	3	2'120	2	1'142		40
4/	3.957	28	2.000	24	2.019	2	1.078	1	47
40	3.650	34	2.571	21	1.821	1ª	-050	T T	40
50	3.218	31/2	2 460	$2\frac{1}{2}$	1.744] I ⁴ /4	-905	I	50

EXAMPLES.—The perpetuity of an annuity of £1 per annum after 37 years is worth in present money: at 4 per cent., £5.857, or $5\frac{3}{4}$ years' purchase; at 5 per cent., £3.289, or $3\frac{1}{4}$ years' purchase.

The 1	The Present Value of the REVERSION OF A PERPETUITY after any given Term not exceeding 100 Years								
After Years	Ysars' Purchase	7%	Years' Purchase	8 %	Years' Purchase	9%	Years' Purchase	.0%	After Years
$\begin{array}{c} \text{After Years} \\ \hline \textbf{I} \\ \textbf{2} \\ \textbf{3} \\ \textbf{4} \\ \textbf{5} \\ \textbf{6} \\ \textbf{7} \\ \textbf{8} \\ \textbf{9} \\ \textbf{10} \\ \textbf{11} \\ \textbf{12} \\ \textbf{13} \\ \textbf{14} \\ \textbf{15} \\ \textbf{16} \\ \textbf{17} \\ \textbf{18} \\ \textbf{199} \\ \textbf{20} \\ \textbf{21} \\ \textbf{22} \\ \textbf{23} \\ \textbf{24} \\ \textbf{25} \\ \textbf{26} \\ \textbf{29} \\ \textbf{30} \\ \textbf{31} \\ \textbf{33} \\ \textbf{34} \\ \textbf{35} \end{array}$	Ysars' Purchase 13:351 12:477 11:661 10:898 10:185 9:519 8:896 8:314 7:770 7:262 6:787 6:343 5:928 5:540 5:178 4:839 4:522 4:226 3:950 3:450 3:450 3:450 3:424 3:013 2:816 2:632 2:460 2:299 2:148 2:008 1:532 1:431 1:331 1:335 1:335 1:3555 1:3555 1:3555 1:3555 1:3555 1:3555 1:3555	$7^{ 0} \\ \begin{array}{c} & 132 \\ 1312 \\ 111 \\ 110 \\ 908 \\ 777 \\ 666 \\ 66 \\ 555 \\ 44 \\ 44 \\ 4 \\ 33 \\ 33 \\ 22 \\ 22 \\ 22 $	Years' Purchase 11.574 10.717 9.923 9.188 8.507 7.877 7.294 6.753 6.253 5.790 5.361 4.596 4.256 3.940 3.649 3.378 3.128 2.896 2.682 2.129 1.971 1.825 1.690 1.565 1.449 1.342 1.242 1.505 1.449 1.342 1.505 1.449 1.342 1.505 1.449 1.565 1.459 1.565 1.449 1.565 1.459 1.565 1.449 1.565 1.449 1.565 1.449 1.565 1.449 1.565 1.459 1.565 1.449 1.565 1.459 1.565 1.449 1.565 1.459 1.565 1.449 1.565 1.459 1.565 1.449 1.565 1.449 1.565 1.459 1.565 1.449 1.565 1.449 1.565 1.449 1.565 1.449 1.565 1.449 1.565 1.449 1.565 1.449 1.565 1.449 1.565 1.565 1.449 1.565 1.449 1.565 1.449 1.565 1.565 1.449 1.565 1.565 1.449 1.565 1.565 1.449 1.565 1.5	8 1100 98 77665555444 33333222222 111111111111111111111111	Years' Purchase 10.194 9.352 8.580 7.872 7.222 6.626 6.078 5.577 5.116 4.694 4.306 3.951 3.625 3.325 3.051 2.799 2.568 2.356 2.161 1.983 1.669 1.531 1.405 1.289 1.669 1.531 1.405 1.289 1.669 1.531 1.405 1.289 1.535 1.005 .913 .838 .769 .594 .545 .555 .555 .557 .577 .516 .557 .577 .5176 .5176 .577 .5176 .577 .5176 .577 .5176 .577 .5176 .5777 .5176 .5777 .5176 .5777 .5176 .5777 .5176 .5777 .5176 .5777 .57477 .5747 .5747 .57477	9 % 10 9 % 7 7 6 6 5 5 4 4 4 3 3 3 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1	Years' Purchase 9.091 8.264 7.513 6.830 6.210 5.645 4.241 3.855 3.505 3.505 3.186 2.897 2.633 2.394 2.633 2.394 2.633 2.394 2.176 1.978 1.799 1.635 1.486 1.351 1.229 1.117 1.015 9.20 3.839 .633 6.33 6.33 5.531 1.474 4.31 3.311 4.74 4.31 3.356	0%	$\begin{array}{c} {\rm After} \\ {\rm Years} \\ {\rm I} \\ {\rm 2} \\ {\rm 3} \\ {\rm 4} \\ {\rm 5} \\ {\rm 6} \\ {\rm 78} \\ {\rm 910} \\ {\rm II} \\ {\rm I} \\ {\rm 13} \\ {\rm 14} \\ {\rm 15} \\ {\rm 16} \\ {\rm 1718} \\ {\rm 1920} \\ {\rm 2122} \\ {\rm 232425} \\ {\rm 262728} \\ {\rm 29930} \\ {\rm 312} \\ {\rm 333344} \\ {\rm 5512} \\ {\rm 2333344} \\ {\rm 2512} \\ {\rm 233344} \\ {\rm 2512} \\ {\rm 233344} \\ {\rm 233444} \\ {\rm 2334444} \\ {\rm 23344444} \\ {\rm 233444444} \\ {\rm 23344444444444444444444444444444444444$
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	1 · 3 38 1 · 250 1 · 168 1 · 092 1 · 021 · 954 · 891 · 833 · 778 · 778 · 728 · 680 · 635 · 594 · 555 · 519 · 485	ાં નાં≁ાંત્તાં ાા ાા ગાંયઝાયઝાયજ્ઞાય જાયન(ગ્રાનજીનજી) ક્લા	-845 -783 -725 -671 -621 -575 -533 -493 -493 -493 -493 -493 -392 -363 -311 -288 -267	ରୀକ ରାକରାକରାକ ମାସ ନିର୍ବାଦାସ ନାରୀ ମାସ ନିର୍ବାଦେଶ କରି	-545 -500 -458 -421 -386 -354 -298 -273 -251 -230 -211 -194 -178 -163 -150	รมาร์เราส์เราส์เราส์เราส์เราส์เราส์เราส์เร	-356 -323 -294 -267 -243 -221 -201 -183 -166 -151 -137 -125 -113 -103 -094 -085	רויז רויז-רויז-ויז-ויז-ויז-רויז-ז'וז-ז'וז-ז'וז-ז'וז-ז'וז-ז'וז-ז'וז-ז	35 36 37 38 39 4 1 4 2 3 4 4 5 6 4 7 8 9 9 5 9 5 9 5 9 5 9 5 9 5 9 5 9 5 9 5

For Explanations and Examples, see pp. xviii. and xix. Tables continued on pp. xxxii.-xxxv. and xxxviii., xxxix.

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The Present Value of the REVERSION OF A PERPETUITY after any given Term not exceeding 100 Years									
After Years	Years' Purchase	: %	Years' Purchase	4 ½ %	Years' Purchase	5 %	Years' Purchase 6	%	After Years
51 52 53 54 55	3·3 8 3 3·253 3·128 3·007 2·892	3 3 3 3 3 3 3 3 3 3 3	2·354 2·253 2·156 2·063 1·974	$2\frac{1}{4}$ $2\frac{1}{4}$ $2\frac{1}{4}$ 2 2 2	1.661 1.582 1.507 1.435 1.367	124 121 121 121 121 14	·854 ·806 ·760 ·717 ·677	<u>ଜାଏଲୋକର</u> ାକରାକୁ କା	51 52 53 54 55
56 57 58 59 60	2·781 2·674 2·571 2·472 2·377	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 ·889 1 ·808 1 ·730 1 ·655 1 ·584	2 14844 14844 14844 1	1 · 302 1 · 240 1 · 181 1 · 125 1 ·071	I 1 4 I 4 I 4 I I I	·639 ·603 ·568 ·536 ·506	<u>ର୍ଜ୍ୟୁ ନ(ମୁନାର) ନାର</u> ୁ ନା	56 57 58 59 60
61 62 63 64 65	2·285 2·197 2·113 2·031 1·953	2 4 2 1 4 2 2 2 2	1 • 516 1 • 451 1 • 388 1 • 328 1 • 271	ાજ્યનંજી-નંજી-નંજી- ા ગ્રાહ્યનંજી-નંજી-નંજી-નંજી	1 020 971 925 881 839	I I I ³ 4	*477 *450 *424 *400 *378	ମ୍ ରମ୍ ରମ୍ବରମ୍ବର	61 62 63 64 65
66 67 68 69 70	1.878 1.806 1.736 1.670 1.605	2 1343434 14344 112	1·217 1·164 1·114 1·066 1·020	I 1 1 1 I I I	•799 •761 •725 •690 •657		·356 ·336 ·317 ·299 ·282	<u></u>	66 67 68 69 70
71 72 73 74 75	1·544 1·484 1·427 1·372 1·320	1212 1212 114 14 14	•976 -934 -894 -855 -819	I I 344 344 344	·626 ·596 ·568 ·541 ·515	<u> ପ୍</u> ୟୁକ୍ଟାର-ସ୍ଥାସ	·266 ·255 ·237 ·223 ·211	<u>ન</u> સન સન સન પ	71 72 73 74 75
76 77 78 79 80	1 •269 1 •220 1 •173 1 •128 1 •085	I 4 1 4 1 4 1 4 1 4 1 1 4 1	·783 ·750 ·717 ·686 ·657	ಣ(ತ್ರಂಭಕ್ರತ್ರಣಗಳು	-491 -467 -445 -424 -404	ન)ભન(ભન(ભ	·199 ·188 ·177 ·167 ·158	าเฉาเอาเอาเซาเอ	76 77 78 79 80
85 90 95 100	-891 -733 -602 -495	I ๗๙-ฦุณ-ฦุณ	·527 ·423 ·339 ·272	୷୲ୠ୷୲ୠ	·316 ·248 ·194 ·152		•118 •088 •066 •049	1.891/11/15 111/151/20	85 90 95 100

EXAMPLES.—The perpetuity of an annuity of $\pounds I$ per annum after 65 years is worth in present money: at 4 per cent., $\pounds I \cdot 953$, or 2 years' purchase; at $4\frac{1}{2}$ per cent., $\ell I \cdot 271$, or $1\frac{1}{4}$ years' purchase.

(xxxviii)

110	Term not exceeding 100 Years								
After Year9	Years' Purchase	%	Years' Purchase	3 %	Years' Purchase) %	Years' Purchase) %	After Year9
51 52 53 54 55	·453 ·423 ·396 ·370 ·346	1 ¦જાન]જાન જાન જ઼ ગ	·247 ·229 ·212 ·196 ·182	า จา จำเธาเธา	*137 *126 *116 *106 *097	1718191 9191	·078 ·071 ·064 ·059 ·053	$ \begin{array}{r} 1 \\ 13 \\ 14 \\ 18 \\ 17 \\ 19 \\ 19 \\ 13 \\ 19 \\ 19 \\ 19 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10$	51 52 53 54 55
56 57 58 59 60	·323 ·302 ·282 ·264 ·246	1313141414	·168 ·156 ·144 ·134 ·124	18181718	·089 ·082 ·075 ·069 ·063	$ \frac{1}{11} \frac{1}{12} \frac{1}{13} \frac{1}{14} \frac{1}{16} $	•049 •044 •040 •037 •033	1 20 1 23 1 25 27 1 :0	56 57 58 59 60
61 62 63 64 65	·230 ·215 ·201 ·188 ·176	14 4 5 1 5 1 5 1 0	·114 ·106 ·098 ·091 ·084	19 19 10 11 11 12	·058 ·053 ·049 ·045 ·041	$ \begin{array}{r} 1 \\ 17 \\ 1 \\ 19 \\ 20 \\ 122 \\ 122 \\ 124 \\ 24 \\ \end{array} $	•030 •027 •025 •022 •020	$ \frac{\frac{1}{33}}{\frac{1}{37}} \frac{1}{40} \frac{1}{45} \frac{1}{50} $	61 62 63 64 65
66 67 68 69 70	·164 ·154 ·143 ·134 ·125	10181718	·078 ·072 ·067 ·062 ·057	$ \begin{array}{r} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $	·038 ·035 ·032 ·029 ·027	$ \frac{1}{20} \\ \frac{1}{20} \\ \frac{1}{31} \\ \frac{1}{34} \\ \frac{1}{37} $	-019 -017 -015 -014 -013	1 53 1 79 1 71 71 77	66 67 68 69 70
71 72 73 74 75	·117 ·109 ·102 ·096 ·089	1919 10 10 11	•053 •049 •045 •042 •039	19 19 20 122 124 22 14 26	-024 -022 -021 -019 -017	$\frac{1}{42}$ $\frac{1}{45}$ $\frac{1}{48}$ $\frac{1}{53}$ $\frac{1}{59}$	·012 ·010 ·010 ·009 ·008	$ \frac{1}{83} \frac{1}{100} \frac{1}{100} \frac{1}{111} \frac{1}{125} $	71 72 73 74 75
76 77 78 79 80	·084 ·078 ·073 ·068 ·064	$ \frac{1}{12} \\ \frac{1}{13} \\ \frac{1}{14} \\ \frac{1}{15} \\ \frac{1}{16} $	•036 •033 •031 •029 •026	1 28 30 1 32 32 34 34 38	·016 ·015 ·013 ·012 ·011	1 82 1 77 1 83 1 91	·007 ·006 ·006 ·005 ·005	$ \frac{1}{143} \\ \frac{1}{167} \\ \frac{1}{200} \\ \frac{1}{200} $	76 77 78 79 80
85 90 95 100	·045 ·032 ·023 ·016	$ \begin{array}{c} 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ $	·018 ·012 ·008 ·006	$ \frac{\frac{1}{56}}{\frac{1}{63}} \\ \frac{\frac{1}{125}}{\frac{1}{167}} $	·007 ·005 ·003 ·002	$ \frac{1}{143} \\ \frac{1}{200} \\ \frac{1}{333} \\ \frac{1}{500} $	·003 ·002 ·001 ·001	$ \frac{\frac{1}{333}}{\frac{1}{500}} \frac{1}{1000} \frac{1}{1000} $	85 90 95 100

The Present Volne of the REVERSION OF A PERPETUITY after any give _ 1

For Explanations and Examples, see pp. xviii. and xix. Tables continued on pp. xxxii.-xxxvii.

Years	PRESENT	VALUE OF	Vears	PRESENT	VALUE OF
	One Pound	£1 per Annum	10413	One Pound	£1 per Annum
1	•8695652	-8695652	51	*0008024	6.6613171
2	•7561437	1-6257089	52	*0006978	6.6620149
3	•6575162	2-2832251	53	*0006068	6.6626216
4	•5717532	2-8549784	54	*0005276	6.6631492
5	•4971767	3-3521551	55	*0004588	6.6636080
6	·4323276	3·7844827	56	·0003990	6.6640070
7	·3759370	4·1604197	57	·0003469	6.6643539
8	·3269018	4·4873215	58	·0003017	6.6646556
9	·2842624	4·7715839	59	·0002623	6.6649179
10	·2471847	5·0187686	60	·0002281	6.6651460
11	·2149432	5·2337118	61	-0001983	6.6653443
12	·1869072	5·4206190	62	-0001725	6.6655168
13	·1625280	5·5831470	63	-0001500	6.6656668
14	·1413287	5·7244756	64	-0001304	6.6657972
15	·1228945	5·8473701	65	-0001134	6.6659106
16	·1068648	5:9542349	66	·0000986	6.6660092
17	·0929259	6:0471608	67	·0000858	6.6660950
18	·0808051	6:1279659	68	·0000746	6.6661696
19	·0702653	6:1982312	69	·0000648	6.6662344
20	·0611003	6:2593315	70	·0000564	6.6662908
21	·0531307	6·3124622	71	*0000490	6.6663398
22	·0462006	6·3586627	72	*0000426	6.6663824
23	·0401744	6·3988372	73	*0000371	6.6664195
24	·0349343	6·4337714	74	*0000322	6.6664518
25	·0303776	6·4641491	75	*0000280	6.6664798
26	•0264153	6·4905644	76	•0000244	6.6665042
27	•0229699	6·5135343	77	•0000212	6.6665254
28	•0199738	6·5335081	78	•0000184	6.6665438
29	•0173685	6·5508766	79	•0000160	6.6665598
30	•0151031	6·5659796	80	•0000139	6.6665738
31	·0131331	6·5791127	81	•0000121	6.6665859
32	·0114201	6·5905328	82	•0000105	6.6665964
33	·0099305	6·6004633	83	•0000092	6.6666056
34	·0086352	6·6090985	84	•0000080	6.6666135
35	·0075089	6·6166074	85	•0000069	6.6666205
36	·0065295	6·6231369	86	*0000060	6.6666265
37	·0056778	6·6288147	87	*0000052	6.6666317
3 ⁸	·0049372	6·6337519	88	*0000046	6.6666363
39	·0042932	6·6380451	89	*0000040	6.6666403
40	·0037332	6·6417784	90	*0000034	6.6666437
41	·0032463	6·6450247	91	•0000030	6.6666467
42	·0028229	6·6478475	92	•0000026	6.6666493
43	·0024547	6·6503022	93	•0000023	6.6666516
44	·0021345	6·6524367	94	•0000020	6.6666535
45	·0018561	6·6542928	95	•0000017	6.6666552
46	·0016140	6 ·6 55 9 068	96	•0000015	6.6666567
47	·0014035	6·6573102	97	•0000013	6.6666580
48	·0012204	6·6585306	98	•0000011	6.6666592
49	·0010612	6·6595 919	99	•0000010	6.6666601
50	·0009228	6·660514 7	100	•0000009	6.6666610

For explanation see pp. xviii, 10, 12

INTRODUCTION

ON THE NATURE AND USE OF DECIMALS

-

In order to render the following tables intelligible to persons only moderately acquainted with common arithmetic it may be well to give a brief explanation of decimals, since most of the tables here given involve their use.

Our entire system of numbering (if for the moment we leave fractions out of consideration) is, in fact, the *decimal* system, which means literally a system of *tens*, for if any number consist of a single figure-say, 6-we call that number six-that is, six units or six onesbut if another figure-a 4, for instance-stand before it, making the number 46, we do not call this 4 four ones, but four tens, and thus regard the number as forty-six. In like manner if another figure-3, for instance—be prefixed making the number 346, we regard this 3 not as three ones, nor as three tens, but as three hundreds. In this way we give to every figure in a number ten times the value the same figure would have if it were moved one place more to the right; so that the value of a figure depends upon its position. When we are dealing with whole numbers the figure occupying the first place on the right denotes so many ones, the next figure so many tens, the next so many hundreds, and so on. This tenfold increase of value which every advance towards the left gives to a figure is properly called the *decimal* system of notation.

Now what are more particularly called *decimals* are numbers that are less than unity, and they are dealt with on exactly the same principle as numbers that are more than unity, a decimal dot being placed to indicate what numbers are more than unity and what numbers are less than unity. Whether we are dealing with numbers greater or less than unity the value of a figure is ten times as much as the value of the same figure placed next to it on the right-hand side and one tenth as much as the value of the same figure placed next to it on the left-hand side. It is, therefore, just as simple to deal with decimals as it is to deal with whole numbers.

If we see a number, such as 346, without any decimal dot we understand, as explained above, that the 6 stands for six ones, but if between the four and the six we place a decimal dot, 34.6, we then know that the four no longer stands for four tens, but for four ones, and the 6 no longer stands for six ones, but for six tenths of one. So if we write 3.46 the 3 no longer stands for three hundreds, but for three ones, the 4 for four tenths of one, and the 6 for six hundredths of one. The decimal dot, therefore, is simply employed to tell us where the ones come, for the figure immediately to the left of the decimal dot always stands for so many ones. If these uniform gradations by tens and tenths are kept in mind no difficulty will arise in dealing with the decimals.

Decimals and Fractions

From this it will be seen that any decimal may be converted into its equivalent fraction at once: we have only to write the decimal, removing the dot, for numerator, and to write for denominator \mathbf{I} followed by as many cyphers as there are figures, or *places*, in the decimal. Thus:

$$0.6 = \frac{6}{10}$$
; $0.6 = \frac{6}{100}$; $0.06 = \frac{6}{1000}$; $42 = \frac{42}{100}$; $423 = \frac{423}{1000}$

and so on.

Every fraction too of which the denominator 1 is followed by cyphers may just as readily be written as a decimal, thus

$$\frac{3}{10} = 3; \frac{7}{100} = 07; \frac{9}{1000} = 009; \frac{2463}{100} = 2463, \&c.$$

We have only to write down the numerator and to point off from the right as many decimal places as there are cyphers in the denominator, supplying this necessary number of places by cyphers immediately after the decimal point, should the number of figures in the numerator be too few.

Fractions, whatever be their denominators, may also be converted into decimals, as will be seen presently.

Addition of Decimals

From what has been already said it will be seen that the important thing in the addition of decimals is to take care that the decimal dots all come under one another, just as in the addition of whole numbers the units have to come under the units, the tens under the tens, and so on. If this point is attended to the matter is perfectly simple, and is conducted exactly like simple addition. A few examples are given below :—

```
    Add together 2.345, '64, 23.7, '02.
    7.432, 16.207, '021, '4628.
```

3. '005, 61'4, '368, 7'2.

(1)	(2)	(3)
2.342	7'432	·005
·64	16.302	61.4
23.2	' 021	•368
' 02	·4628	7.2
26.705	24.1228	68.973

Subtraction of Decimals

In subtracting decimals, as in adding them, the important thing is to see that the decimal dots come under one another, and if this is done the subtraction of decimals is carried out in exactly the same way as simple subtraction. A few examples of subtraction are also given : -

- 1. Subtract 3'725 from 5'103.
- 2. 27.846 from 31.3.
- 3. '026 from 12'4.

(1)	(2)	(3)
5.103	31.3	12.4
3.725	27.846	·026
1.378	3'454	12.374

In the third example of addition two cyphers appear immediately to the right of the decimal dot. These o's serve to indicate the *position*, and therefore the *value*, of the figure to the right of them; thus '005 indicates that there are no tenths nor hundredths, and that the five stands for five thousandths; and similarly in the third example of subtraction '026 indicates that there are no tenths, but that the 2 stands for two hundredths and the 6 for six thousandths.

Multiplication of Decimals

It will have already been seen that we multiply a number involving decimals by 10 by simply removing the decimal point one place to

a 2

the right; we multiply by 100 by removing the point two places to the right, and so on. Thus:

$$6 \times 10 = 6$$
; $6 \times 100 = 60$; $006 \times 100 = 6$.
 $42 \times 10 = 42$; $42 \times 100 = 42$; $42 \times 100 = 420$.

In order to multiply a number containing decimals by any *whole* number—that is, by any number without decimals—we proceed exactly as we should do if there were no decimals at all; only when the product is obtained we must point off, as decimals, as many places as there are places pointed off in the number 24'623 multiplied. Thus, if we have to multiply 24'623 by 47, 47 we proceed as in the margin, and so in all similar 172361 cases. As the number multiplied has three decimal 98492 places, we mark off three places of decimals in the pro-

If we have to multiply together two numbers which both contain decimals we proceed as in simple multiplication, and place the decimal dot in the answer in such a position that the number of decimals is the same in the answer as in the two numbers when their decimal places are added together. Thus:

> $1'2 \times 1'1 = 1'32$; $'12 \times '12 = '0144$; $'222 \times 3'1 = '6882$; $'033 \times '22 = '00726$.

Division of Decimals

In dividing a number containing decimals by a whole number we place the decimal dot in the quotient as soon as we bring down a decimal of the dividend. Thus to divide 27.344 by 4 we proceed as follows :---

After dividing 27 by 4 we come to the decimal 3, and so the decimal dot had to be placed between the 6 and 8 of the quotient.

If we have to divide by a number that will not go into the decimal part of the dividend we must be careful to record the fact by putting a cypher in the quotient.

Thus $372 \div 4$ gives

4)<u>'372</u> '093 and 0372 + 4 gives 4)<u>'0372</u> '0093 (4)

USE OF DECIMALS

The values of the 9 and the 3 depend on their *position*, and they must be put in their right place by prefixing cyphers to the left of them if necessary. Placing cyphers to the right of a decimal dot alters the value of the number. Placing cyphers to the right of a decimal number with no other number after the cyphers makes no difference in its value. With whole numbers it is just the opposite of this. Thus :

$$73 = \frac{73}{100}$$
; $073 = \frac{73}{1000}$; $0073 = \frac{73}{10000}$; $730 = \frac{730}{1000}$ or $\frac{73}{100}$;

These facts have to be borne in mind in the division of decimals. We may add as many cyphers as we please to the right of a decimal number, and so carry our division as far as we choose. Thus $4\cdot 3 \div 7$ may just as well be called $4\cdot 30000 \div 7$. It makes no difference in the value, but there is no need to actually write the cyphers in working out the sum. We may put

7)4.3000000 or 7)4.3
.
$$6142857$$
 or 7)4.3
. 6142857

and the result is the same. The benefit of proceeding in this way is that we may get an answer that is more nearly correct than if we left off at the last figure of the dividend. Thus the result of $4\cdot 3 \div 7$ is approximately $\frac{6}{10}$, more nearly $\frac{61}{100}$, still more nearly $\frac{614}{1000}$, and so on.

If both the divisor and the dividend contain decimals there must be as many decimal places in the divisor and quotient together as there are in the dividend. This is obvious from what has been said in regard to multiplication. It was there shown that $222 \times 3^{12} = 6882$, and so if we have to divide 6882 by 222 we have

There are three decimal places in the divisor '222, and four in the dividend '6882, so there must be one in the quotient 3'1 to add to the three in the divisor to make up the four in the dividend.

In applying this rule it must be borne in mind that the number of decimal places in the dividend means the number actually used in division, and the number of cyphers added to it ranks as decimal places. Thus $8.973 \div 24 = 37.3$ or 37.38 or 37.387 or 37.3875, as we may see.

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 $\begin{array}{c} {}^{\cdot 24} \\ {}^{\cdot 24} \\ 8 \cdot 97 \, 3000 (37 \cdot 3875 \\ \\ 7^2 \\ 177 \\ 168 \\ \\ 93 \\ 7^2 \\ 210 \\ 192 \\ 180 \\ 192 \\ 180 \\ 168 \\ 120 \\ 120 \end{array}$

There are one, or two, or three, or four places of decimals in the answer, depending upon the extent to which we carry the division. Obviously the answer cannot sometimes be $37\cdot3$ (*i.e.* $37\frac{3}{10}$), sometimes $3\cdot73$ (*i.e.* $3\frac{73}{100}$), and so on : it must always be 37 and a little more. Hence the number of decimal places *used in the dividend* have to be noted, and the number in the quotient added to those in the divisor must make up the number used in the dividend.

Some examples of division are appended.

(1) 44 [·] 406÷12	(2) 44·406÷12	(3) *44406÷1*2
12)44.406	·12)44·4060	1.5).444060
3.7005	370.05	.37005
	(4) $89.648 \div 347.3$	
34	7.3)89.64800000(.258	1284
•	6946	
	20188	
	17365	
	28220	
	27784	
	4460	
	4400	
	3473	
	9870	
	6946	
	29240	
	27784	
	14560	
	13892	
	668	
	(6)	

USE OF DECIMALS

For most of the purposes for which the tables in this book are likely to be used four or five places of decimals is amply sufficient, and it is unnecessary to carry the calculations any further.

Fractions and Decimals

We have already shown how readily decimals may be converted into fractions, and we must now show how fractions may be converted into decimals. We saw that a decimal may be thought of as a fraction with the decimal as numerator, and for denominator I followed by as many cyphers as there are decimal places in the decimal. Thus $I = \frac{I}{IO}$; $23 = \frac{23}{IOO}$, and so on. Now it is obvious we do not alter the value of any fraction if we multiply both the numerator and denominator by the same quantity. Thus $I = \frac{2}{4} = \frac{4}{8} = \frac{8}{16} = \frac{16}{32}$, and so on. All these fractions are of the same value.

If, therefore, we multiply the denominator by a quantity that makes it equal to 10 or 100, or any other multiple of 10, and then multiply the numerator by the same quantity as we multiplied the denominator by, we at once get a fraction that can be converted into a decimal at sight.

Thus

It is often, however, a clumsy way of working to divide 10 or some power of 10 by the denominator, and then multiply the numerator by the result. To do so may involve a long multiplication sum. We therefore multiply the numerator by 1 followed by any number of cyphers we want and divide by the denominator. In other words, we divide the numerator by the denominator. Thus in converting $\frac{2}{5}$ into a decimal it makes no difference in the result whether we have $\frac{2 \times 10 \div 5}{5 \times 10 \div 5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10} = 4$, or whether we have $\frac{2 \cdot 0}{5} = 4$.

But it makes a great deal of difference in the working whether in converting, say, $\frac{1868}{3736}$ into a decimal we first divide 1 by 3736 and

multiply the result by 1868, or whether we divide 1868 by 3736 and get '5 as our answer at once.

Ă few examples of converting fractions into decimals are appended.

$$\frac{1}{2} = \cdot 5; \ \frac{1}{4} = \cdot 25; \ \frac{3}{4} = \cdot 75; \ \frac{1}{8} = \cdot 125; \ \frac{1}{3} = \cdot 3; \ \frac{2}{3} = \cdot 6.$$

These are useful fractions of which to know the corresponding decimals. A recurring decimal is marked with a dot above it, and means that it is repeated continuously. Where a group of several figures recurs it is marked with a dot over the first and last of the group. Thus $\frac{1}{3} = 33333$ and as many more threes as we care to write. It is shortly expressed as 3. If we wish to convert $\frac{1}{7}$ into a decimal, we have

which means that at this stage there is 1 over, and the numbers 142857 would be repeated indefinitely if the division were continued for an indefinitely long time. Other examples are :---

$$4\frac{3}{8} = 4.375$$
; $7\frac{9}{16} = 7.5625$; $\frac{17}{21} = .809523$; $\frac{14}{373} = .0375335 + .$

INTEREST TABLES

On pp. xx-xl and 50-124 Interest Tables of various kinds are given. Their construction and use is here explained, in order to facilitate their employment, and to make it possible for those unfamiliar with the subject to perform calculations at other rates and for other periods than those given in the table.

Unless otherwise stated the tables throughout the book are calculated at compound interest, not at simple interest. Compound interest, of course, means that the interest as it becomes due is added to the original debt, and the interest for subsequent periods is calculated on the original debt increased by all the previous accumulations of interest.

The Amount of £1

On pp. 50-85 are tables which show for various rates of interest—

(1) The sum which £1 will amount to in any number of years from 1 to 100,

- (2) The present value of *£*1 due at the end of any number of years from 1 to 100.
- (3) The sum to which \mathcal{L}_{I} per annum will amount in any number of years from 1 to 100.
- (4) The present value of £1 per annum to be received for any number of years.

We will consider these in the order stated, taking our illustrations principally from the 4% table on pp. 70 and 71. It will be convenient to give the explanations by quite simple algebra first, and then to give the arithmetical explanations or numerical examples.

If by *i* we represent the rate of interest, it is clear that one pound, or one dollar, or any other unit, will amount in one year to 1 + i; and if we represent the amount by s, we have s = 1 + i. If the rate of interest is 4%, or 4 on one hundred, it is '04 on a unit and 1+i=1.04.

At the beginning of the second year, if the interest has not been paid, the loan or investment, s, is 1+i, = 1.04, and the interest on this is i(1+i), = 1.04 × 04 = 0416. To find the amount at the end of the second year we must add the second year's interest to the amount at the beginning of the second year. Thus we have (1+i) $+i(1+i) = (1+i) \times (1+i) = (1+i)^2$, or $1.04 + (0.04 \times 1.04)$ = $1.04 + 0.0416 = 1.0816 = 1.04 \times 1.04 = 1.04^2$.

We begin the third year with s = (1+i)(1+i), and the interest for the third year is this amount multiplied by i=i(1+i)(1+i), and, adding this to the amount at the beginning of the third year, we have $(1 + i)(1 + i)(1 + i) = (1 + i)^3$, = 1.0816 + (.04 × 1.0816) = 1.0816 + .043264 = 1.124864 = 1.04^3.

Thus the amount of one in any number of years, n, is the amount of one in one year raised to the n^{th} power. This is expressed as $(1+i)^n$, and, if i = 0.4, then $(1+i)^n = 1.04^n$. If n = 5 this is 1.04^5 . This may be seen below.

	Amount at Begins	ning	
Year	of Year	Process Amount at End of Ye	ar
I	I	$\times 1.04 = 1.04 = 1.04$	
2	1.04	× 1.04 = 1.045 = 1.0810	
3	1.0810	× 1°04 = 1°04 ³ = 1°124864	
4	1 124864	× 1.04 = 1.044 = 1.16985856	
5	1116985856	5 × 1.04 = 1.04 ⁵ = 1.5166559024	

This tells us the amount of 1, and, if we want to know what any other sum comes to, we must multiply the sum by the amount of 1.

What is the amount of \pounds_{17} in five years at 4%?

The amount of $\pounds I$ is 1.21665 The amount of 17 is therefore $\pounds 20.68305$

We might get this result more exact by using more places of decimals. Thus, $1.2166529024 \times 17 = 20.6830993408$, which is :0000493408 more than we previously had. The difference is less than $\frac{5}{100000}$ of $\pounds I$, which is $\frac{1}{1000}$ of a shilling, or almost $\frac{1}{20}$ of a farthing. This shows that five places of decimals, as given in the tables, give results quite near enough for most purposes.

It is explained later on (pp. 206-228) how easily a table of this kind can be constructed by means of logarithms the practical use of which is extremely simple, and if other rates of interest than those tabulated are needed they should be obtained by logarithms.

It should be noted that the table gives the amount of one pound at the *end* of the year, *i.e.* just after the year's interest has been added. The amount at the *beginning* of any year is the same as the amount at the end of the preceding year. Before explaining some of the uses of these tables it will be best to explain the contents of the other columns on these pages.

We at present assume that the interest is reckoned annually, but later on we shall consider the case of interest convertible half-yearly and at other intervals.

The Present Value of $\pounds I$

If, as we have seen, \pounds_{I} amounts to $\pounds_{I} \circ_{4}$ in one year the present value of this $\pounds_{I} \circ_{4}$ is obviously \pounds_{I} . In other words, \pounds_{I} invested now at 4% will amount to $\pounds_{I} \circ_{4}$ in one year. But if the present value of $\pounds_{I} \circ_{4} = I$ the present value of $I = \frac{I}{1 \circ 4}$, and using v to represent the present value of I one year hence we have $v = \frac{I}{I+i}$, and $v^{n} = \frac{I}{(I+i)^{n}}$, where, as before, n represents the term. If $i = \circ_{4}$ and n = 5 we have

$$v^5 = \frac{1}{(1+i)^5} = \frac{1}{1\cdot 21665} = \cdot 82193.$$

Whatever the term may be

$$v = \frac{I}{I + i}$$
$$I + i = \frac{I}{v}$$
$$v (I + i) = I$$
(IO)

Thus to take 10 years at 4%

$$\frac{I}{I+i} = \frac{I}{1\cdot 48024} = \cdot67556 = v$$
$$I+i = 1\cdot 48024 = \frac{I}{\cdot67556} = \frac{I}{v}$$
$$v(1+i) = 1\cdot 48024 \times \cdot67556 = \cdot99999$$

By calculating the values of i and v to more places of decimals we may obtain as close an approximation as we please to 1 by multiplying v by (1 + i).

To find the present value of any other sum than 1 we multiply the sum by the present value of 1 for the number of years required. Thus, the present value of $\pounds 83$ due at the end of 10 years at 4% is $\cdot 67556 \times 83 = \pounds 56 \cdot 07148$. It will be noticed that the table of present values, like the table of amounts, refers to the *end* of the year. See also pp. xviii, 218.

The Amount of £1 per Annum

The third table on each page gives the amount of \pounds_1 per annum immediately after each annual payment is made. Thus the first line is in all cases 100000. This table may be found from the amount of \pounds_1 by a series of additions. Thus at 4 %, if to the initial payment of \pounds_1 we add 104000, the amount of \pounds_1 in one year, we obtain 204000, which is the amount of \pounds_1 per annum immediately after the second annual payment has been made. If to this amount we add 108160, the amount of \pounds_1 per annum immediately after the second year, the amount of \pounds_1 per annum immediately after the third annual payment has been made.

We can, however, obtain the result in another way. The amount of \pounds_{I} in five years at 4 % is 1°21665, of which amount 1 was the original payment and 21665 the accumulated interest. Now \pounds_{I} yields '04 every year at interest at 4%, therefore the amount of '04 per annum for 5 years is 21665. But if '04 per annum amounts to '21665 in 5 years '01 per annum will amount to one fourth of this sum, which is '054163, and 1 amounts to 100 times this sum, which is 5'41632, which we see to be the amount of \pounds_{I} per annum in 5 years. Hence it follows that we can obtain the amount of \pounds_{I} per annum by subtracting unity from the amount of \pounds_{I} and dividing the result by the rate of interest. Hence we get the following expression :

$$s_n = \frac{(1+i)^n - 1}{i},$$

where s_n is the amount of \pounds_1 per annum in *n* years, *i* is the rate of interest, and $(1 + i)^n$ is the amount of \pounds_1 in *n* years.

To find the amount of any other sum for any number of years we take from the table the amount of \pounds 1 per annum at the rate of interest and for the number of years required, and multiply this amount by the sum with which we have to deal. Thus the amount of \pounds 75 per annum for 30 years at 4 % = \pounds 56.08494 (p. 70) × 75 = \pounds 4206.3705. For further details see p. 224.

The Present Value of £1 per Annum

By similar reasoning we see that the present value of \pounds_1 per annum may be obtained from the present value of \pounds_1 —that is to say, by a series of additions the present value of \pounds_1 per annum can be obtained from the present value of \pounds_1 . It may also be obtained by a second method similar to the second method of finding the amount of \pounds_1 per annum from the amount of \pounds_1 . Thus the present value of \pounds_1 at the end of 10 years is 67556, and the difference between this amount and unity is 32444, which is the present value of $\cdot 4$ per annum for 10 years. The value of $\cdot 01$ per annum is one fourth of this amount, which is $\cdot 08111$. The present value of 1 per annum is 100 times this amount, viz. $8\cdot111$, which is seen (p. 70) to be the present value of \pounds_1 per annum for 10 years at 4 %.

It will be noticed that the present value of \pounds_I per annum for 10 years is stated to be 8.11090, not 8.111. This slight discrepancy is due to the fact that the present value of \pounds_I is only given to five places of decimals. If we calculate the present value of \pounds_I due at the end of 10 years at 4 % to six places of decimals instead of five we find that it comes to 675564. Subtracting this amount from unity we obtain 324436, which divided by 4 and multiplied by 100 gives us 8.11090 as the present value of \pounds_I per annum for 10 years, which is in accordance with the table.

This relation between the present value of \pounds_I and \pounds_I per annum may be expressed by the formula

$$a_{\overline{n_1}} = \frac{1 - v^n}{i}$$

where $a_{\overline{n}|}$ is the present value of \pounds_{I} per annum for *n* years, v^{n} is the present value of I due at the end of *n* years, and *i* is the rate of interest.

A knowledge of the methods by which the tables are constructed greatly facilitates their use. Hence in all cases we first describe the construction of the tables and then give some account of the purposes to which they may be applied. See also pp. xviii, 222.

The table giving the present value of \pounds_I per annum is applicable to many different purposes. Thus if we want to know the present value of an annuity, or pension for a definite number of years—the value, that is to say, of what is called an 'annuity certain,' or the value of a lease, or of any other property yielding a fixed and certain yearly income, we can readily obtain it from this table. Thus a lease, or annuity, yielding \pounds_I per annum, with 25 years to run, if purchased for \pounds_{I5} 62208, would yield the purchaser 4% on his money and replace the capital by the end of 25 years. If the annuity were \pounds_{I0} a year its value would be ten times as much; if \pounds_{20} a year, twenty times as much, and so on.

We sometimes want to know what rate of interest will be yielded by purchasing an annuity for a given amount at a certain price. which may not be exactly any rate of interest that is here tabulated. In order to ascertain this we must see what an annuity of f_{11} per annum would cost at the same price, and then turning to tables at various rates we shall be able to see approximately what rate the investment would yield. Thus, if we buy an annuity of f_{30} a year, for 20 years, for £450 we see that an annuity of £1 per annum at the same price would cost f_{15} . A reference to the tables on pp. 64 and 66 shows that this is less than we should pay to yield $2\frac{3}{4}$ % on the investment, and more than we should pay to yield interest at 3%; but the return would be more nearly 3% than $2\frac{3}{4}$ % being, in fact, a trifle over $2\frac{1}{2}$ %. It is sometimes convenient to be able to see the results at different rates of interest in this way; consequently on pp. 86-93 abbreviated tables showing the amount and present value of f_{1} and of f_{1} per annum are printed. These are only extracts from the tables on pp. 50-85 arranged in a different form with a few other rates of interest added.

The Present Value of a Perpetuity

On p. 94 is given the present value of a perpetuity of \pounds_1 per annum for every $\frac{1}{8}$ % up to 10%. These results are obtained by dividing 100 by the rate of interest. From this table the value of freehold property, advowsons, &c., can be obtained, it of course being necessary to ascertain the net annual value of the property on which to base the price to be paid for it. Thus a freehold yielding \pounds 80 per annum, after deduction of all expenses connected with it, would yield 4%, if purchased for $\pounds_2,2000$, for $25 \times 80 = 2,000$. If the same property were purchased for $\pounds_1,800$, which is at the rate of \pounds_{22} 10s. (for $1,800 \div 80 = 22.5$) for each \pounds_1 per annum, the yield upon the capital invested would be between $4\frac{3}{8}$ and $4\frac{1}{2}\%$.

Present Value of Reversions

On pp. xxxii-xxxix and 95-98 is given the present value of a Reversion to a Perpetuity of \pounds_1 . On p. 94 we have the present value of a (13)

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perpetuity to be entered upon immediately, and on pp. xx-xxxi and 50-85 we have the present value of an annuity for any number of years from I to 100. By subtracting the present value of an annuity for a certain number of years from the present value of a perpetuity we obtain the present value of a perpetuity deferred for that certain number of years. Thus we see that the present value of a perpetuity of \mathcal{L} I per annum at 4% is \mathcal{L}_{25} (p. 94). The present value of an annuity of \mathcal{L} I per annum for 20 years at 4% is \mathcal{L}_{13} .59033 (p. 70). Deducting this amount from \mathcal{L}_{25} , we have \mathcal{L}_{11} .40967 as the present value of the Reversion after 20 years of a Perpetuity of \mathcal{L} I, which is the amount given on p. 98. The present value of a perpetuity of any other amount than \mathcal{L}_{1} is obtained by multiplying the value of a perpetuity of \mathcal{L}_{1} by the amount of the perpetuity the value of which it is desired to obtain.

Commutation of Fines for Renewing Estates

Estates held in perpetuity are sometimes subject to a renewal fine to be paid by the holder at regular specified intervals. These periodical fines may be compounded for by a single payment down. The first table on p. 99 shows what this payment ought to be. so that the holder of the estate may redeem all these continually recurring fines and at the same time be allowed such interest upon the money thus paid in advance as may be agreed upon. Thus if the renewal fine is payable every 7 years for ever then the redemption money to bear 5 % interest is found by the table to be 2.4564. This means that $f_{2,2,4,5,6,4}$ must be paid to redeem a fine of $f_{1,1}$ payable every 7 years. To redeem a fine that is equivalent to one year's rent a sum equal to 2.4564 times the annual rent must be paid. It is obvious that the redemption money must be that sum the interest upon which, if allowed to accumulate at compound interest at the rate agreed upon for the period between the fines, will just suffice to pay the fine. A reference to p. 74 shows that the amount of f_{11} for seven years is $f_{1240710}$. Deducting from this amount the original f_{1} invested, we see that the interest on f_{1} invested for 7 years is £.40710. If now we multiply .40710 by 2.4564, the amount required to redeem a fine of f_{1} payable every j years, reckoning interest at 5 %, we have $40710 \times 24564 = 1$. Thus it will be seen that in every 7 years the interest on the redemption money amounts to exactly enough to pay the fine.

Renewal of any Number of Years Expired in a Lease

The second table on p. 99 and the tables on pp. 100-103 show the number of years' purchase for the renewal of any number of years expired in leases of various length. A reference to p. 70 shows that the present value of f_{1} per annum for 10 years is f_{1000} , and on p. 99 we see that the amount to be paid for the renewal of a 10 years' lease is this same sum of $\pounds 8.11090$, which may be read as either £8.11090 for every £1 of income annually derived from the lease, or as 8'11090 years' purchase of the annual income from the lease. But if we own a lease that has, say, 5 years to run and we want to convert it into a lease that has 10 years to run, it is obvious that we must pay something for the extension of the lease. Reckoning interest at 4 % we have just seen that the value of a lease for 10 years is 8'11090 times its annual value, and another reference to p. 70 shows that the value of the 5 years' lease we at present possess is $f_{4,45182}$ for every $f_{1,1}$ of annual income; in other words, the value of the 5 years' lease we hold is 4:45182 times the annual value of the lease. Deducting this value of the 5 years' lease we own from the total value of the 10 years' lease we wish to obtain, we have 3.65908 as the number of years' purchase to be paid for extending our 5-year lease into a 10-year lease.

We could obtain the same result from the table on p. 70 showing the present value of \pounds_1 instead of the present value of \pounds_1 per annum. We are obviously entitled to the benefit of the lease for the next 5 years, and the additional benefit we have to pay for by having the lease extended to 10 years is equivalent to the present value of

_					£
£1	due at	the end	of 6	years	5 = '79031
£1	"	"	7	,,	$=.7599_{2}$
£1	"	,,	8	,,	= 73069
£1		"	9	,,	= .20259
£1	,,	,,	10	,,	=.67556
	Te	otal .			3.65907

This gives us $\pounds 3.65907$ as the present value of $\pounds I$ per annum for the 6th to the 10th years, or 3.65907 years' purchase of the annual value of the lease, and is the same result as we obtained before, except that the last figure is a 7 instead of an 8, which is due to the number of decimal places to which the calculations were carried not being sufficient to produce absolutely identical results.

The tables referring to the Renewals of any number of years in leases for 20, 21, and 40 years are calculated in the same way, and the renewal of leases for different times, or at other rates of interest than those given on pp. 99–103, may be readily calculated from the present value of $\pounds I$ per annum given on pp. 50-85 by subtracting the present value of $\pounds I$ per annum for the number of years the lease we own has to run from the present value of $\pounds I$ per annum for

(15)

the number of years for which the fresh lease will be granted. It will be noticed that the last column in the table dealing with the ro years' lease is headed 17.95%; in the 20 years' lease 12.304%; in the 21 years' lease 11.564%; and in the 40 years' lease 8%.

These rates of interest are respectively equivalent to a fine of r year's rent every 4, 7, 7, and 14 years. The extraordinary rates of interest here referred to result from customs that must presumably have originated from ignorance of the real rates of interest involved.

Yield per cent. and Years' Purchase

The percentage per annum which each number of years' purchase of a perpetuity yields to a purchaser is obtained by dividing 100 by the number of years' purchase. The results are given on p. 104.

Interest, Amount, and Discount

On p. 105 are shown the interest, amount, and discount of \pounds_1 in a year, and in 9, 6, and 3 months. The interest is calculated annually, and consequently in 9 months it is $\frac{3}{4}$ of the interest earned in a year; in 6 months $\frac{1}{2}$, and in 3 months $\frac{1}{4}$ of the annual interest. The 'amount' of \pounds_1 is simply the addition of the interest to the original \pounds_1 . Were the interest to be calculated at other intervals than that of 1 year the figures here given would be different, as we shall see (p. 18) when we come to refer to the question in detail.

Discount is the value at the beginning of a period of the interest to be received at the end—in other words, discount is the interest paid in advance. Thus the present value of \pounds_I due at the end of a year, reckoning interest at 4 %, is \pounds 96154 (p. 70). The value of \pounds_I now due is, of course, \pounds_I , and the discount is the difference between these two amounts, which is \pounds 03846; that is to say, if we owe an amount of \pounds_I which is due to be paid one year hence, and, to suit the convenience of a creditor, we pay it twelve months in advance, we ought to be allowed a discount of \pounds 03846; that is to say, we should pay \pounds 96154 now instead of paying \pounds_I a year hence. This is obviously fair, since if we invested the \pounds 96154 at 4 % for a year it would at the end of that time amount to the \pounds_I we should have to pay.

Sinking Fund

On pp. 106-115 is given the annual amount to be set aside and invested in order to replace the capital at the end of the selected period. This table is obtained by dividing unity by the amount of one pound per annum, as given on pp. 50-85. Thus, comparing the amount of \pounds r per annum at 4 %, as given on p. 70, divided into unity with the Sinking Fund in the 4 % column on p. 112, we have for Year $I, I \div I \circ 0 \circ 0 \circ 0 = I \circ 0 \circ 0 \circ 0$ $, Io, I \div I 2 \circ 0 \circ 0 I I = \circ 0 \circ 3 2 \circ 0 I$; $, 20, I \div 29 \circ 77 \circ 0 \circ 8 = \circ 0 \circ 33 \circ 5 \circ 2 \circ 3$; $, 30, I \div 56 \circ 0 \circ 8 \circ 9 \circ 4 = \circ 0 \circ 17 \circ 3 \circ 0$.

This may be stated the other way about, and we may say that $\pounds \cdot 083291$ per annum accumulated for ten years at 4 % amounts to $\pounds 1$, or $\cdot 083291 \times 12 \cdot 00611 = 1$.

In this table no provision is made for paying interest on the capital. If this has to be done the amounts given in the sinking fund table must be increased each year by the interest on \pounds_1 . Thus to repay \pounds_1 in ten years, and to pay interest annually at 4 %, needs an annual payment of :083291 + :04 = :123291. Of this amount :04 pays the interest each year, and :083291 accumulated at 4 % replaces the original \pounds_1 invested.

If we take '123291 and accumulate it at 4 %, we find that in ten years it amounts to '123291 × 12'00611 = 1'48024, which, from p. 70, we find is the amount to which \pounds 1 amounts in ten years at 4 % if the interest on it is allowed to accumulate instead of being drawn annually.

In using this table care must be taken to notice whether the purpose for which it is required calls for interest on the original investment to be paid annually or not. See pp. 225 and 219.

If the purchaser of a leasehold property wishes to set aside out of the net rent received sufficient to replace the purchase price by the time the lease expires, the table must be used as it stands, the difference between the net rent and the sinking fund constituting the interest on the purchase price of the lease.

If, on the other hand, a loan has to be repaid, say, in 10 years, with interest at 4 %, either the interest on the loan must be paid annually, in addition to the sinking fund as given in the table, or '04 must be added to the sinking fund for every \pounds_1 borrowed, and allowed to accumulate with it.

If the interest is at 1% there must be an addition of '01 to the annual sinking fund for every \pounds_1 borrowed; if at 2% an addition of '02; if at 5%, of '05; if at 10\%, of '1; and so on.

Value of Annuity to Yield Interest on Capital at One Rate, and Replace Capital at a Lower Rate

On pp. 116-121f are given the annual payments required to pay interest at comparatively high rates, and to replace the capital by a sinking fund accumulating at a lower rate. From p. 110 we learn that £'087231 per annum at 3% for 10 years will amount to £1. But if we have to pay 5% per annum upon the £1 we must add £'05 to the sinking fund payment of £'087231. These two amounts come to £'137231, and would suffice, if paid annually for 10 years, to pay 5% per annum on the original loan of £1, and to replace the £1 by accumulation at 3%. The present value of this annuity of £'137231 on these terms as to interest is therefore obviously £1. But if the value of an annuity of £'137231 is £1, the value of an annuity of £1 is $\frac{1}{'137231} = 7'287$, which, on reference to p. 120, we see to be the value of an annuity of £1 yielding interest on capital at 5%, and replacing capital when invested at 3%.

These terms are very onerous to the borrower, since he has to pay interest at a high rate on the whole capital for the whole term, although by the accumulation of the sinking fund the capital may be rightly considered as partly repaid.

These tables may be readily extended to other periods and rates of interest by taking the reciprocal of the amount obtained by adding to the sinking fund payment the annual interest on the loan. The reciprocal of a number is obtained by dividing unity by the number.

The value of an annuity of any other amount than \pounds_1 per annum is obtained by multiplying the figures in the table by the amount of the annuity. See also p. 226.

Nominal and Effective Rates of Interest

On p. 122 is given a table comparing nominal and effective rates of interest. This subject is a somewhat intricate one, but the main principles underlying it may be grasped without much difficulty. Hitherto we have been considering that the rate of interest was calculated annually. We now have to deal with the case of interest calculated half-yearly, quarterly, and monthly. Suppose the nominal rate to be 4 % per annum; it will obviously be 2% for 6 months, and at the end of the first half-year an original investment of \pounds_{I} will amount to \pounds_{I} o2. For the second half-year interest at the rate of 2% for every 6 months is now earned upon \pounds_{I} o2 instead of upon only \pounds_{I} . This brings the amount of the original investment at the end of the second half-year to \pounds_{I} o404 instead of

to only $f_{1'04}$, which is the amount it would have been if the interest had been calculated annually instead of half-yearly. A reference to p. 58 will show that this is the amount that f_{1} amounts to in 2 years at 2 %. Hence we see that if we want to calculate interest at more frequent intervals than 1 year we can divide the nominal rate of interest by the number of periods (at which interest is to be calculated) that are contained in a year, and take the interest for this number of years at the resulting rate of interest. In other words, we see that instead of talking about years we can talk about periods, and if we want to talk about interest that is nominally 4 % per annum, but really 2 % for 6 months, or if convertible quarterly 1 % for 3 months, we may turn to a 2 % table and look at the result after 2 periods and a 1 % table to find the result after 4 periods. Thus on p. 50 we see that \pounds_1 accumulated for 4 periods at 1 % amounts to f, r 0406, the interest being f, 0406, which is the effective annual rate when interest is convertible quarterly, shown on p. 122 as corresponding to a nominal annual rate of 4%. The same thing holds if interest is convertible monthly. The amount of f_{r} accumulated for 12 periods, whatever their length, at $\frac{1}{2}$ % per period, would amount to $f_{1.061678}$, and $\cdot 061678$ is shown on p. 122 to be the effective annual rate when interest is convertible monthly, if the nominal rate is 6% per annum. The lower part of the table is the converse of the upper. If the real or effective rate is 4 % per annum the nominal annual rate, when interest is convertible half-yearly, is $f_{1,039608}$, or '019804 per half-year. Thus f_1 for 6 months at '019804 % per 6 months amounts to $f_{1,019804}$. During a second period of 6 months this amount at the same rate of interest earns \pounds 020196, which added to the $\pounds_1.019804$ makes up $\pounds_1.04$, which is equivalent to the amount of f_{1} at an effective annual rate of 4%. higher the rate of interest and the more frequently the interest is convertible the greater is the difference between the effective and the nominal rates. See Preface to 26th Edition.

Annuities Payable Half-yearly, Quarterly, and Monthly

If we are entitled to receive an annuity of $\pounds I$ per annum, payable yearly, but, instead of receiving it annually, receive it every 6 months, we obviously receive the amount of the half-yearly payment sooner than we are entitled to; and if that half-yearly payment were invested for 6 months, the 2 half-yearly payments, together with this 6 months' interest on one of them, would amount to more than the annual payment to which we are entitled supposing the halfyearly payments were exactly half the yearly payment. That is to say, if the annuity to which we are entitled annually is divided into 2, or 4, or 12 equal parts, and paid half-yearly, quarterly, or monthly, its capital value is greater than if the annuity were paid annually. As a concrete instance of this we have, on p. 123, the value of an annuity of \pounds 1 per annum for 25 years at 4%. If the annuity is payable annually and the interest convertible annually, the present value or the annuity is \pounds 15⁶²²⁰⁸, which is the figure given for its value on p. 70, as also on p. 123. To find the value of an annuity of 105. every 6 months for 25 years at 4% we multiply \pounds 15⁶²²⁰⁸ by 1°0099, the factor given in the upper table on p. 123. This gives us 15'77677 as the value of an annuity of 105. every 6 months for twenty-five years, reckoning interest at 4% per annum.

Similarly an annuity of \pounds_1 per annum payable quarterly—that is, 5s. every three months—is worth 15 62208 × 1 01488, or \pounds_15 85449. The value of an annuity payable monthly is calculated on similar principles, the constant factor by which to multiply the value of the annuity payable yearly being 1 0182.

If the interest is convertible half-yearly, and the annuity payable half-yearly, we can obtain the value of the annuity from the tables on pp. 50-85, by considering that we have an annuity of one-half per period for 50 periods at 2 % instead of an annuity of 1 for 25 periods at 4 %. A reference to p. 58 shows us that the present value of \pounds_1 per annum for 50 periods is $\pounds_{31}42361$, the half of which is $\pounds_{15}71180$, which is the value given in the middle table on p. 123 for an annuity payable half-yearly when the interest is convertible half-yearly. Similarly an annuity of 5s. every three months at 4 % per annum for 100 periods at 1 %. Now $\pounds_{63}02888 \div 4=$ $\pounds_{15}75722$, which on p. 123 is seen to be the value of an annuity for 25 years at 4 % payable quarterly, with interest convertible quarterly.

This subject is dealt with and the appropriate formulæ given in the 'Theory of Compound Interest and Annuities' by Fédor Thoman.*

Present Value and Discount

The bottom table on p. 123 gives to 9 places of decimals the present value of \pounds_1 due one year hence, which has already been given to fewer places of decimals on pp. 50-85, and explained on p. 10. The discount has been given for most rates of interest, but fewer places of decimals, on p. 105, and explained on p. 16. No further explanation is therefore necessary here, but for some pur-

^{*} London : Crosby Lockwood and Son.

DECIMALS OF ONE YEAR

poses it is convenient to have these items calculated with greater approach to accuracy, as is here done.

Time in which an Amount Doubles at Interest

On p. 124 is stated the number of years in which an amount is doubled at simple and compound interest. At simple interest all we have to do is to divide 100 by the rate of interest; thus, \pounds 100 at 4% yields \pounds 4 per annum, and dividing 100 by 4 we obtain 25 years as the time it will take for the interest to amount to the same as the principal, or, in other words, double the principal.

At compound interest we obtain the number of years in which the interest will amount to the capital approximately by dividing '69 by the rate of interest, and still more nearly by dividing '693 by the rate of interest and adding '35 to the result. Thus $\frac{.693}{.05} + .35 =$ 13.86 + .35 = 14.21.

Decimals of One Year

On p. 124 are given the decimals of 1 year, representing various numbers of weeks, months, and days. From what has been said on p. 7 it will readily be apparent how these figures are arrived at. There being 52 weeks in a year, 13 weeks, for example, is obviously $\frac{13}{5^2}$ of a year. To convert the fraction $\frac{13}{5^2}$ into a decimal we divide 13 by 52 and find that it goes 25 times. We assume the year to contain exactly 52 weeks, exactly 12 months, and exactly 365 days, the consequence being that though the figures given are right for practical purposes they are not entirely accurate. There are more than 52 weeks and more than 365 days in a year, while no calendar month is exactly $\frac{1}{12}$ of a year.

If we meet with the decimal of a year different from any given in the table, and desire to know how many weeks, or months, or days it corresponds to, we must multiply by 12 to get the answer in months, multiply by 52 to get the answer in weeks, and multiply by 365 to get the answer in days.

Decimals of £1

On pp. 125-128 is given the decimal corresponding to every farthing in the \pounds_1 . The first and last columns on each page give

the pence and farthings up to $11\frac{3}{4}d$, while at the top of each of the other columns the shillings are stated to which the figures in the columns refer. Thus if we wish to know the decimal corresponding to 4s. 3d. we look in the column marked 4s. on the line marked 3d., and find that the required decimal is \pounds '21250. Again, if we want the decimal corresponding to 13s. $7\frac{1}{4}d$. we look on p. 127, column 13s., line $7\frac{1}{4}d$., and find the required decimal to be \pounds '68021. To obtain these results we must first convert the farthings into the decimal of a penny, then the pence and decimals of a penny into the decimal of a shilling, finally the shillings and decimals of a shilling into the decimal of a pound. Thus in the example we have just taken of 13s. $7\frac{1}{4}d$.

One farthing = $\frac{1}{4}$ = 25 of a penny, 725 pence = $\frac{725}{12}$ = 6042 of a shilling, 136042 shillings = $\frac{136042}{20}$ = 68021 of a pound,

which is the result given in the table.

To find the number of shillings, pence, and farthings corresponding to a given decimal we have only to look for the decimal nearest to the one we are dealing with, which is easily found in the table, as the decimals come in regular order throughout.

To calculate the shillings, pence, and farthings corresponding to a given decimal we have only to carry out the converse of the process just described, multiplying first by 20 to get the shillings and decimals of a shilling, then multiplying the decimal part of a shilling by 12 to get the pence, and multiplying the decimal part of the penny by 4 to get the farthings. Thus :

 $\begin{array}{rl} \cdot 68021 \text{ of a } \pounds & \times 20 = 13.6042 \text{ shillings} \\ \cdot 6042 \text{ of a shilling} \times 12 = 7.25 \text{ pence} \\ \cdot 25 \text{ of a penny} & \times 4 = 1 \text{ farthing} \end{array}$

It will be convenient to remember that 1s. is '05 of a \pounds , 2s. is '1 of a \pounds , and every even number of shillings is expressed by half the number with a decimal dot to the left of it. Thus $4s. = \pounds$ '2, 12s. $= \pounds$ '6, and so on. In the same way an odd number of shillings is always represented by a decimal ending in 5, and is half its own amount. Thus $5s. = \pounds$ '25 of a \pounds ; $9s. = \pounds$ '45, and so on.

The figures in the column headed o shillings on p. 125 may be conveniently studied, for it will be seen that the last four of them are repeated exactly in all the columns headed with an even number of shillings, while in the columns headed with an odd number of shillings the last three of them are repeated exactly, and the figure in the second decimal place is in every instance increased by 5. Familiarity with the figures in this first column, especially those relating to an exact number of pence, when combined with the rule just referred to relating to shillings, will enable any one with a little practice to know the number of shillings and pence represented by a given decimal as readily as if the shillings and pence were actually written down, and conversely the decimal corresponding to any number of shillings and pence will be at once known without any calculation being consciously made.

MORTALITY TABLES

On pp. 130-136 certain statistics are given concerning the duration of human life. On pp. 130-131 the expectation or average duration of life is stated according to various mortality tables.

The first table mentioned is the Northampton, prepared by Dr. Price in 1780. This table for many years after its publication was much used, and many calculations based upon it are retained in the present volume. It contains, however, a great many serious defects, and its use for transactions on a large scale as a guide to the duration of Life has long since been abandoned.

The Carlisle Table, published in 1815, was greatly superior to the Northampton, and may still be used with advantage in many transactions in which the duration of life is concerned. The Experiences of the Equitable Society and of Seventeen Offices, published in 1834 and 1843 respectively, deal with assured lives. but are of less importance in connection with the valuation of life interests of all kinds than either the Carlisle or the Actuaries' Healthy Males Table. The English Experience (No. 3) is a very valuable table, dealing with the mortality recorded by the Registrar-General, and is the most reliable for questions of mortality among the general population. The Actuaries' Healthy Males Table, published in 1869, is the most reliable record of assured lives, and is the result of the experience accumulated by a large number of life offices. It is the best record of mortality among this class of people-that is to say, among people who have been subjected to a medical examination before going under observation, but who have since lived the ordinary lives of middle-class English people.

Another table of considerable importance in connection with annuity transactions is the Government Annuitants, in regard to which some information will be given later on.

The fundamental facts to be learnt from a life table are the

number living at the beginning of each year and the number dying during the year. When this information is available it is easy to calculate the probable number out of every 100 alive at the beginning of the year who will survive the year and who will die during the year; the percentage surviving and dying in each year together adds up to 100, as may be seen in columns 4 and 5 on pp. 134 and 135. The expectation of life given on pp. 130 and 131 shows the average duration of life among a large number of people, and is determined by dividing the total number of years that a given number of people will live by the given number of people under observation. Thus, if we examine the table on p. 135, from age 90 we see that of 1,460 living at age 90

1,052	reach	the	age	of	91
723	,,		,,		92
469	,,		,,		93
274	35		**		94
135	"		"		95
49	,,		"		96
9	,,		"		97
2,711					

Adding together the number who survive to the different ages, we find that the 1,460 people with which we commenced live between them 2,711 complete years; and, dividing this number by 1,460, we get an average of 1.857 complete years as the duration of life of each of the 1,460 people whom we commenced to observe at the age 90. This, however, considers only the *entire* years that are survived; lives that live to 91 years and 11 months are treated as if they only lived to 91. It is, however, much more likely that the deaths will be fairly evenly distributed throughout the year, and they may, therefore, be reckoned as happening in the middle of each year.

In these figures, therefore, we are reckoning that each one of the lives under observation would live six months less than would actually be the case, and if we add this half-year to the 1.857 years, we arrive at 2.357, which is the average expectation of life given in the H_M column on p. 131.

We sometimes hear of the Curtate (or cut short) expectation of life, which means the number of *complete* years of life which people of the given age may, on the average, expect to live; the Curtate expectation of life at age 90 is the 1.857 years, which we obtained above, and it is always half a year less than the complete expectation of life given on p. 131.

The expectation of life cannot properly be used in calculations

with which interest is concerned, for the reasons to be given hereafter (p. 26); nor can we learn from the expectation anything about the probable duration of life of any individual. It is, however, a remarkable fact that, while the time at which any individual will die is uncertain in the extreme, the average duration of life among large numbers of people is very uniform. The expectation of life should also be distinguished from the *Vie Probable*, or probable lifetime. This means the number of years that have to elapse before exactly half the number of people alive at a given age have died. Thus from the table on p. 135 we find that 51,373 people are alive at age 64. By age 75 we find that only half this number survives, the other half having died in the meantime. The *Vie Probable* at age 64 is therefore the difference between 64 and 75, viz. 11 years.

Mortality of Single Lives and Interest

The tables on pp. 138–154 are concerned with single lives and interest. They give the values of annuities and the single and annual payments to secure \pounds_I at death, together with the values of reversions.

Values of Annuities

The tables that are in many ways the most important are those which give the values of annuities to be received annually throughout the lifetime of the person of the age stated. In every case, unless specially mentioned as being otherwise, an annuity means an annual payment of f_{1} , or of course g_{1} , or any other unit, the value being given in pounds if the annuity is $\pounds I$, in dollars if the annuity is \$1, and so on. Annuity values derive their importance not merely from the immediate use that may be made of the table, but also from the facility with which other benefits dependent upon the duration of life may be derived from them. It is therefore worth while to explain in some detail how the annuity values may be determined. If we know that 1 year hence we have to pay \pounds_{1} , reckoning interest at 3 %, we can tell from p. 66 that we must have £ 970874 in hand now in order to possess £1 in a year's time, while, according to the Carlisle Table on p. 136, we see that out of 30 people alive at age 95 seven will die during the year, and that consequently there will be 23 people alive I year hence to receive f_{1} each, assuming we have contracted with the 30 people to pay each of them f_{1} per annum as long as they are alive. In order to make this first payment to our annuitants we must therefore have 23 times £ 970874, viz. £ 22.330102, and so on in succeeding years, as set out in the following table :--

Vear	Number living at End of Year	Present Value of $\pounds I$ due at End of Year	Present Value of £1 to each Survivor
		£	£
I	23	.970874	22.3301
2	18	942596	10.0007
3	14	·915142	12.8120
4	II	.888487	9.7734
5	9	·862608	7.7635
6	7	·837484	5.8624
7	5	·813091	4.0655
8	3	*789491	2.3685
9	Ĩ	.766417	•7664
otal			82.7085

From this we see that, assuming mortality to occur according to the Carlisle Table, we need to have $\pounds 82.7085$ in hand now, and to be able to earn interest upon it at 3 % in order to pay an annuity to each of 30 people at present age 95. If this is the value of 30 annuities, the value of 1 annuity is $\pounds 2.75695$, or, stated to the nearest third decimal, $\pounds 2.757$ as given in the 3 % column on p. 141.

The advanced age of 95 was chosen as an illustration, in order to avoid the lengthy table required to illustrate the value for younger ages. It will be noticed that it is necessary to proceed year by year up to the end of the mortality table. It is not correct, as is sometimes supposed, to take the average duration of life and then see the present value of \mathcal{L}_{I} per annum for that number of years. Thus, according to the Carlisle Table, the average duration of life at age 35 is 31 years. If we take the present value of \mathcal{L}_{I} per annum for 31 years from the tables given on pp. 66-80, and compare them with the annuity values on p. 140, we have the following results :—

Value of Annu	Error		
Expectation	Table, p. 140	in Excess	
£	£	٤	
20.000	18.433	1.262	
17.588	16.041	1.242	
15.203	14.127	1 .466	
13.929	12.573	1.326	
12.232	11.592	1.532	
11.320	10.232	1.112	
	Value of Annu Expectation 20:000 17:588 15:593 13:929 12:532 11:350	Value of Annuity according to Expectation Table, p. 140 £ £ 20`000 18`433 17`588 16`041 15`593 14`127 13`929 12`573 12`532 11`295 11`350 10`235	

(26)

If interest had not to be considered, the value of an annuity could correctly be obtained from the average duration of life, since if, say, 100 people at age 35 live 3,100 years between them we must obviously have $\pounds 3,100$ to pay them $\pounds 1$ per annum during life. But when the accumulation of interest comes in we can no longer base our calculations upon the expectation of life, even with the use of an interest table, without getting, as shown above, erroneous results.

In these tables no provision is made for any expenses connected with the granting of annuities, such as has to be provided in the case of life assurance companies who grant them. Although the word annuity is used throughout the tables, the tables of course apply to income derived from any source, whether ordinarily called an annuity or not. Thus, suppose we wish to ascertain the value of a life interest derived from trust funds, or from a lease dependent upon the duration of life, these tables of annuity values of course apply.

Private individuals who use these tables for the purpose of dealing with annuities must remember that dealing with only a few lives is a very speculative transaction. A purchaser may buy a life interest to-day, and the life on whose duration the income depends may die to-morrow, and the bargain prove a bad one, or may live an abnormally long while, and the bargain prove a good one ; so that no tables can give any idea of the value of an annuity on only one life. They give correctly the average value of annuities on many lives, and where many lives are concerned are a reliable guide. This is a point that should always be borne in mind by people dealing in life interests of any kind on a small scale.

On pp. 142 and 143 the values of annuities are given according to the Healthy Males Table published by the Institute of Actuaries. These are not the most suitable tables to use for determining the value of an income for life considered by itself, but they are the best tables for many other purposes, and the annuity values are very convenient for calculating the values of other benefits.

On pp. 144 and 145 annuity values are given according to the experience of Government annuitants. These tables are at present the most reliable guide to the average value of annuities. It is well known that annuitants live long, and consequently tables that correctly record the mortality experience of annuitants are not usually appropriate for determining the value of assurance, and *vice versa*. Several very heavy losses have been made in times past by this now most obvious fact having been overlooked.

Single and Annual Payments to secure $\pounds I$ at Death

On pp. 146-151 the single and annual payments to secure \pounds_1 at death are tabulated. There is a very close connection between these

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items and the values of annuities. Advantage is taken of this connection to derive the values of assurances from those of annuities by means of Premium Conversion Tables, such as are given on pp. 185 and 186, in describing which this connection is explained (p. 35). For the moment it will be sufficient to notice that the single payments to secure $\pounds I$ at death can be readily obtained from the annuity values, pp. 138-145, by means of conversion tables, and the annual payments to secure $\pounds I$ at death can also be obtained from the same pages. For details see pp. 35-39.

Value of Reversions

If we wish to know the average value of the reversion to a sum of money on the death of a person of a given age we can at once obtain it by multiplying the single payment to secure f_1 at death by the sum in question. If, however, we wish to know the value of a reversion to a perpetuity—that is to say, to a perpetual income such as may be derived from freehold property-it is convenient to proceed somewhat differently. On p. 94 we have the present value of a perpetuity to be entered upon at once, but if it is not to be entered upon until the death of a person of a given age it is obviously worth less than if we were to obtain possession at once. The difference between the present value of immediate and of deferred possession is the present value of the benefit the existing holder will receive from it; in other words, the difference between the value of immediate and of deferred possession is the value of an annuity on the life of the present holder. Thus at 4 % the value of a perpetuity with immediate possession is f_{25} . The value of an annuity at age 50 according to the Carlisle Table is f_{12} .860, so that the value of a perpetuity to be entered upon at the death of a person of age 50, according to the Carlisle Table at 4 %, is 25.000 - 12.869 = 12.131, which is the amount given on p. 154. Hence it appears that to obtain the present value of the reversion to a perpetuity at the death of a person of a given age we must deduct the value of an annuity during the life of that person from the value of a perpetuity to be entered upon immediately, as given on p. 94.

The present value of reversions of this kind are given at considerable detail on pp. 152 and 153, according to the Government Experience Table, because this is on the whole the most reliable table for the purpose. The values according to other tables and for other ages may readily be obtained by the simple rule just stated.
Two Lives and Interest

The tables on pp. 156-181 deal with various benefits that are dependent upon the duration of one or both of two lives. In such cases it is necessary to distinguish carefully in what way the lives enter into the question. We sometimes have to deal with joint lives. in which case an annuity is payable so long as both lives continue and ceases at the end of either of them, or in the case of joint life assurance the sum is paid on the occurrence of the first death. Then we have benefits such as annuities or assurances dependent on the duration of the *longer* of the two lives; that is to say, an annuity payable to the last survivor continues so long as either of the two people concerned is alive, or in the case of assurance the sum assured is paid at the death of the second of the two. Yet again we have Contingent Survivorship benefits, such as the assurance of a sum of money to be paid at the death of X, if Y is living when X dies, nothing being paid in the event of Y dying before X.

Joint Life Benefits

We will deal first with the values of annuities payable during the joint life of two persons—payable, that is to say, so long as both persons are alive, and ceasing when either of them dies.

We have already explained on p. 26 how the value of an annuity can be calculated if we know the probable number out of every 100 alive at the beginning of a year who will survive to the end of the year, and we must now explain how to ascertain this probability in regard to pairs of lives as distinguished from individual lives, with which we were formerly dealing. We may use in illustration the Healthy Males Mortality Table given on pp. 134 and 135, taking one life at age 30 and the other at age 60. The probability that a life aged 30 will survive one year is seen to be 99.2277 out of every 100, and that of a life aged 60 is 97.0322 out of 100. If we multiply these two probabilities together, we obtain the probability of both persons surviving the year, which works out at 96.283 out of 100. We can deal with successive years in the same way, and so make a fresh Mortality Table for pairs of lives instead of for individuals. Such a table for ten years is given below for two lives aged respectively 30 and 60 at the time they came under observation :--

Yo	unger Life	Life Elder Life		Pairs of Lives		
Age	Probable Number out of every 100 who survive the Year	Age	Probable Number out of every 100 who survive the Year	Probable Number out of every 100 who survive the Year	Number of Pairs living at Beginning of each Year	
(I) 30	(2) 99:2277	(3) 60	(4) 97:0322	(5) 96:283	(6) 10,000	
31	99.2083	61	96.7962	96.030	9,628	
32	99.1895	62	96.5364	95.754	9,246	
33	99.1715	63	96.2510	95.454	8,853	
34	99.1496	04	95.9590	95.143	0,451	
35	99.1226	65	95.6569	94.818	8,040	
36	99.0891	66	95.3431	94.475	7,624	
37	99.0536	67	95.0111	94.112	7,203	
38	99.0220	68	94.6766	93.751	6,778	
39	98.9918	69	94.2660	93.316	6,355	
40		70	_		5,930	

The probable number of individuals who will survive out of every hundred at each age is given in column 4 on pp. 134 and 135, and by multiplying together the fractions obtained by putting these numbers as numerators and 100 as denominators we obtain the probability that a pair of lives of these ages will survive one year.

The first column gives the age of the younger life and the third column the age of the elder life, and the details given in columns 5 and 6 refer to pairs of lives of the ages given in columns 1 and 3. Columns 2 and 4 are copied from the mortality table on pp. 134 and 135. In column 5 we have the probable number out of every 100 pairs of lives who survive the year. This is obtained for ages 30 and 60 by multiplying $\frac{99^{2277}}{100} \times \frac{97^{0}3^{22}}{100}$, which equals $\frac{9628^{3}}{10000}$ as the probability for each pair, or 96.283 pairs per 100. The details for other years are obtained in the same way. The last column gives the number living at the beginning of each year out of every 10,000 pairs alive at the commencement. This corresponds to column 2 of the mortality table on pp. 134 and 135. By multiplying the number living at one pair of ages by the probability of surviving one year we obtain the number living at the commencement of the next age. Thus :---

$$10000 \times \frac{96.283}{100} = 9628.$$

 $9628 \times \frac{96.03}{100} = 9246.$

and so on throughout.

If the above table were continued till one or other member of all the pairs of lives had ceased to exist, we could determine the value of joint life annuities in the same way as we calculated the values of annuities on single lives on p. 26. Joint life annuity values are given on pp. 156-165 according to the Northampton, Carlisle, Government Experience (1883), and Institute of Actuaries, Healthy Males Tables. For the most part they are given at every five years of age for both lives. To give them for every year of age would take up a great deal of room. They may, however, be found for every year of age, according to the Government Experience, in 'Joint Life Annuity Tables,' published by the Institute of Actuaries ; according to the Healthy Males Table in the 'Institute of Actuaries Life Tables;' and according to the Carlisle Table in 'Jones on Annuities.'

The single payment to secure \pounds_I at the cessation of the joint life—that is to say, at the death of either of two lives—is given according to the Northampton, Carlisle, and Healthy Males Tables on pp. 166–169. The figures in these tables may readily be found by means of conversion tables from the tables of joint life annuities, as already mentioned and as hereafter explained. By the use of these tables the annual payments during the joint continuance of two lives to secure \pounds_I at the first death can also be obtained by inspection by the use of conversion tables. They are given according to the Institute of Actuaries Table on p. 170.

Survivorship Benefits

On pp. 171-173 are given the values of annuities during the continuance of either of two lives. These differ from the joint life tables just considered, inasmuch as joint life annuities are payable only so long as *both* persons exist, and the last survivor annuities are payable so long as *either* of the two persons lives. If we have tables of joint life annuities and of single life annuities we can readily find the values of annuities payable during the continuance of either of two lives.

If we undertake to pay \pounds_1 per annum to each of two lives we can tell the value of that undertaking from the single annuity values given on pp. 138-145. Suppose the lives to be 30 and 60, then the value of the annuity on the life aged 30 by the Carlisle Table at 3 % is \pounds_{10} :556, and on the life aged 60 \pounds_{10} :491, the value of the two together being \pounds_{30} :047. To pay these annuities would involve paying \pounds_2 per annum so long as both persons were alive, and \pounds_1 per annum to the survivor of the two. But the annuities we are now considering, those given on p. 172, only require \pounds_1 per annum to be paid during the joint continuance of the two lives, and \mathcal{L}_{I} per annum to the survivor of the two. The difference between these two arrangements is, therefore, \mathcal{L}_{I} per annum during their joint lives, and from the joint life annuity tables on p. 157 we know the value of this to be \mathcal{L}_{9} '529. Hence we get the rule that to find the value of an annuity on the survivor of two lives we must take the value of an annuity on each of the single lives, and deduct from the sum of these two the value of an annuity on the two joint lives. Thus according to the Carlisle Table at 3 % the value of an annuity

On a life are to is (n, t, t_0)					た
On a me age 50 is (p. 140)	•	•	•	·	14 303
On a life age 70 is (p. 141)	•	•	•	•	7.123
On the two single lives is					21.426
On the joint lives is (p. 157)).		•		6.338
During the continuance of eilives is (p. 172)	ither o	of the	two	}	15.088

In this way survivorship annuities for other ages and by other tables than those given on pp. 171-173 may readily be arrived at.

The single payment to secure $\pounds I$ at the death of the last of two lives is given on pp. 174–176. These amounts, like so many others, may be at once obtained by means of premium conversion tables.

The same remark applies to the annual payments to secure the same benefit, which are given on p. 177, it being noted that the annual payments have to be continued during the continuance of either of the two lives.

Reversions to Perpetuities

On p. 178 the values of the Reversion to a Perpetuity on the death of the first and on the death of the last of two lives are given. It has already been explained (p. 28) how the value of a reversion to a perpetuity on the death of a single life may be obtained. Where two lives are concerned the process is exactly the same. Thus at 4% the value of a perpetuity to be entered upon immediately is (p. 94) $\pounds 25$; the value of an annuity during the joint continuance of two lives, each aged 60, according to the Healthy Males Table at 4%, is $\pounds 6.779$. Deducting this amount from the previous one we have $(25.000 - 6.779 =) \pounds 18.221$, which is the amount given in the upper table on p. 178.

Similarly the value of an annuity during the continuance of either of two lives, each age 60, is, according to the Healthy Males Table at 4 % (p. 173), \pounds 12¹39. Deducting this from the value of a perpetuity to be entered upon immediately, we have (25⁰⁰⁰ - 12¹39=) 12⁸⁶¹, which is the amount given in the lower table on p. 178.

Reversionary Annuities

In the upper table on p. 179 we have the value of an annuity during the life of y after the death of x. Thus, suppose a father to be age 45 and his son to be age 20, this table tells us the present value of the annuity to be entered upon by the son on the father's death and to continue during the time that the son survives the father. The value of the annuity on the son's life only is, by the Carlisle Table at 3 % (p. 140), $\pounds 21.694$. The joint life annuity is (p. 157) $\pounds 14.207$; the difference between the two is $\pounds 7.487$, which is the amount given on p. 179 as the value of an annuity during the life of y aged 20 after the death of x aged 45.

Owing to the facility with which this calculation can be made it is not worth while to give in the tables more than a few examples of the results.

In the lower table on p. 179 we have the value of an annuity during the life of y, who is to be nominated at the death of x. In the preceding case y is supposed to be alive now, and there is, of course, the possibility that he may die before x, with the result that he would never come into the annuity at all. In the present case, however, we have the certainty that y will be alive at the death of x. Thus, suppose we wish to ascertain the value of a next presentation to a living, we may take the age of the person to be presented at 25, and suppose the present incumbent to be 45; then the problem is to find the value of an annuity on the life of a man aged 25 who is to be nominated at the death of a man aged 45. According to the Carlisle Table at 3 %, the present value of \pounds_1 to be received at the death of a man aged 45 is (p. 146) \neq 50885, and the value of an annuity on a life aged 25 is (p. 140) f_{20} . This, however, is the value of an annuity the first payment of which has to be made one year after purchase, but it is here supposed that the annuity is to be entered upon immediately, so that the first annuity payment of $f_{,I}$ must be added to the value of the annuity on the life aged 25, making it 21.665. The present value of this sum, payable at the death of a life aged 45, is therefore $21.665 \times .50885 = 11.024$, which is the amount given on p. 179 as the value by the Carlisle Table at 3 % of an annuity during the life of y, aged 25, who is to be nominated at the death of x, aged 45, y, of course, being supposed to enter on the annuity immediately after the death of x. In using a next presentation to illustrate the point it is not implied that next presentations can now be sold. It may, however, at times still be useful to calculate their value, while in connection with appointments, leases on lives, and certain other kinds of property it may be convenient to know how to calculate the values of annuities on successive lives.

С

Contingent Assurances

On pp. 180 and 181 we have the single payments to secure $\pounds 1$ at the death of x provided he dies before y. This is a somewhat more complicated matter to calculate than any that we have dealt with previously. To obtain it we must take the single premium for joint life assurance on the two lives, and add to it the value of an annuity on two joint lives, one a year younger than x, the other of the age of y, divided by the probability of a life one year younger than x living one year. Then take the value of an annuity on two joint lives, one the age of x, the other one year younger than y, divided by the chance of a life one year younger than y living one year, subtract this result from the former result, and divide by 2. This process may be more clearly apprehended by the following formula and example :—

$$A_{xy} = \frac{1}{2} \Big(A_{xy} + \frac{a_{x-1} \cdot y}{p_{x-1}} - \frac{a_{x+y-1}}{p_{y-1}} \Big),$$

where $A_{xy} =$ the single premium for an assurance on the life of x provided y be then alive.

 A_{xy} = the single premium for an assurance payable at the first death of x or y.

 $a_{x:y}$ = the value of a joint life annuity on x and y.

 p_x = the probability of a life age x dying within a year.

As an example let x = 30 and y = 50, and let us employ; the Healthy Males Table with interest at 3%. Then :

$$A_{xy} = A_{30'50} = (\text{see p. 168}) \quad \begin{array}{l} \cdot 6077 \\ \hline a_{x-1:y} = \frac{a_{29+50}}{p_{29}} = & \frac{12\cdot5147}{\cdot992567} = & 12\cdot6084 \\ \hline \text{By addition} = & 13\cdot2161 \\ \hline a_{x:y-1} = \frac{a_{30:49}}{p_{49}} = & \frac{12\cdot7333}{\cdot984780} = & 12\cdot9301 \\ \hline \text{By subtraction} = & 0\cdot2260 \\ \hline \text{Divided by } 2 = & 0\cdot1430 = A_{xy} \\ \end{array}$$

which is the amount given on p. 181.

In the above example the values p_{x-1} or p_{29} and p_{y-1} or p_{49} are found on p. 134, and of A_{xy} on p. 168. The values of $a_{x-1,y}$ and $a_{x,y-1} = a_{29,50}$ and $a_{z,49}$ are not given in this book.

Annuities on Three Lives

On pp. 182 and 183 the values of annuities for the joint continuance of three lives are given. Full tables for annuities on three lives would be very extensive, and it is therefore generally necessary to obtain them from the values of annuities on two joint lives by some such method as the following :—

Take the present value of the annuity on the joint lives of the two oldest, and find at what age the present value of an annuity on a single life will be equal thereto; the value of an annuity on the joint lives of the youngest of the three lives and the life of the age just found will be approximately the value of the annuity on the three lives. In general we shall be nearer the truth if we subtract '05 from the value just found. The two-life tables given in this book are not sufficiently full to enable the calculation of three-life annuities to be made in very many cases.

On p. 184 is given the value of an annuity during the longest of three lives. The values are obtained by adding together the values of the annuities on each single life, and subtracting from the sum the value of the annuity on each pair of joint lives, then adding the value of the annuity on the three joint lives. In this table, as in the previous one, complete tables of annuities on two joint lives are necessary to enable these values to be calculated.

Premium Conversion Tables

Pages 185 and 186 contain short Premium Conversion Tables, by means of which the single and annual premiums to secure \pounds_1 at death may be found by inspection. On p. 142 we see that according to the Institute of Actuaries Table at 3 % the value of an annuity on a life aged 40 is $\pounds_{17,176}$, and on p. 148 we find the single payment to secure \pounds_1 at death is \pounds_{4706} . This latter value may readily be found from the Single Premium Conversion Table on p. 185. Referring to the 3 % column, we find that the single premium corresponding to an annuity value of \pounds_{17} is \pounds_{47573} . The difference in the single premium corresponding to the decimal part of the annuity value is found from the lower table on p. 185, and must be subtracted from the premium corresponding to the annuity value of \pounds_{17} .

The difference corresponding to

	ι.	==	·00291
	' 07	=	' 02 0 4
	·006	=	.012
	10002	—	. 1
1	1762	=	.00513
¥.,		(35)	

c 2

We thus have the sin	igle pi	emiu	m.co	rrespo	onding to an
annuity of \pounds 17		•	•	,	= '47573
Subtract difference		•	•	•	=:00513
Single premium for a	nnuity	of ≠	Ç1 7' I	762	= .42060

which is the amount given on p. 148.

The differences, as can be seen from the above example, vary with the position of the figures in them in relation to the decimal point.

Thus at 3% :—

The difference for	' 1	is	. 00291
for	.01	it is	. 000291
for	'001	it is	.00002 91

and so on.

The explanation of this connection is very simple.

The annuity value designated a gives the present value of f_{1} per annum on the supposition that the first payment of the annuity has to be made one year hence, and that the last payment is to be made on the anniversary of the first which immediately precedes the death of the annuitant. If, however, one further annual payment is to be made after the death of the annuitant, and we know the value of an annuity on these conditions, the difference between the value of an annuity with the last payment before the death of the annuitant and that of an annuity providing for one payment after death will give the value of f_{r} to be received at death. The value of an annuity providing for this one extra payment is obtained by taking the present value of 1 + a due one year hence, which may be expressed by the formula v(r + a), where v is the value of f_{1} due one year hence. Clearly, after the first payment has been made on such an annuity as this, there still remains the same number of payments to make as under an ordinary annuity. Therefore, if we know the present value of the first payment of f_{1} which has to be made one year hence, and the present value of an ordinary annuity one year hence, we have the value of an annuity providing for one payment after the death of the annuitant.

Using the same example as before, we have :---

 $a = 17^{1}762 \text{ (see p. 142)}$ $1 + a = 18^{1}762$ v = 97087 (see p. 123) $v (1 + a) = 18^{1}762 \times 97087 = 17^{1}6468$ Deduct a $17^{1}762$ $v (1 + a) - a = \frac{17^{1}762}{4706}$ (36)

This amount £.4706 is the single premium to secure £1 at death given on p. 148.

This table may be used to find the single premium for assurance on single lives, joint lives, the last survivor or survivors of any number of lives, and on successive lives; but not for contingent assurances.

The single premium for the assurance of $\pounds 1$ at death may very easily be found from the annuity value by a quite simple calculation even when no Conversion Table is available. We have just seen that v(1+a)-a=A, or the single premium. Now v, which is the present value of $\pounds 1$ due 1 year hence, is equal to 1-d, where d is the discount on 1 for 1 year. Hence we find that v(1+a)-a=(1-d)(1+a)-a, which is the same as 1-d(1+a). The value of d is given on p. 123 for various rates of interest. Therefore the single premium is at once found by adding 1 to the value of the annuity, multiplying it by the rate of discount d, and subtracting the result from unity. Thus, to refer again to the example given above, $1 + a = 18 \cdot 1762$, $d = \cdot 02913$ (p. 123). Therefore 1 - d(1 + a) $= 1 - \cdot 02913 \times 18 \cdot 1762 = 1 - \cdot 5294 = \cdot 4706$, which is the value of the single premium previously found.

Page 186 gives a table for finding the annual premium payable throughout life for the assurance of f_{1} at death. The present value of all these annual payments is, of course, the same as the single premium to secure the same benefit, assuming the same Mortality Table and the same rate of interest to be employed in the calculations. Inasmuch as the annual premiums to be paid for assurance commence when the assurance is effected, so that the first premium has to be paid immediately, the number of annual premiums that have to be paid is one more than the number of annuity payments on the same life, since the first ordinary annuity payment is made one year after the annuity is taken, and the last is made prior to the death of the annuitant. Hence the single premium is the present value of an annuity the amount of which is the annual premium to secure f_{1} at death plus the extra premium that has to be paid when the assurance is effected. Thus the annuity value plus 1 multiplied by the annual premium equals the single premium. That is to say, P(1 + a)= A, where P is the annual premium, A the single premium, and a the annuity value. We may put this another way and say that the single premium divided by the annuity value plus I equals the annual premium or $P = \frac{A}{1+a}$

We have just seen, however, that the single premium A can be expressed in terms of an annuity-value for A = I - d(I + a); hence $P = \frac{I - d(I + a)}{I + a} = \frac{I}{I + a} - d.$ If, therefore, we wish to know the annual premium for the assurance of \pounds_{I} at death on a life aged 40 according to the Actuaries Table at 3 % we have

$$1 + a = 18.176 \text{ (p. 142)},$$

$$\frac{1}{1 + a} = \frac{1}{18.176} = .05502,$$

 $\frac{1}{1+a} - d = 05502 - 02913 = 02589$, which is the annual pay-

ment during life to secure \pounds_1 at death given on p. 150.

If we make use of the Annual Premium Conversion Table on p. 186, we can only approximate to this result. The Conversion Table is only a short one and deals with the annuity value to the first decimal place. Looking on line '17 - 17'9,' column '1, we find that the annual premium corresponding to an annuity value of 17'1 is '0261, which is a larger amount than the true value. If we look on the same line in column '2 we find the annual premium corresponding to an annuity value of 17'2 is '0258, which is less than the true value. The annuity value being 17'176 is approximately $\frac{3}{4}$ of the way between these two amounts, so that if we take $\frac{3}{4}$ of their difference, which is '0003 $\times \frac{3}{4}$ equals '0002, and subtract it from '0261, we have '0259, which corresponds very nearly with the annual premium given on p. 150.

In the Annual Premium Conversion Table we have no differences to deal with of the same kind as we have in the Single Premium Conversion Table. What we are concerned with in the Annual Premium Conversion Table is the variation in the rate of discount. If we want to know the annual premium to assure \pounds_1 at death on a life aged 40, according to the HM Table, with interest at 4 % instead of at 3 %, as previously, we must take the 4 % annuity value from p. 142, where it is given as 15-135, find from p. 186 the annual premium corresponding to this annuity value, which is '0329, and subtract from it 0093 (difference p. 186), so obtaining 0236 as the annual premium at 4 %, which corresponds fairly well with the amount given on p. 150. If a closer approximation to the truth is required it can he obtained, as mentioned above, by adding 1 to the annuity value, dividing unity by this amount, and subtracting the rate of discount given on p. 123. Thus, to repeat the last example, we have the annuity value 15.1347, which with 1 added amounts to 16.1347. Dividing unity by this amount, we have '06198, and subtracting the rate of discount '03846 we obtain '02352, which is the exact amount given on p. 150. Repeating the calculation in connection with the symbols we have

$$\mathbf{P} = \frac{\mathbf{I}}{\mathbf{I} + a} - d = \frac{\mathbf{I}}{\mathbf{I} \cdot \mathbf{I} \cdot \mathbf{I} \cdot \mathbf{I} \cdot \mathbf{I}} - \mathbf{0} \cdot \mathbf{$$

Annual premiums, like single premiums, may be obtained from annuity values in this way in connection with single lives, joint lives, the last survivor or survivors of any number of lives, and successive lives. The premiums for contingent assurances cannot be obtained in this way.

Post Office Annuities and Assurances

Hitherto we have been considering the values of annuities and other benefits on what may be called a theoretical basis. That is to say, we have been supposing deaths to occur in exact accordance with certain mortality tables, and interest to be earned at various specified rates.

We have now to consider the terms on which annuities and other benefits can be obtained from various Government Departments. Page 189 gives the cost of immediate life annuities of $\pounds I$ per annum when purchased through the Post Office. A distinction is made between the cost of annuities on male and female lives, and the annuities are payable by half-yearly instalments on January 5 and July 5, or April 5 and October 10, according to the date of purchase, the first half-yearly instalment becoming due on the second quarterly day of payment next following the day of purchase. The table gives the cost of an annuity of $\pounds I$, and an annuity of a larger amount costs a larger sum in exact proportion. For instance, an annuity of $\pounds I0$ a year would cost ten times the amount given in the table.

The cost of deferred life annuities under which the purchase money will be returned on application or on the death of the nominee if an instalment of the annuity shall not have become due, is given on p. 190. The annuities are payable half-yearly, the first payment of the annuity being made six months after the number of years they are deferred has expired. Thus the first payment under an annuity deferred 10 years will become due and payable on the second quarterly day of payment next following the expiration of ten years.

The Table of Annual Payments shows the amount of each annual payment that has to be made for a number of years exceeding by one the number of years the annuity is deferred. Thus if the annuity is deferred ten years, 11 payments have to be made; if it is deferred twenty years, 21 payments have to be made, and so on.

On p. 191 a corresponding table is given, showing the cost of deferred life annuities under which the purchase price is not returnable in the event of the life on which the annuity is granted ceasing before the first payment of the annuity becomes due.

Pages 192-194 give the premiums for life assurance effected through the Post Office. It will be noticed that the sum assured is sometimes payable at death and sometimes payable in various numbers of years after being effected or at death if previous. The annual premiums for life assurances given on p. 194 differ, in regard to assurances payable at a certain age, from the ordinary practice of life assurance companies. The great majority of life assurance offices, when they assure an amount payable at a specified age or at death if previous, only require as a maximum number of payments the difference between the age at entry and the age at maturity. Thus an endowment assurance effected by a man aged thirty, payable at age sixty or at death if previous, only calls for (60 - 30 =) 30 annual payments in the eventof the assured surviving till the age of sixty, while Post Office assurance in such a case as this would require 31 annual premiums to be paid.

Government annuities are also granted by the National Debt Office, and are made chargeable upon the Consolidated Fund of the United Kingdom. Further particulars in connection with these annuities are given at the bottom of the table on p. 195.

Annuities and Assurances Granted by Life Offices

It is probable that any person wanting to purchase an annuity or to assure to the best advantage would go to a well-established life assurance company rather than to a Government department. He would obtain much better value for money by so doing, and the security offered by the best life offices is so ample and altogether beyond question that no advantage attaches to Government guarantee as compared with the guarantee of first-class life assurance companies. The rates given on p. 196 for annuities and assurances granted by British life offices are only the average rates. Many companies of the highest standing guarantee these benefits on terms much more favourable than the average.

Details for each company may be obtained from various publications, such as Whitaker's Almanack. They are also given, much more fully, in Bourne's 'Insurance Directory' and Bourne's 'Assurance Manual.'

INCOME TAX

The Income Tax Tables on pp. 198-204 require little explanation. The amounts are arrived at by multiplying the income by the pence in the tax per pound, and dividing the result by 12 and 20 to obtain the answer in pounds. Thus the income tax on \pounds_{130}

LOGARITHMIC TABLES

at
$$5d. = \frac{130 \times 5}{12} = 54$$
 $2 = 2$ 14 2 ;
at $6d. = \frac{130 \times 6}{12} = 65$ $0 = 3$ 5 0 ;
at $7d. = \frac{130 \times 7}{12} = 75$ $10 = 3$ 15 10 ;
at $8d. = \frac{130 \times 8}{12} = 86$ $8 = 4$ 6 8 ;
at $9d. = \frac{130 \times 9}{12} = 97$ $6 = 4$ 17 6 .

If it is desired to find the income tax on other amounts than those quoted, may easily be done by addition. Thus the tax at 7*d*. on $\pounds I$,493 is

£		£	s.	d.
on 1,490	(p. 202)	43	9	2
on3	(p. 198)		Ι	9
on 1,493		43	10	11

If the tax is desired at a rate not given in the tables, it can be obtained by addition or subtraction. Thus the tax on $\pounds 680$ at 11*d*. is

(n. 200)	た	s.	<i>a</i> .
(p. 200) (p. 200)	14	3	4
	31	3	4
	(p. 200) (p. 200)	(p. 200) 17 (p. 200) 14 31	(p. 200) 17 0 (p. 200) 14 3 31 3

LOGARITHMIC TABLES

On pp. 230-320 there are various logarithmic tables by means of which many calculations required to be made by users of this book can be performed with the greatest ease. These tables are fully explained on pp. 207-228, and with the explanation there given the logarithmic tables may readily be employed by people previously unacquainted with logarithms. It cannot be too strongly urged upon everybody who has calculations to make that logarithms offer a very short and at the same time quite simple means of performing calculations that without their aid frequently involve long and tedious processes.

EXAMPLES

On pp. 42-48 a collection of examples is given showing some of the many purposes to which the tables in this book may be applied. These, in conjunction with the explanations already given, will, it is hoped, make the use of the tables perfectly clear, and at the same time show how many results not specifically tabulated may be arrived at.

Amount of a Sum in Any Number of Years	
(1) Find the amount of £437 at the end of 35 years at $2\frac{1}{4}$ %. 1 in 35 years = 2'17879 437 in 35 years = 2'17879 × 437 = £952'13123	See p 60
$437 = \log 2.640481$ 1 in 35 years = log 0.338216 437 in 35 years = log 2.978697 = £952.13	242 277 264
(2) Required, the amount of £625 in 127 years at $4\frac{1}{2}$ %. I in 100 years = 81.58852 I in 27 , = 3.28201 I in 127 years = 81.58852 × 3.28201 = 267.77434 625 , 127 , = 267.77434 × 625 = £.167358.96250	73 72
or $625 = \log 2.795880$ 1 in 127 years=log 0.01911629 × 127=log 2.427769 625 in 127 years=log 5.223649=£ <u>167359</u>	250 318 232
(3) Find the amount of £475 in 30 years at $2\frac{7}{10} = 2.7 \%$. $475 = \log 2.676694$ 1 in 30 years $= \log 0.01157044 \times 30 = \log 0.347113$ $475 \text{ in 30 years} = \log 3.023807 = £1056.35$ or 1 in 30 years at $2.75 \% = 2.25660$ 1 ,, , , 2.5 $\% = 2.09757$	244 319 231 64 62
Difference = $0.15903 \div 5 = 0.03181$ 1 in 30 yrs. at 2.7 = 2.25660 - 0.03181 = 2.22479 475 in 30 years = 2.22479 × 475 = £ 1056.78 approximately (42)	

(4) Find the rate of interest at which £530 must be invested in order to amount to £3,000 in 80 years.	<u>.</u>
If 530 amounts to 3,000	
3,000_=.660.28	
1 "," ",500038	See p.
This is between 2 % and $2\frac{1}{4}$ %, but nearer $2\frac{1}{4}$ %.	86
$3,000 = \log 3.477121$	238
$530 = \log 2.724276$	246
1 in 80 years=log 0.752845	216
1 , I year = $\log 0.752845 \div 80 = \log 0.009411 = 1.0219$ The rate of interest therefore is an $0.00000000000000000000000000000000000$	
The face of interest therefore is 2^{19} %.	ļ
Present Value of a Sum to be Received in the Future	
(5) It is required to know the present value of £913 to be	
received at the end of 37 years, reckoning interest at 4 %.	
Present value of 1 in 37 years $=$ 2343	70
", ", $913 = 23430 \times 913 = £213.9159$	
I	
913=log 2 960471	262
$1 \text{ in } 37 \text{ years} = \log \circ - \log \circ 630234 = \log 1.369766$	291
913 in 37 years = $\log_{2} 2 \cdot 330237 = \pounds_{213.92}$	235
(
(6) Find the present value of £350 due in 30 years at $4\frac{1}{8}$ %.	
350=log 2.544068	240
P.V. of 1 in 30 yrs. $= \log 0 \log 0.526650$	
$=\log 1.473350$	292
Present value of 350 in 30 years = $\log 2.017418 = \pounds 104.1$	230
or	
Present value of 1 at $4 \frac{\%}{100} = 30832$	70
", ", I ", $4\frac{1}{2}$ % = 20700	72
Difference = $04132 \div 4 = 01033$	
Present value of 1 at $4\frac{1}{8}$ = '30832 - '01033 = '29799	
", ", $350 = 29799 \times 350 = 104.3$ approximately	
· · · · · · · · · · · · · · · · · · ·	1
सेंच	
(7) At the end of 20 years an institution will enter into possession of a property which, it is agreed, will then be worth	

(43)

£5,000. Meantime it receives no income, but must spend £100 upon the property at the end of 5 years, £100 in 10 years, and £100 in 15 years. Find the present value of the property, reckoning interest at 3 %. Present value of 5,000 in 20 years= $55368 \times 5000 = 2768.4$ ", 100, 5 , $=86.261$ ", 100, 10 , $=74.409$ ", 100, 15 , $=64.186$ ", , expenditure $=224.856 = 224.9$ ", property according to conditions=£2543.5	See p. 66 66 66 66
 (8) Find the present value of £1,000 due at the end of 120 years at 2¹/₂%. P.V. of 1,000 due in 100 years=84.65 , 84.65 , 20 , =84.65 × .61027=£51.659 	63 62
$1000 = \log 3.0$ P.V. of 1 in 120 yrs. = log 0 log 1.286864 (year 12 log $r^n \times 10$) = log 2.713136 Present value of 1,000 in 120 years = log 1.713136 = £51.66	279 247
Amount of £1 per Annum (9) Find the amount of £93 per annum in 27 years at $3\frac{1}{2}$ %. Amount of £ 1 per annum in 27 years = £ 43.75906 $602 = 43.75906 \times 92 = £ 43.75906$	68
$\begin{array}{c} 33 = \log 1.968483 \\ \text{Amount of 1 in 27 years} = \log 0.4033894 \\ \text{mount of 1 in 27 years} = \log 1.2376785 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds4069.59 \\ \text{mount of 1 in 27 years} = \log 3.609551 = \pounds400551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ \text{mount of 1 in 27 years} = \log 3.609551 \\ m$	262 287 224 287 243
(10) Find the amount of £735 per annum in 34 years at $2\frac{7}{8}$ %. £735 p. a. in 34 years at $2\frac{7}{8}$ % = log 4.6175421 = £41451.68	225
$ \begin{array}{c} \pounds \text{ 1 per annum at } 3 \% = 57.73018 \\ \pounds \text{ 1 per annum at } 2\frac{3}{4}\% = 55.10023 \\ \text{Difference} = \underline{2.62995} \\ (44) \end{array} $	66 64

$\begin{array}{llllllllllllllllllllllllllllllllllll$	
The error here is considerable. Taking half the difference between $2\frac{3}{4}$ and $3\frac{9}{5}$ to obtain $2\frac{7}{8}\frac{9}{5}$ is only a means of roughly approximating to the correct amount.	
Present Value of Annuity	
(11) Find the present value of $\pounds_{47,25}$ per annum for 30 years at 5 %	Sec.4
P.V. of \pounds_1 per annum = 15'37245 , $\pounds_47'^{25}$ per annum=15'37245 × 47'^{25} = $\pounds_{\underline{726'348}}$	<i>.see p</i> . 74
Log 1'186743 + log 1'674402 = log 2'861145 = $\pounds 726'35$	223
(12) Find the value of a lease yielding £ 137 per annum for 27 years to make 3 % and to get back the principal by the end of the term.	
\pounds I p.a. for 27 years = \pounds 18.32703 or 18.32703 yrs. purchase \pounds 137 ,, , = 18.32703 × 137 = \pounds 2510.8 or	66
$137 = \log 2 \cdot 136721$	230
$\pounds_{137} , , = \log 3.399813 = \pounds_{2510.8}$	283 236
(13) Find the present value of \pounds_1 per annum for 75 years at 3.7 %.	
Present value=log 1'4023555= $\pounds_{25'2555}$	224
 (14) If leasehold property yielding a net annual income of £100 a year for 30 years is bought for £2,000, find the yield per cent. 	
If \pounds_{100} per annum costs $\pounds_{2,000}$, \pounds_{1} per annum costs \pounds_{20} . This is seen to be between $\underline{2\frac{3}{4}}$ and $\underline{3\frac{\%}{2}}$	92
\mathcal{L}_1 p.a. costs \mathcal{L}_2 o=log 1.30103	234
log o - log 1'30103=log 2'69897 $2\frac{7}{8}$ %=log o - log 2'70069=log 1'29931=19'92 This is very close to 20, and therefore the required rate is a triffe less than 2^{\pm} %	222 282

. (45)

Present Value of a Perpetuity	A -
(15) Find the value of a perpetuity of ± 60 a year, reckoning interest at $3\frac{3}{8}$ %.	See to
29 [.] 62963 × 60= <u>1777[.]7778</u>	94
(16) Find the value of a property yielding £25 per annum for the next 15 years and £110 in perpetuity thereafter, reckoning interest at 3 %.	
Take the value of a perpetuity of \pounds 110 per annum and deduct the value of $(110-25=)$ \pounds 85 per annum for 15 years.	
Perpetuity= $33 \times 110 = 3000000$ P.V. of £85 p. a. for 15 years= $1103794 \times 85 = 1014725$	94 66
Value required = ± 2651.941 or	
P.V. of \pounds_{25} p. a. for 15 years=11'93794 × 25= 298'448 P.V. of perpetuity \pounds_{110} deferred 15 years	66
$=21.39539 \times 110 = 2353.493$	97
Value required = ± 2651.941	
(17) Find the value of the reversion to a perpetuity of \pounds 496 per annum after 22 years at $2\frac{5}{8}$ %.	
Value of perpetuity of $\pounds 1$ at $2\frac{5}{8}\% = 38.09524$ P.V. of $\pounds 1$ p. a. for 22 years at $2\frac{1}{2}\% = 16.76541$ ", ", ", $2\frac{3}{4}\% = 16.34350$	94 62 64
Difference 42191	
Approximate P.V. of perpetuity of \mathcal{L}_{I} p. a. at	
$2\frac{5}{8}$ % deferred 22 years = 21.54079 Approximate P.V. of perpetuity of £496 p. a.	
at $2\frac{5}{8}$ % deferred 22 years = 21.54079 × 496 = \pounds_{10} 10684	
Value of perpetuity at	1.1
P.V. of \pounds_1 p. a. for 22 years at $2\frac{5}{8}$ %	94
$=\log 1.2188635 = 16.5525$	280
P.V. of perp. deferred $22 \text{ years} = 21.5427 = \log 1.333300$ $406 = \log 2.605482$	234
P.V. of perp. of £496 deferred 22 years at	
$2\frac{5}{8}\%$ = log 4 $\circ 28782 = \pounds_{10685}$ (46)	231

Sinking Fund

Sinking Fund	
(18) Find the sum to be set aside annually to amount to £750 in 30 years reckoning interest at 4 %.	C. A
The sum to amount to $f_{1} = f_{1} \circ 1783$	112
", ", $\pounds_{750}=01783 \times 750=\pounds_{13}:3725 \text{ p. a.}$	
or $750 = \log 2.875061$	256
Annuity I will buy $= \log \overline{2.762154}$	291
", 750 ", $= \log 1.637215 = 43.373$ Deduct 4 % on 750 = $\cdot04 \times 750 = 30.000$	243
Annual sum to amount to £750 in 30 years = $\underline{\pounds_{13:373}}$	
Annuity a Given Sum will Purchase	
(19) Find the annuity for 35 years that may be bought for $\pounds_{1,573}$, reckoning interest at $3\frac{1}{2}$ %.	
$1573 = \log 3.196729$	232
Annuity 1 will buy $= \log 2.698956$	287
1573 $= \log 1.895685 = £78.6475$	256
or 20'00066 will buy an annuity of f_{1} p. a.	68
1573 will buy an annuity of $\frac{1573}{2000066} = \pounds 78.6474$	
Annuities and Assurances on Lives	
 (20) Find the value of an annuity of £250 on the life of a male aged 45, according to the Government Experience Table at 	
Value of \pounds 1 p. a. = $\pounds_{15,152}$, \pounds_{250} , = $15,152 \times 250 = \pounds_{3788}$	144
(21) Find the value of £1,500 to be received at the death of a male aged 50, according to the Healthy Males Table at $3\frac{1}{2}$ %.	
$5_{2}70$ $5_{2}023 \times 1500 = £780.345$	148
(22) Find the annual payment to secure £1,500 at the death of a male aged 50, according to the Healthy Males Table at $3\frac{1}{2}$ %.	
$0.3667 \times 1500 = £55.005$	150
(23) Find the value of the reversion to a perpetuity of £100 per annum at the death of a male aged 60, according to the Government Experience Table at 3 %, and according to the Healthy Males Table at 3 %. (47)	

	See p.
By Government Experience $22.732 \times 100 = \pounds 2273.2$ By Healthy Males—	152
Value of a perpetuity of $100 = 3333^{\circ}3$	94
,, 100 p. a. for life = $1023'6$	143
,, deferred perpetuity = $\pounds 2309.7$	28
 (24) Find value of annuity of £135 so long as two female lives, aged 25 and 45, both continue to live. Government Table 3%. 	158
$14050 \times 135 = \pm 197775$	130
 (25) Find value of annuity of £250 so long as either of two male lives, aged 30 and 50, continue to live. Healthy Males Table 3½%. 19.7251 × 250 = £4931.275 	173
 (26) Find the single payment to secure £1,250 (a) at the death of the first and (b) at the death of the last of two male lives, aged 45 and 60. Healthy Males Table 4 %. 	
(a) At death of first $.64328 \times 1250 = £804.1$	169
(b) last :2814 × 1250 = $\int 476.75$	176
(0) ,, , ,	-/-
Single and Annual Premiums by Conversion Tables (27) Find the single payment to secure $f_{1,000}$ at death of a person aged A2. Northampton Table 3.96	
Appuitu on life and the surface	T 00
Single payment for annuity of 14 = $.56311$	130
",",",","," = 00291	185
", ", ", ", ", ", ", ", ", ", ", ", ", "	185
", ", $14.162 = .55839$ Single payment to secure 1,000 = $\pounds 558.39$	36
or	
$1000 \left[1 - 029126 \left(14.162 + 1\right)\right] = \pounds 558.3916$	37
(28) Find the annual payment to secure £ 1,000 at the death of a person aged 43. Carlisle Table 4 %.	
Annuity on life aged $43 = 14.505$ Annual premium for annuity of $14.5 = 0.354 - 0.003 = 0.0261$ ", ", $\pounds_{1,000}$ at death $= \pounds_{26.1}$.	14 0 186
$OI = 1000 \left(I = -0.03846 \right) = 64.50 - 38.46 = 4.26.04$	
$(14.505 + 1 0 +) + 3 0 + \frac{25-5-4}{2}$	37

AMOUNT AND PRESENT VALUE of

ONE POUND

AND OF

ONE POUND PER ANNUM

VALUES OF PERPETUITIES AND REVERSIONS NOMINAL AND EFFECTIVE RATES OF INTEREST AND OTHER TABLES

For explanation see pp. 8-23

В

1%

INTEREST TABLES

Years	ONE PO	UND	ONE POUND	PER ANNUM	Var
	Amount	Present Value	Amount	Present Value	Tears
1	1.01000	.99010	I .00000	0.99010	I
2	1.02010	·98030	2.01000	1 97040	2
3	1.03030	·97059	3.03010	2.94099	3
4	1 04060	*96098	4.06040	3.00102	4
5	1.02101	'95147	5.10101	4.85343	5
6	1.00122	104205	6.15202	5-70548	6
	1.07214	.02272	7:01254	579340	
7	1:08286	932/2	8-28-67	7.67.168	6
°	1 00200	92340	0/26852	8+=6600	0
- 9	1.10463	91434	9 30033	0.47120	70
10	1 10402	90549	10 40221	9 4/130	10
II	1.11262	*89632	11.26683	10.36263	11
12	1 • 1 2683	*88745	12.68250	11-25508	12
13	1.13809	*87866	13.80933	12.13374	13
14	1.14942	*86996	14.94742	13.00370	14
15	1.16092	86135	16 09690	13.86505	ıġ
тб	1.17258	-85282	17.25786	14.71787	16
10	1.18430	84428	18.43044	15.56225	17
78	1.10012	*82602	10 61475	16.20827	78
10	1.20811	82774	20.81080	17:22601	10
20	1.55010	·81054	22:01000	18:04555	20
20		10	-2 01900	-8-8-(-8	
21	1.23239	81143	23.23919	18.85098	21
22	1-24472	80340	24.47159	19.00038	22
23	1.25710	79544	25.71030	20.42282	23
24	1'26973	78757	26.97346	21.24339	24
25	1.28243	77977	28.24320	22.02316	25
26	1.29526	77205	29.52563	22.79520	26
27	1.30821	76440	30.82089	23.55961	27
28	1.35150	75684	32.12910	24.31644	28
29	1.33450	*74934	33.42039	25.06579	29
30	1.34785	74192	34.78489	25.80771	30
21	1.36133	*73458	36.13274	26.54220	21
32	1.37494	72730	37.49407	27.26050	32
22	1.38860	'72010	38.86001	27.08060	22
34	1.40258	71207	40.25770	28.70267	24
35	1 41660	70591	41 66028	29.40858	35
36	1.43077	*60802	43.07688	30-10750	36
27	1 44508	*60200	44.50765	20.70051	27
28	1'45052	68515	45.05272	21.48466	28
20	1.47412	67827	43 93-7~	22.16202	30
39	1.48886	67165	48.88627	22.82460	39
40	1,50075	*66=00	40 00037	32 03409	40
41	1 50375	65840	50 37524	33.49909	41
42	1 510/9	15042	51.07099	34-15811	42
43	1 53390	05190	53 39/70	34.81001	43
44	1 54932	04545	54.93170	35 45545	44
45	1.20401	03900	50.48107	30.09421	45
46	1 58046	63273	58.04588	36.72724	46
47	1.29626	62646	59.62634	37 35370	47
48	1.61223	62026	61.22261	37 97396	48
49	1 62835	61412	62.83483	38.28808	49
50	1.64463	.60804	64.46318	39.19612	50

Years	ONE POUND		ONE POUND PER ANNUM		Years
	Amount	Present Value	Amount	Present Value	
51	1.66108	·60202	66·10781	39·79814	51
52	1.67769	·59606	67·76889	40·39419	52
53	1.69447	·59016	69°44658	40°98435	53
54	1.71141	·58431	71°14105	41°56866	54
55	1.72852	·57853	72°85246	42°14719	55
56	1 •74581	·57280	74·58098	42.71999	56
57	1 •76327	·56713	76·32679	43.28712	57
59 60	1.79871 1.81670	·55595 ·55045	79.87096 79.87096 81.66967	43 34003 44 40459 44 95504	59 60
61 62 63 64 65	1.83486 1.85321 1.87174 1.89046 1.90027	•54500 •53960 •53426 •52897	83·48637 85·32123 87·17444 89·04619	45 [.] 50004 46 [.] 03964 46 [.] 57390 47 [.] 10287 47 [.] 62661	61 62 63 64
66 67 68 69 70	1 ·92846 1 ·94774 1 ·96722 1 ·98689 2 ·90676	-575 -51855 -51341 -50833 -50330 -40831	92.84601 94.77447 96.72222 98.68944	48.14516 48.65857 49.16690 49.67020 50.16851	66 67 68 69 70
71 72 73 74 75	2.00070 2.02683 2.04710 2.06757 2.08825 2.10913	4903 49338 48850 48366 47887 47413	102.68310 104.70993 106.75703 108.82460 110.91285	50.66190 51.15039 51.63405 52.11292 52.58705	71 72 73 74 75
76	2·13022	*46944	113.02197	53*05649	76
77	2·15152	*46479	115.15219	53*52127	77
78	2·17304	*46019	117.30372	53*98146	78
79	2·19477	*45563	119.47675	54*43709	79
80	2·21672	*45112	121.67152	54*88821	80
81	2·23888	•44665	123.88824	55·33486	81
82	2·26127	•44223	126.12712	55·77709	82
83	2·28388	•43785	128.38839	56·21494	83
84	2·30672	•43352	130.67227	56·64845	84
85	2·32979	•42922	132.97900	57·07768	85
86	2·35309	·42497	135 ^{.30879}	57·50265	86
87	2·37662	·42077	137 ^{.66187}	57·92342	87
88	2·40038	·41660	140 ^{.03849}	58·34002	88
89	2·42439	·41248	142 ^{.43888}	58·75249	89
90	2·44863	·40839	144 ^{.86327}	59·16088	90
91	2:47312	·40435	147.31190	59·56523	91
92	2:49785	·40034	149.78502	59·96557	92
93	2:52283	·39638	152.28287	60·36195	93
94	2:54806	·39246	154.80570	60·75441	94
95	2:57354	·38857	157.35375	61·14298	95
96	2·59927	·38472	159-92729	61 • 52770	96
97	2·62527	·38091	162-52656	61 • 90862	97
98	2·65152	·37714	165-15183	62 • 28576	98
99	2·67803	·37341	167-80335	62 • 65917	99
100	2:70481	·36971	170-48138	63 • 02888	100

See also Tables on pp. xx-xxxi

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14%

INTEREST TABLES

$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Years	ONE POUND ONE POUND PER AND		ONE POUND ONE POUND PER ANNUM		PER ANNUM	I Years	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Amount	Present Value	Amount	Present Value			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	I	1.01250	·98765	I .00000	0.98765	I		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2	1.02516	·97546	2'01250	1.96312	2		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3	1.03797	.06342	3.03766	2 92653	3		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	4	1.02002	.05152	4.07563	3.87806	Ă		
	5	1.06408	·93978	5.12657	4.81783	5		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6	1.07738	·92817	6.19062	5.74601	6		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	7	1.00082	·91672	7:26804	6.66273	7		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8	1.10440	·90540	8.35889	7.56812	8		
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	9	1.11829	·89422	9.46337	8 46234	9		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	IO	1.13227	·88318	10.28167	9.34553	10		
12116075 $\cdot 86151$ 12.8603611.079311213117526 $\cdot 85087$ 14.0211211.93018131411.8995 $\cdot 84037$ 15.1963812.770551415120483 $\cdot 82999$ 16.3863313.6005515161.21989 $\cdot 81975$ 17.5911614.4202916171.23514 $\cdot 80963$ 18.8110515.2299217181.25058 $\cdot 79963$ 20.0461916.0295518191.26621 $\cdot 78976$ 21.2967716.8193119201.28204 $\cdot 78001$ 22.5628817.5993220211.29806 $\cdot 77038$ 23.8450218.3696921221.31429 $\cdot 76087$ 25.1430819.1305622231.33072 $\cdot 75147$ 26.4573719.8820423241.34735 $\cdot 74220$ 27.7880820.6242324251.36419 $\cdot 73303$ 29.1354421.3572725261.38125 $\cdot 72398$ 30.4996322.0812526271.39851 $\cdot 71505$ 31.8808722.7963027281.41599 $\cdot 70622$ 33.2793823.5025228291.43369 $\cdot 69750$ 34.6953824.2002229301.45161 $\cdot 68889$ 303031311.46976 $\cdot 68038$ 37.5806825.5692931321.46976 $\cdot 68038$ 37.5806825	II	1.14642	·87228	11.71394	10.21280	11		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12	1.16022	·86151	12.86036	11.02031	12		
141:18995:8403715:1963812:7705514151:20483:8299916:3863313:6005515161:21989:8197517:5911614:4202916171:23514:8096318:8110515:2299217181:25058:7996320:0461916:0295518191:28204:7800122:5629817:5993220211:28204:7703823:8450218:3696921221:31429:7668725:1430819:1305622231:33072:7514726:4573719:8820423241:36419:7330320:1354421:3572725251:36419:7330320:1354421:3572725261:38125:7239830:4996322:0812526271:39851:7150531:8808722:7963327281:41599:7062233:2793823:5025228291:43161:688930'1290724:8880130311:46976:6803837:5866825:5692931321:50673:6636940:3385726'9049633341:52557:6554942:0453027:5604634351:54464:6474043:5708728:2078635361:56394:6394145:1155128:8472736371:56349:6394145:1155128:8472736361:5	13	1.17526	·85087	14.02112	11.93018	13		
15 $1 \cdot 20483$ $\cdot 82999$ $16 \cdot 38633$ $13 \cdot 60055$ 15 16 $1 \cdot 21989$ $\cdot 81975$ $17 \cdot 59116$ $14 \cdot 42029$ 16 17 $1 \cdot 23514$ $\cdot 80963$ $18 \cdot 81105$ $15 \cdot 22992$ 17 18 $1 \cdot 25058$ 79963 $20 \cdot 04619$ $16 \cdot 02955$ 18 19 $1 \cdot 26621$ 78976 $21 \cdot 29677$ $16 \cdot 81931$ 19 20 $1 \cdot 28204$ 78001 $22 \cdot 56298$ $17 \cdot 59932$ 20 21 $1 \cdot 29866$ 77038 $23 \cdot 84502$ $18 \cdot 309696$ 21 23 $1 \cdot 31429$ 76087 $25 \cdot 14308$ $19 \cdot 13056$ 22 23 $1 \cdot 33072$ 775147 $26 \cdot 45737$ $19 \cdot 88204$ 23 24 $1 \cdot 34735$ 74220 $27 \cdot 78808$ $20 \cdot 62423$ 24 25 $1 \cdot 36419$ 7.3303 $29 \cdot 13544$ $21 \cdot 35727$ 25 26 $1 \cdot 38125$ 72398 $30 \cdot 49963$ $22 \cdot 08125$ 26 27 $1 \cdot 39851$ 71505 $31 \cdot 88687$ $22 \cdot 79630$ 27 28 $1 \cdot 41501$ -68838 $37 \cdot 5868$ $25 \cdot 56929$ 31 31 $1 \cdot 46976$ -68038 $37 \cdot 58688$ $25 \cdot 56929$ 31 32 $1 \cdot 56673$ -66369 $40 \cdot 53857$ $26 \cdot 24127$ 32 33 $1 \cdot 50673$ -66369 $40 \cdot 53857$ $26 \cdot 94966$ 33 34 $1 \cdot 52557$ -65549 $42 \cdot 04530$ $27 \cdot 56046$ 34 35 $1 \cdot 54$	14	1.18992	·84037	15.19638	12.77055	14		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	15	1.20483	*82999	16.38633	13.60055	15		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	16	1.21989	·81975	17.59116	14.42029	16		
18 $1^{2}2058$ 79963 $20^{\circ}20^{\circ}4619$ $16^{\circ}02955$ 18 19 $1^{\circ}26621$ 78976 $21^{\circ}29677$ $16^{\circ}81931$ 19 20 $1^{\circ}28204$ 77801 $22^{\circ}56298$ $17^{\circ}59932$ 20 21 $1^{\circ}29806$ 77038 $23^{\circ}84502$ $18^{\circ}36969$ 21 22 $1^{\circ}31249$ 76087 $25^{\circ}14308$ $19^{\circ}13056$ 22 23 $1^{\circ}3072$ 75147 $26^{\circ}45737$ $19^{\circ}88204$ 23 24 $1^{\circ}34735$ 74220 $27^{\circ}78808$ $20^{\circ}62423$ 24 25 $1^{\circ}36419$ 73303 $29^{\circ}13544$ $21^{\circ}35727$ 25 26 $1^{\circ}38125$ 772398 $30^{\circ}49963$ $22^{\circ}8125$ 26 27 $1^{\circ}3851$ 71505 $31^{\circ}88087$ $22^{\circ}9630$ 27 28 $1^{\circ}41599$ 70622 $33^{\circ}27938$ $23^{\circ}50252$ 28 29 $1^{\circ}43369$ 69750 $34^{\circ}69538$ $24^{\circ}20002$ 29 30 $1^{\circ}45161$ 68889 $36^{\circ}12907$ $24^{\circ}8891$ 30 31 $1^{\circ}46976$ 68038 $37^{\circ}58068$ $25^{\circ}56299$ 31 32 $1^{\circ}4813$ 67198 $39^{\circ}5044$ $26^{\circ}24127$ 32 33 $1^{\circ}52557$ -65549 $42^{\circ}04530$ $27^{\circ}56046$ 34 35 $1^{\circ}5434$ -63941 $45^{\circ}1551$ $28^{\circ}84727$ 36 36 $1^{\circ}56394$ -63941 $45^{\circ}1294787$ 37 <t< th=""><th>17</th><th>1.53214</th><th>·80963</th><th>18.81105</th><th>15.22992</th><th>17</th></t<>	17	1.53214	·80963	18.81105	15.22992	17		
19 $1 \cdot 26621$ $\cdot 78976$ $21 \cdot 29677$ $16 \cdot 81931$ 1920 $1 \cdot 28204$ $\cdot 78001$ $22 \cdot 56298$ $17 \cdot 59932$ 2021 $1 \cdot 29806$ $\cdot 77038$ $23 \cdot 84502$ $18 \cdot 36969$ 2122 $1 \cdot 31429$ $\cdot 76087$ $25 \cdot 14308$ $19 \cdot 13056$ 2223 $1 \cdot 33072$ $\cdot 75147$ $26 \cdot 4737$ $19 \cdot 88204$ 2324 $1 \cdot 34735$ -74220 $27 \cdot 78808$ $20 \cdot 62423$ 2425 $1 \cdot 36419$ $\cdot 73303$ $29 \cdot 13544$ $21 \cdot 35727$ 2526 $1 \cdot 38125$ -72398 $30 \cdot 49963$ $22 \cdot 08125$ 2627 $1 \cdot 39851$ $\cdot 71505$ $31 \cdot 88087$ $22 \cdot 96302$ 2728 $1 \cdot 4599$ -70622 $33 \cdot 27938$ $23 \cdot 50252$ 2829 $1 \cdot 43369$ -69750 $34 \cdot 69538$ $24 \cdot 20002$ 2930 $1 \cdot 45161$ -68889 $36 \cdot 12907$ $24 \cdot 88891$ 3031 $1 \cdot 46976$ -68038 $37 \cdot 58068$ $25 \cdot 56929$ 3132 $1 \cdot 48813$ -67198 $39 \cdot 05044$ $26 \cdot 24127$ 3233 $1 \cdot 50673$ -66369 $42 \cdot 53857$ $26 \cdot 90496$ 3334 $1 \cdot 52557$ -65549 $42 \cdot 04530$ $27 \cdot 56046$ 3435 $1 \cdot 54464$ -64740 $43 \cdot 57087$ $28 \cdot 20786$ 3536 $1 \cdot 6392$ -63941 $45 \cdot 11551$ $28 \cdot 84727$ 3637 $1 \cdot 56394$ -63941 <	18	1.22028	•79963	20.04619	16.02955	18		
20 $1 \cdot 28204$ $\cdot 78001$ $22 \cdot 56298$ $17 \cdot 59932$ 2021 $1 \cdot 29806$ $\cdot 77038$ $23 \cdot 84502$ $18 \cdot 36969$ 2122 $1 \cdot 31429$ $\cdot 76087$ $25 \cdot 14308$ $19 \cdot 13056$ 2223 $1 \cdot 33072$ $\cdot 75147$ $26 \cdot 45737$ $19 \cdot 88204$ 2324 $1 \cdot 34735$ $\cdot 74220$ $27 \cdot 78808$ $20 \cdot 62423$ 2425 $1 \cdot 36119$ $\cdot 73303$ $29 \cdot 13544$ $21 \cdot 35727$ 2526 $1 \cdot 38125$ $\cdot 72398$ $30 \cdot 49963$ $22 \cdot 08125$ 2627 $1 \cdot 39851$ $\cdot 71505$ $31 \cdot 88087$ $22 \cdot 79630$ 2728 $1 \cdot 41599$ $\cdot 70622$ $33 \cdot 27938$ $23 \cdot 50252$ 2829 $1 \cdot 43369$ -69750 $34 \cdot 69538$ $24 \cdot 20002$ 2930 $1 \cdot 46976$ -68838 $37 \cdot 58068$ $25 \cdot 56929$ 3131 $1 \cdot 46976$ -68038 $37 \cdot 58068$ $25 \cdot 56929$ 3132 $1 \cdot 48976$ -638549 $40 \cdot 53857$ $26 \cdot 90496$ 3334 $1 \cdot 52557$ -65549 $42 \cdot 04530$ $27 \cdot 56046$ 3435 $1 \cdot 56394$ -63941 $45 \cdot 11551$ $28 \cdot 84727$ 3636 $1 \cdot 56394$ -63941 $45 \cdot 1251$ $28 \cdot 84727$ 3637 $1 \cdot 58349$ -63941 $45 \cdot 12787$ 3738 $1 \cdot 66329$ -63941 $45 \cdot 127874$ 3637 $1 \cdot 58349$ -63941 $45 \cdot 12787$ 36	19	1.56651	•78976	21.29677	16.81931	19		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	20	1.28204	•78001	22.56298	17.59932	20		
22 $1^{3}1429$ 76087 $25^{1}4308$ $19^{1}3056$ 22 23 $1^{3}3072$ 75147 $26^{4}5737$ $19^{8}8204$ 23 24 $1^{3}4735$ 74220 $27^{7}7808$ $20^{5}62423$ 24 25 $1^{3}619$ 73303 $29^{1}3544$ $21^{3}5727$ 25 26 $1^{3}8125$ 72398 $30^{4}9963$ $22^{5}08125$ 26 27 $1^{3}9851$ 71505 $31^{1}88087$ $22^{7}9630$ 27 28 $1^{4}1599$ 70622 $33^{2}7938$ $23^{5}50252$ 28 29 $1^{4}3369$ 60750 $34^{6}9538$ $24^{2}0002$ 29 30 $1^{4}5161$ -68889 $36^{1}12907$ $24^{1}8891$ 30 31 $1^{4}6976$ -68038 $37^{1}58068$ $25^{1}56929$ 31 32 $1^{5}3673$ -66369 $40^{5}3857$ $26^{9}9496$ 33 34 $1^{5}2557$ -65549 $42^{1}04530$ $27^{1}56046$ 34 35 $1^{5}6394$ -63941 $45^{1}1551$ $28^{1}84727$ 36 36 $1^{5}6394$ -63941 $45^{1}1551$ $28^{1}84727$ 36 37 $1^{5}8349$ -63152 $46^{1}67945$ $29^{1}4878$ 37 38 $1^{6}0622$ $49^{1}88623$ $30^{1}1852$ 39 40 $1^{6}4362$ -60841 $51^{1}38834$ $33^{1}68640$ 44 $47^{1}68497$ 59348 $54^{1}79734$ $32^{1}2132$ 42 43 $1^{7}7081$ 5	21	1.29806	•77038	23.84502	18.36969	21		
23 $1 \cdot 33072$ 75147 $26 \cdot 45737$ $19 \cdot 88204$ 23 24 $1 \cdot 34735$ 74220 $27 \cdot 78808$ $20 \cdot 62423$ 24 25 $1 \cdot 36419$ 73303 $29 \cdot 13544$ $21 \cdot 35727$ 25 26 $1 \cdot 38125$ 72398 $30 \cdot 49963$ $22 \cdot 08125$ 26 27 $1 \cdot 39851$ 71505 $31 \cdot 88087$ $22 \cdot 79630$ 27 28 $1 \cdot 41599$ 70622 $33 \cdot 27938$ $23 \cdot 50252$ 28 29 $1 \cdot 43369$ -69750 $34 \cdot 69538$ $24 \cdot 20002$ 29 30 $1 \cdot 45161$ -68889 $36 \cdot 12907$ $24 \cdot 88891$ 30 31 $1 \cdot 46976$ -68038 $37 \cdot 58068$ $25 \cdot 56929$ 31 32 $1 \cdot 48976$ -66369 $40 \cdot 53857$ $26 \cdot 92472$ 32 33 $1 \cdot 50673$ -66369 $40 \cdot 53857$ $26 \cdot 92496$ 33 34 $1 \cdot 52557$ -65549 $42 \cdot 04530$ $27 \cdot 56046$ 34 35 $1 \cdot 54464$ -64740 $43 \cdot 57087$ $28 \cdot 20786$ 35 36 $1 \cdot 56394$ -63152 $46 \cdot 67945$ $29 \cdot 47878$ 37 37 $1 \cdot 58349$ -63152 $46 \cdot 67945$ $29 \cdot 47878$ 37 38 $1 \cdot 66416$ -60090 $53 \cdot 13318$ $31 \cdot 92784$ 41 42 $1 \cdot 66416$ -60090 $53 \cdot 13318$ $31 \cdot 92784$ 41 42 $1 \cdot 66497$ 59748 57777 $59 \cdot 91569$ $34 \cdot 25817$ 45	22	1.31429	•76087	25.14308	19.13056	22		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	23	1.33072	.75147	26.45737	19.88204	23		
25 $1\cdot36419$ $\cdot73303$ $29\cdot13544$ $21\cdot35727$ 25 26 $1\cdot38125$ $\cdot72398$ $30\cdot49963$ $22\cdot08125$ 26 27 $1\cdot39851$ $\cdot71505$ $31\cdot88087$ $22\cdot99630$ 27 28 $1\cdot41599$ $\cdot70622$ $33\cdot27938$ $23:50252$ 28 29 $1\cdot43369$ $\cdot69750$ $34\cdot69538$ $24\cdot20002$ 29 30 $1\cdot45161$ $\cdot68889$ $36\cdot12907$ $24\cdot88891$ 30 31 $1\cdot46976$ $\cdot68038$ $37\cdot58068$ $25\cdot56929$ 31 32 $1\cdot48813$ $\cdot67198$ $39\cdot05044$ $26\cdot24127$ 32 33 $1\cdot50673$ $\cdot66369$ $40\cdot53857$ $26\cdot90496$ 33 34 $1\cdot52557$ $\cdot65549$ $42\cdot04530$ $27\cdot56046$ 34 35 $1\cdot54464$ -64740 $43\cdot57087$ $28\cdot20786$ 35 36 $1\cdot56394$ -63341 $45\cdot11551$ $28\cdot84727$ 36 37 $1\cdot58349$ -63312 $46\cdot67945$ $29\cdot47878$ 37 38 $1\cdot60329$ -62372 $48\cdot26294$ $30\cdot10250$ 38 39 $1\cdot62333$ -61602 $49\cdot88623$ $30\cdot71852$ 39 40 $1\cdot64362$ -60841 $51\cdot48566$ $31\cdot32693$ 40 41 $1\cdot66416$ -60090 $53\cdot13318$ $31\cdot92784$ 41 42 $1\cdot68497$ $\cdot59348$ $54'79734$ $32\cdot52132$ 42 43 $1\cdot70631$ $\cdot56471$ $61\cdot66464$ $34\cdot82288$ 46 47	24	1.34735	•74220	27.78808	20.62423	24		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	25	1.36419	•73303	29.13544	21.35727	25		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	26	1.38125	.72398	30.49963	22.08125	26		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	27	1.39821	.71505	31.88087	22.79630	27		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	28	1.41599	.70622	33 27938	23.20252	28		
30 $1 \cdot 45161$ $\cdot 68889$ $36 \cdot 12907$ $24 \cdot 88891$ 3031 $1 \cdot 46976$ $\cdot 68038$ $37 \cdot 58068$ $25 \cdot 56929$ 31 32 $1 \cdot 48813$ $\cdot 67198$ $39 \cdot 05044$ $26 \cdot 24127$ 32 33 $1 \cdot 50673$ $\cdot 66369$ $40 \cdot 53857$ $26 \cdot 90496$ 33 34 $1 \cdot 52557$ $\cdot 65549$ $42 \cdot 04530$ $27 \cdot 56046$ 34 35 $1 \cdot 56394$ $\cdot 64740$ $43 \cdot 57087$ $28 \cdot 20786$ 35 36 $1 \cdot 56394$ $\cdot 63941$ $45 \cdot 11551$ $28 \cdot 84727$ 36 37 $1 \cdot 58349$ $\cdot 63152$ $46 \cdot 67945$ $29 \cdot 47878$ 37 38 $1 \cdot 60329$ $\cdot 62372$ $48 \cdot 26294$ $30 \cdot 10250$ 38 39 $1 \cdot 64362$ $\cdot 60841$ $51 \cdot 48956$ $31 \cdot 32693$ 40 40 $1 \cdot 66416$ $\cdot 60090$ $53 \cdot 13318$ $31 \cdot 92784$ 41 42 $1 \cdot 664467$ 558616 $56 \cdot 48231$ $33 \cdot 10748$ 43 43 $1 \cdot 72735$ $\cdot 57892$ $58 \cdot 18834$ $33 \cdot 68640$ 44 45 $1 \cdot 7081$ $\cdot 56471$ $61 \cdot 66464$ $34 \cdot 82288$ 46 47 $1 \cdot 70294$ $\cdot 55774$ $63 \cdot 43545$ $35 \cdot 38662$ 47 48 $1 \cdot 81535$ $\cdot 55466$ $67 \cdot 2439$ $35 \cdot 31 \cdot 48$ 48 49 $1 \cdot 81535$ $\cdot 54406$ $67 \cdot 04374$ $36 \cdot 47554$ 49 50 $1 \cdot 86102$ $\cdot 53734$ $68 \cdot 88179$ $37 \cdot 01288$ 50	29	1.43369	•69750	34.69538	24.20002	29		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	30	1.42161	•68889	36.12907	24.88891	30		
32 1:48813:67198 $39 \cdot 05044$ $26 \cdot 24127$ 32 33 1:50673:66369 $40 \cdot 53857$ $26 \cdot 02496$ 33 34 1:52557:65549 $42 \cdot 04530$ $27 \cdot 56046$ 34 35 1:54464:64740 $43 \cdot 57087$ $28 \cdot 20786$ 35 36 1:56394:63941 $43 \cdot 11551$ $28 \cdot 84727$ 36 37 1:58349:63152 $46 \cdot 67945$ $29 \cdot 47878$ 37 38 1:60329:62372 $48 \cdot 26294$ $30 \cdot 10250$ 38 39 1:62333:61602 $49 \cdot 88623$ $30 \cdot 71852$ 39 40 1:64362:60841 $51 \cdot 48956$ $31 \cdot 32693$ 40 41 1:66416:60090 $53 \cdot 13318$ $31 \cdot 92784$ 41 42 1:68497:59348 $54 \cdot 79734$ $32 \cdot 52132$ 42 43 1:70603:58616:56 \cdot 48231 $33 \cdot 10748$ 43 44 1:72735:57892:58 \cdot 18834 $33 \cdot 68640$ 44 45 1:7081:56471:61 \cdot 66464 $34 \cdot 82288$ 46 47 1:70294:55774:63 \cdot 43545:35 \cdot 38602 47 48 1:81535:50866:52 \cdot 2839:35 \cdot 93 \cdot 48 48 49 1:83655:54406:67 \cdot 04374:6'47554 49 50 1:86102:53734:68 \cdot 88179:37 \cdot 01288:50	31	1.46976	•68038	37.58068	25.56929	31		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	32	1.48813	·67198	39.05044	26.24127	32		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	33	1.20623	·66369	40.23822	26.90496	33		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	34	1.22557	•65549	42.04530	27.56046	34		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35	1.24464	•64740	43.57087	28.20786	35		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	36	1.56394	•63941	45.11551	28.84727	36		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	37	1.58349	·63152	46.67945	29.47878	37		
39 1.62333 .61602 49.88623 30.71852 39 40 1.64362 .60841 51.48956 31.32693 40 41 1.66416 .60090 53.1318 31.92784 41 42 1.68497 .59348 54.79734 32.52132 42 43 1.70603 .58616 56.48231 33.10748 43 44 1.72735 .57892 .58.18834 33.68640 44 45 1.74895 .57177 .59.91569 34.25817 45 46 1.77081 .56471 61.666464 34.82288 46 47 1.79294 .55774 63.43545 35.38062 47 48 1.81535 .55086 65.22839 35.93148 48 49 1.83635 .5406 67.04374 36.47554 49 50 1.86102 .53734 68.88179 37.01288 50	38	1.60329	62372	48.26294	30.10220	38		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	39	1.62333	·61602	49.88623	30.71852	39		
411.66416.6009053.1331831.9278441421.68497.5934854.7973432.5213242431.70603.5861656.4823133.1074843441.72735.5789258.1883433.6864044451.74895.5717759.9156934.2581745461.77081.5647161.6646434.8228846471.79294.5577463.4354535.3866247481.81535.5508665.2283935.9314848491.8355.5440667.0437436.4755449501.86102.5373468.8817937.0128850	40	1.64362	·60841	51.48956	31.32693	40		
42 1.68497 .59348 54.79734 32.52132 42 43 1.70603 .58616 56.48231 33.10748 43 44 1.72735 .57892 58.18834 33.68640 44 45 1.74895 .57177 59.91569 34.25817 45 46 1.77081 .56471 61.66464 34.8288 46 47 1.79294 .55774 63.43545 35.38662 47 48 1.81535 .55086 65.22839 35.93148 48 49 1.83805 .54406 67.04374 36.47554 49 50 1.86102 .53734 68.88179 37.01288 50	41	1.66416	•60090	53.13318	31 92784	41		
43 1·70603 ·58616 56·48231 33·10748 43 44 1·72735 ·57892 58·18834 33·68640 44 45 1·74895 ·57177 59·91569 34·25817 45 46 1·77081 ·56471 61·66464 34·82288 46 47 1·79294 ·55774 63·43545 35:38662 47 48 1·81535 ·550866 65·22839 35·93148 48 49 1·83805 ·54406 67·04374 36'47554 49 50 1·86102 ·53734 68·88179 37·01288 50	42	1 68497	•59348	54.79734	32.52132	42		
44 1·72735 ·57892 58·18834 33·68640 44 45 1·74895 ·57177 59·91569 34·25 ⁸ 17 45 46 1·7081 ·56471 61·66464 34·82288 46 47 1·70294 ·55774 63·43545 35·38062 47 48 1·81535 ·55086 65·22839 35·93148 48 49 1·83655 ·54406 67·04374 36'47554 49 50 1·86102 ·53734 68·88179 37·01288 50	43	1.70603	-58616	56.48231	33.10748	43		
45 1·74895 ·57177 59·91569 34·25817 45 46 1·77081 ·56471 61·66464 34·82288 46 47 1·79294 ·55774 63·43545 35·38062 47 48 1·81535 ·55086 65·22839 35·93148 48 49 1·83805 ·54406 67·04374 36·47554 49 50 1·86102 ·53734 68·88179 37·01288 50	44	1.72735	.57892	58.18834	33.6864 0	44		
46 1 •77081 •56471 61 •66464 34 •82288 46 47 1 •79294 •55774 63 •43545 35 •38062 47 48 1 •81535 •55086 65 •22839 35 •93148 48 49 1 •83805 •54406 67 •04374 36 •47554 49 50 1 •86102 •53734 68 •88179 37 •01288 50	45	1.74895	•57 177	59.91569	34.25817	45		
47 1.79294 .55774 63.43545 35.38062 47 48 1.81535 .55086 65.22839 35.93148 48 49 1.83805 .54406 67.04374 36.47554 49 50 1.86102 .53734 68.88179 37.01288 50	46	1.22081	•56471	61.66464	34.82288	46		
48 1.81535 .55086 65.22839 35.93148 48 49 1.83805 .54406 67.04374 36.47554 49 50 1.86102 .53734 68.88179 37.01288 50	47	1.79294	*55774	63.43545	35 · 3806 2	47		
49 1.83805 .54406 67.04374 36.47554 49 50 1.86102 .53734 68.88179 37.01288 50	48	1.81535	•55086	65.22839	35.93148	48		
50 1·86102 ·53734 68·88179 37·01288 50	49	1.83805	.54406	67.04374	36.47554	49		
	50	1.86102	•53734	68.88179	37.01288	50		

1¹/₄%

Years	ONE PO	DUND	ONE POUND	PER ANNUM	Years .
	Amount	Present Value	Amount	Present Value	
51	1 ·88429	·53071	70·74281	37·54358	51
52	1 ·90784	·52415	72·62710	38 ·06 773	52
53	1 ·93169	·51768	74·53494	38·58542	53
54	1 ·95583	·51129	76·46662	39·09671	54
55	1 ·98028	·50498	78·42246	39·60169	55
56	2·00503	*49874	80·40274	40.10043	56
57	2·03010	*49259	82·40777	40.59302	57
58	2·05547	*48651	84·43787	41.07952	58
59	2·08117	*48050	86·49334	41.56002	59
60	2·10718	*47457	88·57451	42.03459	60
61	2·13352	•46871	90.68169	42.50330	61
62	2·16019	•46292	92.81521	42.96622	62
63	2·18719	•45721	94.97540	43.42343	63
64	2·21453	•45156	97.16259	43.87499	64
65	2·24221	•44599	99.37713	44.32098	65
66	2·27024	•4404 8	101 61934	44.76146	66
67	2·29862	•43504	103 88958	45.19651	67
68	2·32735	•42967	106 18820	45.62618	68
69	2·35644	•42437	108 51555	46.05055	69
70	2·38590	•41913	110 87200	46.46968	70
71	2·41572	•41395	113:25790	46.88363	71
72	2·44592	•40884	115:67362	47.29247	72
73	2·47649	•40380	118:11954	47.69627	73
74	2·50745	•39881	120:59604	48.09508	74
75	2·53879	•39389	123:10349	48.48897	75
76	2·57053	·38903	125.64228	48.87800	76
77	2·60266	·38422	128.21281	49.26222	77
78	2·63519	·37948	130.81547	49.64170	78
79	2·66813	·37479	133.45066	50.01649	79
80	2·70149	·37017	136.11880	50.38666	80
81	2·73525	·36560	1 38 • 82028	50°75225	81
82	2·76944	·36108	141 • 55554	51°11334	82
83	2·80406	·35663	144 • 32498	51°46996	83
84	2·83911	·35222	147 • 12904	51°82219	84
85	2·87460	·34787	149 • 9681 5	52°17006	85
86	2·91053	·34358	152.84276	52.51364	86
87	2·94692	·33934	155.75329	52.85298	87
88	2·98375	·33515	158.70021	53.18813	88
89	3·02105	·33101	161.68396	53.51914	89
90	3·05881	·32692	164.70501	53.84606	90
91	3·09705	·32289	167 •76382	54.16895	91
92	3·13576	·31890	170 •86087	54.48785	92
93	3·17496	·31496	173 •99663	54.80282	93
94	3·21464	·31108	177 •171 59	55.11389	94
95	3·25483	·30724	180 •38623	55.42113	95
96	3·29551	·30344	183.64106	55·72457	96
97	3·33671	·29970	186.93658	56·02427	97
98	3·37842	·29600	190.27328	56·32026	98
99	3·42065	·29234	193.65170	56·61261	99
100	3·46340	·28873	197.07234	56·90134	100

See also Tables on pp. xx-xxxi

1¹/₂%

INTEREST TABLES

Van	ONE PC	ONE POUND		ONE POUND PER ANNUM	
I Cars	Amount	Present Value	Amount	Present Value	
I	1.01200	·98522	1.00000	0 ·9 8522 1·05588	1 2
2	103023	97000	2.04523	2.01220	3
3	1.04500	95032	4:00000	2.85438	4
4	1.07728	-92826	5.15227	4.78265	5
5		01454	6:22055	5.60710	6
0	1.09344	91454	7:22200	6:50821	7
7	1.10994	-90103	8-42284	7-48503	8
8	1.12649	-00//1	0 43204	8.26052	o l
9	1.14339	86167	9 55955 10 70272	9.22219	10
	1.17705	-84803	11.86326	10.07112	II
11	1 1//95	*82620	13.04121	10.00221	12
12	1 19502	-82402	14.23683	11.73153	13
13	1 21355	-87785	15.45028	12.54338	14
14	1.23170	170085	16.68214	13.34323	15
15	1-25023	79905	10 00214	14.12126	16
10	1.20899	70003	1/ 9323/	14 19120	17
17	1.58805	77039	19-20130	14 90703	78
18	1.30234	.70491	20-40930	150/250	TO
19	1.32692	.75301	21 /90/2	10 42017	-7
20	1.34686	.74247	23-12307	1/ 10004	20
21	1.36206	.73150	24 47052	17.90014	22
22	1.38756	•72069	25.83758	10.02003	22
23	1.40838	71004	27.22515	19.33080	23
24	1 42950	·69954	28.63352	20.03041	24
25	1.45095	•68921	30.06302	20'71901	-6
26	1.4221	.67902	31.21392	21.39863	20
27	1 40480	•66899	32.98668	22.00702	27
28	1.51722	65910	34.48148	22.72672	28
20	1 53008	64936	35.99870	23.37608	29
30	1.26308	63976	37.53868	24 01 584	30
31	1.28623	·63031	39.10176	24.64615	31
32	1 61032	62099	40.68829	25 207 14	32
32	1.63448	·61182	42.29862	25.87890	33
24	1.62000	.60277	43.93309	26.48173	34
35	1 68388	59387	45.59209	27.07560	35
26	1.20014	.58509	47 27 597	27.66068	36
27	1.72478	.57644	48 98511	28.23713	37
3/	1.76080	.56702	50 7 1 9 8 9	28.80505	38
30	1.78721	-55053	52.48068	29.36458	39
39	1.81402	-55126	54-26789	29.91585	40
40	1.84122	.54312	56.08101	30.45896	41
41	7.86885	.52500	57 92314	30 99405	42
42	1.80688	+52718	50.20100	31.2123	43
43	1 09000	1020	61 68887	32 04062	44
44	1 94533	17171	63 61420	32.55234	45
45	1.95421	511/1	65.56847	22:05640	46
46	1.98323	50415	67.55104	22.55210	47
47	2.01359	49070	60155194	24:04255	17
48	2.04348	40930	09 50522	24-52468	10
49	2.02413	.40213	71.000/0	24.00060	50
50	2.10224	•47 500	73.00203	34 99909	

 $1_{2}^{10}/_{0}$

Years	ONE PO	DUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
51	2·13682	•46798	75·78807	35·46767	51
52	2·16887	•46107	77·92489	35·92874	52
53	2·20141	•45426	80·09376	36·38300	53
54	2·23443	•44754	82·29517	36·83054	54
55	2·26794	•44093	8 4·52962	37·27147	55
56	2·30196	-43441	86·79754	37 •70588	56
57	2·33649	-42799	89·09951	38 • 1 3387	57
58	2·37154	-42167	91·43600	38 • 555554	58
59	2·40711	-41544	93·80754	38 • 97097	59
60	2·44322	-40930	96·21465	39 • 38027	60
61	2·47987	·40325	98.65787	39·78352	61
62	2·51707	·39729	101.13774	40·18080	62
63	2·55482	·39142	103.65481	40·57222	63
64	2·59314	·38563	106.20963	40·95785	64
65	2·63204	·37993	108.80277	41·33779	65
66	2.67152	*37432	111-43481	41.71211	66
67	2.71160	*36879	114-10634	42.08089	67
68	2.75227	*36334	116-81793	42.44423	68
69	2.79355	*35797	119-57020	42.80220	69
70	2.83546	*35268	122-36375	43.15487	70
71	2·87799	·34746	125-19921	43·50234	71
72	2·92116	·34233	128-07720	43·84467	72
73	2·96498	·33727	130-99836	44·18194	73
74	3·00945	·33229	133-96333	44·51422	74
75	3·05459	·32738	136-97278	44·84160	75
76	3·10041	·32254	140:02737	45°16414	76
77	3·14692	·31777	143:12778	45°48191	77
78	3·19412	·31308	146:27470	45°79499	78
79	3·24203	·30845	149:46882	46°10343	79
80	3·29066	·30389	152:71085	46°40732	80
81	3·34002	·29940	156.00152	46·70672	81
82	3·39012	·29497	159.34154	47·00170	82
83	3·44097	·29062	162.73166	47·29231	83
84	3·49259	·28632	166.17264	47·57863	84
85	3·54498	·28209	169.66523	47·86072	85
86	3·59815	·27792	173-21020	48.13864	86
87	3·65213	·27381	176-80836	48.41246	87
88	3·70691	·26977	180-46048	48.68222	88
89	3·76251	·26578	184-16739	48.94800	89
90	3·81895	·26185	187-92990	49.20985	90
91	3 [.] 87623	·25798	191 ·74885	49.46784	91
92	3 [.] 9343 8	·25417	195 ·625c8	49.72201	92
93	3 [.] 99339	·25041	199 ·55946	49.97242	93
94	4 [.] 05329	·24671	203 ·55285	50.21913	94
95	4 [.] 11409	·24307	207 ·60614	50.46220	95
96	4·17580	·23947	211.72023	50°70168	96
97	4·23844	·23594	215.89604	50°93761	97
98	4·30202	·23245	220.13448	51°17006	98
99	4·36655	·22901	224.43650	51°39907	99
100	4·43205	·22563	228.80304	51°62470	100

See also Tables on pp. xx-xxxi

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INTEREST TABLES

Voors	ONE P	OUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
I	1.01750	·98280	I.00000	0.98280	I
2	1.03231	•96590	2.01750	1.94870	2
3	1.05342	·94929	3.05281	2.89798	3
4	1.07186	93296	4.10623	3.83094	4
5	1 09062	•91691	5.17809	4.74786	5
6	1.10020	-90114	6.26871	5.64000	6
7	1.15015	·88564	7.37841	6.53464	7
8	1.14888	·87041	8.50753	7:40505	8
Ō	1.16800	85544	9.65641	8.26040	o
10	1.18944	.84073	10.82540	9.10122	10
11	1.51056	·82627	12.01484	9.02749	II
12	1.23144	·81206	13.22510	10.73055	12
12	1.25200	.79809	14.42654	11.53764	13
14	1.27492	.78436	15.70953	12:32201	14
15	I 29723	77087	16.98445	13.09288	15
16	1.31003	.75762	18.28168	13.85050	16
17	1.34303	.74459	10.00101	14.50508	17
78	1.36653	.73178	20.04463	15.32686	18
TO	1.30042	.71010	22.31117	16.04606	10
20	1.41478	.70682	23.70161	16.75288	20
21	1.43954	·69467	25.11630	17:44755	21
22	1.46473	68272	26.55593	18.13027	22
23	I 49036	67098	28.02065	18.80125	23
24	1.51644	65944	29.51102	19.46069	24
25	1.54298	·64810	31.02746	20.10878	25
26	1.26998	·63695	32.57044	20.74573	26
27	1.29746	·62599	34.14042	21.37173	27
28	1.62541	.61523	35.73788	21.98695	28
29	1.65386	·60465	37:36329	22.29160	29
30	1.68280	·59425	39.01715	23.18585	30
31	1.71225	·58403	40.69995	23.76988	31
32	1*74221	-57398	42.41220	24.34386	32
33	1.77270	•56411	44.12441	24.90797	33
34	1.80372	·55441	45.92712	25.46238	34
35	1.83529	•54487	47.73084	26.00725	35
36	1.86741	.53550	49.56613	26.54275	36
37	1.90009	.52629	51.43354	27.06904	37
38	1.93334	.51724	53.33362	27.58628	38
30	1.96717	.50834	55.26696	28.09463	30
40	2 00160	49960	57.23413	28.59423	40
41	2.03663	·49101	59.23573	29.08524	41
42	2.07227	48256	61 27236	29.56780	42
43	2.10853	47426	63.34462	30.04207	43
44	2.14543	46611	65.45315	30.50817	44
45	2.18298	45809	67.59858	30.96626	45
46	2.22118	·45021	69.78156	31.41647	46
47	2.26005	.44247	72.00274	31.85894	47
48	2.29960	·43486	74.26278	32.29380	48
49	2.33984	42738	76.56238	32.72118	40
50	2.38079	42003	78.90222	33.14121	50

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Vents	ONE POUND		ONE POUND PER ANNUM		Years
I Cais -	Amount	Present Value	Amount	Present Value	
51	2:42245	·41280	81 • 28301	33`55401	51
52	2:46485	·40570	83 • 70547	33`95972	52
53	2:50798	·39873	86 • 17031	34`35 ⁸⁴⁵	53
54	2:55187	·39187	88 • 67829	34`75032	54
55	2:59653	·38513	91 • 23016	35`13545	55
56	2.64197	·37851	93.82669	35,51395	56
57	2.68820	·37200	96.46866	35,88595	57
58	2.73524	·36560	99.15686	36,25155	58
59	2.78311	·35931	101.89210	36,61086	59
60	2.83182	·35313	104.67522	36,96399	60
61	2·88137	·34706	107·50703	37·31104	61
62	2·93180	·34109	110·38841	37·65213	62
63	2·98310	·33522	113·32020	37·98735	63
64	3·03531	·32946	116·30331	38·31681	64
65	3·08843	·32379	119·33861	38·64060	65
66	3·14247	·31822	122*42704	38.95882	66
67	3·19747	·31275	125*56951	39.27157	67
68	3·25342	·30737	128*76698	39.57893	68
69	3·31036	·30208	132*02040	39.88102	69
70	3·36829	·29689	135*33076	40.17790	70
71	3·42723	·29178	138.69905	40·46968	71
72	3·48721	·28676	142.12628	40·75545	72
73	3·54824	·28183	145.61349	41·03828	73
74	3·61033	·27698	149.16173	41·31526	74
75	3·67351	·27222	152.77206	41·58748	75
76	3.73780	·26754	156:44557	41.85502	76
77	3.80321	·26294	160:18336	42.11795	77
78	3.86977	·25841	163:98657	42.37636	78
79	3.93749	·25397	167:85634	42.63033	79
80	4.00639	·24960	171:79382	42.87994	80
81	4 07650	•24531	175 ^{.80022}	43·12524	81
82	4 14784	•24109	179 [.] 87672	43·36633	82
83	4 22043	•23694	184 [.] 02456	43·60328	83
84	4 29429	•23287	188 [.] 24499	43·83614	84
85	4 36944	•22886	192 [.] 53928	44·06501	85
86	4·44590	·22493	196·90872	44·28993	86
87	4·52371	·22106	201·35462	44·51099	87
88	4·60287	·21726	205·87833	44·72824	88
89	4·68342	·21352	210·48120	44·94176	89
90	4·76538	·20985	215·16462	45·15161	90
91	4·84877	·20624	219 [.] 93000	45 ^{.35785}	91
92	4·93363	·20269	224 [.] 77877	45 ^{.56054}	92
93	5·01997	·19920	229 [.] 71240	45 ^{.75974}	93
94	5·10782	·19578	234 [.] 73237	45 ^{.95552}	94
95	5·19720	·19241	239 [.] 84018	46 ^{.14793}	95
96	5 •28815	·18910	245.03739	46·33704	96
97	5 •38070	·18585	250.32554	46·52288	97
98	5 •47486	·18265	255.70624	46·70554	98
99	5 • 57067	·17951	261.18110	46·88505	99
100	5 •66816	·17642	266.75177	47·06147	100

See also Tables on pp. xx-xxxi

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INTEREST TABLES

Years	ONE POUND		ONE POUND PER ANNUM		Years
	Amount	Present Value	Amount	Present Value	
I	I *02000	·98039	I *00000	•98039	1
2	I *04040	·96117	2*02000	1 •941 56	2
3 4 5	1.06121 1.08243 1.10408	·94232 ·92385	3.06040 4.12161 5.20404	2·88388 3·80773	345
6	1·12616 1·14869	·88797 ·87056	6·30812 7·43428	5.60143	6
8 9 10	1.17166 1.19509 1.21800	·85349 ·83676 ·82035	8·58297 9·75463	7 · 32548 8 · 16224 8 · 98258	8 9 10
11	1 ·24337	*80426	12.16872	9°78685	11
12	1 ·26824	*78849	13.41209	10°57534	12
13	1 ·29361	*77303	14.68033	11°34837	13
14	1 ·31948	*75788	15.97394	12°10625	14
15	1 ·34587	*74301	17.29342	12°84926	15
16	1·37279	·72845	18.63928	13.57771	16
17	1·40024	·71416	20.01207	14.29187	17
18	1·42825	·70016	21.41231	14.99203	18
19	1·45681	·68643	22.84056	15.67846	19
20	1·48595	·67297	24.29737	16.35143	2 0
21	1 · 51567	·65978	25 78332	17 °01 121	21
22	1 · 54598	·64684	27 29898	17 °65805	22
23	1 · 57690	·63416	28 84496	18 °29220	23
24	1 · 60844	·62172	30 42186	18 °91 393	24
25	1 · 64061	·60953	32 03030	19 °52346	25
26	1.67342	·59758	33.67090	20·12104	26
27	1.70689	·58586	35.34432	20·70690	27
28	1.74102	·57437	37.05121	21·28127	28
29	1.77584	·56311	38.79223	21·84438	29
30	1.81136	·55207	40.56808	22·39646	30
31	1 •847 59	·54125	42°37944	22:93770	31
32	1 •884 54	·53063	44°22703	23:46833	32
33	1 •9222 3	·52023	46°11157	23:98856	33
34	1 •96068	·51003	48°03380	24:49859	34
35	1 •99989	·50003	49°99447	24:99862	35
36	2:03989	-49022	51 99436	25·48884	36
37	2:08068	-48061	54 03425	25·96945	37
38	2:12230	-47119	56 11494	26·44064	38
39	2:16474	-46195	58 23723	26·90259	39
40	2:20803	-45289	60 40198	27·35548	40
41	2·25220	*44401	62.61002	27·79949	41
42	2·29724	*43530	64.86222	28·23479	42
43	2·34319	*42677	67.15947	28·66156	43
44	2·39005	*41840	69.50265	29·07996	44
45	2·43785	*41020	71.89271	29·49016	45
46	2·48661	·40215	74:33056	29·89231	46
47	2·53634	·39427	76:81717	30·28658	47
48	2·58707	·38654	79:35352	30·67312	48
49	2·63881	·37896	81:94059	31·05208	49
50	2·69159	·37153	84:57940	31·42361	50

Years	ONE POUND		ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
51	2·74542	36424	87·27098	31.78785	51
52	2·80033	35710	90·01640	32.14495	52
53	2·85633	35010	92·81673	32.49505	53
54	2·91346	34323	95·67307	32.83828	54
55	2·97173	33650	98·58653	33.17479	55
56	3.03117	-32991	101 • 55826	33·50469	56
57	3.09179	-32344	104 • 58943	33·82813	57
58	3.15362	-31710	107 • 68121	34·14523	58
59	3.21670	-31088	110 • 83484	34·45610	59
60	3.28103	-30478	114 • 05154	34·76089	60
61	3·34665	·29881	117 · 33257	35°05969	61
62	3·41358	·29295	120 · 67922	35°35264	62
63	3·48186	·28720	124 · 09280	35°63984	63
64	3·55149	·28157	127 · 57466	35°92141	64
65	3·62252	·27605	131 · 12615	36°19746	65
66	3·69497	•27064	1 34 74868	36·46810	66
67	3·76887	•26533	1 38 44365	36·73343	67
68	3·84425	•26013	1 42 21252	36·99356	68
69	3·92114	•25503	1 46 05677	37·24859	69
70	3·99956	•25003	1 49 97791	37·49862	70
71	4 ^{.07955}	·24513	153.97747	37 •74374	71
72	4 ^{.16114}	·24032	158.05702	37 •98406	72
73	4 [.] 24436	·23561	162.21816	38 •2 1967	73
74	4 [.] 32925	·23099	166.46252	38 •45066	74
75	4 [.] 41584	·22646	170.79177	38 •6771 1	75
76	4·50415	·22202	175 [.] 20761	38·89913	76
77	4·59424	·21766	179 [.] 71176	39·11679	77
78	4·68612	·21340	184 [.] 30599	39·33019	78
79	4·77984	·20921	188 [.] 99211	39·53940	79
80	4 ·8 7544	·20511	193 [.] 77195	39·74451	80
81	4`97295	·20109	198.64739	39·94560	81
82	5`07241	·19715	203.62034	40·14275	82
83	5`17385	·19328	208.69275	40·33603	83
84	5`27733	·18949	213.86660	40·52551	84
85	5`38288	·18577	219.14394	40·71129	85
86	5:49054	•18213	224·52681	40 ·8 9342	86
87	5:60035	•17856	230·01735	41·07198	87
88	5:71235	•17506	235·61770	41·24704	88
89	5:82660	•17163	241·33005	41·41867	89
90	5:94313	•16826	247·15665	41·58693	90
91	6·06200	•16496	253 [.] 09979	41 75189	91
92	6·18324	•16173	259•16178	41 91362	92
93	6·30690	•15856	265·34502	42 07217	93
94	6·43304	•15545	271·65192	42 22762	94
95	6·56170	•15240	278·08496	42 38002	95
96	6·69293	•14941	284•64666	42.52943	96
97	6·82679	•14648	291•33959	42.67591	97
98	6·96333	•14361	298•16638	42.81952	98
99	7·10259	•14079	305•12971	42.96032	99
100	7·24465	•138 0 3	312•23230	43.09835	100

See also Tables on pp. xx-xxxi

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INTEREST TABLES

Vears	ONE POUND		ONE POUND	PER ANNUM	M Yeara	
	Amount	Present Value	Amount	Present Value		
I	1.02250	·97800	I .00000	0.97800	I	
2	1.04221	95647	2.02250	1.93447	2	
3	1.06903	93543	3.06801	2.86990	3	
4	1.00308	.91484	4.13704	3.78474	Ă	
5	1.11768	-89471	5.23012	4 67945	Š	
5			6.0.580		£	
0	1.14203	-67502	0.34700	5 55440	Ö	
7	1.10854	*85577	7.49002	0.41025	7	
0	1.19493	*83094	8.05910	7.24710	ð	
9	1.55121	.81852	9.85399	8.00571	9	
10	1.24920	*80051	11.02221	8'80022	10	
II	1.27731	.78290	12:32491	9.64911	11	
12	1.30605	76567	13.60222	10.41478	12	
13	1.33544	•74882	14.90827	11.16360	13	
14	1.36548	.73234	16.24371	11.89594	14	
15	1 39621	.71623	17.00010	12.61217	15	
76	1.42762	170047	10:00540	12:21262	76	
177	1.45074	·68:05	20:42202	12:00768	17	
1 12	1:40250	*66008	20 43302	13 99700		
10	1.492.59	65522	21 092/0	14 00/00	10	
20	1.52017	64082	23 30535	15 32290	19	
20	1 30031	04082	24 91152	13 903/1	20	
21	1.20202	.62672	20.47203	16.20043	21	
22	1.03152	.01292	28 00705	17.20335	22	
23	1.00823	•59944	29.69917	17.80279	23	
24	1.40224	.58625	31.36740	18.38904	24	
25	1.74415	•57335	33.07317	18.90238	25	
26	1.78339	.56073	34.81732	19.22311	26	
27	1.82352	•54839	36.60071	20.07120	27	
28	1.86454	•53632	38.42422	20.60783	28	
29	1.90620	•52452	40.28877	21.13235	29	
30	1.94939	-51298	42.19526	21.64233	30	
31	1.99325	.20169	44.14466	22.14702	31	
32	2.03810	49065	46.13791	22.63767	32	
33	2.08396	•47986	48.17602	23.11753	33	
34	2.13085	•46930	50.25998	23.28683	34	
35	2.17879	45897	52.39083	24 04580	35	
36	2.22782	·44887	54.56962	24.49467	36	
37	2.27794	43899	56.79744	24.93366	37	
38	2.32920	.42933	59.07530	25.36299	38	
30	2.38160	.41080	61.40457	25.78288	39	
40	2 43519	41065	63.78618	26.19322	40	
AT	2:48008	140161	66:22127	26.50512	AT	
42	2:54601	-20277	68.71125	26.08700	12	
42	2.60220	-28412	71-25725	27-27202	42	
40	2.66186	•27568	73.86064	27.74771	44	
45	2.72176	3/303	76.52251	28.11212	45	
46	2:78200	125020	70.24426	28.47444	46	
40	2.70300	35932	82:02726	28.82586	40	
4/	2:00064	33142	84.87287	20.16055	4/	
40	2 90904	34309	87.78251	20.10933	40	
49	2:04:00	33012	00.75762	20.82440	49	
20	3 04205	320/3	90 / 3/02	29 03440	30	

21%

Vearg	ONE POUND		ONE POUND PER ANNUM		Years
Tears	Amount	Present Value	Amount	Present Value	Itars
51 52	3·11049 3·18048	·32149 ·31442	93.79966 96.91016	30·15589 30·47031	51 52
53	3.25204	·30750	100.09064	30.77781	53
54	3.32221	·30073	103.34267	31.07854	54
55	3.40003	·29412	106.66788	31.37265	55
56	3.47653	·28764	110.06791	31.66030	56
57	3*55475	·28131	113.24444	31.94161	57
58	3.63473	•27512	117.09919	32.21673	58
59	3.71051	•26907	120.73392	32.48580	59
00	3.20013	-20315	124-45043	32.74095	00
61	3.88564	·25736	128.25057	33.00631	61
02	3.97306	•25169	132.13621	33.22800	02
03	4.00240	•24010	130.10927	33.50416	03
65	4-15300	•24074	140-17173	33.74490	65
~	4 -4/33	~3344	-44 3-339	33 90034	
00	4.34289	·23020	148.57292	34.21060	00
07	4.44001	•22519	152.91501	34-43580	69
60	4 54052	+21520	161.80604	24.87142	60
70	4 04200	-21065	166.23062	35.08208	70
/-			171.08676	35	
71	4.05395	*20002	171-20070	35.20010	71
72	4 90317	10705	181.10288	35 40959	72
73	5.18002	·19271	186.17871	35.87935	74
75	5:30577	·18847	191.36774	36.06283	75
76	5-42515	+18433	106.67351	36.25215	76
77	5.54722	·18027	202.09866	36.43242	77
78	5.67203	•17630	207.64588	36 60873	78
79	5.79965	•17242	213.31792	36.78115	79
80	5.93015	•16863	219-11757	36 ·9 4978	80
81	6.06357	·16492	225.04771	37.11470	81
82	6.20000	·16129	231.11129	37 27599	82
83	6.33950	·15774	237.31129	37.43373	83
84	6.48214	•15427	243.65080	37.58800	84
85	6.62799	•15088	250-13294	37.73000	•5
86	6.77712	-14756	256.76093	37.88643	86
87	6.92961	•14431	263.53805	38.03074	87
88	7.08552	•14113	270.40700	38.17187	80
89	7.24495	13003	277.55310	28:4480	09
90	7.40790	13499	204 /9013	30 44409	90
91	7.57464	·13202	292.20608	38.57091	91
92	7.74507	·12911	299.70072	28.82220	92
93	8.00717	1202/	30/ 525/9	38.05.570	04
94	8.27071	12078	323.54263	39.07657	95
95	9-1911		0.000	20.10460	06
90	8.6.6.0	11012	240.28824	20.21021	07
97	8.8=126	11208	348.04482	30.72310	08
00	0.02011	.11040	357 70600	39.53368	99
100	9.25405	·10806	366.84650	39.64174	100
1) - 57-5			1	<u> </u>

See also Tables on pp. xx-xxxi



Years	ONE POUND		ONE POUND PER ANNUM		Years
	Amount	Present Value	Amount	Present Value	
I 2	1.02500 1.05062	197561 195181	I '00000 2'02 5 00	·97561 1·92742	I 2
3	1.07689	.02860	3.07562	2.85602	3
4	1.10381	.00595	4.12252	3.26192	Ă
5	1.13141	·88385	5 2 5 6 3 3	4.64583	5
6	1.12969	86230	6.38774	5.20812	-6
7	1.18869	·84127	7.54743	6.34939	7
8	1.21840	-82075	8.73612	7.12014	8
9	1.24886	*80073	9.92425	7.97087	9
10	I '28008	.78120	11.20338	8.75206	10
II	1.31209	•76214	12.48347	9.51421	II
12	1.34489	•74356	13779555	10.25776	12
13	1.32821	72542	15-14044	10.98318	13
14	1.41297	.70773	16.21892	11-09091	14
15	1.44830	*69047	17.93193	12.38138	15
16	1.48451	•67363	19.38022	13.05500	16
17	1.2102	.65720	20.86473	13.71220	17
18	1.2200	.64117	22.38035	14-35330	18
19	1.59005	62553	23'94001	14.97009	19
20	103002	01027	25 54400	15 50910	20
21	1.07958	*59539	27.18327	10.18455	21
22	1.72157	•58080	28'80280	10.70541	22
23	1-70401	-50070	30-50443	17 33211	23
24	1.85304	-52020	32 34904	18.42438	25
-5	1:00020	53939	37-377*	18:05061	-5
20	1.04780	52023	30 011/1	10 95001	27
28	1.00650	1340	20.85080	19 40401	28
20	2.04640	*48866	11.85630	20.45355	20
30	2.09757	•47674	43.90270	20.93029	30
31	2.15000	•46511	46.00027	21.39540	31
32	2.20376	*45377	48.15028	21.84918	32
33	2.25885	•44270	50.35403	22.29188	33
34	2.31232	•43191	52.61289	22.72379	34
35	2.37321	•42137	54:92821	23.14510	35
36	2.43254	.41109	57'30141	23.55625	36
37	2.49335	.40107	59.73395	23.95732	37
38	2.55508	.39128	62.22730	24.34860	38
39	2.01957	.*38174	64.78298	24.73034	39
40	2.03500	3/243	07:40250	25.102/7	40
41	2.75219	•36335	70.08762	25.46612	41
42	2'82100	35448	72.83981	25.82001	42
43	2.09152	34504	75.00081	20.10045	43
44	3.03700	33/40	81:51612	26.83302	44
45	2+17285		84155402	27.17419	46
40	3.10160	-34113	87.66788	27:46748	40
48	3.27140	*30567	00.85058	27.77315	47
49	3.35328	29822	94.13107	28.07137	40
50	3.43711	*29094	97 48435	28.36231	50
		1			

$2\frac{10}{2}$

Years		ONE POUND		ONE POUND PER ANNUM		Years
		Amount	Present Value	Amount	Present Value	
	51	3·52304	·28385	100.92146	28.64616	51
	52	3·61111	·27692	104.44449	28.92308	52
	53	3·70139	·27017	108.05561	29.19325	53
	54	3·79392	·26358	111.75700	29.45683	54
	55	3·88877	·25715	115.55092	29.71398	55
	56	3`98599	·25088	119·43969	29·96486	56
	57	4`08564	·24476	123·42569	30·20962	57
	58	4`18778	·23879	127·51133	30·44841	58
	59	4`29248	·23296	131·69911	30·68137	59
	60	4`39979	·22728	135·99159	30·90866	60
	61	4`50978	·22174	140·39138	31 ·13040	61
	62	4`62253	·21633	144·90116	31 ·34673	62
	63	4`73809	·21106	149·52369	31 ·55778	63
	64	4`85654	·20591	154·26179	31 ·76369	64
	65	4`97796	·20089	159·11833	31 ·96458	65
	66	5·10241	·19599	164 09629	32·16056	66
	67	5·22997	·19121	169 19869	32·35177	67
	68	5·36072	·18654	174 42866	32·53831	68
	69	5·49473	·18199	179 78938	32·72030	69
	70	5·63210	·17755	185 2841 1	32·89786	70
	71	5·77291	•17322	190·91622	33 07 108	71
	72	5·91723	•16900	196·68912	33 24008	72
	73	6·06516	•16488	202·60635	33 40495	73
	74	6·21679	•16085	208·67151	33 56581	74
	75	6·37221	•15693	214·88829	33 72274	75
	76	6·53151	·15310	221 • 26050	33·87584	76
	77	6·69480	·14937	227 • 79201	34·02521	77
	78	6·86217	·14573	234 • 48681	34·17094	78
	79	7·03372	·14217	241 • 34898	34·31311	79
	80	7·20957	·13870	248 • 38271	34·45182	80
	81	7 • 38981	·13532	255·59228	34 • 587 14	81
	82	7 • 57455	·13202	262·98209	34 • 719 16	82
	83	7 • 76392	·12880	270·55664	34 • 847 96	83
	84	7 • 95801	·12566	278·32056	34 • 97 36 2	84
	85	8 • 1 5696	·12259	286·27857	35 • 096 2 1	85
	86	8·36089	·11960	294·43553	35·21582	86
	87	8·56991	·11669	302·79642	35·33251	87
	88	8·78416	·11384	311·36633	35·44635	88
	89	9·00376	·11106	320·15049	35·55741	89
	90	9·22886	·10836	329·15425	35·66577	90
	91	9:45958	·10571	338·38311	35·77148	91
	92	9:69607	·10313	347·84269	35·87462	92
	93	9:93847	·10062	357·53875	35·97523	93
	94	10:18693	·09817	367·47722	36·07340	94
	95	10:44160	·09577	377·66415	36·16917	95
	96	10·70264	·09343	388.10576	36·26261	96
	97	10·97021	·09116	398.80840	36·35376	97
	98	11·24447	·08893	409.77861	36·44269	98
	99	11·52558	·08676	421.02308	36·52946	99
	100	11·81372	·08465	432.54865	36·61410	100

see also Tables on pp. xx-xxx1

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INTEREST TABLES

Years	ONE POUND		ONE POUND PER ANNUM		Years
	Amount	Present Value	Amount	Present Value	
I	1.02750	·97324	1.00000	0.97324	I
2	1.05576	·94719	2.02750	1.92042	2
2	1.08479	·92184	3.08326	2.84226	2
45	1·11462 1·14527	·89717 ·87315	4·16805 5·28267	3.73943 4.61258	45
6 7 8	1.17077 1.20913 1.24238 1.27655	*84978 *82704 *80491 *78336	0.42794 7.60471 8.81384	5·40237 6·28941 7·09431 7·87768	6 7 8
10	1.31165	•76240	11.33276	8 64008	10
11	1·34772	•74199	12:04442	9:38207	11
12	1·38478	•72213	13:99214	10:10420	12
13	1·42287	•70281	15:37692	10:80701	13
14	1·46199	•68400	16:79979	11:49101	14
15	1·50220	•66569	18:26178	12:15670	15
16	1 • 54351	-64787	19·76398	12·80457	16
17	1 • 58596	-63053	21·30749	13·43511	17
18	1 • 62957	-61366	22·89344	14·04877	18
19	1 • 67438	-59723	24·52301	14·64600	19
20	1 • 72043	-58125	26·19740	15·22725	20
21	1·76774	•56569	27·91783	15·79295	21
22	1·81635	•55055	29·68557	16·34350	22
23	1·86630	•53582	31·50192	16·87932	23
24	1·91763	•52148	33·36822	17·40080	24
25	1·97036	•50752	35·28585	17·90832	25
26	2·02455	*49394	37 • 25621	18·40226	26
27	2·08022	*48072	39 • 28075	18·88297	27
28	2·13743	*46785	41 • 36098	19·35083	28
29	2·19621	*45533	43 • 49840	19·80616	29
30	2·25660	*44314	45 • 69461	20·24930	30
31	2·31866	•43128	47 95121	20.68059	31
32	2·38242	•41974	50 26987	21.10033	32
33	2·44794	•40851	52 65229	21.50883	33
34	2·51526	•39757	55 10023	21.90641	34
35	2·58443	•38693	57 61 548	22.29334	35
36	2.65550	•37658	60·19991	22.66992	36
37	2.72852	•36650	62·85541	23.03642	37
38	2.80356	•35669	65·58393	23.39311	38
39	2.88066	•34714	68·38749	23.74025	39
40	2.95987	•33785	71·26815	24.07810	40
41	3·04127	*32881	74 22802	24·40691	41
42	3·12491	*32001	77 26929	24·72692	42
43	3·21084	*31144	80 39419	25·03837	43
44	3·29914	*30311	83 60504	25·34147	44
45	3·38986	*29500	86 90417	25·63647	45
46	3·48309	·28710	90`29404	25 92357	46
47	3·57887	·27942	93`77712	26 20299	47
48	3·67729	·27194	97`35600	26 47493	48
49	3·77842	·26466	101`03329	26 73959	49
50	3·88232	·25758	104`81170	26 99717	50


Years	ONE POUND		ONE POUND PER ANNUM		Years
	Amount	Present Value	Amount	Present Value	
51	3·98909	*25068	108.69402	27 · 24785	51
52	4·09879	*24397	112.68311	27 · 49183	52
53	4·21150	*23744	116.78189	27 · 72927	53
54	4·32732	*23109	120.99340	27 · 96036	54
55	4·44632	*22491	125.32071	28 · 18527	55
56	4.56859	·21889	129.76703	28.40415	56
57	4.69423	·21303	134.33563	28.61718	57
58	4.82332	·20733	139.02986	28.82451	58
59	4.95596	·20178	143.85318	29.02628	59
60	5.09225	·19638	148.80914	29.22266	60
61	5·23229	·19112	153.90139	29*41378	61
62	5·37618	·18601	159.13368	29*59979	62
63	5·52402	·18103	164.50986	29*78082	63
64	5·67593	·17618	170.03388	29*95700	64
65	5·83202	·17147	175.70981	30*12846	65
66	5·99240	·16688	181·54183	30·29534	66
67	6·15719	·16241	187·53423	30·45775	67
68	6·32651	·15806	193·69142	30·61582	68
69	6·50049	·15383	200·01793	30·76965	69
70	6·67926	·14972	206·51843	30·91937	70
71	6·86294	·14571	213.19768	31 °06508	71
72	7·05167	·14181	220.06062	31 °20689	72
73	7·24559	·13802	227.11229	31 °34491	73
74	7·44484	·13432	234.35788	31 °47923	74
75	7·64957	·13073	241.80272	31 °60995	75
76	7·85994	·12723	249·45229	31 •73718	76
77	8·07600	·12382	257·31223	31 •86100	77
78	8·29818	·12051	265·38832	31 •98151	78
79	8·52638	·11728	273·68649	32 •09880	79
80	8·76085	·11414	282·21287	32 •21294	80
81	9·00178	·11109	290·97373	32·32403	81
82	9·24933	·10812	299·97551	32·43214	82
83	9·50368	·10522	309·22483	32·53737	83
84	9·76503	·10241	318·72851	32·63977	84
85	10·03357	·09967	328·49355	32·73944	85
86	10·30950	•09700	338·52712	32·83644	86
87	10·59301	•09440	348·83662	32·93084	87
88	10·88431	•09188	359·42962	33·02271	88
89	11·18363	•08942	370·31394	33·11213	89
90	11·49118	•08702	381·49757	33·19915	90
91	11.80719	•08469	392 •98876	33·28385	91
92	12.13189	•08243	404 •79595	33·36628	92
93	12.46552	•08022	416 •92783	33·44650	93
94	12.80832	•07807	429 •39335	33·52457	94
95	13.16055	•07598	442 •20167	33·60056	95
96	13·52246	•07395	455°36221	33 ^{•67451}	96
97	13·89433	•07197	468°88467	33·74648	97
98	14·27642	•07005	482°77900	33·81652	98
99	14·66902	•06817	497°05542	33·88469	99
100	15·07242	•06635	511°72445	33·95104	100

See also Tables on pp. xx-xxxi

3°/₀

INTEREST TABLES

Years	ONE P	DUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amouut	Present Value	
I	1.03000	·97087	I *00000	•97087	1
2	1.06090	·94260	2 *03000	1•91347	2
3 4 5	1.12521 1.15927	·88849 ·86261	4·18363 5·30914	3.71710 4.57971	3 4 5
6	1 · 19405	•83748	6°46841	5.41719	6
7	1 · 22987	•81309	7°66246	6.23028	7
8	1 · 26677	•78941	8°89234	7.01969	8
9	1 · 30477	•76642	10°15911	7.78611	9
10	I ·34392	.74409	11.46388	8.53020	10
11	1 30423	72242	12-80780	9 9 5 400	11
12	1 42576	770138	14-19203	9 9 5 400	12
13	1 46853	68095	15-61779	10 6 3 4 9 6	13
14	1 51259	66112	17-08632	1 1 2 9 6 0 7	14
15	1 55797	664186	18-59891	1 1 9 3 7 9 4	15
16	1 •60471	•62317	20·15688	12·56110	16
17	1 •65285	•60502	21·76159	13·16612	17
18	1 •70243	•58739	23·41444	13·75351	18
19	1 •75351	•57029	25·11687	14·32380	19
20	1 •80611	•55368	26·87037	14·87748	20
21	1 •86029	•53755	28.67649	15:41502	21
22	1 •91610	•52189	30.53678	15:93692	22
23	1 •97359	•50669	32.45288	16:44361	23
24	2 •03279	•49193	34.42647	16:93554	24
25	2 •09378	•47761	36.45926	17:41315	25
26	2·15659	•46369	38·55304	17·87684	26
27	2·22129	•45019	40·70963	18·32703	27
28	2·28793	•43708	42·93092	18·76411	28
29	2·35657	•42435	45·21885	19·18846	29
30	2·42726	•41199	47·57542	19·60044	30
31	2·50008	·39999	50·00268	20 00043	31
32	2·57508	·38834	52·50276	20 38877	32
33	2·65234	·37703	55·07784	20 76579	33
34	2·73191	·36604	57·73018	21 13184	34
35	2·81386	·35538	60·46208	21 48722	35
36	2·89828	·34503	63·27594	21 ·83225	36
37	2·98523	·33498	66·17422	22 ·16724	37
38	3·07478	·32523	69·15945	22 ·49246	38
39	3·16703	·31575	72·23423	22 ·80822	39
40	3·26204	·30656	75·40126	23 ·11477	40
41	3·35990	·29763	78.66330	23·41240	41
42	3·46070	·28896	82.02320	23·70136	42
43	3·56452	·28054	85.48389	23·98190	43
44	3·67145	·27237	89.04841	24·25427	44
45	3·78160	·26444	92.71986	24·51871	45
46	3·89504	·25674	96 • 50146	24 77545	46
47	4·01190	·24926	100 • 39650	25 02471	47
48	4·13225	·24200	104 • 40840	25 26671	48
49	4·25622	·23495	108 • 54065	25 50166	49
50	4·38391	·22811	112 • 79687	25 72976	50

Veara	ONE PO	UND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
51	4°51542	·22146	11718077	25 95123	51
52	4°65089	·21501	12169620	26 16624	52
53	4°79041	·20875	12634708	26 37499	53
54	4°93412	·20267	13113749	26 57766	54
55	5°08215	·19677	13607162	26 77443	55
56	5°23461	·19104	141 ·15377	26·96546	56
57	5°39165	·18547	146 ·38838	27·15094	57
58	5°55340	·18007	151 ·7800 3	27·33101	58
59	5°72000	·17483	157 ·33343	27·50583	59
60	5°89160	·16973	163 ·05344	27·67556	60
61	6·06835	•16479	168 94504	27*84035	61
62	6·25040	•15999	175 01339	28*00034	62
63	6·43791	•15533	181 26379	28*15567	63
64	6·63105	•15081	187 70171	28*30648	64
65	6·82998	•14641	194 33276	28*45289	65
66	7·03488	•14215	201 • 16274	28.59504	66
67	7·24593	•13801	208 • 19762	28.73305	67
68	7·46331	•13399	215 • 44355	28.86704	68
69	7·68721	•13009	222 • 90686	28.99712	69
70	7·91782	•12630	230 • 59406	29.12342	70
71	8·15536	·12262	238 • 51 189	29·24604	71
72	8·40002	·11905	246 • 66724	29·36509	72
73	8·65202	·11558	255 • 06726	29·48067	73
74	8·91158	·11221	263 • 71928	29·59288	74
75	9·17893	·10895	272 • 63086	29·70183	75
76	9:45429	•10577	281 ·80978	29·80760	76
77	9:73792	•10269	291 ·26407	29·91029	77
78	10:03006	•09970	301 ·00200	30·00999	78
79	10:33096	•09680	311 ·03206	30·10679	79
80	10:64089	•09398	321 ·36302	30·20076	80
81	10°96012	•09124	332.00391	30·29200	81
82	11°28892	•08858	342.96403	30·38059	82
83	11°62759	•08600	354.25295	30·46659	83
84	11°97642	•08350	365.88054	30·55009	84
85	12°33571	•08107	377.85695	30·63115	85
86	12·70578	·07870	390°19266	30·70986	86
87	13·08695	·07641	402°89844	30·78627	87
88	13·47956	·07419	415°98539	30·86045	88
89	13·88395	·07203	429°46495	30·93248	89
90	14·30047	·06993	443°34890	31·00241	90
91	14·72948	•06789	457.64937	31.07030	91
92	15·17137	•06591	472.37885	31.13621	92
93	15·62651	•06399	487.55022	31.20021	93
94	16·09530	•06213	503.17672	31.26234	94
95	16·57816	•06032	519.27203	31.32266	95
96	17.07551	•05856	535·85019	31·38122	96
97	17.58777	•05686	552·92569	31·43808	97
98	18.11540	•05520	570·51346	31·49328	98
99	18.65887	•05359	588·62887	31·54687	99
100	19.21863	•05203	607·28773	31·59891	100

See also Tables on pp. xx-xxxì

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3¹₂°/₀

INTEREST TABLES

Years	ONE P	OUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
I	1.03200	·96618	1.00000	·96618	I
2	1.07122	-93351	2.03500	1.99000	2
3	1.10925	*90194	3.10023	2.80104	3
4	1,1422	*87144	4.51494	3*67308	4
5	1.18769	.84197	5.36247	4.21202	5
6	1 122026	-81250	6155035	5-20855	6
2	1 22920	1330	0 55015	3 32033	
7	1 2/220	70599	777941	6.874	1
ð	1.31081	75941	9.05109	0.87390	0
9	1.30290	73373	10.30820	7 00709	9
IO	1 41060	.70892	11.23139	8.31001	10
TT	1'45007	.68405	13.14100	0.00122	TT
12	1.21107	66178	14.60106	0.66222	12
10	1.56206	:62040	14 00190	10:20274	12
13	1 50390	61778	10 11303	10:02074	-3
14	1.6555	17/0	17 07099	10 92052	14
15	1 07535	59009	19-29508	11-51741	15
16	1.23399	•57671	20.97103	12:09412	10
17	1.79467	.55720	22.70501	12.65132	17
18	1.85749	•53836	24 49969	13.18968	18
19	1.92250	·52016	26.35718	13.70984	10
20	1 98979	.50257	28.27968	14.21240	20
21	2.05943	·48557	30.26947	14.69797	21
22	2.13151	46915	32 32800	15.16713	22
23	2.20611	45320	34.46041	15 62041	22
24	2.28333	43706	36.66652	16.05827	24
25	2.36324	42315	38.94986	16.48152	25
26	2.44596	·40884	41.31310	16.89035	26
27	2.53157	.30201	43.75006	17.28537	27
28	2.62017	*38165	46.20062	17.66702	28
20	2.71188	*36875	48'01080	18:02577	20
20	2.80670	25628	51.62267	18:20205	20
30	2 000/9	33020	31 02207	-8-5-6-8	30
31	2.90503	34423	54.42947	1873028	31
32	3.00021	·33259	57.33450	19.00887	32
33	3.11104	.32134	60.34121	19.39021	33
34	3.22086	.31048	63.45315	19'70068	34
35	3 33359	•29998	66.67401	20.00066	35
36	3.45027	-28983	70.00760	20.29049	36
37	3.22103	28003	73 45787	20.57053	37
38	3 69601	27056	77.02880	20.84109	38
30	3.82537	26141	80.72400	21.10220	30
40	3.95926	*25257	84.55028	21.35507	40
AT	4:00782	*24402	88-50052	21.20010	AT
41	4 09/03	-24403	00 50953	21 39910	41
42	4 24120	235/0	92.00737	21 03400	42
43	4 30970	-22701	90.94903	22.00209	43
44	4 54334	22010	101.53933	22 28279	44
45	4.70236	·21206	105.28162	22.49545	45
46	4.86694	-20547	1 10 . 48403	22.70092	46
47	5.03728	.19825	115.32097	22.89944	47
48	5.21359	.19181	120.38826	23.09125	48
49	5.39606	.18532	125.60184	23.27657	49
50	5.58493	17905	130.99791	23.45562	50
	00.00	1			

3¹/₂%

Years	ONE P	OUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
51 52 53 54 55	5·78040 5·98271 6·19211 6·40883 6·63314	·17300 ·16714 ·16150 ·15603 ·15076	136.58283 142.36324 148.34595 154.53805 160.04689	23.62862 23.79577 23.95726 24.11330 24.26405	51 52 53 54
56 57 58 59 60	6·86530 7·10559 7·35428 7·61168 7·87809	·14566 ·14073 ·13598 ·13138 ·12693	167 • 58003 174 • 44 5 33 181 • 55092 188 • 90 5 20 196 • 51688	24 • 4097 I 24 • 55045 24 • 68642 24 • 68642 24 • 81780 24 • 94474	56 57 58 59 60
61	8 • 1 5 3 8 2	·12264	204 · 39497	25.06738	61
62	8 • 4 3 9 2 1	·11849	212 · 54879	25.18587	62
63	8 • 7 3 4 5 8	·11449	220 · 98800	25.30036	63
64	9 • 0 4 0 2 9	·11062	229 · 722 58	25.41097	64
65	9 • 3 5 6 7 0	·10688	238 · 76287	25.51785	65
66	9 ^{.68} 418	·10326	248 • 11957	25 ^{.6} 2111	66
67	10 ^{.02} 313	·09977	257 • 80376	25 ^{.7} 2088	67
68	10 [.] 37394	·09640	267 • 82689	25 ^{.8} 1728	68
69	10 [.] 73703	·09314	278 • 20083	25 [.] 91041	69
70	11 [.] 11282	·08999	288 • 93786	26 ^{.00040}	70
71	11·50177	·08694	300.05069	26·08734	71
72	11·90434	·08400	311.55244	26·17134	72
73	12·32099	·08116	323.45680	26·25251	73
74	12·75222	·07842	335.77778	26·33092	74
75	13·19855	·07577	348.53001	26·40669	75
76	13.66050	•07320	361 •72856	26·47989	76
77	14.13862	•07073	375 •38906	26·55062	77
78	14.63347	•06834	389 •52768	26·61896	78
79	15.14564	•06603	404 •16115	26·68498	79
80	15.67574	•06379	419 •30678	26·74878	80
81	16 •22439	•06164	434 98252	26 •81041	81
82	16 •79224	•05955	451 20691	26 •86996	82
83	17 •37997	•05754	467 99915	26 •927 50	83
84	17 •98827	•05559	485 37912	26 •98309	84
85	18 •61786	•05371	503 36739	27 •03680	85
86	19·26948	•05190	521 98525	27:08870	86
87	19·94391	•05014	541 25474	27:13884	87
88	20·64195	•04845	561 19865	27:18729	88
89	21·36442	•04681	581 84060	27:23409	89
90	22·11217	•04522	603 20503	27:27932	90
91	22.88610	•04369	625·31720	27·32301	91
92	23.68711	•04222	648·20330	27·36523	92
93	24.51616	•04079	671·89042	27·40602	93
94	25.37423	•03941	696·40658	27·44543	94
95	26.26233	•03808	721·78082	27·48351	95
96	27 • 18151	•03679	748 04314	27 • 52029	96
97	28 • 13286	•03555	775 22465	27 • 55584	97
98	29 • 11751	•03434	803 35752	27 • 59018	98
99	30 • 13662	•03318	832 47503	27 • 62337	99
100	31 • 19141	•03206	862 61166	27 • 65543	100

See also Tables on pp. xx-xxx1

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INTEREST TABLES

Years	ONE PO	DUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
I 2 3	1 °04000 1 °08160 1 '12486	*96154 *92456 *88000	1 '00000 2 '04000 2 '12160	·96154 1·88609	I 2 2
45	1·16986 1·21665	·85480 ·82193	4·24646 5·41632	3.62990 4.45182	3 4 5
0	1 ·26532	-79031	6.63298	5·24214	6
7	1 ·31593	-75992	7.89829	6·00205	7
8	1 ·36857	-73069	9.21423	6·73275	8
9	1 ·42331	-70259	10.58280	7·43533	9
10	1 ·48024	-67556	12.00011	8.11090	10
11	1 ·53945	-64958	13.48635	8.76048	11
12	1 ·60103	-62460	15.02581	9.38507	12
13	1 ·66507	-60057	16.62684	9.98565	13
14	1 ·73168	-57748	18.29191	10.56312	14
15	1 ·80094	-55726	20.02359	11.11839	15
16	1.87298	•53391	21 · 82453	11.65230	16
17	1.97,790	•51337	23 · 69751	12.16567	17
18	2.02582	•49363	25 · 64541	12.65930	18
19	2.10685	•47464	27 · 67123	13.13394	19
20	2.19112	•45639	29 · 77808	13.59033	20
21	2·27877	•43883	31 96920	14·02916	21
22	2·36992	•42196	34 24797	14·45112	22
23	2·46472	•40573	36 61789	14·85684	23
24	2·56330	•39012	39 08260	15·24696	24
25	2·66584	•37512	41 64591	15·62208	25
26	2·77247	·36069	44 [•] 31174	15·98277	26
27	2·88337	·34682	47 •08421	16·32959	27
28	2·99870	·33348	49 •96758	16·66306	28
29	3·11865	·32065	52 •96629	16·98372	29
30	3·24340	·30832	56 •08494	17·29203	30
31	3·37313	·29646	59'32834	17 · 58849	31
32	3·50806	·28506	62'70147	17 · 87355	32
33	3·64838	·27409	66'20953	18 · 14765	33
34	3·79432	·26355	69'85791	18 · 41120	34
35	3·94609	·25342	73'65222	18 · 66461	35
36	4·10393	·24367	77 • 59831	18'90828	36
37	4·26809	·23430	81 • 70225	19'14258	37
38	4·43881	·22529	85 • 97034	19'36787	38
39	4·61637	·21662	90 • 40915	19'58449	39
40	4·80102	·20829	95 • 0255 2	19'79277	40
41	4 [.] 99306	·20028	99 ^{.8} 2654	19 99305	41
42	5 [.] 19278	·19257	104 ^{.8} 1960	20 18563	42
43	5 [.] 40050	·18517	110 ^{.012} 38	20 37080	43
44	5 [.] 61652	·17805	115 [.] 41288	20 54884	44
45	5 [.] 84118	·17120	121 ^{.02} 939	20 72004	45
46	6 07482	•16461	126.87057	20·88465	46
47	6 31782	•15828	132.94539	21·04294	47
48	6 57053	•15219	139.26321	21·19513	48
49	6 83335	•14634	145.83373	21·34147	49
50	7 10668	•14071	152.66708	21·48219	50

4%

Years	ONE PO	UND	ONE POUND	PER ANNUM	Veers
	Amount	Present Value	Amount	Present Value	Itars
51	7 • 39095	•13530	159.77377	21 • 61 749	51
52	7 • 68659	•13010	167.16472	21 • 747 58	52
53	7 • 99405	•12509	174.85131	21 • 87268	53
54	8 • 31 381	•12028	182.84536	21 • 99296	54
55	8 • 64637	•11566	191.15917	22 • 10861	55
56	8·99222	•11121	199 ^{.80554}	22 ·21982	56
57	9·35191	•10693	208.79776	22 ·32675	57
58	9·72599	•10282	218.14967	22 ·42957	58
59	10·11503	•09886	227.87566	22 ·52843	59
60	10·51963	•09506	237.99069	22 ·62349	60
61	10·94041	·09140	248 • 51031	22·71490	61
62	11·37803	·08789	259 • 45073	22·80278	62
63	11·83315	·08451	270 • 82875	22·88729	63
64	12·30648	·08126	282 • 66 190	22·96855	64
65	12·79874	·07813	294 • 96838	23·04668	65
66	13·31068	•07513	307 •76712	23.12181	66
67	13·84311	•07224	321 •07780	23.19405	67
68	14·39684	•06946	334 •92091	23.26351	68
69	14·97271	•06679	349 •31775	23.33030	69
70	15·57162	•06422	364 •29046	23.39452	70
71	16·19448	•06175	379·86208	23.45627	71
72	16·84226	•05937	396·05656	23.51564	72
73	17·51595	•05709	412·89892	23.57273	73
74	18·21659	•05490	430·41478	23.62763	74
75	18·94525	•05278	448·63137	23.68041	75
76	19·70307	•05075	467 •57662	23·73116	76
77	20·49119	•04880	487 •27969	23·77996	77
78	21·31084	•04692	507 •77087	23·82689	78
79	22·16327	•04512	529 •08171	23·87201	79
80	23·04980	•04338	551 •24498	23·91539	80
81	23 97179	•04172	574·29478	23·95711	81
82	24 93066	•04011	598·26657	23·99722	82
83	25 92789	•03857	623·19723	24·03579	83
84	26 96 500	•03709	649·12512	24·07287	84
85	28 04360	•03566	676·09012	24·10853	85
86	29·16535	•03429	704 · 13373	24·14282	86
87	30·33196	•03297	733 · 29908	24·17579	87
88	31·54524	•03170	763 · 63104	24·20749	88
89	32·80705	•03048	795 · 17628	24·23797	89
90	34·11933	•02931	827 · 98333	24·26728	90
91	35·48411	•02818	862 • 10267	24·29546	91
92	36·90347	•02710	897 • 58677	24·32256	92
93	38·37961	•02606	934 • 49024	24·34861	93
94	39·91479	•02505	972 • 86985	24·37367	94
95	41·51139	•02409	1012 • 78465	24·39776	95
96	43 · 17 184	•02316	1054·29603	24·42092	96
97	44 · 89872	•02227	1097·46788	24·44319	97
98	46 · 69467	•02142	1142·36659	24·46461	98
99	48 · 56245	•02059	1189·06125	24·48520	99
100	50 · 50495	•01980	1237·62370	24·50500	100

See also Tables on pp. xx-xxxi

4¹₂%

INTEREST TABLES

Years	ONE P	OUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
1	1 °04500	·95694	1 00000	·95694	1
2	1 '09203	·91573	2 04500	1·87267	2
3 4 5	1.14117 1.19252 1.24618	·83856 ·80245	3·13702 4·27819 5·47071	3·58753 4·38998	3 4 5
6	1 ·30226	·76790	6·71689	5·15787	6
7	1 ·36086	·73483	8·01915	5·89270	7
8	1 ·42210	·70319	9·38001	6·59589	8
9	1.48610	•67290	10.80211	7·26879	9
10	1.55297	•64393	12.28821	7·91272	10
11	1 62285	•61620	13.84118	8 • 52892	11
12	1 69588	•58966	15.46403	9 • 1 1858	12
13	1 77220	•56427	17.15991	9 • 68285	13
14	1 85194	•53997	18.93210	10 • 22283	14
15	1 93528	•51672	20.78405	10 • 73955	15
16	2·02237	'49447	22 • 71933	11.23401	16
17	2·11338	'47318	24 • 74170	11.70719	17
18	2·20848	'45280	26 • 85508	12.15999	18
19	2·30786	'43330	29 • 06356	12.59329	19
20	2·41171	'41464	31 • 37 142	13.00794	20
21	2·52024	·39679	33 •78314	13·40472	21
22	2·63365	·37970	36 •30338	13·78442	22
23	2·75217	·36335	38 •93703	14·14777	23
24	2·87601	·34770	41 •68919	14·49548	24
25	3·00543	·33273	44 •56521	14·82821	25
26	3·14068	·31840	47 • 57064	15·14661	26
27	3·28201	·30469	50 • 7 1 1 32	15·45130	27
28	3·42970	·29157	53 • 99333	15·74287	28
29	3·58404	·27901	57 • 42303	16·02189	29
30	3·74532	·26700	61 • 00707	16·28889	30
31	3 91386	·25550	64 ·75238	16·54439	31
32	4 08998	·24450	68 ·66624	16·78889	32
33	4 27403	·23397	72 ·75622	17·02286	33
34	4 46636	·22390	77 ·03026	17·24676	34
35	4 66735	·21425	81 ·49662	17·46101	35
36	4·87738	·20503	86·16396	17·66604	36
37	5·09686	·19620	91·04134	17·86224	37
38	5·32622	·18775	96·13820	18·04999	38
39	5·56590	·17967	101·46442	18·22966	39
40	5·81636	·17193	107·03032	18·40158	40
41	6·07810	*16453	112·84668	18·56611	41
42	6·35161	*15744	118·92479	18·72355	42
43	6·63744	*15066	125·27640	18·87421	43
44	6·93612	*14417	131·91384	19·01838	44
45	7·24825	*13796	138·84996	19·15635	45
46	7`57442	·13202	146·09821	19·28837	46
47	7`91527	·12634	153·67263	19·41471	47
48	8`27145	·12090	161·58790	19·53561	48
49	8`64367	·11569	169·85935	19·65130	49
50	9`03264	·11071	178·50303	19·76201	50

410/o

Vears	ONE PO	DUND	ONE POUND	PER ANNUM	Years
Tears	Amount	Present Value	Amount	Present Value	
51	9:43910	-10594	187-53566	19·86795	51
52	9:86386	-10138	196-97477	19·96933	52
53	10:30774	-09701	206-83863	20·06634	53
54	10:77159	-09284	217-14637	20·15918	54
55	11:25631	-08884	227-91796	20·24802	55
56	11.76284	•08501	239·17427	20·33303	56
57	12.29217	•08135	250·93711	20·41438	57
58	12.84532	•07785	263·22928	20·49224	58
59	13.42336	•07450	276·07459	20·56673	59
60	14.02741	•07129	289·49795	20·63802	60
61	14.65864	•06822	303·52536	20·70624	61
62	15.31828	•06528	318·18400	20·77152	62
63	16.00760	•06247	333·50228	20·83399	63
64	16.72794	•05978	349·50988	20·89377	64
65	17.48070	•05721	366·23783	20·95098	65
66	18.26733	-05474	383 71853	21.00572	66
67	19.08936	-05239	401 98586	21.05811	67
68	19.94838	-05013	421 07523	21.10824	68
69	20.84606	-04797	441 02362	21.15621	69
70	21.78413	-04590	461 86968	21.20211	70
71	22.76442	•04393	483.65381	21·24604	71
72	23.78882	•04204	506.41823	21·28808	72
73	24.85931	•04023	530.20706	21·32830	73
74	25.97798	•03849	555.06637	21·36680	74
75	27.14699	•03684	581.04436	21·40363	75
76	28·36861	•03525	608·19136	21 · 43888	76
77	29·64520	•03373	636·55997	21 · 47262	77
78	30·97923	•03228	666·20517	21 · 50490	78
79	32·37329	•03089	697·18440	21 · 53579	79
80	33·83009	•02956	729·55770	21 · 56534	80
81	35·35245	·02829	763·38779	21 · 59363	81
82	36·94331	·02707	798·74024	21 · 62070	82
83	38·60576	·02590	835·68355	21 · 64660	83
84	40·34302	·02479	874·28931	21 · 67 1 39	84
85	42·15845	·02372	914·63233	21 · 69511	85
86	44 05558	·02270	956·79079	21 · 71781	86
87	46 03808	·02172	1000·84637	21 · 73953	87
88	48 10980	·02079	1046·88446	21 · 76032	88
89	50 27474	·01989	1094·99426	21 · 78021	89
90	52 53710	·01903	1145·26900	21 · 79924	90
91	54·90127	·01821	1197.80611	21 ·81746	91
92	57·37183	·01743	1252.70738	21 ·83489	92
93	59·95356	·01668	1310.07922	21 ·85156	93
94	62·65147	·01596	1370.03278	21 ·86753	94
95	65·47079	·01527	1432.68426	21 ·88280	95
96	68:41697	·01462	1498.15505	21.89742	96
97	71:49574	·01399	1566.57202	21.91140	97
98	74:71305	·01338	1638.06777	21.92479	98
99	78:07514	·01281	1712.78082	21.93760	99
100	81:58852	·01226	1790.85595	21.94985	100

See also Tables on pp. xx-xxxi

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INTEREST TABLES

Years	ONE PO	UND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
I	1.02000	.95238	1.00000	.95238	r
2	1.10220	90703	2.02000	1.85941	2
3	1.12763	86384	3.1 5250	2.72325	3
4	1.5121	82270	4.31013	3.24202	4
5	1.27628	·78353	5.52563	4.32948	5
6	1.34010	.74622	6·80191	5.07569	6
7	1.40710	71068	8.14201	5.78637	7
8	1.47746	•67684	9.24911	6.46321	8
9	1.22133	·64461	11.02656	7.10782	9
10	1 62889	·61391	12.57789	7.72173	10
11	1.71034	•58468	14.20679	8.30641	II
12	1.79586	.55684	15.91713	8.86325	12
13	1.88565	.53032	17.71298	9:39357	13
14	1 97993	.20202	19.59863	9.89864	14
15	2.07893	.48102	21.57856	10.37966	15
16	2.18287	*45811	23.65749	10.83777	16
17	2.29202	*43630	25.84037	11.27407	17
18	2.40662	*41552	28.13238	11.68929	18
19	2.52695	39573	30.23900	12.08532	19
20	2.05330	*37689	33.06292	12.40221	20
21	2.78596	*35894	35.71925	12.82115	21
22	2.92526	*34185	38.20221	1.3.16300	22
23	3.07122	*32557	41.43048	13.48857	23
24	3.22510	*31007	44.20200	13.79864	24
25	3.38035	-29530	47 72710	14.09394	25
20	3.2220	28124	51.11345	14.37518	20
27	3.73340	*20785	54.00913	14.64303	27
28	3.92013	25509	58.40258	14.89813	28
29	4-11014	24295	66.009	15 14107	29
30	4-32194	-23130	00.43005	15.37245	30
31	4.53804	*22030	70.70079	15.59281	31
32	4 70494	-20987	75-29883	15.90208	32
33	5.00319	19907	81.06606	10.00255	33
34	5 25335	19035	00:22027	10-19290	34
35	5 51002	10129	90 32031	10 3/419	33
30	5.79182	1/200	95 03032	10-54085	30
37	6.28 9	10444	101.02014	10.71129	37
30	6.70475	15001	107.70955	10.00/09	30
39	7:03000	14915	120.70077	17 01/04	39
+•	7 ~3777		19911	-/ - 3909	
41	7-39199	13520	127.03970	17*29437	41
42	8.14067	12004	135-231/5	17 42321	42
43	8.55715	11686	144 99334	1/ 54591	43
44	8.98501	.11130	159.70016	17.77407	44
46	9.43426	.10600	168.68516	17.88007	46
47	9.90597	10095	178.11942	17.98101	47
48	10'40127	.09614	188.02530	18.07716	48
49	10.92133	.09156	198.42666	18.16872	49
50	11.46740	·08720	209.34800	18 25592	50
			1		

5%

Years	ONE P	OUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
51	12.04077	•08305	220.81540	18.33898	51
52	12.04281	•07910	232.85017	18.41807	52
53	13.27495	•07533	245.49897	18.49340	53
54	13 93870	•07174	258.77392	18.20214	54
55	14-03503	-00833	272.71202	18.03347	55
56	15.36741	·06507	287.34825	18.69854	56
57	16.13578	*06197	302.71566	18.76052	57
58	16.94257	·05902	318.85144	18.81954	58
59	17.78970	·05621	335.79402	18.87575	59
60	18.67919	·05354	353.58372	18.92929	60
61	10.01312	·05000	372.26200	18.98027	бі
62	20.59380	·04856	391.87605	10.02883	62
63	21.62349	·04625	412.46985	19.07508	63
64	22.70467	•04404	434 09334	19 11912	64
65	23 83990	•04195	456.79801	19.16107	65
66	25.03100	·03005	480.62701	10.20102	66
67	26.28340	*03805	505.66081	10.23007	67
68	27 50766	*03623	531.05330	10.27530	68
60	28.07755	+03451	50.22000	10.30081	60
70	30'42643	+03287	588.52851	19.34268	70
	37104585		678-07-04	101017308	
71	31 94/75	03130	670,00268	19.37398	/1
72	33 54513	102981	68444780	19.403/9	74
73	35 22239	102039	710-67021	19-43210	73
74	28.82260	02/04	719 07021	19 43922	74
15	30 03209	023/3	730 03372	-9 40497	13
70	40.77432	·02453	795.48040	19.20949	70
77	42.81304	*02330	830-20072	19.53285	77
70	44 95309	02225	879-07370	19.55510	70
79	47-20137	102119	924 02/45	19 5/028	/9
00	49 50144	02010	9/1 22002	19 39040	
81	52.03951	•01922	1020.79026	19.61568	81
82	54.64149	-01830	1072 82978	19.63398	82
83	57.37350	*01743	1127 47120	19.05141	03
84	60.24224	•01000	1104-04403	19.00001	04
85	03-25435	-01501	1245-00707	19.00302	°5
86	66 41707	·01506	1308.34142	19 ·69 887	86
87	69.73792	·01434	1374.75849	19.71321	87
88	73.22482	·01366	1444 • 49642	19.72687	88
89	76.88606	·01301	1517.72124	19.73987	89
90	80.73037	.01239	1594.60730	19.75220	90
91	84.76688	-01180	1675-33767	19.76406	91
92	89.00523	°01124	1760-10455	19.77529	92
93	93.45549	01070	1849.10978	19.78599	93
94	98.12826	.01010	1942.56527	19.79618	94
95	103 03468	·00971	2040.69353	19.80589	95
96	108.18641	·00924	2143.72821	19.81513	96
97	113-59573	•00880	2251 91462	19.82394	97
98	119.27552	·00838	2365.51035	19.83232	98
99	125 23929	·00798	2484 78586	19.84030	99
100	131.20126	·00760	2610.02516	19.84791	100

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INTEREST TABLES

Years	ONE P	OUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
I	I '06000	.94340	I.00000	.94340	I
2	1.12360	•89000	2.06000	1.83339	2
3	1.10105	·83962	3.18360	2.67301	3
4	1.26248	•79209	4.37462	3.46511	ă
5	1.33823	74726	5.63709	4.21236	5
6	1.41852	.70496	6.07532	4.01732	6
7	1.20363	•66506	8.30384	5.58238	7
8	1.20382	·62741	9.89747	6.20070	8
0	1.68948	.59190	11 49132	6.80169	a
IÓ	1.79085	•55839	13.18079	7.36009	10
11	1.89830	.52679	14.07164	7.88687	II
12	2.01220	49697	16 86994	8.38384	12
13	2.13293	46884	18.88214	8.85268	13
14	2.26090	•44230	21 01 507	9.29498	14
15	2.39656	*41727	23 27 597	9.71225	15
16	2.24035	-39365	25.67253	10.10200	16
17	2.69277	•37136	28.21288	10.47726	17
18	2.85434	-35034	30.90565	10.82760	18
19	3.02560	-33021	33.75999	11-15812	19
20	3.20714	.31180	36.78559	11.46992	20
21	3.39956	*29416	39.99273	11.76408	21
22	3.60354	°2775I	43.39229	12.04158	22
23	3.81975	*26180	46 99583	12.30338	23
24	4.04803	•24698	50.81558	12.55036	24
25	4.29182	•23300	54.86451	12.78336	25
26	4.24938	-21981	59.12638	13.00317	26
27	4.82235	-20737	63.70577	13.21053	27
28	5.11169	•19563	68.52811	13.40616	28
29	5.41839	•18456	73.63980	13.59072	29
30	5.74349	.17411	79.02819	13.76483	30
31	6.08810	·16425	84.80168	13.92909	31
32	6.45339	•15496	90.88978	14.08404	32
33	6.84059	•14619	97.34316	14.23023	33
34	7.25103	13791	104 18375	14.36814	34
35	7.08009	.13011	111.43478	14.49825	35
36 ·	8.14725	·12274	119.12087	14 62099	36
37	8.63609	•11579	127-26812	14.73678	37
38	9 1 5 4 2 5	.10924	135 90421	14 84602	38
39	9.70351	.10300	145.02840	14 94907	39
40	10.28572	.09722	154.76197	15.04030	40
41	10.90286	·09172	165.04768	15.13802	41
42	11.55703	*08653	175.95054	15.22454	42
43	12.25045	08103	187.50758	15.30017	43
44	12.98548	107701	199 7 5 8 0 3	15 38318	44
45	13.70401	-0/205	212.74351	15 45503	45
46	14.59049	*06854	226.50812	15.52437	46
47	15.40592	00400	241 09861	15.28903	47
48	10-39387	00100	250.50453	15-05003	48
49	17.37750	05755	272 95841	15.70757	49
50	18.42015	.05429	290-33590	15.70180	50

6°/₀

Years	ONE P	DUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
51	19·52536	-05122	308.75606	15.81308	51
52	20·69689	-04832	328.28142	15.86139	52
53	21·93870	-04558	348.97831	15.90697	53
54	23·25502	-04300	- 370.91701	15.94998	54
55	24·65032	-04057	394.17203	15.99054	55
56	26 • 12934	·03827	418·82235	16.02881	56
57	27 • 697 10	·03610	444·95169	16.06492	57
58	29 • 35893	·03406	472·64879	16.09898	58
59	31 • 12046	·03213	502·00772	16.13111	59
60	32 • 98769	·03031	533·12818	16.16143	60
61	34 96695	•02860	566 • 1 1 587	16·19003	61
62	37 06497	•02698	601 • 08282	16·21701	62
63	39 28887	•02545	638 • 14779	16·24246	63
64	41 64620	•02401	677 • 43666	16·26647	64
65	44 14497	•02265	7 19 • 08286	16·28912	65
66	46 79367	•02137	763·22783	16·31049	66
67	49 60129	•02016	810·02150	16·33065	67
68	52 57737	•01902	8 59·62279	16·34967	68
69	55 7 3201	•01794	912·20016	16·36792	69
70	59 07 593	•01693	967·93217	16·38454	70
71	62 • 62049	·01597	1027 00810	16·40051	71
72	66 • 37772	·01507	1089 62859	16·41158	72
73	70 • 36038	·01421	1156 00630	16·42979	73
74	74 • 58200	·01341	1226 36668	16·44320	74
75	79 • 0 5692	·01265	1300 94868	16·45585	75
76	83.80034	•01193	1380-00560	16·46778	7 6
77	88.82836	•01126	1463-80594	16·47904	77
78	94.15806	•01062	1552-63429	16·48966	78
79	99.80754	•0100 2	1646-79235	16·49968	79
80	105.79599	•00945	1746-59989	16·50913	80
81	112·14375	·00892	1852·39588	16·51805	81
82	118·87238	·00841	1964·53964	16·52646	82
83	126·00472	·00794	2083·41202	16·53440	83
84	133·56500	·00749	2209·41674	16·54188	84
85	141·57890	·00706	2342·98174	16·54895	85
86	1 50 07 364	·00666	2484 • 56065	16·55561	86
87	1 59 07806	·00629	2634 • 63428	16·56190	87
88	168 72274	·00593	2793 • 71234	16·56783	88
89	1 78 74010	·00559	2962 • 33508	16·57342	89
90	189 46451	·00528	3141 • 07519	16·57870	90
91	200.83238	-00498	3330 • 53970	16-58368	91
92	212.88232	-00470	3531 • 37208	16-58838	92
93	225.65526	-00443	3744 • 25441	16-59281	93
94	239.19458	-00418	3969 • 90967	16-59699	94
95	253.54625	-00394	4209 • 10425	16-60093	95
96	268.75903	-00372	4462.65050	16.60465	96
97	284.88457	-00351	4731.40953	16.60816	97
98	301.97765	-00311	5016.29411	16.61147	98
99	320.09631	-00312	5318.27175	16.61460	99
100	339.30208	-00295	5638.36806	16.61755	100

See also Tables on pp. xx-xxxi

7%

INTEREST TABLES

Years	ONE PO	UND	ONE POUND	PER ANNUM	Years
	Amouut	Present Value	Amount	Present Value	
I	1.07000	*9 3458	I .00000	· <u>9</u> 3458	I
2	1.14490	·87344	2.02000	1.80802	2
3	1.22504	·81630	3.21490	2*62432	3
4	1.31080	•76290	4*43994	3.38721	4
5	1.40255	•71299	5*75074	4.10020	5
6	1.20023	·666 <u>3</u> 4	7.15329	4.76654	6
7	1 60578	·62275	8 65402	5.38929	7
8	1.71819	·58201	10.22980	5.97130	8
9	1.83846	•54393	11 97799	6.51523	9
10	1.96715	•50835	13-81645	7.02358	10
11	2.10485	* 47509	15-78360	7 49867	11
12	2.25219	•44401	17.88845	7.94269	12
13	2.40985	•41496	20.14064	8.35765	13
14	2-57853	•38782	22.55049	8.74547	14
15	2.75903	•36245	25.12902	9.10291	15
16	2.95216	•33873	27.88805	9.44665	16
17	3.15882	·31657	30.84022	9.76322	17
18	3.37993	·29586	33.99903	10.02000	18
19	3.61653	·27651	37.37896	10.33560	19
20	3.86968	*25842	40.99549	10.29401	20
21	4.14056	*24151	44.86518	10.83553	21
22	4.43040	·22571	49.00574	11.06124	22
23	4.74053	*21095	53.43614	11.27219	23
24	5.07237	19715	58.17667	11.46933	24
25	5.42743	*18425	63.24904	11.65358	25
26	5.80735	·17220	68.67647	11.82578	26
27	6-21387	·16093	74.48382	11.98671	27
28	6.64884	·15040	80.69769	12.13711	28
29	7.11426	·14056	87.34653	12.27767	29
30	7 61226	.13137	94.46079	12.40904	30
31	8.14511	·12277	102.07304	12.53181	31
32	8.71527	11474	110.21815	12.64656	32
33	9:32534	10723	118.93343	12.75379	33
34	9.97811	·10022	128.25876	12.85401	34
35	10.67658	·09366	138.23688	12-94767	35
35	11.42394	·08754	148.91346	13 03521	36
37	12 22 362	08181	160.33740	13.11702	37
38	13.07927	•07646	172.56102	13.19347	38
30	13 99482	07146	185 64029	13 26493	39
40	14.97446	06678	199.63511	13.33171	40
41	16.02267	•06241	214.60957	13`39412	41
42	17.14426	•05833	230 63224	13.45245	42
43	18.34435	·05451	247.77650	13.20696	43
44	19 62846	*05095	266.12085	13.2221	44
45	21.00245	•04761	285.74931	13.60552	45
46	22.47262	•04450	306.75176	13.65002	46
47	24.04571	·04159	329.22439	13.69161	47
48	25.72891	•03887	353 27009	13.73047	48
49	27.52993	03632	378 99900	13.76680	49
50	29.45703	•03395	406.52893	13.80075	50

7%

Years	ONE PO	UND	ONE POUND PE	ER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
51	31 · 51902	·03173	435 98595	13.83247	51
52	33 · 72 535	·02965	467 50497	13.86212	52
53	36 · 08612	·02771	501 23032	13.88984	53
54	38 · 61 2 1 5	·02590	537 31644	13.91573	54
55	41 · 31 500	·02420	575 92859	13.93994	55
56	44 • 20705	·02262	617 •24359	13.96256	56
57	47 • 301 55	·02114	661 •45065	13.98370	57
58	50 • 61 26 5	·01976	708 •7 5219	14.00346	58
59	54 • 1 55 54	·01847	759 •36484	14.02192	59
60	57 • 94 644	·01726	813 •52038	14.03918	60
61	62:00267	·01613	871.46681	14·05531	61
62	66:34286	·01507	933.46949	14·07038	62
63	70:98686	·01409	999.81235	14·08447	63
64	75:95594	·01317	1070.79922	14·09764	64
65	81:27285	·01230	1146.75516	14·10994	65
66	86·96195	·01150	1228:02802	14·12144	66
67	93·04929	·01075	1314:98998	14·13219	67
68	99·56274	·01004	1408:03928	14·14223	68
69	106·53213	·00939	1507:60203	14·15162	69
70	113·98938	·00877	1614:13417	14·16039	70
71	121 96864	•00820	1728·12357	14·16859	71
72	130 50644	•00766	1850·09222	14·17625	72
73	139 64 189	•00716	1980·59867	14·18341	73
74	149 41682	•00669	2120·24058	14·19010	74
75	159 87600	•00625	2269·65742	14·19636	75
76	171.06732	·00585	2429`53344	14·20220	76
77	183.04203	·00546	2600`60078	14·20767	77
78	195.85498	·00511	2783`64283	14·21277	78
79	209.56483	·00477	2979`49783	14·21755	79
80	224.23437	·00446	3189`06268	14·22201	80
81	239·93077	·00417	3413:29707	14·22617	81
82	256·72592	·00390	3653:22786	14·23007	82
83	274·69674	·00364	3909:95381	14·23371	83
84	293·92551	·00340	4184:65058	14·23711	84
85	314·50029	·00318	4478:57612	14·24029	85
86	336·51531	·00297	4793`07645	14·24326	86
87	360·07139	·00278	5129`59180	14·24604	87
88	385·27638	·00260	5489`66323	14·24863	88
89	412·24573	·00243	5874`93965	14·25106	89
90	441·10293	·00227	6287`1 8 543	14·25333	90
91	471 98014	·00212	6728:28841	14·25545	91
92	505 01875	·00198	7200:26859	14·25743	92
93	540 37006	·00185	7705:28740	14·25928	93
94	578 19596	·00173	8245:65751	14·26101	94
95	618 66968	·00162	8823:85354	14·26262	95
96	661 •97656	·00151	9442.52329	14·26413	96
97	708 •31492	·00141	10104.49992	14·26555	97
98	757 •89696	·00132	10812.81491	14·2686	98
99	810 •94975	·00123	11570.71196	14·26810	99
100	867 •71623	·00115	12381.66179	14·26925	100

See also Tables on pp. xx-xxxi

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INTEREST TABLES

Years	ONE PO	DUND	ONE POUND	PER ANNUM	Years
	Amount	Present Value	Amouut	Present Value	
I	1.08000	'02503	1*00000	.02503	т
2	1.16640	85734	2.08000	1.78326	2
2	1.22071	.79383	3.24640	2.57710	2
4	1.36049	.73503	4.20611	3.31213	4
5	1 46933	·68058	5.86660	3.99271	5
6	1.18687	.62017	7.22502	4.62288	6
7	1.71282	.58340	8.02280	5.20627	7
8	1.85003	-54027	10.62663	5.74664	8
ŏ	1.00000	.50025	12.48756	6.24689	ő
10	2.15892	·46319	14.48656	6.71008	10
11	2:33164	·42888	16.64549	7.13896	II
12	2.51817	39711	18 97713	7.53608	12
13	2.71962	-36770	21.49530	7.90378	13
14	2.93719	·34046	24.21492	8.24424	14
45	3.12212	.31524	27.12211	8.55948	15
16	3.42594	·29189	30.32428	8.85137	16
17	3.20002	·27027	33.75023	9.12164	17
18	3.99602	·25025	37.45024	9*37189	18
19	4.31570	·23171	41 44626	9.60360	19
20	4.66096	-21455	45.76196	9.81815	20
21	5.03383	·19866	50.42292	10.01680	21
22	5.43654	·18394	55.45676	10.20074	22
23	5.87146	17032	60.89330	10.37106	23
24	6.34118	.12220	66•76476	10.22876	24
25	6.84848	•14602	73.10594	10.67478	25
26	7.39635	·13520	79.95442	10.80998	26
27	7.98806	.12519	87.35077	10.93210	27
28	8.02711	.11591	95.33883	11 05108	28
29	9.31727	.10733	103.96593	11.12841	29
30	10.00200	-09930	113-28321	11-25778	30
31	10.86762	·09202	123.34587	11.34980	31
32	11.23208	·08520	134 21354	11.43500	32
33	12.67605	·07889	145.95062	11.21389	33
34	13.69013	.07305	158.62667	11.28693	34
35	14.78534	*06703	172-31680	11.05457	35
36	15.96817	+06262	187.10215	11.71719	36
37	17.24563	·05799	203.07032	11.77518	37
38	18.02528	•05369	220.31595	11.82887	38
39	20.11530	·04971	238 94122	11.87858	39
40	21.72452	•04003	259.05052	11.92401	40
41	23.46248	.04262	280.78104	11.96723	41
42	25.33948	·03946	304.24352	12.00670	42
43	27.30004	.03054	329.58301	12.04324	43
44	29.55597	-03383	350.94905	12.07707	44
45	31 92045	03133	300.50502	12.10840	45
46	34 47409	·02901	418 42607	12 13741	46
47	37.23201	02686	452.90015	12.10427	47
48	40.21057	·02487	490.13216	12'18914	48
49	43 42742	02303	530-34274	12-21210	49
50	40.90101	-02132	573.77010	12.23340	50

Years	ONE PO	DUND	ONE POUND P	ER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
51	50.65374	·01974	620.67177	12·25323	51
52	54.70604	·01828	671.32551	12·27151	52
53	59.08252	·01693	726.03155	12·28843	53
54	63.80913	·01567	785.11408	12·30410	54
55	68.91386	·01451	848.92320	12·31861	55
56	74 • 42696	·01344	917 •83706	12·33205	56
57	80 • 381 12	·01244	992 •26402	12·34449	57
58	86 • 81 161	·01152	1072 •64514	12·35601	58
59	93 • 75654	·01067	1159 •45676	12·36668	59
60	101 • 25706	·00988	1253 •21330	12·37655	60
61	109·35763	•00914	1354 47036	12·38570	61
62	118·10624	•00847	1463 82799	12·39416	62
63	127·55474	•00784	1581 93423	12·40200	63
64	137·75912	•00726	1709 48897	12·40926	64
65	148·77985	•00672	1847 24808	12·41598	65
66	160.68223	•00622	1996 02793	12·42221	66
67	173.53681	•00576	2156 71016	12·42797	67
68	187.41976	•00534	2330 24698	12·43330	68
69	202.41334	•00494	2517 66673	12·43824	69
70	218.60641	•00457	2720 08007	12·44282	70
71	236.09492	•00424	2938 68648	12:44705	71
72	254.98251	•00392	3174 78140	12:45098	72
73	275.38111	•00363	3429 76391	12:45461	73
74	297.41160	•00336	3705 14502	12:45797	74
75	321.20453	•00311	4002 55662	12:46108	75
76	346 90089	•00288	4323.76115	12·46397	76
77	374 65296	•00267	4670.66205	12·46664	77
78	404 62520	•00247	5045.31501	12·46911	78
79	436 99522	•00229	5449.94021	12·47139	79
80	471 95483	•00212	5886.93543	12·47351	80
81	509 71122	•00196	6358 89026	12·47548	81
82	550 48812	•00182	6868 60148	12·47729	82
83	594 52717	•00168	7419 08960	12·47897	83
84	642 08934	•00156	8013 61677	12·48053	84
85	693 45649	•00144	8655 70611	12·48197	85
86	748 93301	•00134	9349•16260	12·48331	86
87	808 84765	•00124	10098·09561	12·48455	87
88	873 55546	•00114	10906·94326	12·48569	88
89	943 43990	•00106	11780·49872	12·48675	89
90	1018 91 509	•00098	12723·93862	12·48773	90
91	1100·42830	•00091	13742*85370	12:48864	91
92	1188·46256	•00084	14843*28200	12:48948	92
93	1283·53956	•00078	16031*74456	12:49026	93
94	1386·22273	•00072	17315*28413	12:49098	94
95	1497·12055	•00067	18701*50686	12:49165	95
96	1616·89019	-00062	20198 62740	12·49227	96
97	1746·24141	-00057	21815 51760	12·49284	97
98	1885·94072	-00053	23561 75900	12·49337	98
99	2036·81598	-00049	25447 69972	12·49386	99
100	2199 ·7 6126	-00045	27484 51570	12·49432	100

See also Tables on pp. xx-xxxi

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INTEREST TABLES

Years	ONE PO	ONE POUND ONE POUND PE		PER ANNUM	Years
	Amount	Present Value	Amount	Present Value	
1	1 ·09000	·91743	1.00000	·91743	1
2	1 ·18810	·84168	2.09000	1·75911	2
3	1 ·29503	·77218	3.27810	2·53129	3
4	1 ·41158	·70843	4.57313	3·23972	4
5	1 ·53862	·64993	5.98471	3·88965	5
6	1 67710	·59627	7 · 52333	4·48592	6
7	1 82804	·54703	9 · 20043	5·03295	7
8	1 99256	·50187	11 · 02847	5·53482	8
9	2 17189	·46043	13 · 02104	5·99525	9
10	2 36736	·42241	15 · 19293	6·41766	10
11	2·58043	·38753	17·56029	6·80519	11
12	2·81266	·35553	20·14072	7·16073	12
13	3·06580	·32618	22·95338	7·48690	13
14	3·34173	·29925	26·01919	7·78615	14
15	3·64248	·27454	29·36092	8·06069	15
16	3·97031	•25187	33.00340	8·31256	16
17	4·32763	•23107	36.97370	8·54363	17
18	4·71712	•21199	41.30134	8·75563	18
19	5·14166	•19449	46.01846	8·95011	19
20	5·60441	•17843	51.16012	9·12855	20
21	6·10881	·16370	56•76453	9·29224	21
22	6·65860	·15018	62•87334	9·44243	22
23	7·25787	·13778	69•53914	9·58021	23
24	7·91108	·12640	76•789\$1	9·70661	24
25	8·62308	·11597	84•70090	9·82258	25
26	9:39916	·10639	93·32398	9·92897	26
27	10:24508	·09761	102·72313	10·02658	27
28	11:16714	·08955	112·96822	10·11613	28
29	12:17218	·08215	124·13536	10·19828	29
30	13:26768	·07537	136·30754	10·27365	30
31	14:46177	•06915	149`57522	10°34280	31
32	15:76333	•06344	164`03699	10°40624	32
33	17:18203	•05820	179`80032	10°46444	33
34	18:72841	•05339	196`98234	10°51784	34
35	20:41397	•04899	215`71075	10°56682	35
36	22·25123	·04494	236·12472	10:61176	36
37	24·25384	·04123	258·37595	10:65299	37
38	26·43668	·03783	282·62978	10:69082	38
39	28·81598	·03470	309·06646	10:72552	39
40	31·40942	·03184	337·88245	10:75736	40
41	34·23627	•02921	369 29187	10·78657	41
42	37·31753	•02680	403 52813	10·81337	42
43	40·67611	•02458	440 84566	10·83795	43
44	44·33696	•02255	481 52177	10·86051	44
45	48·32729	•02069	525 85873	10·88120	45
46	52 ^{.6} 7674	•01898	574·18602	10°90018	46
47	57 ^{.41765}	•01742	626·86276	10°91760	47
48	62 ^{.58524}	•01598	684·28041	10°93358	48
49	68 ^{.21791}	•01466	746·86565	10°94823	49
50	74 ^{.35752}	•01345	815·08356	10°96168	50

Vears	ONE POUND		ONE POUND PI	Voor	
	Amount	Present Value	Amount	Present Value	1 6413
51	81.04970	·01234	889.44108	10.97402	51
52	88.34417	·01132	970.49077	10.98534	52
53 54 55	104·96171 114·40826	·00953 ·00874	1155-13009 1260-09180	11.00222	53 54 55
56	124.70501	•00802	1374·50006	11 02201	56
57	135.92846	•00736	1499·20506	11 02937	57
58	148.16202	•00675	1635·13352	11 03612	58
59	161.49660	•00619	1783·29553	11 04231	59
60	176.03129	*00568	1944-79213	11.04799	60
61	191.87411	*00521	2120-82342	11.05320	61
62	209.14278	*00478	2312-69753	11.05798	62
63	227.96563	*00439	2521-84031	11.06237	63
64	248.48253	*00402	2749-80594	11.06640	64
65	270.84596	·00369	2998.28847	11.07009	65
66	2 95.22 210	·00339	3269.13444	11.07347	66
67	321.79209	·00311	3564.35654	11.07658	67
68	350.75338	·00285	3886.14862	11.07943	68
60	382.32118	·00262	4236.00200	11.08205	60
70	416.73009	·00240	4619-22318	11.08445	70
71	454.23579	·00220	5035-95327	11.08665	71
72	495.11702	·00202	5490-18906	11.08867	72
73	539.67755	·00185	5985-30608	11.09052	73
74	588.24853	·00170	6524-98362	11.09222	74
75	641.19089	·00156	7113·23215	11.09378	75
76	698.89807	·00143	7754·42304	11.09521	76
77	761.79890	·00131	8453·32112	11.09653	77
78	830.36080	·00120	9215·12002	11.09773	78
79	905.09327	·00110	10045·48082	11.09883	79
81 82 83 84 85	930 55107 1075'34132 1172'12204 1277'61302 1392'59819 1517'93203	*00093 *00085 *00078 *00072 *00066	11937 12576 13012 46708 14184 58911 15462 2021 3 16854 80033	11.10078 11.10078 11.10163 11.10241 11.10313 11.10379	81 82 83 84 85
86	1654°54591	·00060	18372.73236	11°10440	86
87	1803°45504	·00055	20027.27827	11°10495	87
88	1965°76600	·00051	21830.73331	11°10546	88
89	2142°68494	·00047	23796.49931	11°10593	89
90	2335°52658	·00043	25939.18425	11°10635	90
91	2545 72397	•00039	28274.71083	11.10675	91
92	2774 83913	•00036	30820.43481	11.10711	92
93	3024 57465	•00033	33595.27394	11.10744	93
94	3296 78637	•00030	36619.84859	11.10774	94
95	3593 49715	•00028	39916.63497	11.10802	95
96	3916·91189	•00026	43510·13211	11 · 10827	96
97	4269·43396	•00023	47427·04400	11 · 10851	97
98	4653·68302	•00021	51696·47796	11 · 10872	98
99	5072·51449	•00020	56350·16098	11 · 10892	99
100	5529 ·0 4079	•00018	61422·67547	11 · 10910	100

See also Tables on pp. xx-xxxi

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INTEREST TABLES

Years	ONE PO	DUND	ONE POUND	PER ANNUM	Усага
	Amount	Present Value	Amount	Present Value	
r	1.10000	•90909	1.00000	•90909	I
2	1.51000	·82645	2.10000	1.73554	2
3	1.33100	.75131	3.31000	2.48685	3
4	1.46410	•68301	4.64100	3.16987	4
5	1.01021	•62092	6.10210	3.20029	5
6	1.77156	.56447	7.71561	4.35526	6
7	1.04872	.51316	9.48717	4.86842	7
k k	2.14359	•46651	11.43589	5:33493	8
	2.35795	.42410	13.57948	5.75902	9
10	2.59374	·38554	15.93742	6.14457	IÓ
тт	2.85312	·35049	. 18.53117	6.49506	11
12	3.13843	·31863	21.38428	6.81369	12
12	3.45227	·28966	24.52271	7.10336	13
-3	3 79750	26333	27 97498	7.36669	14
15	4.17725	·23939	31.77248	7.60608	15
16	4.20492	·21763	35.94973	7.82371	16
17	5.05447	·19784	40.54470	8.02155	17
78	5.55992	·17986	45.20012	8.20141	18
TO	6.11291	16351	51.12009	8.36492	19
20	6.72750	·14864	57.27500	8.51356	20
21	7.40025	.13513	64.00250	8.64869	21
22	8.14027	·12285	71 40275	8.77154	22
23	8.95430	.11168	79.54302	8.88322	23
24	9.84973	.10123	88.49733	8.98474	24
25	10.83471	·09230	98.34706	9*07704	25
26	11.01818	·08391	109.18177	9.16092	26
27	13.10999	·07628	121.09994	9.23722	27
28	14.42099	·06934	134.50994	9.30657	28
29	15.86309	•06304	148.63093	9.36961	29
30	17.44940	·05731	164 49402	9.42691	30
31	19.19434	·05210	181 94342	9.47901	31
32	21.11378	·04736	201-13777	9.52638	32
33	23.22515	·04306	222.25154	9.26943	33
34	25.54767	·03914	245.47670	9*60857	34
35	28.10244	·03558	271 02437	9.64416	35
36	30.91268	·03235	299 • 1 268 1	9.67651	36
37	34.00395	·02941	330.03949	9.70592	37
38	37.40434	.02673	364.04343	9.73265	38
30	41.14478	·02430	401 44778	9.75696	39
40	45.25926	·02209	442-59256	9.77905	40
41	49.78518	·02009	487.85181	9.29914	4 I
42	54.76370	·01826	537 63699	9.81740	42
43	60.24007	·01660	592 40069	9.83400	43
44	66.26408	°01 509	652 64076	9.84909	44
45	72.89048	.01372	718.90484	9.86281	45
46	80.17953	·01247	791 79532	9.87528	46
47	88.19749	·01134	871.97485	9'88662	47
48	97.01723	.01031	960.17234	9.89693	48
40	106.71896	·00937	1057 18957	9.90630	49
50	117.39085	·00852	1163-90853	9.91481	50

For explanation see pp. 8-13

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Verm	ONE POU	IND	ONE POUND P	ER ANNUM	Vanra
Toms	Amount	Present Value	. Amount	Present Value	TCALP
51	120.12004	*00774	1281-29938	9.92256	51
52	142.04203	·00704	1410.42932	9.92960	52
52	156.24723	·00640	1552.47225	9.93600	53
54	171.87195	·00582	1708.71948	9.94182	54
55	189 05914	*00529	1880.59142	9 94711	55
56	207.96506	·00481	2069-65057	9.95191	56
57	228.76156	·00437	2277 61 562	9.95629	57
58	251 63772	*00397	2506.37719	9.96026	58
59	276.80149	*00361	2758 01490	9 96387	59
60	304 48164	·00328	3034 81640	9.96716	60
61	334 92980	·00299	3339.29803	9.97014	61
62	368 42278	·00271	3674 22784	9.97286	62
63	405.26506	·00247	4042.65062	9.97532	63
64	445 [.] 79 ¹ 57	·00224	4447 91 568	9.97757	64
0 5	490.37073	*00204	4893.70725	9.97961	o5
66	539.40780	·00185	5384.07798	9.98146	66
67	593.34858	•00169	5923.48578	9.98315	67
68	652.68344	'00153	6516.83435	9.98468	68
69	717.95178	.00130	7169.51779	9.98607	09
70	789.74696	·00127	7887.46957	9 [.] 98734	70
71	868.72165	.00112	8677 21652	9.98849	71
72	955.59382	.00102	9545 93818	9.98954	72
73	1051-15320	*00095	10501 .23199	9.99049	73
74	1156.26852	•00086	11552 68519	9'99135	74
75	1271.89537	.00079	12708.95371	9.99214	75
76	1399.08491	·00071	13980.84909	9.99285	76
77	1538-99340	*00065	1 5379 93399	9.99320	77
78	1692.89274	·00059	16918-92739	9.99409	78
79	1862-18201	*00054	18611.82013	9 99463	79
80	2048 40021	.00049	20474 00215	9.99212	80
81	2253.24024	*00044	22522.40236	9.99526	81
82	2478.56426	*00040	24775 64260	9 99597	82.
83	2726.42069	·00037	27254.20686	9.99633	83
84	2999.06275	*00033	29980.62754	9.99667	84
85	3298.96903	*00030	32979.69030	9.99697	85
86	3628.86593	*00028	36278 65932	9.99724	86
87	3991.75253	·00025	39907.52526	9.99749	87
88	4390.92778	• •00023	43899.27778	9.99772	88
89	4830.02056	·00021	48290.20556	9.99293	89
90	5313.02261	.00019	53120-22612	9.99812	90
91	5844.32487	.00017	58433.24873	9.99829	91
92	6428.75736	.00010	04277 57360	9.99844	92
93	7071.03310	.00014	70700-33096	9.99×59	93
94	7778.79641	.00013	77777 90400	9'99871	94
95	8556-67605	.00012	85550.70046	9.99883	95
96	9412.34365	11000 [.]	94113.43651	9 99894	96
97	10353.57802	.00010	103525.78016	9.99903	97
98	11388.93582	.00009	113879.35818	9.99912	98
99	12527.82940	80000	125208-29400	9 99920	99
100	13780.61234	·00007	137790-12340	9'99927	100
See	also Tables on pp.	xxxxxî. F	or 15% see p. xl		
		(85)		

	AMOUNT O	F ONE POUN	ID AT END C	F YEAR	
Years	1%	\mathbf{l}_{4}^{1} %	$l^{\frac{1}{2}}$ %	$1\frac{3}{4}\%$	Years
10	1.10462	1.13227	1.16054	1.18944	10
20	1.22019	1.28204	1.34686	1 41478	20
30	1.34785	1.42161	1.26308	1.68280	30
40	1.48886	1.64362	1.81402	2.00100	40
50	1.04403	1.90105	2.10524	2.30079	50
60	1.81670	2.10718	2.44322	2.83182	60
70	2.00676	2.38590	2.83546	3.36829	70
80	2.21672	2.70149	3.29066	4.00639	80
90	2.44863	3.02881	3.81895	4.76538	90
100	2.70481	3.46340	4.43205	5.00810	100
	2 %	2 ¹ / ₄ %	2 ¹ / ₂ %	$2\frac{3}{4}$ %	
10	1.31800	L:24020	1.38008	1.31165	10
20	1.48505	1.24920	1.63862	1.72043	20
30	1.81136	1.94939	2.09757	2.25660	30
40	2.20803	2.43519	2.68506	2.95987	40
50	2.69159	3.04205	3.43711	3.88232	50
60	3.28103	3.80013	4:39979	5.09225	60
70	3.99956	4.74714	5.63210	ŏ∙6792ŏ	70
80	4.87544	5.93015	7.20957	8.76085	80
90	5 94313	7:40796	9.22886	11.49118	90
100	7.24405	9.25405	11.81372	15.07242	100
	3 %	3 ¹ / ₄ %	$3\frac{1}{2}\%$	3 <u>3</u> %	
TO	1.34302	1.37680	1.41060	1.44504	10
20	1.80611	1.89584	1.98979	2.08815	20
30	2.42726	2.61037	2.80679	3.01747	30
40	3.26204	3.59420	3 95926	4.36038	40
50	4.38391	4.94884	5.58493	6•30094	50
60	5.89160	6.81402	7.87809	9.10513	60
70	7.91782	9.38219	11.11282	13 15732	70
80	10.64089	12.91828	15 67574	19.01290	80
90	14.30047	17.78711	22.11217	27.47448	90
100	19.21903	24 49097	31-19141	39.70103	100

	AMOUNT	OF ONE POU	JND AT END	OF YEAR	
Years	4 %	$4\frac{1}{4}\%$	$4\frac{1}{2}\%$	$4\frac{3}{4}$ %	Years
10	1.48024	1.21621	1.2207	1.20022	10
20	2.10115	2.20801	2.41171	2.2077	20
30	3.24340	3.48564	3.74532	4.02366	30
40	4.80102	5.28497	5.81636	6.39972	40
50	7.10668	8.01315	9.03264	10.17892	50
60	10.21963	12.14965	14.02741	16.18982	60
70	15.57162	18.42148	21.78413	25.75030	70
80	23.04980	27.93091	33.83009	40.95647	80
90	34 11933	42.34925	52.53710	65.14220	90
100	50.20495	04-21055	01-50052	103-01030	100
	5 %	$5\frac{1}{2}\%$	6 %	$6\frac{1}{2}\%$	
10	1.62880	1.70814	1.20085	1.87714	10
20	2.65330	2.91776	3.20714	3.52365	20
30	4.32194	4.98395	5.74349	6.61437	30
40	7 03999	8.21331	10.28572	12.41607	40
50	11.46740	14.24196	18.42015	23.30668	50
60	18.67919	24.83977	32.98769	43.74984	60
70	30.42643	42.42992	59.07593	82.12446	70
8o	49.26144	72.47643	105.79599	154.15891	80
90	80.73037	123.80021	189.46451	289.37746	90
100	131.20126	211.46864	339.30208	543.20127	100
	7 %	8 %	9 %	10 %	
10	1:06715	2.1 5802	2.26726	2.50274	10
20	3.86968	4.66096	5.60441	6.72750	20
30	7.61226	10.06266	13.26768	17.44940	30
40	14.97446	21.72452	31.40942	45.25926	40
50	29.45703	46.90161	74.35752	117-39085	50
60	57.94644	101 .25706	176.03129	304.48164	бо
70	113.98938	218.60641	416.73009	789 74696	70
80	224.23437	471.95483	986.55167	2048.40021	80
90	441.10293	1018.91509	2335.52658	5313.02261	90
100	867.71623	219 9 .76126	5529.04079	13780.01234	100

Years	l %	$1\frac{1}{4}\%$	$1\frac{1}{2}\%$	$1\frac{3}{4}$ %	Years
10	.90529	.88318	•86167	•84073	10
20	·81954	.78001	.74247	•70682	20
30	.74192	·68889	63976	•59425	30
40 50	*67165 *60804	·60841 ·53734	•55126 •47500	*49960 *42003	40
60			110020		60
70	*40821	4/45/	*25268	35313	70
80	49031	*37017	*20280	*24060	80
90	*40839	.32692	*26185	*20985	00
100	•36971	•28873	·22563	•17642	100
	2 %	2 ¹ / ₄ %	$2\frac{1}{2}$ %	$2\frac{3}{4}$ %	
10	•82035	·80051	.78120	.76240	10
20	67297	·64082	.61027	.58125	20
30	55207	·51298	•47674	•44314	30
40	•45289	•41065	*37243	•33785	40
50	•37153	•32873	*29094	•25758	50
60	·30478	·26315	·22728	·19638	60
70	·25003	·21065	17755	14972	70
80	20511	•16863	•13870	.11414	80
90 100	·16826 ·13803	·13499 ·10806	•10836 •08465	•08702 •06635	90 100
	3 %	3 ¹ / ₄ %	3분 %	3 ³ / ₄ %	
10	.74409	•72627	•70892	·69202	10
20	-55368	*52747	50257	•47889	20
30	-41199	*38309	*35028	*33140	30
40 50	*22811	2/023	17905	15871	40 50
60	·16973	•14676	·12693	·10983	60
70	12630	·10658	•08999	.07600	70
80	•09398	.07741	·06379	•05260	80
90	.00993	.05022	04522	·03040	90

THE PR	ESENT VAL	UE OF ONE H	OUND DUE	AT END OF	YEAR
Years	4 %	4 ¹ / ₄ %	$4\frac{1}{2}\%$	4 ³ / ₄ %	Years
10	•67556	·65954	·64303	·62872	10
20	45639	43499	•41464	*39529	20
30	.30832	·28689	•26700	·24853	30
40	•20829	•18922	17193	•15626	40
50	•14071	-12479	-11071	09824	50
60	·095 0 6	·08231	·07129	·06177	60
70	·06422	·05428	-04590	·03883	70
80	•04338	.03580	·02956	*02442	80
90	·02931	*02301 *01557	•01903 •01926	-01535 -00065	90
100	-01980	01357	01220	00905	100
	5 %	$5\frac{1}{2}$ %	6 %	$6\frac{1}{2}$ %	
то	·61301	.58543	•55839	•53273	10
20	·37Ğ89	•34273	·31180	·28380	20
30	·23138	-20064	-17411	-15119	30
40	14205	•11746	09722	.08054	40
50	08720	-008/7	-05429	04291	50
60	·05354	·04026	·03031	·02286	60
70	03287	·02357	·01693	·01218	70
80	·02018	.01380	·00945	00649	80
90	·01239	*00808	·00528	*00346	90
100	-00700	-00473	-00295		100
i I	7 %	8 %	9 %	10 %	
10	.50825	·46310	·4224 I	•38554	T
20	25842	21455	·17843	14864	20
30	·13137	-09938	•07537	·0573 I	30
40	·06678	·04603	·03184	+02209	40
50	·03395	.02132	·01345	-00852	59
60	·01726	•00988	·00568	·00328	6
70	·00877	-00457	*00240	.00127	7
80	·00446	*002 I 2	10100	.00049	8
90	·00227	.000099	·00043	-00019	9

For 15% see p. xl

	THE AMO	UNT OF ON	E POUND PE	R ANNUM	
Years	1 %	114 %	1½ %	$1^{\frac{3}{4}}$ %	Years
10	10:46221	10:58167	10'70272	10:82540	TO
20	22:01000	22:56208	22.12267	23.70161	20
30	34.78480	36.12007	37.53868	30.01712	30
40	48.88637	51.48956	54.26789	57.23413	40
50	64 46318	68.88179	73.68283	78.90222	50
60	81.66967	88.57451	96.21465	104.67522	60
70	100.67634	110.87200	122.36375	135.33076	70
8 0	121.67152	136.11880	152.71085	171.79382	80
90	144.86327	164.70501	187.92990	215.16402	90
100	170.48138	197.07234	228.80304	200.75177	100
	2 %	$2\frac{1}{4}\%$	$2\frac{1}{2}\%$	$2\frac{3}{4}$ %	
70	10101050				. 70
20	24:20727	24:01152	25.5466	26:10740	20
30	40.56808	12:10526	13:00270	45.60461	30
40	60.40108	63.78618	67.40256	71.26815	40
50	84.57940	90.75762	97.48435	104.81170	50
60	114.05154	124.45043	135.09159	148.80914	60
70	149 97791	166.53962	185.28411	206.51843	70
8 0	193.77195	219.11757	248.38271	282.21287	80
90	247 • 1 566 5	284 79813	329.15425	381.49757	90
100	312.23230	366.84650	432.54865	511.72445	100
	3 %	3 ¹ / ₄ %	3 ¹ / ₂ %	$3\frac{3}{4}\%$	
10	11:46288	11:50675	11.72120	11.86784	10
20	26.87037	27.56424	28.27968	20.01730	20
30	47.57542	49.54980	51.62267	53'79924	30
40	75.40126	79 821 58	84.55028	89.61010	40
50	112.79687	121.20263	130.99791	141.35837	50
60	163.05344	178.89303	196.51688	216.13690	60
70	230.59406	257 91 354	288.93786	324.19515	70
8 0	321.36302	366.71643	419.30678	480.34408	80
90	443.34890	516.52651	603.20503	705 98614	90
100	607.28773	722.79916	862.01100	1032.04983	100

	THE A	LOUNT OF ON	E POUND PER	ANNUM	
Years	4 %	4 ¹ / ₄ %	4 ¹ / ₂ %	4 ³ / ₄ %	Years
10	12.00011	12.14622	12.28821	12.43209	10
20	29.77808	30.26220	31.37142	32.20563	20
30	56.08494	58·48553	61 00707	63 65594	30
40	95.02552	100.82283	107.03032	113.67841	40
50	152.00708	165.01525	178.20303	193-24036	50
60	237.99069	262.34474	289.49795	· 319.78559	60
70	364 29046	409.91711	461.86968	521.05885	70
8 0	551 24498	633 66848	729.55770	841 18887	80
90	827.98333	972 92354	I 145·26900	1350-36345	90
100	1237.62370	1487 30697	1790.85595	2160.21801	100
	5 %	$5\frac{1}{2}\%$	6 %	6 ¹ / ₂ %	
10	12.57789	12.87535	13.18079	13.49442	10
20	33.06292	34.86832	36.78559	38.82531	20
30	66.43885	72.43548	79.02819	86.37486	30
40	120.79977	136.60561	154.76197	175.63192	40
50	209.34800	240-21748	290.33590	343.17967	50
60	353.58372	433.45037	533.12818	657.68984	60
70	588.22851	753.27120	967 93217	1248.06867	70
80	971.22882	1299.57139	1746.59989	2356-29087	80
90 100	1594·60730 2610·02516	2232.73101 3826.70246	3141 07519 5638 36806	4436·57630 8341·55802	90 100
	7 %	8 %	9 %	10 %	
10	13.81645	14.48656	15.19293	15.93742	10
20	40.99549	45 76196	51.10012	57.27500	20
30	94.46079	113-28321	136 30754	164 49402	30
40	199 63511	259 05652	337.88245	442.59256	40
50	406.52893	573.77016	815.08356	1163.90853	50
бо	813.52038	1253-21330	1944.79213	3034.81640	60
70	1614 13417	2720.08007	4619 22318	7887 46957	70
8 0	3189.06268	5886.93543	10950.57409	20474 00215	80
9 0	6287.18543	12723.93862	25939.18425	53120-22612	90
100	12381 66179	27484.51570	01422-07547	137796.12340	100

			OF ILAL		
Years	1%	l ¹ / ₄ %	1월 %	$1\frac{3}{4}$ %	Years
10	9.47130	9:34553	9.22219	9.10122	10
20	18-04555	17.29932	17.16864	16.75288	20
30	25.80771	24.9991	24.01584	23.10505	30
40 50	39.19612	31 32093 37 01 288	34.99969	33.14121	40 50
60	44.95504	42.03459	39.38027	36.96399	60
70	50.16821	46.46968	43.15487	40.17790	70
80	54.88821	50.38000	40.40732	42.87994	06
90 100	63.02888	56.90134	49 ⁻²⁰⁹⁸⁵ 51 -62 470	45'15101 47'06147	90 100
	2 %	2 ¹ / ₄ %	2 ¹ / ₂ %	2 ³ / ₄ %	
10	8:08258	8.86622	8.75206	8.64008	10
20	16.35143	15.96371	15.58916	15.22725	20
30	22.39646	21.64533	20.93029	20.24930	30
40	27.35548	26.19322	25.10277	24.07810	40
50	31.42361	29.83440	28.36231	26 997 17	50
60	34.76089	32.74895	30.00866	29.22266	60
70	37.49862	35.08208	32.89786	30.91937	70
80	39.74451	36.94978	34.45182	32.21294	80
90 100	43.09835	39.64174	36.61410	33.95104	100
	3 %	3 ¹ / ₄ %	3 ¹ / ₂ %	3 ³ / ₄ %	
	P. 1000-	8	8.0.766-		-
10	14.87748	14:52025	14:21240	12:80620	10
20	14 0/740	18.08102	18.30205	17.82025	20
40	23.11477	22.20843	21.35507	20.2200	40
50	25.72976	24.22176	23.45562	22.43449	50
бо	27.67556	26.25366	24.94474	23.73792	60
70	29.12342	27.48970	26.00040	24.63991	70
8c	30.20076	28.38740	26.74878	25.26411	80
90	31.00241	29.03937	27.27932	25.09007	90
100	31.29091	29 51200	2/ 03343	23 99499	100

Years	4 %	4 ¹ / ₄ %	4 ¹ / ₂ %	4 ³ / ₄ %	Years
10	8.11090	8.01089	7.91272	7.81635	10
20	13.20033	13.29437	13.00794	12.73067	20
30	17.29203	10.77902	10-28889	15.82042	30
40 50	21.48219	20.29306	19.76201	18.98437	50
60	22.62349	21.59278	20.63802	19.75227	60
70	23.39452	22.25213	21.20211	20.23506	70
80	23.91539	22.03700	21.20534	20.53001	
100	24.50500	23.16297	21 94985	20.84944	100
	5 %	5 ¹ / ₂ %	6 %	6 ¹ / ₂ %	
10	7.72173	7.53763	7.36009	7.18883	10
20	12.46221	11 95038	11.46992	11.01821	20
30	15.37245	14.53375	13.76483	13.02868	30
40 50	18.25592	16.93152	15.76186	14.72452	40 50
60	18.92929	17.44985	16.16143	15.03297	60
70	19.34268	17.75330	16.38454	15.19728	70
80	19.59646	17.93095	10.20913	15-20402	00
100	19 / 5220	18.09584	16.61755	15.35629	100
	7 %	8 %	9 %	10 %	
		6:71008	6:41766	6.14457	TO
20	10.2320	0.81814	9.12855	8.51356	20
30	12.40904	11.25778	10.27365	9.42691	30
40	13.33171	11.92461	10.75736	9.77905	40
50	13.80075	12.23348	10.96168	9.91481	50
60	14.03918	12.37655	11.04200	9.96716	60
70	14 16039	12:44282	11.08442	9.98734	70
80	14-22201	12.47351	11.10632	0.00812	
700	14-25025	12:40422	11.10010	0.00027	100

See also Tables pp. xx-xxxi. For 15% see p. xl

THE PRESENT	VALUE OF A PE	RPETUITY OF £1 P	ER ANNUM
At per Cent.	£	At per Cent.	£
$\begin{array}{c} & \pounds & s. & d. \\ \frac{1}{6} & \text{or} & 0 & 2 & 0 \\ \frac{1}{4} & ,, & 0 & 5 & 0 \\ \frac{3}{8} & ,, & 0 & 7 & 0 \\ \frac{1}{2} & ,, & 0 & \mathbf{I0} & 0 \end{array}$	800.00000 400.00000 266.66667 200.00000	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	19·51220 19·04762 18·60465 18·18182
$\begin{array}{c} \frac{5}{8} & , & 0 & 12 & 6 \\ \frac{3}{4} & , & 0 & 15 & 0 \\ \frac{7}{8} & , & 0 & 17 & 6 \\ \mathbf{I} & , & \mathbf{I} & 0 & 0 \end{array}$	160.00000 133.33333 114.28571 100.00000	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17 • 77778 17 • 391 30 17 • 02128 16 • 66667
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	88·88889 80·00000 72·72727 66·66667	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	16·32653 16·0000 15·68627 15·38462
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	61 •53846 57 •1 4 286 53 •33333 50 •00000	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15*09434 14*81481 14*54545 14*28571
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	47 05882 44 44444 42 10526 40 00000	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	14.03509 13.79310 13.55932 13.33333
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	38 [.] 09524 36 [.] 36364 34 [.] 78261 33 [.] 33333	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	13·11475 12·90323 12·69841 12·50000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	32.00000 30.76923 29.62963 28.57143	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12·30769 12·12121 11·94030 11 ·76471
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	27.58621 26.66667 25.80645 25.00000	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11•59420 11•42857 11•26761 11•11111
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	24*24242 23*52941 22*85714 22*22222	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10.95890 10.81081 10.66667 10.52632
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	21.62162 21.05263 20.51282 20.00000	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10·38961 10·25641 10·12658 10·00000

THE PRESENT VALUE OF THE REVERSION OF A PERPETUITY OF $\pounds 1$							
Years Deferred	1%	$l_{\frac{1}{4}}^{\frac{1}{4}}\%$	1 ¹ / ₂ %	$1\frac{3}{4}\%$	Years Deferred		
1	99.00990	79·01235	65.68145	56·16006	1		
2	98.02960	78·03688	64.71079	55·19416	2		
3	97.05901	77·07347	63.75447	54·24488	3		
4	96.09893	76·12194	62.81229	53·31192	4		
5	95.14657	75·18217	61.88402	52·39500	5		
6	94 • 20452	74*25399	60·96948	51 •49386	6		
7	93 • 27 181	73*33727	60·06846	50 •60822	7		
8	92 • 34832	72*43188	59·18074	49 •73781	8		
9	91 • 43398	71*53766	58·30615	48 •88237	9		
10	90 • 52870	70*65447	57·44448	48 •04164	10		
11	89·63237	69·78220	56`59555	47·21537	11		
12	88·74492	68·92069	55`75916	46·40331	12		
13	87·86626	68·06982	54`93514	45·60522	13		
14	86·99630	67·22945	54`12329	44·82085	14		
15	86·13495	66·39945	53`32344	44·04998	15		
16	85 [.] 28213	65·57971	52·53541	43·29236	16		
17	84 [.] 43775	64·77008	51·75902	42·54778	17		
18	83 [.] 60173	63·97045	50·99411	41·81600	18		
19	82 [.] 77399	63·18069	50·24050	41·09680	19		
20	81 [.] 95445	62·40068	49·49803	40·38998	20		
21	81 • 14302	61.63031	48 76653	39·69531	21		
22	80 • 33962	60.86944	48 04584	39·01259	22		
23	79 • 544 18	60.11796	47 33581	38·34161	23		
24	78 • 7566 1	59.37577	46 63626	37·68217	24		
25	77 • 97684	58.64273	45 94706	37·03408	25		
26	77 •20480	57·91875	45°26804	36·39713	26		
27	76 •44039	57·20370	44°59905	35·77113	27		
28	75 •68356	56·49748	43°93995	35·15591	28		
29	74 •93421	55·79998	43°29059	34·55126	29		
30	74 •19229	55·11109	42°65083	33·95701	30		
31	73`45771	54·43071	42 02052	33·37298	31		
32	72`73041	53·75873	41 039953	32·79900	32		
33	72`01031	53·09504	40 78771	32·23489	33		
34	71`29733	52·43954	40 18494	31·68048	34		
35	70`59142	51·79214	39 059107	31·13561	35		
36	69·89250	51·15273	39 00599	30.6001 I	36		
37	69·20049	50·52122	38 42954	30.07382	37		
38	68·51534	49·89750	37 86162	29.55658	38		
39	67·83697	49·28148	37 30209	29.04823	39		
40	67·16531	48·67307	36 75082	28.54863	40		
41	66·50031	48 07216	36·20771	28:05762	41		
42	65·84189	47 47868	35·67262	27:57506	42		
43	65·18999	46 89252	35·14544	27:10079	43		
44	64·54455	46 31360	34·62605	26:63469	44		
45	63·90549	45 74183	34·11433	26:17660	45		
46	63·27276	45.17712	33.61018	25·72639	46		
47	62·64630	44.61938	33.11348	25·28392	47		
48	62·02604	44.06852	32.62412	24·84906	48		
49	61·41192	43.52446	32.14199	24·42168	49		
50	60·80388	42.98712	31.66698	24·00165	50		

For explanation see pp. 13, 14. See also Tables on pp. xxxii-xxxix

(95)

THE P	THE PRESENT VALUE OF THE REVERSION OF A PERPETUITY OF $\pounds 1$						
Years Deferred	2 %	2 ¹ / ₄ %	2 ¹ / ₂ %	$2\frac{3}{4}$ %	Years Deferred		
I	49.01961	43.46644	39.02439	35.39040	I		
2	48 05844	42.20997	38.07258	34.44322	2		
3	47.11612	41.2424	37.14398	33.22138	3		
4	46.19222	40.65970	36-23803	32.62421	4		
5	45.28654	39.76499	35.35417	31.22106	5		
6	44.30857	38.88000	34.40188	30.00127	6		
7	43.2801	28.03410	33.62061	30.07423	7		
8	42.67452	37.19726	32.82986	29.26933	8		
ā	41.83776	36.37873	32.02013	28.48596	ò		
10	41.01742	35.57822	31.24794	27.72356	IÓ		
TT ·	40.21312	34.70533	30.48570	26.08157	11		
12	20:42466	24.02066	20.74224	26.25044	12		
12	28.65162	33.28084	20.01682	25.22663	T2		
10	27.80275	22.54850	28:20000	24.87262	-3 TA		
14	37.15074	31.83227	27.61862	24.20694	15		
-5	26:42220	21-12181	26:04 500	22155007	76		
10	30 42229	31 13101	20 94 300	23 33907	10		
17	3570813	30 44070	20 20/00	22 92033	17		
10	35 00797	29.77078	25'04004	22 31407	10		
19	34 32154	28.48073	23.02111	21.13630	20		
	33 57						
21	32.98879	27.85401	23.81545	20.57009	21		
22	32.34195	27 24109	23.23459	20.02014	22		
23	31.20290	20.04105	22.00789	19.48432	23		
24	31.08007	20.05540	22.11501	18.90284	24		
25	30 4/034	25 40200	21 3/302	10 43332	2°2		
26	29.87896	24.92133	21.04939	17.96138	20		
27	29.29310	24.37294	20.53599	17.48007	27		
28	28.71873	23.83001	20.03211	17.01281	28		
29	28.15562	23.31209	19.54645	16.22248	29		
30	27.00354	22.79911	19.00921	16-11434	30		
31	27.06230	22.29742	18.60460	15.68305	31		
32	26.53167	21.80677	18.12082	15.26331	32		
33	26.01144	21.32691	17.70812	14.85481	33		
34	25.20141	20.85761	17.27621	14.4223	34		
35	25.00138	20.39864	16.85484	14.07030	35		
36	24.21116	19.94977	16.44375	13.69372	36		
37	24.03055	19.51078	16.04268	13.32722	37		
38	23.55936	19.08145	15.65140	12.97053	38		
30	23'0974I	18.66156	15.26966	12.62339	39		
40	22 64452	18-25092	14.89723	12.28554	40		
41	22.20021	17.84931	14.53388	11.05673	41		
42	21.76521	17.45654	14.17930	11 63672	42		
43	21.33844	17.07241	13.83355	11.32527	42		
44	20 92004	16 69673	13.49615	11.02217	44		
45	20.50984	16.32932	13.16698	10.72717	45		
16	20.10760	15.02000	12.84583	10.44007	46		
47	10.71342	15.61858	12.53252	10.1006	47		
48	10.32688	15.27480	12.2268	0.88871	18		
40			J	· · · · · · · · ·	1 T		
1 10	18.04702	14.02877	11.02863	9.62405	40		

THE P	THE PRESENT VALUE OF THE REVERSION OF A PERPETUITY OF $\pounds 1$							
Years Deferred	3 %	3 ¹ / ₄ %	3 ¹ / ₂ %	$3\frac{3}{4}^{3}$ %	Years Deferred			
I	32.36246	29.80071	27.60525	25.70281	I			
2	31.41986	28.86267	26.67174	24.77380	2			
3	30.50472	27.95416	25.76979	23 87836	3			
4	29.61623	27.07425	24.89835	23.01 229	4			
5	28.75362	26.22203	24.05638	22.18341	5			
6	27.91614	25.39664	23.24288	21.38160	6			
7	27.10305	24.29253	22.45689	20.00877	7			
8	26°31364	23.82298	21.69747	19.80382	8			
9	25.54722	23.02311	20.96374	19.14590	9			
10	24.80313	22.34683	20.22482	18.45388	10			
II	24.08071	21.64342	19.26988	17.78687	II			
12	23.37933	20.90215	18.90810	17-14398	12			
13	22.09737	20.30233	18.20809	10.2431	13			
14	22 03726	19.00327	17.05091	15.92705	14			
15	21.39539	19.04433	17.05402	15.35137	15			
16	20.77223	18.44487	16.47731	14.79650	10			
17	20.16221	17.86428	15.92011	14.20109	17			
18	19.57982	17.30197	15.38175	13.74621	18			
19	19.00923	16.75735	14.86159	13.24936	19			
20	18.45585	16.22988	14.35903	12.77047	20			
21	17.91831	15'71902	13.87346	12.30888	21			
22	17.39641	15.22423	13.40430	11.86398	22			
23	16 88972	14.74501	12.95102	11.43516	23			
24	16.39779	14.28089	12.21306	11.02185	24			
25	15.92018	13.83137	12.08991	10.62347	25			
26	15.45649	13.39600	11.68108	10.23948	26			
27	15.00630	12.97433	11.58606	9.86938	27			
28	14.56922	12.56594	10.00441	9.51266	28			
29	14.14487	12.17040	10.23266	9.16883	29			
30	13.73289	11.28231	10.12938	8.83742	30			
31	13.33290	11.41628	9.83515	8.51800	31			
32	12.94456	11.02693	9.20256	8.21012	32			
33	12.26754	10.70889	9.18122	7.91337	33			
34	12.20149	10.32181	8.87075	7.62734	34			
35	11.84611	10.04534	8.22022	7.35166	35			
36	11.20108	9.72914	8.28094	7.08593	36			
37	11.16609	9.42289	8.00090	6.82982	37			
38	10.84087	9 12629	7.73034	6.58296	38			
39	10.22511	8.83902	7 46893	6.34202	39			
40	10.21856	8.56080	7.21636	6-11568	40			
41	9.92093	8.29133	6.97233	5.89463	4 1			
42	9.63197	8.03034	6.73655	5 681 57	42			
43	9.35143	7.77757	6.20874	5.47021	43			
44	9.07906	7.53276	6.28864	5.27828	44			
45	8.81462	7.29565	6.07598	5.08720	45			
46	8.55788	7.06600	5.87051	4.90361	46			
47	8.30862	6.84359	5.07199	4.72037	47			
48	8 06662	6.02817	5'48018	4.55554	40			
49	7.83167	6.41954	5.29480	4-39088	49			
50	7.00357	0.21747	5.11201	4-23218	50			

See also Tables on pp. xxxii-xxxix

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THE PRESENT VALUE OF THE REVERSION OF A PERPETUITY OF $\pounds 1$							
Years Deferred	4 %	4 ¹ / ₂ %	5 %	6 %	Years Deferred		
1 2	24·03846 23·11391	21·26528 20·34955	19:04762 18:14059	15.72327 14.83328	I 2		
3	22.22491	19.47326	17.27675	13.99366	3		
4	21.37010	18.03409	10.45405	13.20150	4		
5	20 34010	17 03224	15 0/052	12 45431	5		
0	19.75786	17.06435	14.92431	11.74935	6		
	18 99/95	10-32952	14.21303	11.08429	7		
å	17.56467	19 02033	12:80218	0.86408	0		
10	16.88910	14.30920	12.27827	9:30658	10		
11	16.23052	12:60220	11.60250	8.77080			
12	15.61493	13.10364	11.13672	8.28282	11		
13	15.01435	12.53937	10.60643	7.81399	13		
14	14.43688	11.99939	10.10130	7.37169	14		
15	13.88161	11.48267	9.62034	6.95442	IŚ		
16	13 34770	10.98821	9.16223	6.56077	16		
17	12.83433	10.51503	8.72593	6.18941	17		
18	12.34070	10.06223	8.31041	5.83907	18		
19	11:30000	9.62893	7.91468	5.20822	19		
20	11 40907	9 21420	7.53779	5-19075	20		
21	10.97084	8.81750	7.17885	4.90259	21		
22	10.24000	8.07447	6.83700	4.62509	22		
23	9.75304	7.72674	6:20126	4.30329	23		
25	9.37792	7.39401	5.90606	3.88331	24		
26	9.01723	7.07561	5.62482	3.66250	26		
27	8.67041	6.77092	5 35697	3.45614	27		
28	8.33694	6.47935	5.10187	3.26021	28		
29	8.01028	6.20033	4.85893	3.07292	29		
30	7.70797	5.93333	4.02755	2.90184	30		
31	7.41151	5.67783	4.40719	2.73758	31		
32	7-12045	5.43333	4.19732	2.58263	32		
33	6.28880	4.07546	3'99745	2.43044	33		
35	6.33539	4.76121	3.62581	2.16842	34		
26	6.00172	4.55618	2.45215	2104567	55		
37	5.85742	4:35998	3.28871	1.02080	30		
38	5.63213	4.17223	3-13211	I 82067	38		
39	5.41551	3.99256	2.98296	1.71760	39		
40	5.20723	3.82064	2.84091	1.62037	40		
41	5.00692	3.62611	2.70563	1.52865	41		
42	4.81437	3 49867	2.57679	1.44213	42		
43	4.02920	3.34801	2.45409	1.36050	43		
44	4 45110	3.06587	2 33723	1.28349	44		
45	4 - 1 7 7 7 7	3 00307	2 22 393	1 21004	45		
40	4 11535	2.3392	2.11993	1.14230	46		
47	3.80487	2.68661	1.02284	1.07/04	47		
49	3.65853	2.57092	1.83128	95910	40		
50	3.21781	2.46021	1.74408	·90481	50		

For explanation see pp. 13, 14. See also Tables on pp. xxxii-xxxix

YEARS' PURCHASE								
Years	3 %	4 %	5 %	6 %	8 %	10 %	Years	
2	16.4204	12.2549	9.7561	8.0906	6.0096	4.7619	2	
3	10.7839	8.0089	6.3439	5.2350	3 8 5 0 4	3.0211	3	
4	7.9675	5.8872	4.6401	3.8098	2.7740	2.1547	4	
5	6.2786	4.6157	3.6195	2.9566	2.1307	1.6380	5	
6	5'1533	3.7690	2.9403	2.3894	1.2039	1.5001	6	
7	4.3203	3.1652	2.4564	1 '9856	1.4000	1.0241	7	
10	2.9076	2.0823	1.2001	1.2646	·8629	·6275	10	
14	1.9209	1.3667	1.0202	.7931	·5162	.3575	14	
20	1.5402	·8395	•6049	·4531	·2731	•1746	20	
21	1 1624	.7820	•5599	·4167	·2479	•1562	21	
40	•4421	•2631	·1656	·1077	•0483	·0226	40	

The Present Value of the Perpetuity of One Year's Rent or Fine, Payable for Renewing Estates at Various Intervals and Rates of Interest

Number of Years' Purchase for the Renewal of any Number of Years Expired in a

Years	2 %	$2\frac{1}{2}\%$	3 %	$3\frac{1}{2}\%$	Years
1	·82034	·78119	*74409	·70892	1
2	1·65710	1·58192	1*51051	1·44265	2
3	2·51059	2·40267	2*29992	2·20207	3
4	3·38115	3·24394	3*11301	2·98806	4
5	4·26912	4·10623	3*95049	3·80156	5
6	5·17485	4·99009	4·81310	4·64353	6
7	6·09870	5·89604	5·70159	5·51497	7
8	7·04102	6·82464	6·61673	6·41692	8
9	8·00219	7·77645	7·55933	7·35043	9
10	8·98258	8·75206	8·53020	8·31661	10
	4%	4 ¹ / ₂ %	5 %	17.95 %	
1	·67557	-64393	·61391	·1919	1
2	1·37815	1-31683	1·25852	·4182	2
3	2·10885	2-02002	1·93536	·6851	3
4	2·86876	2-75485	2·64604	I·0000	4
5	3·65908	3-52274	3·39225	I·3714	5
6	4·48100	4 '32519	4·17578	1 ·8094	6
7	5·33581	5 '16376	4·99848	2·3261	7
8	6·22481	6 '04005	5·86232	2·9355	8
9	7·14936	6 '95578	6·76935	3·6543	9
10	8·11090	7 '91272	7·72173	4·5021	10

Number of Years' Purchase for the Renewal of any Number of Years Expired in a TWENTY YEARS' LEASE									
I	•67297	·61027	•55368	·50256	I				
2	1.35940	1.23580	1.12397	I 02272	2				
3	2.05956	1.87696	1.71136	1.26108	3				
4	2 77372	2.53416	2.31638	2.11858	4				
5	3.20212	3.20778	2.93954	-2*09499	5				
6	4.24518	3.89825	3.28141	3.29188	6				
7	5.00306	4.60598	4.24252	3.90966	7				
8	5.77609	5.33140	4.92348	4.24906	8				
9	6.264.28	6.07495	5.62486	5.21085	9				
10	7.30885	6.83710	6.34728	5.89579	10				
II	8.18919	7.61829	7.09137	6.60471	II				
12	9.02595	8.41902	7 85779	7:33844	12				
13	9.87944	9.23977	8.64720	8.09786	13				
14	10.75000	10.08103	9.46029	8.88385	14				
15	11.03797	10.94333	10.29777	9.69735	15				
16 .	12.54370	11.82719	11-16038	10.53932	16				
17	13.46755	12.73314	12.04887	11.41076	17				
18	14•40987	13.66174	12.96401	12.31271	18				
19	15.37104	14.61355	13-90661	13.24622	19				
20	16.32143	15.58916	14.87748	14.21240	20				
-	4 %	4 ¹ / ₂ %	5 %	12'304%					
I	*45639	•41465	•37689	·098	I				
2	93103	84795	•77262	·208	2				
3	1.42466	1.30075	1.18814	•332	3				
4	1.93803	1.77393	1.62444	•471	4				
5	2.47194	2*26839	2.08255	·628	5				
6	3.02721	2.78511	2.56357	•803	6				
7	3.60468	3.32509	3.06864	1.000	7				
8	4.20526	3.88936	3.29896	I •22I	8				
9	4.82985	4 47902	4.12280	1.420	9				
10	5.47943	5.09222	4.74048	1.249	10				
II	6.15200	5.23915	5.35439	2.062	II				
12	6-85758	6.41205	5 99900	2.414	12				
13	7.58828	7.11524	6.67584	2.809	13				
14	8.34819	7.85007	7.38652	3.253	14				
15	9.13851	a.01790	8.13273	3.751	15				
16	9.96043	9.42041	8.91626	4.311	16				
17	10.81524	10.25898	9 7 38 96	4.940	17				
18	11.70424	11.13527	10.60280	5.646	18				
19	12.62879	12.05100	11.20983	0.439	19				
20	13.20033	13.00294	12'40221	7.329	20				

Number of Years' Purchase for the Renewal of any Number of Years Expired in a						
		TWENTY-ONE	YEARS' LEAS	E		
Years	2 %	2 ¹ / ₂ %	3 %	3 ¹ / ₂ %	Years	
I	·65978	.59539	.53754	-48557	I	
2	1.33275	1.20500	1.00122	·98813	2	
3	2.71934	2.47235	2.24890	2.04665	3	
5	3.43350	3.12955	2.85392	2.60385	5	
6	4.16195	3.80317	3.47708	3.18056	6	
7	4.90496	4.49364	4.11895	3.77745	7	
8	5.66284	5.20137	4.78006	4'39523	8	
9 10	7.22436	6 67034	6.16240	5.69642	9 10	
TT	8.02863	7.43240	6.88482	6.38136	тт	
12	8.84897	8.21368	7.62891	7.09028	12	
13	9.68573	9.01441	8.39233	7.82401	13	
14	10.53922	9.83516	9.18474	8.28343	14	
15	11-40978	10-07042	9.99783	9.30942	15	
16	12.29775	11.53872	10.83531	10.18292	16	
17	13.20348	12:42250	12:58647	11.02409	17	
10	14 12/33	13 32033	12 50155	12.70828	10	
20	16.03082	15.20894	14.44415	13.73179	20	
21	17.01121	16.18455	15.41502	14.69797	21	
	4 %	$4\frac{1}{2}$ %	5 %	11.564 %		
Ţ	.42883	.30678	•35804	•100	т	
2	·89522	81143	73583	.213	2	
3	1.36986	1 24473	1.13126	·338	3	
4	1.86349	1.69753	1.54708	.477	4	
5	2*37080	2 17071	1 98338	-033	5	
6	2.91077	2.60517	2.44149	*806	0 E	
7	3-40004	3.10109	2 92251	1.510	8	
0	4.64409	4.28614	3.95790	1.422	ŏ	
10	5.26868	4 87580	4.21474	1.726	IÓ	
II	5.91826	5.49200	5.09942	2.026	11	
12	6.29383	6.13593	5.71333	2.361	12	
13	7 2964 I	0.90993	7:02478	2.734	13	
14	8.78702	8.24685	7.74546	3.616	15	
16	9.57734	9.01474	8.49167	4.135	16	
17	10.39926	9.81719	9.27520	4.713	17	
18	11 25407	10.65576	10.09790	5.359	18	
19	12.14307	11.53205	10.96174	6.892	19	
20	13.00702	12.44770	12.82115	7.770	20	
12	14 02910	13 404/2	12 42113	1119	~1	

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Number of Years' Purchase for the Renewal of any Number of Years Expired in a							
FORTY YEARS' LEASE							
Years	2 %	2 ¹ / ₂ %	3 %	3 ¹ / ₂ %	Years		
I	·45289	.37243	.30655	-25257	I		
2	·91484	·75417	·62231	.51398	2		
3	1.38603	1.14242	.94753	•78454	3		
4 5	2.35686	1.24022	1.62755	1.35441	45		
6	2.85689	2•37898	1 • 98293	1.65439	6		
7	3.36692	2.81089	2.34898	1 • 96486	7		
8	3.88715	3.25359	2.72600	2.28620	8 C		
9	4.41778	3.70737	3.11434	2.01879	9		
10	4 93902	4 1/240	5 51455	2 90302	10		
11	5.2110	4.64922	3.02631	3.31030	II		
12	ő·07421	5 1 3788	4.35066	3.68805	12		
13	6 64858	5.63876	4.78774	4 06970	13		
14	7.23444	6.15216	5.23793	4.46472	14		
15	7.93202	0.02939	5.70162	4.87355	15		
16	8.44155	7.21778	6.17923	5 29670	16		
17	9.06328	7.77066	6.67116	5.73466	17		
18	9.69743	8.33736	7.17785	6.18794	10		
20	11.00405	9.51361	8.23729	7.14267	20		
			8.5005				
21	11.07702	10.12388	8.79097	7.64523	21		
22	12.30345	10-74941	0:04865	8.70275	22		
24	13.77777	12.04777	10.22202	0.26002	24		
25	14.20622	12.72139	11.17683	9.83766	25		
26	15-24923	13.41186	11.81870	10.43455	26		
27	16.00711	14 11959	12.47881	11.05233	27		
28	16.78014	14 84501	13 16077	11.69174	28		
29	17.56863	15.58856	13.86215	12.35352	29		
30	18.37290	10.35071	14.28457	13.03840	30		
31	19.19324	17.13190	15.32866	13.74738	31		
32	20.03000	17.93263	10.09208	14-48111	32		
33	20.00349	10.75330	10.00449	15-24053	33		
35	22.64202	20.45694	18.53506	16.84002	35		
36	23.54775	21.34080	19.39767	17.68199	36		
37	24.47160	22.24675	20.28616	18.55343	37		
38	25.41392	23.17535	21.30130	19.45538	38		
39	26.37509	24.12716	22.14390	20.38889	39		
40	27.35548	25 10277	23.11477	21.35507	40		

For explanation see pp. 14-16

Number of Years' Purchase for the Renewal of any Number of Years Expired in a FORTY YEARS' LEASE						
Years	4 %	$4\frac{1}{2}\%$	5 %	8 %	Years	
1	·20828	*17192	*14205	·04603	I	
2	·42490	*35159	*29120	·09574	2	
3	·65019	*53934	*44780	·14943	3	
4	·88449	*73554	*61224	·20742	4	
5	I·12816	*94057	*78490	·27004	5	
6	1 · 38157	1 · 1 5482	·96619	•33768	6	
7	1 · 64512	1 · 37872	1·15654	•41072	7	
8	1 · 91922	1 · 6 1269	1·35641	•48961	8	
9	2 · 20428	1 · 8 57 19	1·56628	•57481	9	
10	2 · 50074	2 · 1 1269	1·78664	•66683	10	
11	2·80905	2·37969	2·01802	·76620	11	
12	3·12971	2·65871	2·26096	·87353	12	
13	3·46318	2·95028	2·51606	·98945	13	
14	3·81000	3·25497	2·78391	1·11463	14	
15	4·17069	3·57337	3·06515	1·24983	15	
16	4·54581	3·90610	3·36045	1 · 39585	16	
17	4·93593	4·25381	3·67052	1 · 55355	17	
18	5·34165	4·61716	3·99609	1 · 72387	18	
19	5·76361	4·99686	4·33794	1 · 90781	19	
20	6·20244	5·39364	4·69688	2 · 10646	20	
21	6:65883	5·80829	5 07377	2·32101	21	
22	7:13347	6·24159	5 46950	2·55272	22	
23	7:62710	6·69439	5 88502	2·80297	23	
24	8:14047	7·16757	6 32132	3·07324	24	
25	8:67438	7·66203	6 77943	3·36513	25	
26	9·22965	8·17875	7 ·26045	3.68037	26	
27	9·80712	8·71873	7 ·76552	4.02083	27	
28	10·40770	9·28300	8 ·29584	4.38853	28	
29	11·03229	9·87266	8 ·85268	4.78565	29	
30	11·68187	10·48886	9 ·43736	5.21453	30	
31	12·35744	11 ·13279	10:05127	5.67772	31	
32	13·06002	11 ·80569	10:69588	6.17797	32	
33	13·79072	12 ·50888	11:37272	6.71824	33	
34	14·55063	13 ·24371	12:08340	7.30173	34	
35	15·34095	14 ·01160	12:82961	7.93190	35	
36	16·16287	14.81405	13 61314	8.61248	36	
37	17·01768	15.65262	14 43584	9.34751	37	
38	17·90668	16.52891	15 29968	10.14135	38	
39	18·83123	17.44464	16 20671	10.99868	39	
40	19·7 9277	18.40158	17 15909	11.92461	40	

Years	PER CENT.	PER ANNUM	Years
т	£	£ s. d.	I
2	50	50 0 0	2
3	33.3	33 6 8	3
4	25	25 0 0	4
5	20	20 0 0	5
6	16.6	16 13 4	6
7	i4·2857	$14 5 8\frac{1}{2}$	7
8	12.5	12 10 0	8
9	11.1	$11 2 2_4^2$	9
10	10	10 0 0	10
11	9.09	9 I 9 ⁸ / ₄	II
12	8.3	868	12
13	7.09230	7 13 102	13
14	6.6	6 12 4	14
-5	6.07	6 5 9	-5
10	0.25		10
17	5.00235		18
10	5.26316	5 5 2	10
20	5	5 0 0	20
21	4:7610	4 TE 28	21
22	47019	4 10 11	22
23	4.3478	4 6 11	23
24	4.16	4 3 4	24
25	4	400	25
26	3.84615	3 16 11	26
27	3.70	3 14 1	27
28	3.5714	3 11 54	28
29	3.4483	3 8 111	29
30	3.3	3 6 8	30
31	3.2258	3 4 6	31
32	3.122	3 2 6	32
33	3.03		33
34	2.9412	2 18 10	34
35	203/14		35
30	2.7		30
3/	2,6316	$2 12 7\frac{1}{4}$	3/
30	2.56410	2 11 3	30
40	2.5	2 10 0	40
41	2.4300	2 8 0 1	AI
42	2.38095	2 7 75	42
43	2.32558	z 6 6 1	43
44	2.27	$2 5 5\frac{1}{2}$	44
45	2.2	2 4 54	45
46	2.17391	$2 3 5\frac{3}{4}$	46
47	2.12766	2 2 68	47
48	2.083	2 1 8	48
49	2.0408	2 0 94	49
50	2.0	200	50

The Percentage per Annum which each Number of Years' Purchase of a Perpetuity allows the Purchaser

For explanation see p. 16

INTEREST, AMOUNT, AND DISCOUNT OF £1 IN A YEAR, NINE, SIX, AND THREE MONTHS

Interest per Annu m	Period	Interest	Amount	Discount
1 %	J year	*01	1 °01	•009901
	9 months	*0075	1 °0075	•007444
	6 ,,	*005	1 °005	•004975
	3 ,,	*0025	1 °0025	•002494
1 ¹ / ₂ %	[year	·015	1 °01 5	·014778
	9 months	·01125	1 °01 125	·011125
	6 ,,	·0075	1 °00 75	·007444
	3 ,,	·00375	1 °00 375	·003736
1 <u>3</u> %	I year	·0175	1.0175	·017199
	9 months	·013125	1.013125	·012955
	6 ,,	·00875	1.00875	·008674
	3 ,,	·004375	1.004375	·004356
2 %	1 year	·02	1.02	•019608
	9 months	·015	1.015	•014778
	6 ,,	·01	1.01	•009901
	3 ,,	·005	1.005	•004975
2 ¹ / ₄ %	$\begin{cases} \mathbf{I} \text{ year} \\ 9 \text{ months} \\ 0 \\ 3 \\ , \end{cases}$	·0225 ·016875 ·01125 ·005625	1 ·0225 1 ·016875 1 ·01125 1 ·005625	·022005 ·016595 ·011125 ·005593
2 ½ %	$\begin{cases} \mathbf{I} \text{ year} \\ 9 \text{ months} \\ 6 \\ 3 \\ , \end{cases}$	·025 ·01875 ·0125 ·00625	1 °025 1 °01875 1 °0125 1 °0625	•024390 •018405 •012346 •006211
2 ³ / ₄ %	1 year	·0275	1 °0275	•026764
	9 months	·020625	1 °020625	•020208
	6 ,,	·01375	1 °01375	•013563
	3 ,,	·006875	1 °006875	•006828
3 %	1 year	•03	1.03	•029126
	9 months	•0225	1.0225	•022005
	6 ,,	•015	1.015	•014778
	3 ,,	•0075	1.0075	•007444
3 ½ %	$\begin{cases} \mathbf{I} \text{ year} \\ 9 \text{ months} \\ 6 \\ 3 \\ , \end{cases}$	•035 •02625 •0175 •00875	1.035 1.02625 1.0175 1.00875	.033816 .025579 .017199 .008674
4 %	$\begin{cases} \mathbf{I} \text{ year} \\ 9 \text{ months} \\ 6 \\ 3 \\ , \end{cases}$.04 .03 .02 .01	I •04 I •03 I •02 I •01	038462 029126 019608 009901
4 ½ %	f year	·045	1:045	·043062
	9 months	·03375	1:03375	·032648
	6 ,,	·0225	1:0225	·022005
	3 ,,	·01125	1:01125	·011125
5 %	f year	·05	1 °05	·047619
	9 months	·0375	1 °0375	·036145
	6 ,,	·025	1 °025	·024390
	3 ,,	·0125	1 °0125	·012346

For explanation see p. 16

(105)

SINKING FUND FOR THE REPAYMENT OF LOANS

Years	1 %	$l_{4}^{1}\%$	$1\frac{1}{2}\%$	$1\frac{3}{4}\%$	Years
I	I .000000	I .000000	1.000000	I •000000	I
2	497512	·496893	•496278	•495663	2
3	.330022	•329202	·328383	•327 567	3
4	•246281	-245361	·2444 <u>4</u> 5	·243532	4
5	·196040	195062	•194089	•193121	5
6	·162548	·161534	.160525	159523	6
7	·138628	137589	136556	.135531	7
8	*120690	·119633	·118584	.117543	8
9 '	·106740	·105671	·104609	·103558	9
10	·095582	*094503	·093434	·092375	10
11	·086454	085367	.084204	.083231	
12	078849	.077758	·076680	.075614	12
13	072415	071321	'070240	.060173	12
14	066901	.065805	064723	*063656	14
15	·062124	·061026	°059944	·058877	15
76	.057045	1056847	-5774-	1074700	-5
10	05/945	050047	1055705	054700	10
18	054250	1040884	1052080	1017745	17
10	048052	049004	040000	104/745	18
20	045415	1044220	043070	044021	19
20	-+34-3	044320	043240	042191	20
21	043031	.041937	·040866	.039815	21
22	040804	.039770	038703	·037656	22
23	03000	·037897	.036731	·035688	23
24	-03/0/3	035987	·034924	.033886	24
25	035407	034322	·033263	·032230	25
26	·033869	·032787	·031732	·030703	26
27	·032446	·031367	·030315	·029291	27
28	.031124	*030049	·029001	027982	28
29	·029895	028822	·027779	·026764	29
30	·028748	027679	·026639	·025630	30
31	·027676	·026609	°025574	.024570	21
32	·026671	025608	024577	·023578	32
33	·025728	·024668	02 364 1	·022648	33
34	024840	023784	·022762	021774	34
35	·024004	·022951	·021934	020951	35
26	.023214	022165	021152	1020175	26
37	022468	021424	020414	010442	30
38	021762	020720	010716	018750	28
30	021092	020054	010055	.018004	20
40	·020456	019421	018427	017472	39
AT	1010851	1018821	1017801	/+/=	40
42	019031	018240	017031	010882	41
42	018727	017705	01/204	010321	42
43	018204	017186	010/25	15/0/	43
44	017705	016600	016210	015278	44
40 16	01//03	010090	013/20	014/93	45
40	017228	010217	015251	.014330	46
47	010771	015764	014803	.013888	47
48	010334	015331	014375	·013466	48
49	.015915	014916	013965	·013061	49
50	.015513	014518	·OI 3572	·0I2674	50

For explanation see pp. 16, 17

SINKING FUND FOR THE REPAYMENT OF LOANS

51 52 53	015102				
52 53	015127	·014136	·013195	.012303	51
53	014756	013769	012833	011947	52
	·014400	.013416	012485	011605	53
54	014057	·013078	012151	·011277	54
55	013726	·012751	011830	.010961	55
56	·013408	·012437	011521	·010658	56
57	·013102	012135	011223	·010366	57
58	·012806	·011843	·0I0937	·010085	58
59	·012520	·011562	·010660	.009814	59
60	·012244	·01 1290	·010393	.009553	60
бі	·011978	·011028	·010136	.009302	61
62	·011720	°010774	.009888	·009059	62
63	·011471	.010529	·009647	·008825	63
64	011230	.010292	·009416	·008598	64
65	·010997	•010063	·009191	.008379	65
66	·01077 I	009841	·008974	.008168	66
07	·010551	·009626	·008764	·007964	67
68	.010339	.009412	·008560	·007766	68
69	·010133	·009215	·008363	·007575	69
70	.009933	.009010	·008172	·007389	70
71	·009739	·008829	·007987	007210	71
72	·009550	*008645	007808	.002036	72
73	.009367	·008466	·007634	.006868	73
74	.009180	.008292	·007465	·006704	74
75	.009019	.008123	·007301	.006546	75
76	·008848	·007959	·007141	006392	76
77	°008684	*007800	·006987	·006243	77
78	.008525	· 0 07644	·006836	·006098	78
<u>7</u> 9	.008320	·007493	.006690	.002028	79
80	·008219	·007347	·006548	.002821	80
81 18	·008072	.007203	.006410	·005688	81
82	.007929	*007064	.006276	·005559	82
83	.007289	·006929	.006145	.005434	83 × 3
84	·oo 7 653	·006797	.006018	.005312	84
85	·007520	*006668	· 0 05894	.005194	85
86	.007390	·006543	.005773	.005078	86
87	°007264	*006420	.005656	·004966	87
88	·007141	006301	·005541	004857	88
89	°007021	*006185	005430	·004751	89
90	000903	-000071	005321	-004040	90
91	*006789 *006676	1005901	·005215	°004547	91
yø 02	-006r67	005055	10050112	004252	94
93	000507	1005644	1004012	004333	93
05	*006255	1005544	*004817	:004160	94
		1005445	*00/722	1801001	06
90	*0061E2	1005340	1004632	'00300 ^r	07
08	000133	005256	004543	1003011	08
00	000033	*00¢164	*004456	002820	00
99 100	*001866	*005074	004371	1003740	100

SINKING FUND FOR THE REPAYMENT OF LOANS

Years	2 %	$2\frac{1}{4}\%$	$2\frac{1}{2}\%$	$2\frac{3}{4}\%$	Years
I	1 ·000000	I.000000	I .000000	I .000000	I
2	.495049	·494438	·493827	·493222	2
3	326755	325945	325137	.324332	3
ă	242624	241719	·240818	239920	ă
5	192158	191200	·190247	·189298	5
6	158526	.157535	.156550	155571	6
7	134512	133500	132495	131407	7
8	116509	115485	114467	113458	8
ō	102515	101482	100457	.000441	ŏ
τó	·091326	090288	089259	088240	10
77	.082178	.081136	.080106	*070086	TT
12	.074560	.073517	·072487	071469	12
13	068118	.067077	066048	065033	12
14	.062602	061562	060536	059525	14
15	·057825	·056789	055766	·054759	15
16	.053650	052617	.021200	050597	16
17	049970	.048940	047928	046932	17
18	046702	.045677	·044670	·043681	18
10	043782	*042762	041760	040778	TO
20	041157	.040142	039147	038172	20
21	038785	·037776	.036787	.035810	21
22	036631	.035628	.034646	.033686	22
23	'034668	·033671	032696	031744	23
24	032871	.031880	·030013	·020060	24
25	031221	·030236	·029276	.028340	25
26	029699	·028721	.027768	·026841	26
27	.028293	·027 322	.026377	·025458	27
28	·026990	026025	·025088	024177	28
29	·025779	·024821	·023891	·022989	20
30	024650	023699	·022777	·021884	30
31	·023596	.022653	.021739	·020855	31
32	·022611	·021674	·020768	019893	32
33	·021687	020757	·019859	.018993	33
34	020819	019897	·019007	.018149	34
35	·020002	·019087	018205	.017356	35
36	.019233	018325	017451	•016611	36
37	·018507	.017606	.016741	·015910	37
38	017821	·016928	·016070	·01 5248	38
39	·017171	.016285	015436	·014623	30
40	·016556	·01 5677	·014836	.014032	40
41	·01 5972	·015101	·014268	013472	41
42	015417	.014554	01 37 28	012942	42
43	014890	·014034	013217	012439	43
44	·014388	013539	.012730	·011961	44
45	·013910	·013068	·012267	.011507	45
46	.013453	·012619	011826	011075	46
47	·013018	012191	·011407	010664	47
48	·012602	·011782	0011006	010272	48
49	012204	011392	010623	009898	40
	0		ő	1	

For explanation see pp. 16, 17

SINKING FUND FOR THE REPAYMENT OF LOANS

7.000	0 0/	01 04	01.0/	08.07	
(ears	Z %	Z ‡ %	Z [†] %	Z ² / ₄ %	Years
51	·011459	.010661	•009909	.009200	51
52	.011109	.010319	·009574	·oo8874	52
53	·010774	1009991	·009254	·008563	53
54	·010452	·009677	·008948	·008265	54
55	.010143	.009375	·008654	·007980	55
56	·009847	·009085	.008373	·007706	56
57	·009561	·008807	.008102	·007444	57
58	·009287	008540	·007842	.007193	58
59	009022	008283	·007593	·006952	59
60	·008768	·008035	.007353	·006720	60
61	.008523	·007797	.007123	·006498	61
62	·008286	007568	·006901	006284	62
63	·008058	.007347	·006688	006079	63
64	·007839	007134	·006482	005881	64
65	·007 62 6	*006929	.006285	·005691	65
66	.007421	.006731	·006094	·005508	66
67	007223	006540	005910	:005332	67
68	007032	·006355	.005733	.005163	68
69	·006847	.006177	.005562	·005000	69
70	*006 6 68	.006002	·005397	·004842	70
71	·006494	·005838	·005238	.004690	71
72	006327	·005677	·005084	·004544	72
73	·006165	005522	·004936	·004403	73
74	*006007	.005371	*004792	·004267	74
75	·005855	.005226	·004654	·004136	75
76	·005708	.002082	·004519	.004000	76
77	005564	004948	004390	003886	77
78	005426	·004816	.004265	·003768	78
79	*005291	004688	.004143	·003654	79
80	005161	·004564	·004026	.003543	80
81	.002034	·004444	·003912	.003437	81
82	'004911	·004327	·003803	.003334	82
83	004792	·004214	·003696	.003234	83
84	004676	·004104	.003593	.003137	84
85	.004563	•003998	003493	.003044	85
86	·004454	·003895	.003396	*002954	86
87	.004348	.003795	.003303	002867	87
88	.004244	.003697	003212	002782	88
80	004144	·003603	·003124	002700	89
90	004046	·003511	·003038	002621	90
OI	·003951	.003422	.002955	.002545	91
02	·003859	003336	.002875	·002470	92
93	.003769	.003252	.002797	002399	93
94	.003681	·003170	·002721	002329	94
95	.003596	·003091	·002648	002261	95
06	.003213	·003014	·002577	·002196	96
07	.003432	.002939	1002 507	.002133	07
6 8	.003354	·002866	002440	·002071	08
00	*003277	002795	002375	002012	90
					1 - 5 -

SINKING FUND FOR THE REPAYMENT OF LOANS

Years	3 %	3 ¹ / ₄ %	3 ¹ / ₂ %	3 ³ / ₄ %	Years
I	I .000000	I '000000	I '000000	I '000000	r
2	·492611	·492005	'491 400	•4907 9 8	2
3	323530	322731	321934	.321140	3
4	*239027	238137	*237251	·236369	4
5	188355	187415	•18648 1	·185552	5
6	154598	153630	·1 52668	151712	6
7	·130506	129522	·128544	127574	7
8	112456	·111463	·110477	·109498	8
9	·098434	·097436	°096446	·095465	9
10	·087231	·086231	·085241	·084261	10
II	·078077	·077079	076092	075115	II
12	·070462	*069467	·068484	067512	12
13	*064030	•063039	'062062	·061096	13
14	058526	·057542	·056571	055613	14
15	·053767	·052789	.051825	·050876	15
16	°04961 I	·048640	·047685	·046745	16
17	*045953	·044990	·044043	°043113	17
18	°042709	041754	·040817	·039897	18
19	.039814	•038868	·037940	·037031	19
20	.037216	·036279	.032361	°034462	20
21	°034872	°033944	.033037	·032149	21
22	·032747	·031829	°030932	*030055	22
23	*030814	*029906	.029019	.028153	23
24	.029047	·028149	*027273	·026419	24
25	*027428	·026539	·025674	*024832	25
26	·025938	·025060	·024205	·o23375	26
27	·024564	·023696	*022852	.022033	27
28	·023293	·022435	021603	·020795	28
29	-022115	·021267	*020445	·019650	29
30	021019	-020182	-019371	018588	30
31	.019999	019172	.018372	°017600	31
32	019047	·018230	017442	016681	32
33	018150	.017350	-010572	·015824	33
34	017322	-010520	1015/00	-015023	34
33	010339	015/55	014998	0142/3	35
30	015804	01 5028	014284	.013571	30
37	015112	.014340	013013	.012911	37
30	014459	1013704	012982	012292	38
39	013044	013099	012300	011709	39
40	013202	012 320	011027	011139	40
41	012/12	011988	011298	*010642	41
40	012192	*010004	010/98	1010153	42
43	011220	010526	1000878	1000254	43
45	.010785	.010101	.000423	*00884T	44
46	:010262	:000688	10000r I	1008440	45
40	*000061	1000206	1009051	1008078	40
47	*000¢78	1008022	008009	1003078	47
40	1000213	1008568	'007062	'007302	40
50	·008866	.008230	007634	.007074	50
				/-/-	50

For explanation see pp. 16, 17

SINKING FUND FOR THE REPAYMENT OF LOANS

Years	3 %	$3\frac{1}{4}\%$	$3\frac{1}{2}\%$	$3\frac{3}{4}\%$	Years
E T				1006772	
5-	008217	007601	007322	006485	52
52	007015	007208	006741	006212	52
55	007913	007028	006471	005052	55
54	007340	·006761	006213	005704	55
55	1007085	.006206	1005067	*005468	56
57	006821	1006261	005732	'005242	57
57	1006588	*006028	005508	.001028	52
50	1006256	.005804	.005204	'004822	50
60	.006133	·005590	*005089	*004627	60
бт	.002010	.005385	·004892	'004440	61
62	005714	005188	004705	·004261	62
63	005517	·005000	.004 52 5	*004090	63
64	005328	.004810	.004353	'003027	64
65	·005146	·004646	*004188	.003221	65
66	'004971	.004479	'004030	.003621	66
67	·004803	*004320	.003879	·003478	67
68	004642	.004166	.003734	·003341	68
69	.004486	·004019	003595	'003210	69
70	.004337	.003877	'003461	.003082	70
71	.004193	·003741	.003333	·002964	71
72	.004024	·003610	'003210	·002849	72
73	·003921	*003484	·003092	.002738	73
74	*003792	·003363	·002978	*002633	74
75	·003668	.003247	·002869	·002531	75
76	·003548	.003132	·002764	'002434	76
77	.003433	*003027	·002664	·002340	77
78	*003322	·002923	.002567	.002220	78
79	.003212	.002823	°002474	·002164	79
80	.003115	·002727	*002385	'002082	80
81	.003015	·002634	.002299	.002003	81
82	·002916	.002545	'002216	.001926	82
83	.002823	·002459	.002137	.001823	83
84	.002733	*002376	'002060	001783	84
85	.002647	.002295	*001987	.001710	85
86	·002563	'002218	•001916	.001621	86
87	·002482	·002 I 44	.001848	001589	87
88	.002404	·002072	001782	*001529	88
89	.002329	.002003	.001719	.001472	89
90	002256	.001936	'001658	'001416	90
91	·002185	.001872	·001599	.001363	91
92	.002112	001809	.001543	.001315	92
93	·002051	·001749	001488	*001263	93
94	·001987	100100	°C01436	'001210	94
95	·001926	.001635	.001382	.001121	95
96	.001866	.001582	.001332	*001127	96
97	001809	·001529	.001290	*001085	97
98	.001223	·001479	001245	.001045	98
99	.001099	.001430	·001201	001000	99
100	·001647	.001384	.001159	-000909	100

(111)

SINKING FUND FOR THE REPAYMENT OF LOANS

Years	4 %	4 ¹ / ₄ %	$4\frac{1}{2}\%$	5 %	Years
I	1.000000	1.000000	I '000000	1.000000	I
2	·490196	489596	·488997	·487805	2
3	320349	319559	'318773	317209	3
Ă	235490	234615	233744	232012	Ă
5	·184627	183707	182792	·180975	Ś
6	·150762	.149817	148878	147017	6
7	126610	125652	124701	122820	7
8	108528	107565	106600	104722	8
ő	100//03	003520	002575	.000000	, i
10	·083291	·082330	081379	079505	10
1 11	074140	*073103	.072248	070380	TT
12	066552	065602	.064666	062825	12
13	·060I44	059203	058275	056456	12
14	054669	053738	052820	051024	-3
IS	049941	.049020	048114	046342	15
16	.045820	-044010	044015	0/2270	-5 16
17	042100	041300	040418	.038600	17
78	.038003	038107	037237	035546	18
TO	036130	.035264	034407	032745	TO
20	033582	032720	031876	030243	20
21	021280	020431	-02060T	027096	27
22	020100	028262	027546	02/990	22
22	027300	026486	025682	023971	22
24	025587	024776	023087	022471	23
25	024012	023215	022439	020052	24
26	022567	021783	021021	:010564	-5
27	021230	020467	010710	1018202	20
28	020013	010255	018521	017122	28
20	·018880	018135	017415	016046	20
30	·017830	.017098	·016392	.01 202 1	30
31	·016855	·016137	·015443	014132	31
32	·01 5949	015243	·014563	013280	32
33	·015104	·0I4411	·0I3745	·012490	33
34	·014315	·013635	·01 2982	·011755	34
35	·0I3577	.012910	·012270	·011072	35
36	·012887	.012232	.011606	.010434	36
37	012240	·011597	·010984	.009840	37
38	·01 1632	·011002	010402	·009284	38
39	.011001	·010444	·009856	008765	39
40	.010523	.009918	.009343	.008278	40
41	·010017	·009424	·008862	·007822	41
42	·009540	.008959	.008409	.007395	42
43	•009090	008521	.007982	.006993	43
44	008665	.008102	.002281	.006010	4 4
45	'008202	.007717	.007202	.006262	45
46	·007882	·007348	006845	.005928	46
47	.007522	.006999	.006202	·005614	47
48	·007181	.006669	.000180	.002318	48
49	.006857	.006356	.002887	.002040	49
50	.006550	.000000	.005602	004777	50

For explanation see pp. 16, 17

SINKING FUND FOR THE REPAYMENT OF LOANS

Years	4 %	4 ¹ / ₄ %	$4\frac{1}{2}\%$	5 %	Years
51	1006250	1005770	.005332	004529	51
52	·005082	1005512	·005077	004205	52
52	005902	1005261	2004825	·004072	52
53	1005/19	1005021	004605	1002864	53
54	005409	1004701	1004288	1003667	54
55	-005231	004/93	004300	003007	55
56	.002002	*004577	·004181	·003480	50
57	·004789	·004371	·003985	.003303	57
58	·004584	·004175	·003799	.003136	58
59	·004388	·oo3989	·003622	·002978	59
60	·004202	·003812	·003454	·002828	60
61	·004024	003643	·003295	·002686	61
62	003854	·003482	.003143	.002552	62
63	003602	.003329	.002998	*002424	63
64	.003538	.003183	·002861	002304	64
65	.001300	'003044	.002730	002189	65
66	1002240	.002012	.002606	·002081	66
67	003115	1002785	1002488	1001078	67
69	1002086	1002665	002275	.001880	68
60	1002862	2002540	002267	1001787	60
09	1002003	1002440	100216F	1001600	70
70	002/43	002440	1002103	001099	70
71	002033	-002335	002008	001010	1
72	002525	002234	1001975	-001530	72
73	002422	002139	001000	001401	73
74	.002323	002047	001802	1001390	74
75	.002229	-001980	001/21	001322	15
76	·002139	·001877	·001644	.001257	70
77	·002052	·001797	·001571	.001100	77
78	·001969	001721	.001201	.001139	78
79	.001800	·001648	·001434	*001082	79
80	·001814	·001578	·001371	.001030	08
81	·001741	·001511	.001310	·000980	81
82	·001672	·001448	·001252	*000932	82
83	·001605	·001387	·001197	.000882	83
84	·001541	·001329	'00I I44	·000844	84
85	·001479	.001273	.001093	.000803	85
86	·001420	·001219	·001045	·000764	86
87	001364	.001168	·000999	·000727	87
88	.001310	.001110	·000955	000692	88
80	·001258	.001073	000913	.000659	89
90	·001208	·001028	.000873	·000627	90
01	.001160	.000982	.000835	*000597	91
02	·001114	.000944	·000798	.000568	92
03	·001070	000905	000763	·000541	93
04	.001028	·000867	.000730	000515	94
95	·000987	.000831	•000698	.000490	95
06	.000949	·000796	.000667	·000466	96
07	1000011	.000763	.000638	000444	97
08	1000875	.000732	.000010	000423	98
00	'000841	·000701	.000584	000402	99
100	.000808	.000672	·000558	.000383	100
					L

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SINKING FUND FOR THE REPAYMENT OF LOANS

Years6 %7 %8 %10 %111'0000001'0000001'0000001'0000001'0000002'485437'4830769'480769'4761903'314110'311052'308033'3021154'228591'225228'221921'2154715'177396'173891'170456'1637986'143363'139796'136315'1296077'119135'115553'112072'1054068'101036'007468'004015'0874449'087022'083486'08079'07364110'075868'072377'069029'06274511'066793'063357'060076'05396312'0529277'055022'026952'04676313'052960'049651'046522'04077914'047585'032475'028629'02466415'042963'039795'036829'03147416'038952'035858'032077'02781717'035445'024425'026702'02193019'029051'026733'024128'0156421'02505'022289'018322'01400522'023046'014393'016422'01257223'01257'0213426'018322'01400524'01679'017189'016422'01257223'013586'0144978'01130024'01679 <th>;</th> <th></th> <th></th> <th>·</th> <th></th> <th></th>	;			·		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Years	6 %	7 %	8%	10 %	Years
2 '485437 '483092 '48769 '476190 3 '314110 '311052 '308033 '302115 4 '228591 '222288 '221921 '215471 5 '177396 '173891 '170456 '163798 6 '143363 '139796 '136315 '129607 7 '119135 '115553 '112072 '105406 8 '101036 '097468 '06029 '062745 10 '075868 '072377 '069029 '062745 11 '05902 '052695 '046763 12 '059277 '055902 '052695 '046763 13 '052960 '036829 '031474 '035746 15 '042963 '039795 '036829 '031474 16 '035455 '032425 '029622 '027817 17 '035445 '032425 '029622 '027817 16 '023957 '024933 '021852 '017460	I	1.0000000	I .000000	I .0000000	I .000000	I
3 '31410 '311052 '308033 '302115 4 '228591 '22528 '221021 '215471 5 '177396 '173891 '170456 '163798 6 '143363 '139796 '136315 '129607 7 '119135 '115553 '112072 '105406 8 '101036 '097468 '094015 '087444 9 '087022 '083486 '060079 '073641 10 '075868 '072377 '069029 '0627455 11 '066793 '033357 '060076 '053963 12 '059277 '055902 '052695 '046763 13 '052960 '049651 '046522 '040779 14 '047585 '044345 '041297 '035746 15 '042963 '039795 '036290 '024664 18 '032357 '029413 '026702 '021817 17 '035445 '022425 '029629	2	•485437	· ·483092	·480769	·476190	2
4 -225228 -221921 -215471 5 ·177396 ·173891 ·170456 ·163798 6 ·143363 ·139796 ·136315 ·129607 7 ·119135 ·115533 ·112072 ·105406 8 ·101036 ·097468 ·094015 ·087444 9 ·087022 ·083486 ·08079 ·073641 10 ·075868 ·072377 ·069029 ·0627455 11 ·066793 ·063357 ·060076 ·053963 12 ·052977 ·055902 ·026595 ·046763 13 ·052960 ·049651 ·04452 ·044779 14 ·047585 ·044345 ·041297 ·035746 15 ·042903 ·035858 ·032977 ·027817 17 ·035445 ·032425 ·026702 ·021930 19 ·026051 ·024283 ·019832 ·01547 20 ·027185 ·024283 ·019832 ·015624 21 ·025005 ·022289 ·019832 ·015624	3	-314110	.311052	•308033	.302115	3
5 ·177396 ·173891 ·170456 ·163798 6 ·143363 ·139796 ·136315 ·129607 7 ·119135 ·115533 ·112072 ·105406 8 ·101036 ·097468 ·04015 ·087444 9 ·087022 ·083486 ·080079 ·073641 10 ·075868 ·072377 ·060029 ·062745 11 ·066793 ·055902 ·052695 ·040763 12 ·059277 ·055902 ·036829 ·031474 16 ·038952 ·033585 ·032977 ·027817 17 ·035445 ·0342357 ·024933 ·021772 ·027817 18 ·032357 ·022433 ·021852 ·017460 21 ·022005 ·022289 ·01832 ·015624 22 ·023046 ·024393 ·021852 ·014005 23 ·021278 ·018714 ·016422 ·012572 24 ·016079 ·013426 ·0114978 ·014055 25 ·018227 ·015811 <t< td=""><td>4</td><td>·228591</td><td>·225228</td><td>221921</td><td>·215471</td><td>4</td></t<>	4	·228591	·225228	221921	·215471	4
6 '143363 '139796 '136315 '129607 7 '119135 '115553 '112072 '105406 8 '101036 '097468 '094015 '087444 9 '087022 '083486 '080079 '073641 10 '075868 '072377 '069029 '062745 11 '066793 '053957 '060076 '053963 12 '059277 '055902 '022695 '046763 13 '052960 '049651 '046522 '040779 14 '047585 '032425 '029629 '031474 16 '038952 '035858 '032977 '027817 17 '035445 '032425 '029629 '024664 18 '032357 '029413 '02672 '021930 20 '021621 '026753 '024128 '019547 20 '023045 '022489 '018322 '015624 21 '025005 '022289 '018322	5	•177396	•173891	•170456	·163798	5
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6	•143363	•139796	·136315	·129607	6
8 ·101036 ·097468 ·094015 ·087444 9 ·087022 ·083486 ·080079 ·073641 10 ·075868 ·072377 ·069029 ·062745 11 ·066793 ·063357 ·060076 ·053963 12 ·059277 ·055902 ·052695 ·040763 13 ·023960 ·049651 ·046522 ·040779 14 ·047585 ·044345 ·041297 ·035746 15 ·042963 ·039795 ·036829 ·031474 16 ·038952 ·035858 ·032977 ·027817 17 ·023621 ·024753 ·02413 ·024702 ·021930 19 ·029621 ·0224393 ·021852 ·017460 21 ·022005 ·0222869 ·01832 ·014052 22 ·023046 ·024066 ·018032 ·014052 23 ·0218714 ·016422 ·012577 ·009158 24 ·019679 ·017189<	7	119135	115553	·112072	·105406	7
9 .087022 .083486 .080079 .073641 10 .075868 .073377 .060029 .062745 11 .066793 .063357 .060076 .053963 12 .052977 .055902 .046522 .040779 14 .047585 .044345 .041297 .035746 15 .042963 .039795 .036829 .024174 16 .038952 .035858 .032977 .027817 17 .035445 .032425 .026629 .024664 18 .032357 .022413 .026702 .021930 19 .029621 .026753 .024128 .019547 20 .027185 .024393 .021852 .015624 21 .025005 .022289 .019832 .015624 22 .023046 .02406 .018032 .014005 23 .021278 .018714 .016422 .012572 24 .019679 .017189 .014978 </td <td>8</td> <td>101036</td> <td>·097468</td> <td>·094015</td> <td>·087444</td> <td>8</td>	8	101036	·097468	·094015	·087444	8
IO '075868 '072377 '069029 '062745 II '066793 '063357 '060076 '053963 IZ '059277 '055902 '052695 '046763 I3 '052960 '049651 '046522 '040779 I4 '047585 '044345 '041297 '035746 I5 '042963 '039795 '036829 '031474 I6 '038952 '035858 '032475 '02464 I8 '032357 '02413 '026702 '021930 I9 '029621 '026753 '024128 '019547 20 '027185 '024393 '01832 '015624 21 '025005 '022280 '019832 '015624 22 '023046 '02406 '01832 '014005 23 '021278 '018714 '016422 '012572 24 '019679 '017189 '014978 '011300 25 '01827 '015811 '01679	9	.087022	•083486	·080079	·07364I	9
II '066793 '063357 '060076 '053963 I2 '059277 '055902 '052695 '046763 I3 '047585 '044345 '044325 '044763 I5 '042963 '039795 '036829 '031474 I6 '038952 '035858 '032977 '027817 I7 '0353445 '024255 '020629 '024664 I8 '022357 '02413 '026702 '021930 I9 '026051 '022489 '019832 '015624 22 '022046 '01832 '015624 '014005 23 '021278 '018714 '016422 '012572 24 '019679 '017189 '014978 '011300 25 '018227 '015811 '012507<''''''''''''''''''''''''''''''''''''	IO	·075868	·072377	·069029	·o62745	10
12 059277 055902 052695 0446763 13 052960 049651 046522 040779 14 047585 044345 041297 035746 15 042963 039795 036829 031474 16 038952 035858 032977 027817 17 035445 032425 0229629 024664 18 032357 022413 026702 021930 19 0229621 0226753 024128 019547 20 027185 0224393 021852 017460 21 025005 022289 019832 015624 22 023046 0220406 018032 014005 23 021278 018714 016422 012572 24 01679 017189 0114978 011300 25 018227 015811 012507 009159 27 01597 012392 010489 007451 29 013580 011449 006618 006728 30 012649 010586 008827 006079 31 011792 009797 008107 005496 32 01002 009797 006304 004972 33 01022 007234 005387 002491 34 000598 007797 006304 0024974 35 006894 005387 004485 002491 36 005681 003287 0025496 37 00785	11	·066793	.063357	·060076	053963	II
13 ·052960 ·049651 ·046522 ·040779 14 ·047585 ·044345 ·041297 ·035746 15 ·042963 ·039795 ·036829 ·031474 16 ·038952 ·035858 ·032977 ·027817 17 ·035445 ·032425 ·0229629 ·024664 18 ·032357 ·029413 ·026702 ·021930 19 ·022621 ·026753 ·024128 ·019547 20 ·027185 ·02490 ·018322 ·015624 21 ·025005 ·022280 ·019832 ·015624 22 ·023046 ·02406 ·018032 ·016624 23 ·021278 ·018714 ·016422 ·012572 24 ·016679 ·017189 ·014978 ·011300 25 ·01827 ·015811 ·012507 ·099159 27 ·015697 ·013426 ·01448 ·006728 28 ·014593 ·012392 ·010489 <td>12</td> <td>.059277</td> <td>055902</td> <td>052695</td> <td>·046763</td> <td>12</td>	12	.059277	055902	052695	·046763	12
14 .047585 .044345 .041297 .035746 15 .042963 .039795 .036829 .031474 16 .038952 .035858 .032977 .027817 17 .035445 .032425 .026702 .021664 18 .032357 .024133 .026702 .021930 19 .029621 .026753 .024128 .019547 20 .027185 .024393 .021852 .017460 21 .025005 .022489 .019832 .016624 22 .023046 .020406 .018032 .014005 23 .021278 .018714 .016422 .012572 24 .019679 .017189 .014978 .011300 25 .018227 .013811 .012507 .009159 27 .015697 .013426 .011448 .008258 28 .014593 .01326 .004451 .006728 30 .012649 .01356 .008827 .006079 31 .01792 .009777 .006304	13	·052960	·049651	·046522	·040779	13
15 ·042963 ·039795 ·036829 ·031474 16 ·038952 ·035858 ·032977 ·027817 17 ·035445 ·032425 ·029629 ·024664 18 ·032357 ·029413 ·026702 ·021930 19 ·02621 ·026753 ·024128 ·019547 20 ·027185 ·024393 ·021852 ·017460 21 ·025005 ·022289 ·019832 ·015624 22 ·023046 ·020406 ·018032 ·014005 23 ·021278 ·018714 ·016422 ·012572 24 ·019679 ·017189 ·0114978 ·011300 25 ·018227 ·015811 ·012507 ·009159 27 ·015697 ·013426 ·011448 ·008258 28 ·014593 ·012507 ·009159 ·007451 29 ·013580 ·011449 ·009618 ·006728 30 ·012649 ·010586 ·006827	14	·047585	·044345	·041297	·035746	14
16 $\cdot 038952$ $\cdot 035858$ $\cdot 032977$ $\cdot 027817$ 17 $\cdot 035445$ $\cdot 032425$ $\cdot 029629$ $\cdot 024664$ 18 $\cdot 032357$ $\cdot 024733$ $\cdot 026702$ $\cdot 021930$ 19 $\cdot 029621$ $\cdot 026753$ $\cdot 024128$ $\cdot 019547$ 20 $\cdot 027185$ $\cdot 024393$ $\cdot 021852$ $\cdot 017460$ 21 $\cdot 025005$ $\cdot 022289$ $\cdot 018322$ $\cdot 017460$ 23 $\cdot 021278$ $\cdot 018714$ $\cdot 016422$ $\cdot 012572$ 24 $\cdot 019679$ $\cdot 01748$ $\cdot 016422$ $\cdot 012572$ 24 $\cdot 019679$ $\cdot 01748$ $\cdot 016422$ $\cdot 012572$ 24 $\cdot 019679$ $\cdot 01748$ $\cdot 014978$ $\cdot 011300$ 25 $\cdot 018527$ $\cdot 013426$ $\cdot 011448$ $\cdot 008258$ 26 $\cdot 016927$ $\cdot 013426$ $\cdot 011448$ $\cdot 008258$ 28 $\cdot 014593$ $\cdot 012397$ $\cdot 006718$ $\cdot 006728$ 29 $\cdot 013586$ $\cdot 011449$	15	·042963	·039795	·036829	·031474	15
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	16	·038952	·035858	032077	·027817	16
18 032357 029413 026702 021930 19 020621 026753 024128 019547 20 027185 024393 021852 017460 21 025005 022289 019832 015624 22 023046 020406 018322 012572 24 019679 017189 014978 011300 25 018227 015811 012507 009159 27 015697 013426 011448 008258 28 014593 012392 010489 007451 29 013580 011449 0066728 006728 30 012649 010586 008827 006079 31 011792 009797 008107 005496 32 010273 006408 006852 004972 33 010273 006715 005345 003433 36 008395 006715 005345 003433 <	17	·035445	·032425	029629	024664	17
19 029621 026753 024128 019547 20 027185 024393 021852 017460 21 025005 022289 019832 015624 22 023046 020406 018032 014005 23 021278 018714 016422 012572 24 019679 017189 014978 011300 25 018227 015811 012507 009159 27 015697 013426 011448 008258 28 014593 012392 010489 007451 29 01380 011449 006788 006798 30 012649 010586 008827 006079 31 011792 009797 008107 005496 32 011002 009073 007451 004972 33 010273 008408 006852 004499 34 009598 007797 006304 004074 <td< td=""><td>18</td><td>.032357</td><td>029413</td><td>·026702</td><td>.021930</td><td>ıŚ</td></td<>	18	.032357	029413	·026702	.021930	ıŚ
20 ·027185 ·024393 ·021852 ·017460 21 ·025005 ·022890 ·019832 ·015624 22 ·023046 ·020406 ·018032 ·015624 23 ·021278 ·018714 ·016422 ·012572 24 ·019679 ·017189 ·014978 ·011300 25 ·018227 ·015811 ·012507 ·009159 27 ·015697 ·013426 ·011448 ·008258 28 ·014593 ·01392 ·010489 ·007451 29 ·013580 ·011449 ·009618 ·006728 30 ·012649 ·010586 ·008827 ·00679 31 ·01792 ·009797 ·008107 ·005496 32 ·011002 ·009073 ·007451 ·004972 33 ·010273 ·008408 ·005832 ·003343 37 ·007857 ·006304 ·004074 35 ·006974 ·007345 ·003343	19	·029621	026753	024128	.019547	19
2I 025005 022289 019832 015624 22 023046 020406 018032 014005 23 021278 018714 016422 012572 24 019679 017189 014978 011300 25 018227 015811 013679 010168 26 016904 014561 012507 009159 27 015697 013426 011448 008258 28 014593 012392 010489 007451 29 01380 011449 009618 006728 30 012649 010586 008827 006799 31 011792 009797 008107 005496 32 01002 009073 007451 004972 33 010273 008408 006852 004499 34 009598 007975 005345 003343 37 007857 006237 0004530 002747 <td< td=""><td>20</td><td>·027185</td><td>024393</td><td>·021852</td><td>·017460</td><td>20</td></td<>	20	·027185	024393	·021852	·017460	20
22 023046 020406 018032 014005 23 021278 018714 016422 012572 24 019679 017189 014978 011300 25 018227 015811 013679 010168 26 016904 014561 012507 009159 27 01580 0113426 011448 008258 28 014593 012392 010489 007451 29 01380 011449 006618 006728 30 012649 010586 008827 00679 31 011792 009797 008107 005496 32 010273 008408 006852 004499 34 009598 007797 006304 004074 35 008974 007234 005803 003689 36 008395 006715 005345 003343 37 004824 003387 004532 00259 4	21	025005	.022280	.010832	.015624	21
23 021278 018714 016422 012572 24 019679 017189 014978 011300 25 018227 015811 012577 00159 26 016904 014561 012577 009159 27 01597 013426 011448 008258 28 014593 012392 010489 007451 29 013580 011449 009618 006728 30 012649 010586 008827 006079 31 011792 009797 008107 005496 32 0110273 008408 006552 004499 34 009598 007797 006304 004074 35 008974 007234 003303 03343 37 006894 005387 004924 003303 38 007358 005795 004530 002259 40 006694 005387 002860 002259	22	.023046	·020406	018032	*014005	22
24 ·019679 ·017189 ·014978 ·011300 25 ·018227 ·015811 ·013679 ·010168 26 ·016904 ·014561 ·012507 ·009159 27 ·015697 ·013426 ·011448 ·008258 28 ·014593 ·012392 ·010489 ·007451 29 ·013580 ·011499 ·006618 ·006728 30 ·012649 ·010586 ·00827 ·006079 31 ·011792 ·009797 ·008107 ·005496 32 ·011002 ·009073 ·007451 ·004972 33 ·010273 ·008408 ·006803 ·003689 34 ·009598 ·00797 ·006304 ·004499 35 ·008974 ·007234 ·005803 ·003303 36 ·007358 ·005387 ·0044185 ·002491 40 ·006462 ·00509 ·003860 ·002259 41 ·006059 ·004660 ·003562 </td <td>23</td> <td>021278</td> <td>.018714</td> <td>016422</td> <td>012572</td> <td>23</td>	23	021278	.018714	016422	012572	23
25 $\circ 18227$ $\circ 15811$ $\circ 13679$ $\circ 10168$ 26 $\circ 16904$ $\circ 14561$ $\circ 12507$ $\circ 09159$ 27 $\circ 15697$ $\circ 13426$ $\circ 11448$ $\circ 08258$ 28 $\circ 14593$ $\circ 12392$ $\circ 10489$ $\circ 07451$ 29 $\circ 13580$ $\circ 11449$ $\circ 00818$ $\circ 06728$ 30 $\circ 12549$ $\circ 010586$ $\circ 00827$ $\circ 06728$ 30 $\circ 12549$ $\circ 010586$ $\circ 00827$ $\circ 006728$ 30 $\circ 11499$ $\circ 009797$ $\circ 008827$ $\circ 006799$ 31 $\circ 11792$ $\circ 009797$ $\circ 008107$ $\circ 005496$ 32 $\circ 011002$ $\circ 009073$ $\circ 007451$ $\circ 004972$ 33 $\circ 10273$ $\circ 008074$ $\circ 00797$ $\circ 006304$ $\circ 004972$ 33 $\circ 010273$ $\circ 005345$ $\circ 003343$ $\circ 003343$ 36 $\circ 007358$ $\circ 005387$ $\circ 002424$ $\circ 003030$ 36 $\circ 007358$ $\circ 004660$ <td>24</td> <td>019679</td> <td>017180</td> <td>·014978</td> <td>·01 I 300</td> <td>24</td>	24	019679	017180	·014978	·01 I 300	24
26 016904 014561 012507 009159 27 015697 013426 011448 008258 28 014593 012392 010489 007451 29 01380 011449 009618 00728 30 012649 010586 00827 006799 31 011792 009797 008107 005496 32 011002 009073 007451 004972 33 010273 008408 006852 004499 34 000598 007977 006304 004074 35 008974 007234 005803 003689 36 008395 006715 005345 003343 37 007857 006237 004539 002747 39 006894 005387 004539 002259 41 006059 004660 003562 002250 42 005333 004336 003034 001688 4	25	·018227	015811	·013679	·010168	25
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	26	·016004	.014561	012507	*000T40	26
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	27	015607	013426	011448	1008258	27
29 013580 011449 '00618 '006728 30 '012649 '010586 '008827 '006079 31 '011792 '009797 '008107 '005496 32 '011002 '009073 '007451 '004972 33 '010273 '008408 '006522 '004499 34 '009598 '00797 '006304 '004974 35 '008974 '007234 '005803 '003689 36 '008395 '006715 '005345 '003343 37 '007857 '006237 '004924 '003030 38 '007358 '005387 '004185 '002491 40 '006694 '005387 '004185 '002491 40 '006659 '004366 '003262 '002050 41 '005066 '003562 '002050 '001860 43 '005333 '004366 '003244 '001860 44 '005006 '003758 '002802 <td>28</td> <td>014593</td> <td>012302</td> <td>010480</td> <td>007451</td> <td>28</td>	28	014593	012302	010480	007451	28
30 $\circ 12\overline{6}49$ $\circ 105\overline{8}\overline{6}$ $\circ 06\overline{8}27$ $\circ 06\overline{0}79$ 31 $\circ 11792$ $\circ 09797$ $\circ 08107$ $\circ 05496$ 32 $\circ 11002$ $\circ 09073$ $\circ 07451$ $\circ 044972$ 33 $\circ 10273$ $\circ 08408$ $\circ co6852$ $\circ 0049972$ 34 $\circ 009598$ $\circ 07797$ $\circ 06304$ $\circ 004074$ 35 $\circ 083974$ $\circ 07234$ $\circ 005303$ $\circ 03343$ 37 $\circ 007857$ $\circ 006237$ $\circ 004924$ $\circ 033030$ 38 $\circ 07358$ $\circ 05795$ $\circ 044539$ $\circ 002747$ 39 $\circ 066944$ $\circ 05387$ $\circ 044185$ $\circ 002491$ 40 $\circ 056494$ $\circ 05387$ $\circ 04185$ $\circ 002491$ 40 $\circ 056492$ $\circ 003360$ $\circ 002259$ 41 $\circ 005099$ $\circ 003362$ $\circ 001860$ 43 $\circ 005333$ $\circ 004366$ $\circ 003287$ $\circ 01860$ 43 $\circ 005333$ $\circ 004366$ $\circ 003287$ $\circ 01860$	20	013580	.011449	.000018	.006728	20
31 011792 009797 008107 005496 32 011002 009073 007451 004972 33 010273 008408 006852 004499 34 000598 00797 006304 004074 35 008974 007234 005803 003689 36 008395 006715 005345 003343 37 007857 006237 004539 002747 39 006894 005387 004539 002747 40 006659 004660 003562 002259 41 006059 004660 003562 002259 42 005333 004366 003287 001886 43 005333 004036 003034 001688 44 005006 003758 002802 001532 45 004701 003499 002587 001391 46 004701 003260 002390 001263 <td< td=""><td>30</td><td>·012649</td><td>·010586</td><td>·008827</td><td>.006070</td><td>30</td></td<>	30	·012649	·010586	·008827	.006070	30
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	21	011702	1000707	1008107	:005406	21
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	22	011002	000073	2007451	*004072	22
34 000598 007797 006304 004774 35 008974 007234 005803 003689 36 008395 006715 005345 003343 37 007857 006237 004924 003030 38 007358 005795 0044539 002747 39 006894 005387 004185 002291 40 006659 004660 003562 002259 41 006059 004660 003287 001860 43 005333 004036 003287 001860 43 005303 003758 002802 001532 44 005006 003758 002802 001532 45 004701 003499 002587 001391 46 004415 003260 002390 001263 47 003898 002831 002040 00141	22	010273	008408	006852	*004400	22
35 008974 007234 005803 003689 36 008395 006715 005345 003343 37 007857 006237 004924 003030 38 007358 005795 004539 002747 39 006894 005387 004185 002291 40 006659 003660 003562 002259 41 006059 004660 003287 001860 43 005333 004036 003034 001688 44 005006 003758 002802 001532 45 004701 003499 002587 001391 46 004701 003260 002390 001263 47 004415 003037 002208 001147 48 003898 002831 002040 001263	34	·009598	.007797	.006304	*004074	33
36 .008395 .006715 .005345 .003343 37 .007857 .006715 .005345 .003333 38 .007358 .005795 .004924 .003030 38 .007358 .005795 .004924 .0020491 40 .006694 .005387 .004185 .0022491 40 .006659 .004660 .003562 .002259 41 .006059 .004660 .003562 .002250 42 .005333 .004036 .003287 .001860 43 .005333 .004036 .003034 .001688 44 .005006 .003758 .002802 .001532 45 .004701 .003499 .002587 .001391 46 .004701 .003260 .002390 .001263 47 .003898 .002831 .002208 .001147 48 .003898 .002831 .001041 .001041	35	.008974	.007234	.002803	.003680	35
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	26	.008305	*0067TF	100F24F	1002242	26
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	37	.007857	.006237	1004024	*002030	27
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	38	.007358	005705	1004530	*002747	28
40 006462 00509 1003860 1002259 41 006059 004660 1003562 1002259 42 005683 004336 1003287 1001860 43 005333 1004036 1003034 1001688 44 005006 1003758 1002802 1001532 45 1004701 1003499 1002587 1001391 46 1004415 1003260 1002390 1001263 47 1004188 1003037 1002208 1001147 48 1003898 1002831 1002040 1001041	30	.006894	005387	.004185	1002401	20
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	40	006462	.005000	.003860	002250	40
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	AT	·006050	1004660	1002 562	1002050	AT
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	42	·005683	004336	003287	1001860	41
44 ·005006 ·003758 ·002802 ·001532 45 ·004701 ·003499 ·002587 ·001391 46 ·004415 ·0030260 ·002390 ·001263 47 ·004148 ·003037 ·002208 ·001147 48 ·003898 ·002831 ·002040 ·001041	43	.005333	.004036	1003034	1001688	42
45 ·oc4701 ·oc3499 ·oc2587 ·oo1391 46 ·oc4415 ·oc3260 ·oc2390 ·oo1263 47 ·oc4148 ·oc3037 ·oc2208 ·oo1147 48 ·oc3898 ·oc2831 ·oc2040 ·oo1041	44	*005006	.003758	002802	001532	43
46 004415 003260 002390 001263 47 004148 003037 002208 001147 48 003898 002831 002040 001041	45	·004701	.003499	.002587	·001391	45
47 003037 002208 001147 48 003898 002831 002040 001041	46	.004415	1003260	1002200	.001262	46
48 .003898 .002831 .002040 .001041	47	.004148	1003037	1002208	'001 147	40
	48	.003808	002831	.002040	.001041	48
49 '003664 '002639 '001886 '000046	49	.003664	.002630	·001886	·000046	40
50 003444 002460 001743 000850	50	003444	·002460	·001743	.000850	50

For explanation see pp. 16, 17

	SINKING FU	ND FOR TH	E AEFAIMEN.	UF LUANS	
Years	6 %	7 %	8 %	10 %	Year
5T	1003230	*002204	•001611	1000780	51
5-	1002046	1002120	001400	000700	52
52	1002866	1001005	001377	1000644	52
55	:002606	001993	1001274	1000585	55
54 55	·002537	001736	001178	.000532	55
56	.002388	.001620	.001000	.000483	56
57	*002247	·001512	·001008	.000430	57
58	002116	1001411	.000032	.000300	58
50	.001002	*001317	1000862	.000363	50
59 60	.001876	.001229	.000798	.000329	60
61	·001766	.001147	·000738	·000299	61
62	.001664	·001071	·000683	*000272	62
63	001567	001000	000632	.000247	6
64	001476	·000934	·000585	.000225	6
65	•001391	000872	·000541	·000204	6
66	.001310	.000814	.000201	000186	6
67	.001235	·000760	·000464	·000169	6
68	1001163	.000710	·000429	·000153	6
69	•001096	·000663	·000397	·000139	6
70	.001033	*000620	·000368	·000127	7
71	*000974	·000579	•000340	.000112	7
72	•000918	·000541	·000315	'000105	7
73	·000865	·000505	·000292	·000095	7
74	·000815	·000472	·000270	•000086	7
75	·000769	·000441	·000250	•000079	7
76	.000725	·000412	·000231	.000072	7
77	.000683	•000385	.000214	000005	7
78	·000644	.000359	.000108	000059	7
79	*000607	•000336	.000183	*000054	17
80	.000573	•000314	·000170	.000049	8
81	·000540	·000293	·000157	*000044	8
82	.000209	*000274	.000140	.000040	5
83	·000480	·000250	.000135	*000037	ð
84 8r	.000453	·000239	*000125 *000116	*000033	8
05 06	1000427	.000223	:000107	1000028	9
80 80	1000402	1000209	*000000	000025	8
07	*000380	1000193	1000002	1000022	8
80	1000330	1000170	1000084	'00002J	9
90	.000318	.000159	.000079	*000019	9
01	.000300	.000149	*000073	1000017	
02	1000283	.000130	.000067	000015	6
02	000267	.000130	*000062	.000014	á
90	000252	1000121	.0000 28	000013	Í
95	.000238	.000113	.000053	·000012	9
06	000224	.000106	*000049	1100001	9
07	000211	•000099	·000046	.0000010	ĝ
68	·000199	*000092	*000042	.000000	9
00	·000188	·000086	*000039	·000008	9
	1000177	·00008T	1000026	*000007	1 10

$\begin{array}{c} 3\frac{1}{2} \& 3 \% \\ \hline 96618 \\ 1 \cdot 89534 \\ 2 \cdot 78916 \\ 3 \cdot 64928 \\ 4 \cdot 47719 \\ 5 \cdot 27433 \end{array}$	Yrs. I 2 3 4
·96618 1·89534 2·78916 3·64928 4·47719 5·27433	1 2 3 4
1.89534 2.78916 3.64928 4.47719 5.27433	234
2·78916 3·64928 4·47719 5·27433	34
3.64928 4.47719 5.27433	4
4·47719 5·27433	
5.27433	5
	6
6 04206	7
6.78167	8
7.49435	9
8.18126	10
8.84349	11
9.48208	12
10.09800	13
10.09217	14
11-20550	15
11.81881	16
12.35292	17
12.80857	18
13-30050	19
13 04/40	20
14.31193	21
14.70071	22
15-19430	23
16.01848	25
16:41004	-5
16.78860	27
17.15465	28
17.50864	29
17.85100	30
18.18217	31
18.50254	32
18.81251	33
19.11243	34
19 · 40 267	35
19.68357	36
19.95545	37
20-21863	38
20.47340	39
20.72007	40
20.92891	41
21.10018	42
21.41414	43
21.03105	44
21 04113	43
22.04402	40
22.42270	47
22.01771	40
22.70606	50
	20-21863 20-47340 20-72007 20-95891 21-19018 21-41414 21-63105 21-84113 22-04462 22-24174 22-43270 22-61771 22-79696

For explanation see p. 18

	Value of an Annuity Yielding Interest on Capital at 3 and $3\frac{1}{2}$ PER CENT., and Replacing Capital when Invested at Lower Rates										
Yrs.	3&2%	3 & $2\frac{1}{2}$ %	3½ & 2%	3½&2½%	3 ¹ / ₂ & 3 %	Yrs.					
51	24.12044	25.05719	21.52456	22.26740	22.97064	51					
52	24.32552	25.26882	21.68770	22.42437	23.13894	52					
53	24.22248	25.47479	21.84650	22.59657	23.30203	53					
54	24.72049	25.67527	22.00110	22.75417	23.46009	54					
55	24 9 107 1	25.87041	22.15164	22.00231	23.61 327	55					
56	25.00626	26.06028	22.20825	22:05612	22.76172	56					
57	25.27720	26.24521	22:44105	22:20076	22:00:62	57					
2/	25.45202	26:42526	22.58016	23 200/0	23 90503	20					
50	25 45392	20 42 5 30	22 30010	23 341 34	24 04512	50					
27	25 02020	20 00003	22 /1509	23 4/000	24 18033	29					
00	25 79449	20 //133	22 04//0	23-01000	24.31140	00					
61	25.95866	26.93751	22.97647	23.74003	24.43847	61					
62	26.11891	27.09935	23.10193	23.86563	24.20162	62					
63	26.27535	27-25694	23.22423	23.98777	24.68111	63					
64	26.42807	27.41041	23.34346	24.10656	24.79691	64					
65	26.57719	27.55988	23.45973	24.22209	24 90920	65					
66	26:72280	27:70545	22.57211	24.22446	25:01807	66					
67	26.86500	27 /0343	23 57 511	24 33440	25 01007	67					
~~~	20 00500	27 04/23	23 00309	24 443/7	2512305	20					
60	27.00307	2/ 90533	2379155	24 55012	25.22003	60					
09	27.13951	2011905	23.89077	24.05350	25.32532	09					
70	27-27200	28-25089	23.99943	24 75424	25.42100	70					
71	27.40142	28.37853	24.09960	24.85219	25.51498	71					
72	27.52786	28.20289	24.19720	24.94751	25.60554	72					
73	27.65140	28 62403	24.29275	25.04027	25.69338	73					
74	27 77210	28.74206	24.38587	25.13054	25.77857	74					
75	27.89005	28.85705	24 47676	25.21840	25.86120	75					
76	28:00121	28:06:008	24.56540	25.20202	25:04125	76					
70	28.11705	20 90900	24 30349	25 30392	25 94135	777					
1/	20 11/95	29 07029	24 05212	25 30/1/	20.01910	14					
70	20 22005	29 10401	24 / 50/0	25 40021	20 09451	70					
79	20 33505	29 20020	24 81930	25 54/10	20 10/00	69					
00	20 44004	29 30925	24 09990	25 02391	20 23003	00					
81	28.54366	29.48767	24.97874	25.69869	26.30747	81					
82	28.64418	29.28327	25.05568	25.77151	26.37425	82					
83	28·74245	29.67704	25.13085	25.84241	26.43905	83					
84	28.83854	29.76812	25.20427	25.91145	26.20191	84					
85	28.93249	29.85689	25.27601	25.98104	26.56289	85					
86	20.02426	20.04 34 1	25-34600	26.04416	26 62206	86					
87	20.11420	20*02772	25.41428	26.10202	26.67046	87					
88	2911420	20:10001	25.48150	26.12002	26.72516	88					
80	29 20200	30 10991	25 40150	26:22052	26.78020	80					
09	29 20/90	20:26800	25 54009	26:28044	26 84162	00					
90	29 3/201	30 20009	29,01001	20 20944	20 04103	90					
91	29.45420	30.34420	25.67327	26.34683	26.89251	91					
92	29.53460	30.41838	25.73433	26.40274	26.94187	92					
93	29.61324	30.49069	25.79402	26.45720	26 98977	93					
94	29.69017	30.20112	25.85236	26.21022	27 03625	94					
95	29.76543	30.62988	25.90940	26.26194	27.08191	95					
06	20.82005	20.60686	25.06517	26.61220	27.12512	06					
07	20.01108	20:76216	26.01020	26.661.25	27.16750	07					
1%	29 91100	20.82582	26:07201	26.200193	27:20880	102					
190	29 90130	20.88787	26.12515	26.75572	27 24880	00					
99	30 05052	30 00/0/	20 12313	20 / 55/ 5	27 24000	79					
1100	30.11799	30.94037	20 17013	20 00111	2/ 20/01	1200					

Value of an Annuity Yielding Interest on Capital at 4 PER CENT., and Replacing Capital when Invested at								
Years	2%	<b>2</b> ¹ / ₂ %	3 %	3½%	Years			
I	·96153	·96153	·96153	·96153	I			
2	1 •86898	1.87326	1.87754	1.88185	2			
3	2.72662	2.73870	2.75080	2.76294	3			
4	3.23827	3.20103	3.28388	3.60684	4			
5	4.30740	4.34310	4.37910	4-41538	5			
6	5.03213	5.08777	5.13881	5.19027	6			
7	5.73026	5.79725	5.86488	5.93315	7			
8	6.38938	6.47386	6.55925	0.04555	8			
9	7.01078	7.11962	7.22367	7.32891	9			
10	7-01514	7.73641	7.85975	7'90450	10			
11	8.18428	8.32598	8.46902	8.61390	II			
12	8.72908	8.88990	9.05288	9.21562	12			
13	9.24912	9.42967	9.61265	9.79801	13			
14	9.74640	9.94663	10.14922	10-35513	14			
-15	10-22229	10.44207	10.00428	10.9027	15			
10	10.67804	10.01212	11.15936	11.40448	10			
17	11.11483	11.37297	11.63433	11.89865	17			
18	11.23374	11.81022	12.09063	12.37300	18			
19	11.93577	12.23083	12.52915	12.83033	19			
20	12.32184	12.03470	12.95073	13-20945	20			
21	12.69281	13.02298	13 35617	13.69177	21			
22	13.04948	13.39646	13.74620	14.09799	22			
23	13.39260	13.75584	14.12122	14.48880	23			
24	13-72286	14.10182	14.48280	14.00404	24			
25	14.04091	14.43503	14.83000	15 22072	25			
26	14.34736	14.75606	15.16269	15.22201	20			
27	14.64277	15 06 549	15.48846	15.91029	27			
28	14.92707	15.30383	15.79948	10.23307	20			
29	15 20257	15.05159	16:09920	10 54307	29			
30	15 40/92	15 92924	10 3002/	10 04313	30			
31	15.72417	16.19722	16.00000	17.13138	31			
32	15.97173	10.45594	10.93577	17.40901	34			
33	10 21099	10 /0502	17 19509	17 07040	33			
34	16.66602	17.18048	17.68681	18.18230	37			
35	*6.88050	1, 10040	17 00001	10 10-30	26			
30	10.00252	17:40597	17.91993	10.42150	27			
3/	17 09204	17.82481	18.26222	18.87428	3/			
30	17 29400	18.03877	18.57222	10 07420	30			
40	17.68167	18.23612	18.77498	19.20486	40			
47	17.86611	18:40711	18:07086	10140287	AT			
41	18:04:401	10 42/11	10.10014	19 49305	44			
42	18.21828	18.70103	10.34307	10.87068	42			
44	18.38643	18.96440	19.51987	20.00000	44			
45	18.54957	19.13234	19.69078	20.22104	45			
46	18.70788	10.30202	10.85602	20.28601	16			
47	18.86154	10.45272	20.01280	20.54688	47			
48	10.01024	19.60554	20.17032	20.20116	48			
40	19.15563	19.79522	20.31978	20.84998	49			
río I	10.20637	19.89731	20.464.34	20.99354	50			

For explanation see p. 18

Val	lue of an Annu and	uity Yielding Int l Replacing Capit	erest on Capital al when Investe	at 4 PER CEN d at	Т.,
Years	2 %	<b>2</b> ¹ / ₂ %	3%	3½%	Years
5T	10:42311	20:03658	20:60/10	21.13201	ET
52	10.20200	20.17364	20.73040	21.26535	52
52	10.00212	20.30271	20.87042	21.30440	52
55	10.82072	20:42085	20.00712	21.21884	55
55	19.04281	20.223	21.11074	21.63883	55
55	20:06156	20.67203	21.22842	21.75460	55
50	20.12202	20.78014	21.25331	21.86631	50
5/	20.28046	20.00104	21-47867	21.07411	57
50	20.20882	21.01146	21.57221	22.07814	50
60	20.20226	21.11781	21.67648	22.17854	60
61	20.60887	21.22108	21.77744	22.27544	61
62	20.20075	21.22130	21.87521	22.36806	62
62	20.80708	21.41882	21.00000	22.45023	62
64	20.00364	21.51348	22.06161	22.24632	64
65	20.00683	21.60544	22.1 2042	22.63045	65
66	21.08760	21.69480	22.23650	22.71163	66
67	21.17602	21.78165	22.31087	22.78999	67
68	21.26224	21.86605	22.40064	22.86563	68
60	21.34624	21.04808	22.47891	22.03866	60
70	21.42812	22.02783	22.55472	23.00916	70
71	21.50794	22.10536	22.62819	23.07722	71
72	21.58576	22.18074	22.69939	23.14293	72
73	21.66164	22.25403	22.76839	23 20638	73
74	21.73565	22.32530	22.83527	23 26763	74
75	21.80783	22.39462	22.90008	23.32677	75
76	21.87824	22.46204	22.96291	23.38388	76
77	21 94693	22 52761	23.02380	23.43902	77
78	22.01394	22.59140	23.08283	23.49226	78
70	22.07933	22 65345	23 14006	23.54367	79
80	22.14314	22.71383	23.19553	23.20331	80
81	22.20542	22.77257	23.24932	23.64125	81
82	22.26620	22.82973	23.30146	23.68755	82
83	22:32555	22.88535	23.35202	23.73225	83
84	22.38348	22.93947	23.40102	23.77542	84
85	22.44003	22.99215	23.44852	23.81711	85
86	22.49526	23.04342	23.49468	23.85737	86
87	22.54918	23.09333	23.23937	23.89626	87
88	22 60185	23.14191	23.58272	23.93381	88
89	22.65329	23.18919	23.62476	23 97008	89
90	22.70353	23.23523	23.66552	24.00210	90
91	22.75260	23.28005	23.70506	24.03893	91
92	22.80055	23-32369	23.24341	24.07160	92
93	22.84739	23.36618	23.78061	24.10316	93
94	22.89315	23.40755	23.81668	24.13364	94
95	22.93787	23.44784	23.82168	24.16302	95
96	22.98157	23.48707	23.88562	24.19121	96
97	23.02427	23.52528	23 9 18 5 4	24 21897	97
98	23.06601	23.56249	23.95049	24.24549	98
99	23.10680	23.59873	23.98147	24.27112	99
100	23.14668	23.63403	24.01123	24.29586	100

Years	<b>2</b> %	<b>2</b> ¹ / ₂ %	3 %	$3\frac{1}{2}\%$	Year
I	95238	·95238	.95238	.05238	I
2	1.83469	1.83882	1.84294	1.84706	2
3	2.65425	2.66570	2 67716	2.68865	3
4	3.41736	3.43858	3.45988	3.48127	4
5	4.12923	4.16239	4.19243	4 22866	5
6	4.79557	4.84145	4.88764	4.03417	6
7	5.41970	5 47959	5 53997	5.60085	7
8	6.00565	6.08024	6.15550	6.23144	8
9	6 5 5 6 7 1	6.64642	6.73701	6.82846	9
10	7.07281	7-18088	7.28701	7 39419	10
11	7.56556	7.68604	7.80778	7.03072	11
12	8.02828	8.16412	8.301.37	8.43996	12
13	8.46608	8.61710	8.76996	8.92367	13
14	8.88083	9 <b>·0</b> 4678	9.21435	9.38344	14
15	9 <b>.2</b> 7425	9*45478	9.63701	9.82076	15
16	9.64784	9.84262	10.03002	10.23700	16
17	10 00 302	10.21161	10.42182	10.63342	17
18	10.34104	10.26300	10.78647	11.01112	18
19	10.66302	10.89792	11.13414	11 37135	IQ
20	10'97011	11.21740	11.46582	11.71495	20
21	11.50310	11.2242	11.78248	12:04288	21
22	11.24316	11.81382	12.08497	12.35604	22
23	11.81082	12.09243	12.37411	12.65521	23
24	12.06693	12 35898	12.65063	12.94116	24
25	12.31217	12.61417	12.91524	13.21457	25
26	12.54717	12.85864	12.16858	12.47611	26
27	12.77252	13.00202	13.41126	13.72638	27
28	12 98875	13.31772	13.64382	13 96596	28
29	13.19638	13.53340	13.86680	14.19539	20
30	13.39586	13.74048	14.08069	14.41518	30
31	13.58763	13.03042	14.28503	14.62578	21
32	13.77209	14.13211	14.48207	14.82766	22
33	13.94962	14:31447	14.67220	15.02123	32
34	14.12057	14.49134	14.85399	15.20689	34
35	14.28526	14.66156	15 02871	15.38501	35
36	14.44401	14.82546	15.10660	15.55593	26
37	14.59709	14 98332	15.35824	15.72000	37
38	14.74479	15 13544	15.51365	15.87752	38
39	14 88734	15.28207	15.66321	16.02879	30
40	15.02500	15.42347	15.80718	16.17409	40
41	15.15797	15.55988	15.94581	16.31360	41
42	15.28648	15.69150	16.07932	16.44783	42
43	15.41071	15.81856	16.20795	16.57677	43
44	15.53086	15.94124	16 33190	16.20021	44
<b>1</b> 5	15.64710	16.05974	16.42138	16.81989	45
16	15.75950	16.17423	16.26622	16.93449	46
47	16.86850	16.28487	16.67764	17.04472	47
48	15.97397	16.39183	16 78478	17 1 5076	48
19	16.07615	16.55328	16.88814	17 25278	49
co i	16.17515	16.2022	16.08288	17.25006	50

For explanation see p. 18

valı	and	Replacing Capi	terest on Capita tal when Invest	ed at	SNT.,
Years	<b>2</b> %	<b>2</b> ¹ / ₂ %	3 %	$3\frac{1}{2}\%$	Yea
51	16.27113	16.69206	17.08414	17:44544	51
52	16.36418	16.78572	17.17706	17.53639	52
53	16.45443	16 87635	17.26677	17 62 394	53
54	16.54198	16.06411	17.35340	17.70824	54
55	16.62693	17.04908	17.43707	17 78941	55
56	16*70040	17.13138	17.51780	17.86757	56
57	16.78945	17.21110	17.50500	17:04287	57
58	16.86720	17.28834	17.67144	18.01538	58
50	16.04271	17.36320	17.74436	18.08526	50
60	17.01607	17.43576	17.81485	18.15257	60
61	17:08726	17.50610	17.88208	18-21742	61
62	17.15667	17 50010	17:04886	18.27002	62
63	17-22401	17.64045	18.01256	18.34017	62
64	17:28951	17.70460	18.07416	18.30822	6
65	17.35320	17.76683	18.13374	18.4.5418	6
66	17.41516	17.80700	18:10:28	18:00812	66
677	17:41510	17.88582	10-19130	18 50013	6
69	17 47 544	17:04:260	18:20108	18.61028	65
60	17 53410	17 94209	18 30108	18.65862	6
70	17 59119	18.05148	18:40270	18.70524	70
70	1/ 040/3	-8	10 403/9	-8-5-5-5-5	
71	17.70085	18-10351	18.45268	18.75020	71
72	17 75353	18-15404	18.50000	10.79355	74
73	17-80483	18 20311	10.54501	18 87 770	
74	17 05400	18.20206	18:62200	18.01461	74
13	1/ 9034/	18:24004	10 03309	18:05013	
70	17.95090	18.28574	18:07400	18:08824	
17	1/ 99/11	10 305/4	18/7/200	10 90034	
70	18:08605	18.46048	18.70166	19 02 320	1 7
80	18.12885	18.50050	18.82822	10.08047	8
0.	-9	-00-0	-9.96.66	19 00947	
01	18-17057	10-54050	10.00305	1912004	0.
02 8a	18:25002	18.62222	18:02120	19 13112	2
03	18-25093	18.65016	18:06241	19 10033	8
84	18.22728	18.60400	18.00/01	10.23572	8
~J 04	10 32/30	18.50588	10 99401	10:2610	0
00 0	18.30419	10.72700	19.02485	19-20197	
<b>0</b> 7	10.40011	10.70083	19:05414	19-20/31	0
00 90	10.43510	18-82405	19:06254	19:311/7	1 00
09	10.40937	18.85428	19 11005	19 3333/	0
90	10 302/3	-0.00-00	19130/1	19 33010	9
91	18.53533	10.00300	19.10257	19.30014	9
92	18.50714	18.91250	1918702	19.40138	9
93	18:59819	18:06:68	19-21190	19 42107	9
94	10.02020	18:00412	19 23544	19 44100	9
95	10 05010	10 99413	19 23020	19 400/0	9
90	18.68700	19.01980	19.28038	19.47919	9
97	18.71523	19.04491	19.30183	19.49700	9
98	18.74280	19.00929	19.32262	19.51418	9
99	18.70972	19.09301	19'34279	19.53078	9
i00	18.79002	10.11015	19.30233	19.54080	10

Value of an Annuity Yielding Interest on Capital at 6 PER CENT., and Replacing Capital when Invested at									
Years	<b>2</b> %	$2\frac{1}{2}\%$	3%	$3\frac{1}{2}\%$	<b>4</b> %	Years			
1	·94340	·94340	·94340	·94340	·94340	1			
2	1·80164	1·80562	1·80959	1·81357	1·81753	2			
3	2·58562 3·30443 3·96577	2·59648 3·32427 3·99605	2°00730 3°34418 4°02649	2°01825 3°36416 4°05711	2.02910 3.38421 4.08786	345			
5 6 7	4·57611 5·14107	4.61787 5.19494	4 [.] 65988 5 [.] 24918	4.70216 5.30380	4.74469 5.35 ⁸ 77	67			
8	5.66543	5·73174	5.79858	5·86589	5.93373	8			
9	6.15328	6·23220	6.31178	6·39198	6.47279	9			
10	6.60825	6·69976	6.79205	6·88511	6.97881	10			
11	7 ^{.0} 3344	7·13745	7·24234	7·34797	7 • 45440	11			
12	7 [.] 43163	7·54791	7·66507	7·78307	7 • 90189	12			
13 14 15	7°80530 8°15647 8°48716	7 93349 8 29628 8 6381 1	8.43697 8.78990	8·19256 8·57846 8·94254	8·32335 8·72075 9·09579	13 14 15			
16	8·79894	8.96065	9.12317	9·28634	9:45001	16			
17	9·09339	9.26544	9.43814	9·61141	9:78483	17			
18	9·37189	9.55384	9.73624	9·91896	10:10172	18			
19 20 21	9.88562 10.12299	10.032104 10.33197	10.28637	10-21033 10-48647 10-74841	10.68582	20 21			
22	10'34865	10·56569	10.78202	10-99723	11 ·21089	22			
23	10'56323	10·78795	11.01152	11-23356	11 ·45357	23			
24	10'76762	10·99953	11.23002	11-45830	11 ·68402	24			
25	10'96239	11·20122	11.43798	11-67215	11 ·90306	25			
26	11.14840	11·39367	11.63630	11.87578	12·11138	26			
27	11.32593	11·57716	11.82536	12.06971	12·30936	27			
28	11.49557	11·75254	12.00581	12.25445	12·49797	28			
29	11.65786	11·92023	12.17805	12.43085	12·67748	29			
30	11.81335	12·08065	12.34278	12.59906	12·84852	30			
31 32 33 34	11.96229 12.10493 12.24185 12.37333 12.49969	12.23406 12.38114 12.52207 12.65711 12.78691	12.50016 12.65070 12.79492 12.93293 13.06523	12.75966 12.91289 13.05960 13.19958 13.33369	13.01152 13.16673 13.31487 13.45623 13.59120	31 32 33 34 35			
36	12.62100	12.91139	13.19192	13.46185	13.71987	36			
37	12.73772	13.03084	13.31345	13.58456	13.84275	37			
38	12.85000	13.14579	13.43021	13.70201	13.96024	38			
39	12.95824	13.25627	13.54206	13.81444	14.07242	39			
40	13.06233	13.36255	13.64964	13.92234	14.17977	40			
45	13.52997	13.83757	14·12729	14·39823	14.64944	45			
50	13.92312	14.23325	14·52095	14·78546	15.02630	50			
55	14.25659	14.56579	14·84803	15·10277	15.33013	55			
60	14.54165	14.84715	15·12104	15·36358	15.57584	60			
65	14.78721	15.08637	15·35014	15·57924	15.77536	65			
70	15.03895	15·29122	15·54316	15.75771	15.93752	70			
75	15.18488	15·46695	15·70648	15.90609	16.06968	75			
80	15.34660	15·61865	15·84485	16.02949	16.17756	80			
90	15.61378	15·86345	16·06271	16.21850	16.33773	90			
100	15.82203	16·04827	16·22139	16.35082	16.44520	100			

For explanation see p. 18.

Va	lue of an A	nnuity Yield and Replaci	ling Interesting Capital v	t on Capital a when Invested	t 7 PER CEN l at	т.,
Year	2%	$2\frac{1}{2}\%$	3%	<b>3</b> ¹ / ₂ %	4%	Years
I	.03458	.03458	.03458	·03458	·02458	T
2	1.76976	1.77359	1.77743	1.78126	1.28:00	2
3	2.52045	2.53077	2.24110	2:55145	2:56181	2
ă	3.10873	3.21732	3.23506	2.25467	2.30101	
5	3.81449	3.84250	3.87064	3.80802	2:02721	1 2
6	4-27587	4:41404	4145240	4:40000	3 9-7 3-	6
7	4 37 307	4 41404	4 4 5 2 4 0	4 49099	4.52977	
4	4 00909	4 93039	4 90/30	5 03007	5'08021	1
0	5 30107	5.966.79	5-40077	5 54007	5.00130	0
~~	5/9000	5.00030	5.93704	6100795	6.07929	9
10	0 19803	0.27908	0-30007	0.44100	0.2324	10
II	6.57125	6.00100	6.75324	6.84200	6.93727	II
12	6.91754	7.01818	7.11936	7.22105	7.32322	12
13	7.24019	7.35035	7.46102	7.57220	7.68380	13
14	7.54136	7.66072	7.78053	7.90070	8.02124	14
15	7.82320	7.95127	8.07970	8.20850	8.33743	15
16	8.08734	8.22376	8.36044	8.40726	8.62400	16
17	8.33542	8.47975	8.62418	8.76862	8.01273	17
18	8.56883	8.72068	8.87241	0.02380	0.12/00	18
10	8.78874	8.04775	0.10631	0.26441	0.42161	TO
20	8.99628	9.10100	9.32697	9.40118	0.65410	20
21	0.10244	0.26444	0:52542	0170525	0.8=060	27
22	0.27814	9 30444	9 53543	970323	9.87302	21
22	9 3/014	9 33003	973204	9 90/00	10.000/5	22
24	9 33402	973740	9 91920	10.09907	10.27054	23
24	0.87027	10:07202	10 09022	10 20035	10.40107	24
~3	9 0/93/	10 0/293	10 20399	10 45210	10 0 3094	-5
20	10-03019	10.22830	10.42340	10.01212	10.80299	20
27	10-17300	10-37592	10.57485	10.20083	10.96023	27
20	10-31034	10.51057	10.71892	10.91007	11.10921	28
29	10.44070	10.02002	10.82000	11.02044	11.22113	29
30	10-50524	10-77853	10.98072	11-18931	11.38203	30
31	10.68422	10.00040	11.11153	11.31280	11.21344	31
32	10.79785	11.01210	11.53005	11.43612	11.63481	32
33	10.00002	11.15852	11.34323	11 55108	11.72033	33
34	11.01001	11.23207	11.42182	11.66042	11.86029	34
35	11.11080	11.33723	11.22248	11.76498	11.96201	35
36	11.50665	11.43498	11.65447	11.86465	12.06462	36
37	11.29854	11.52857	11.74922	11 95986	12.12053	37
38	11.38680	11.61845	11 84006	12.05081	12.22010	38
39	11.42121	11.20462	11 92691	12.13769	12.33639	39
40	11.22321	11.78745	12.01028	12.22091	12.41881	40
45	11.01223	12.12254	12.37854	12.58606	12.77750	45
50	12.22150	12.42082	12.67074	12.88004	12:06326	50
55	12.47770	12.71301	12.02842	13.13113	13.20220	
60	12.69551	12.02775	12.13401	12.21752	12:47672	60
65	12.88228	13.10874	12.20742	-3 3-733	12.62582	65
70	12:04225	12.26212	12:45005	12.6765	10.7.667	70
70	12-18205	12:20513	12.57445	13.01207	1374005	70
20	12:20477	13 39313	12.67767	1372320	13.04405	/5
00	13 304//	13 300//	13.07705	13.01502	13.92400	00
<u>90</u>	12:66064	13 09130	13 03900	13.95518	14.04337	1 90
100	130004	13 02090	13 957 32	14.02304	14.12270	100

Value of an Annuity Yielding Interest on Capital at 7 ¹ / ₂ PER CENT., and Replacing Capital when Invested at								
Years	<b>2</b> %	$2\frac{1}{2}\%$	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %	Years		
I	.03023	*03023	.03023	.03023	*02022	1		
2	1.75424	1.75800	1.76177	1.26224	1.26030	2		
3	2.48008	2.40014	2.50022	2.21031	2.2041	3		
4	3.14838	3.16638	3.18444	3.20255	3.22072	Ă		
Ś	3.74310	3.77007	3.79716	3.82437	3.85168	5		
6	4.28218	1.21872	1.35544	4:20226	4:42044	6		
7	4.77200	4.81030	4.86604	4 392 30	4 42944	7		
8	5.22160	5.27706	5.33450	5.20150	5.44876	× ×		
ō	5.63333	5.60040	5.76588	5.82274	5.80005	ŏ		
10	6.01229	6.08794	6.16402	6.24060	6.31748	10		
11	6.36221	6.44720	6.53266	6.61848	6.20471	11		
12	6•68628	6.78026	6.87465	6.96942	7 064 54	12		
13	6.98724	7.08979	7.19269	7.29597	7:39952	13		
14	7 26734	7.37811	7 48918	7 60046	7 71194	14		
15	7.52870	7.64725	7.76597	7 88488	8.00378	15		
16	7.77303	7.89896	8.02497	8.1 2096	8.27678	16		
17	8.00192	8.13484	8.26768	8.40033	8.53250	17		
18	8.21679	8.35631	8.49553	8.63431	8.77247	18		
19	8.41876	8.56458	8.70974	8.85426	8 99774	19		
20	8.60904	8.76063	8.91139	9 061 17	9.20963	20		
21	8.78850	8.94558	9.10120	9.25609	9.40011	21		
22	8.95809	9.12026	9.28100	9.44002	9.59702	22		
23	9.11843	9.28540	9.45054	9.61363	9 77431	23		
24	9.27033	9 44 17 1	9 61 104	9.77775	9.94164	24		
25	9.41433	9.68991	9.76296	9.93305	10.09979	25		
26	9.55119	9.73066	9.90707	10.08014	10.24937	26		
27	9.68120	9.86417	10.04379	10.21952	10.39080	27		
28	9.80488	9.99121	10.17366	10.32165	10.52488	28		
29	9.92270	10.11514	10.29707	10.47724	10.65190	29		
30	10.03512	10.22735	10.41461	10.59648	10.77238	30		
. 31	10.14240	10.33709	10.22643	10.20985	10.88672	31		
32	10.24475	10.44190	10.63298	10.81759	10.99219	32		
33	10.34265	10.24196	10.73408	10.92037	11.09829	33		
34	10.43034	10 03751	10.83105	11.01802	11.19633	34		
35	10.52009	10.72904	10.92431	11.11130	11.5901	35		
36	10.01100	10.81654	11.01273	11.20022	11.37825	36		
37	10.69439	10.90025	11.00230	11.28203	11.46263	37		
38	10.77342	10.98056	11.12831	11.36296	11.24308	38		
39	10.84940	11.05754	11.25268	11.44322	11 61967	39		
40	10.92228	11.13139	11.32990	11.51715	11.69276	40		
45	11.24733	11.45909	11.65705	11.84091	12.01028	45		
50	11-51709	11.72910	11 92370	12.10150	12.20242	50		
22	11 74495	11 95400	12.14344	12 31 330	12.40401	55		
6⊏	12:10272	12.14205	12.47722	12 40011	12.02594	60		
~ 5	12 102/3	12 30239	4/123	12 02010	12/30/3	5		
70	12.24470	12.43828	12'00446	12.74519	12.86256	70		
75	12.30782	12.55430	12.71165	12.04200	12.94850	75		
00	12.47489	12.05400	12.00213	12.92240	13.01840	00		
90	12.05080	12.01427	12 94398	13.04495	13.12198	90		
100	12.78723	12.93400	13.04093	13.13042	13.19122	100		

For explanation see p. 18.

V	alue of an A	nnuity Yiel and Replaci	ding Interes ng Capital v	t on Capital a vhen invested	t 8 PER CEN at	Τ.,
Years	2%	$2\frac{1}{2}\%$	3%	$3\frac{1}{2}\%$	<b>4</b> %	Years
I	.92593	.02593	.92593	.92593	.02593	I
2	1.73898	1.74269	1.74639	1.75009	1.75378	2
3	2.45848	2.46830	2 47813	2.48797	2.49782	3
4	3.09928	3.11703	3.13453	3.12208	3.16967	4
5	3.67434	3.20032	3.72641	3.75261	3.77890	5
6	4.19242	4 22744	4.26261	4.29797	4.33347	6
7	4 66174	4.70599	4.75046	4.79515	4 84004	7
8	5.08883	5.14226	5.19599	5.24998	5.30425	8
9	5.47900	5.24149	5.60431	5.66745	5.73089	9
10	5.83683	5.90811	5.97975	6.05177	6.12404	IO
11	6.16606	6.24586	6.32603	6.40648	6.48723	II
12	6.46008	6.55794	6.64620	6.73473	6.82352	12
13	6.75137	6.84706	6.04300	7.03918	7.13552	13
14	7.01252	7.11561	7.21886	7.32220	7.42561	14
15	7.25558	7.36563	7.47569	7.58581	7.79580	15
16	7.18222	7.50884	7.71520	7.82177	7.04786	16
17	7.60408	7.81600	7.02047	8.06172	8.18337	17
18	7.80253	8.02118	8.14036	8.27608	8.40386	18
10	8.07872	8.21288	8.34627	8.47889	8.61037	10
20	8.25375	8.30209	8.53126	8.66844	8.80421	20
21	8.41827	8.56260	8.70574	8.84666	8:08624	21
22	8.57405	8.72250	8.86041	0.01452	0.15750	22
22	8.72082	8.87242	0.02412	9 01455	0.21888	22
~3 24	8.85067	0.01002	0.12026	0.22201	0.47086	24
25	8.00111	9.12114	9.30856	9.46307	9.61428	25
	0.11686	0.27010	0.42048	0.50647	0.74072	26
27	9 11 505	0:40052	0.26222	9 39047	9 /49/2	27
28	0.24667	0.51582	0.68120	0.8/222	0.00820	28
20	0.45267	0.62547	0.70288	0.02270	10.11322	20
30	9.55566	9.72980	9.89913	10.06330	10.22181	30
31	9.65288	9.82907	10.00010	10.16249	10:32471	31
32	9.74554	9.92379	10.09622	10.26252	10 42220	32
33	9.83410	10.01412	10.18786	10.35497	10.51480	33
34	9.91877	10.10030	10.27517	10.44277	10.60277	34
35	9.99980	10.18278	10.32821	10.22654	10.68639	35
36	10.07729	10.26157	10.43798	10.60625	10.76577	36
37	10.12120	10.33688	10.51392	10.68228	10.84128	37
38	10.22275	10.40908	10.28660	10.75477	10.91322	38
39	10.29114	10.47823	10.65598	10.82392	10.98165	39
40	10.35668	10.54452	10.72248	10.89004	11.04692	40
45	10.64849	10.83811	11.01504	11 17905	11.32990	45
50	10.89052	11.07935	11.25290	11.41110	11.55402	50
55	10.09348	11 27981	11 44833	11.20018	11.73282	55
6ŏ	10.26532	11.44780	11.60992	11.75240	11.87620	60
65	11.41214	11.58950	11.74453	11.87818	11.99182	65
70	11.53828	11.71001	11.85719	11.98164	12.08532	70
75	11.64755	11.81279	11.95200	12.06724	12.10110	75
80	11.74246	8010911	12.03196	12.13813	12.22285	80
00	11.89825	12.04268	12.15717	12.24620	12.31406	90
100	12.01880	12.14890	12.24785	12.32149	12.37501	100
)						1 1

Value of an Annuity Yielding Interest on Capital at 9 PER CENT., and Replacing Capital when Invested at									
Years	2 %	2 ½%	3%	$3\frac{1}{2}\%$	<b>4</b> %	Years			
I	·91743	·91743	'91743	-91743	.91743	I			
2	1.70926	1 71284	1.71641	1.71999	1 72356	2			
3	2.39949	2 40884	2.41820	2.42757	2.43695	3			
4	3.00640	3.02281	3.03926	3.05576	3.07229	4			
5	3.24411	3.56828	3.26223	3.61689	3.64130	5			
6	4.02372	4.05597	4 08834	4.12086	4.15348	6			
7	4.42411	4 49448	4.53502	4.57574	4.61659	7			
8	4.84240	4.89076	4.93935	4.98810	5.03202	8			
9	5.19440	5.25053	5.30690	5.36348	5.42026	9			
10	5.51493	5.57852	5.64235	5.70643	5.77064	10			
11	5.80794	5.87869	5.94965	6.02076	6 09203	11			
12	6.07681	6.12434	6.23201	6.30979	6.38765	12			
13	6.32439	6.40828	6.49224	6.57626	6.66027	13			
14	6.22299	6.64293	6.73283	6.82263	6.91233	14			
15	6.76476	6.86031	6-95570	7.05094	7.14587	15			
16	6.06136	7.06220	7.16276	7.26296	7.36269	16			
17	7.14439	7.25016	7 35548	7.46029	7.56435	17			
18	7.31518	7.42556	7.53529	7.64427	7.75236	IŚ			
19	7 47485	7.58956	7.70333	7.81616	7.92776	19			
20	7.62445	7.74311	7.86065	7 97696	8.09179	20			
21	7.76488	7.88724	8.00820	8.12764	8-24538	21			
22	7.89696	8.02272	8.14684	8.26011	8.38933	22			
23	8.02130	8.15023	8.27719	8.40202	8-52450	23			
24	8.13862	8.27041	8.40004	8.52711	8 65149	24			
25	8.24940	8.38392	8.51586	8 64499	8.77101	25			
26	8.35420	8.40127	8.62530	8.75618	8.88260	26			
27	8.45359	8.59276	8.72875	8.86116	8.08065	27			
28	8.54774	8.68900	8.82667	8.96033	9.08083	28			
29	8.63715	8.78033	8 91941	9.05428	9.18442	29			
30	8.72220	8.86706	9 00747	9.14319	9.27386	30			
31	8.80313	8.04043	9.00000	0.22748	0.35848	31			
32	8.88013	9.02788	9.17036	0.30735	9.43850	32			
33	8.95359	9.10258	9 24590	9.38333	9.51439	33			
34	9.02372	9.17372	9.31775	9.45537	9.58635	34			
35	9 09074	9.24172	9.38623	9.2399	9 65465	35			
36	9.12474	9.30657	9.45144	9.28917	9.71940	36			
37	9.21600	9.36847	9.51366	9.65134	9.78091	37			
38	9.27463	9.42774	9.57313	9.71044	9.83942	38			
39	9.33088	9 48443	9.62983	9 76677	9.89501	39			
40	9.38474	9.53871	9.68410	9.82058	9.94797	40			
45	9.62371	9.77833	9.92211	10.02200	10.17687	45			
50	9.82096	9.97427	10.11470	10.24233	10.35733	50			
55	9 98572	10.13644	10.27232	10.39361	10.20078	55			
60	10 12474	10.27190	10.40226	10.51646	10.61549	őŏ			
65	10.24317	10.38583	10.21016	10 61706	10.70778	65			
70	10'34468	10.48251	10.00020	10.0000	10.78225	70			
75	10.43242	10.56470	10.67600	10.76786	10.84258	75			
8ŏ	10.20821	10.63536	10.73975	10.82427	10.89150	80			
90	10.63309	10.74830	10.83940	10.91012	10.96395	90			

For explanation see p. 18.

	Δ 70	212 %	3 %	312 %	<b>4</b> %	Year
I	•90909	•90909	.90909	.90909	•90909	I
2	1.68023	1.68399	1.08745	1.69090	1.09435	2
3	2.34326	2.35218	2'30111	2'37004	2 37898	3
4	2 91805	2.93412	2 94902 3 46705	2.40062	2 90071	4
5	3 42201 2.060 0	3 44534	3 49/95	3 49003	2 -02+0-	
0	3.90909	3 89788	3 92770	3 95770	3 90705 1.1287	
8	4 20417	4 30117	4.20686	4 3/ 333	4 70552	
õ.	4.03701	4.98860	5.03046	5.09046	5 14157	
ió	5.22668	5-28377	5.34100	5.39837	5.45580	ı i
II	5.48914	5.55229	5.61555	5.67885	5.74221	II
12	5.72869	5.79754	5.86641	5.93528	6.00413	12
13	5.94820	6.02236	0.09645	0.17048	0.24438	I
14	6.14999	0.22913	0.30811	0.38088	0.40542	14
15 	0.33013	0.41989	0 50335 6.60	50053	5 00929 2-0	
16	6.50830	0.59635	0.08400	0.77117	0.9224	10
17	0.00800	0.70005	0.02152	0.94237	7.03240	
10	6.05407	7.05418	7.15226	7.24052	7.34512	T4
20	7.08431	7.18664	7.28778	7.38765	7.48604	2
21	7.20530	7.31064	7.41444	7.51671	7.61731	2
22	7:31898	7.42688	7.53313	7.63755	7 74000	2
23	7.42567	7.53602	7 64444	7.75080	7 85491	2
24	7 52610	7.63866	7.74911	7.85713	7 96261	2
25	7 62073	7.73539	7.84757	7.95710	o.00374	2
26	7.71016	7.82669	7 94042	8.05121	8.15880	20
27	7 79466	7 91283	0 02800 8 tt torf	0°13988 8°2224	0.24817 8.222	
20 20	7.07404	7.99437	8.18000	8.20254	8.41184	2
	8.02246	8.14485	8.26317	8.37724	8.48680	3
	8.00088	8.21420	8.32240	8-44704	8.55761	2
32	8.12587	8.28034	8.40004	8.51484	8 62448	3
33	8.21781	8.34314	8.46339	8.57839	8.68780	3
34	8.27684	8.40287	8.52355	8.63856	8.74776	3
35	8.33320	8.45988	8.22082	8.69580	8 80460	3
36	8.38694	8.51419	8.63528	8.75013	8.85842	3
37	8 43832	8.56597	8.08719	8.850181	8.90948	3
38	0.48745 8.57	0.01549 8.66281	8.78205	0.05097 8.80775	0 95001	30
39 ∕∩	0 53454 8.57057	8.20201	8.82000	8.94228	9.0400	5
7 ⁻⁷	- 31931 8.77886	8.00224	0.02640	0.15654	0.2368	AI
40 50	8.04270	9.06064	9.18461	9·20074	9.38526	43
55	9.02000	9.20353	9.31541	9.41504	9.50290	5
ŏŏ	9.19388	9.31506	9.42214	9.51574	9.59674	6
65	9 29144	9.40867	9.51059	9.59803	9.67211	65
70	9.37488	9.48794	9.58433	9.66548	9.73283	79
75	9.44688	9 55530	9 64618	9.72110	9.78196	75
80	9.20923	9.61298	9.69819	9.76706	9.82183	80
	0.01112	U 70510	u-77038	0.0001	u 00004	

(121f)

# NOMINAL AND EFFECTIVE RATES OF INTEREST

Nominal Rate	Effe	Nominal Rate		
(Annual)	Half-yearly	Quarterly	Monthly	(Annual)
.01	010025	.010038	·010046	.01
0125	012539	.012559	012572	.0125
·015	·01 5056	·01 5085	015104	015
.0175	·017577	·017615	·017641	0175
<b>'02</b>	·020100	·020151	·020184	·02
·0225	·022627	·022691	022733	·0225
·025	·025156	025235	·025288	.022
·0275	·027689	·027785	·027849	0275
.03	·030225	·030339	·030416	·03
·0325	·032764	·032898	·032989	0325
·035	·035306	·035462	·035567	·035
·0375	-037852	·038031	-038151	[.] 0375
·04	·040400	·040604	·040742	·04
·045	*045506	•045765	·045940	·045
·05	•050625	·050945	051162	·05
.00	•060900	·061364	·061678	.00
·07	071225	·071859	·072290	·07
·08	·081600	·082432	.083000	·08
·09	· <b>0</b> 92025	.093083	·093807	.09
.10	.102500	.103813	•104713	.10
Effective Rate	Nominal Annual Rate when Interest is Convertible			Effective Rate
(Annual)	Half-yearly	Quarterly	Monthly	(Annual)
TO.	.000075	.000063	*0000 £4	10.
0125	012461	012442	'0I2420	0125
015	.014044	·014016	.014808	015
·0175	017424	017386	017361	0175
·02	·019901	.019852	019819	.02
·0225	.022375	022313	'02227 I	0225
·025	·024846	024769	·024718	·025
.0275	·0273I3	·027221	027159	·0275
·03	·029778	·029668	·029595	.03
.03 .0325	·029778 ·032240	·029668 ·032111	•029595 •032026	.03 .0325
.03 .0325 .035	·029778 ·032240 ·034699	·029668 ·032111 ·034550	•029595 •032026 •034451	.03 .0325 .035
·03 ·0325 ·035 ·0375	•029778 •032240 •034699 •037155	·029668 ·032111 ·034550 ·036984	•029595 •032026 •034451 •036871	03 0325 035 0375
-03 -0325 -035 -0375 -04	029778 032240 034699 037155 039608	*029668 *032111 *034550 *036984 *039414	·029595 ·032026 ·034451 ·036871 ·039285	^{.03} .0325 .035 .0375 .04
-03 -0325 -035 -0375 -04 -045	•029778 •032240 •034699 •037155 •039608 •044504	029668 032111 034550 036984 039414 044260	•029595 •032026 •034451 •036871 •039285 •044098	03 0325 035 0375 0375 04 04
-03 -0325 -035 -0375 -04 -045 -05	•029778 •032240 •034699 •037155 •039608 •044504 •049390	029668 032111 034550 036984 039414 044260 049089	•029595 •032026 •034451 •036871 •039285 •044098 •048889	03 0325 035 0375 04 045 05
-03 -0325 -035 -0375 -04 -045 -05 -06	·029778 ·032240 ·034699 ·037155 ·039608 ·044504 ·049390 ·059126	.029668 .032111 .034550 .036984 .039414 .044260 .049089 .058695	•029595 •032026 •034451 •036871 •039285 •044098 •048889 •058411	03 0325 035 0375 04 045 05 05
-03 -0325 -035 -0375 -04 -045 -05 -06 -07	·029778 ·032240 ·034699 ·037155 ·039608 ·044504 ·049390 ·059126 ·068816	·029668 ·032111 ·034550 ·036984 ·039414 ·044260 ·049089 ·058695 ·068234	•029595 •032026 •034451 •036871 •039285 •044098 •048889 •058411 •067850	03 0325 035 0375 045 045 05 06 06
·03 ·0325 ·0355 ·0375 ·04 ·045 ·05 ·06 ·07 ·08	·029778 ·032240 ·034699 ·037155 ·039608 ·044504 ·049390 ·059126 ·068816 ·078461	·029668 ·032111 ·034550 ·036984 ·039414 ·044260 ·049089 ·058695 ·068234 ·077706	•029595 •032026 •034451 •036871 •039285 •044098 •044098 •048889 •058411 •067850 •077208	03 0325 035 0375 04 045 05 05 05 06
·03 ·0325 ·0325 ·0375 ·04 ·045 ·05 ·06 ·07 ·08 ·09 ·09	•029778 •032240 •034699 •037155 •039608 •044504 •049390 •059126 •068816 •078461 •088061 •088061	·029668 ·032111 ·034550 ·036984 ·039414 ·044260 ·049089 ·058695 ·068234 ·077706 ·087113	•029595 •032026 •034451 •036871 •039285 •044098 •048889 •058411 •067850 •077208 •086488	03 0325 035 0375 04 045 05 06 07 08 09

For explanation see pp. 18, 19

Constant Fa	ctors for Convert into those of A ALF-YEARLY,	ing Values and nnuities for One QUARTERLY,	Amounts of Year Year Payable AND MONTHLY	ly Annuities
Yearly	Half-yearly	Quarterly	Monthly	Yearly
Rates	Factors	Factors	Factors	Rates
-01	1 00249	1 ·00377	I .00460	01
-0125	1 00312	1 ·00469	I .00572	0125
-015	1 00374	1 ·00563	I .00685	015
-0175	1 00436	1 ·00656	I .00799	0175
·02	1 °00497	1 °00747	1 °00914	·02
·0225	1 °00559	1 °00841	1 °01027	·0225
·025	1 °00621	1 °00933	1 °01142	·025
·0275	1 °00683	1 °01025	1 °01254	·0275
.03	I 00744	1.01118	1 °01368	·03
.0325	I 00806	1.01211	1 °01482	·0325
.035	I 00867	1.01303	1 °01594	·035
.0375	I 00929	1.01395	1 °01707	·0375
·04	1 °00990	1 ·01488	1 01820	°04
·045	1 °01 1 1 3	1 ·01672	1 02046	°045
·05	1 °01 2 35	1 ·01856	1 02271	°05
·06	1 °01 478	1 ·02223	1 02721	°06
07	1 °01720	1 ·02588	1 °03169	.07
08	1 °01961	1 ·02952	1 °03616	.08
09	1 °02201	1 ·03314	1 °04061	.09
10	1 °02440	1 ·03676	1 °04504	.10

Value of A	nnuity for Tw	venty-five Year	e at 4 PER C	ENT.
		Interest C	onvertible	
Annuity Payable	Yearly	Half-yearly	Quarterly	Monthly
Yearly	15.62208	15.55624	15.52282	15.20032
Half-yearly	15.77677	15.71180	15-67883	15.65665
Quarterly	15.85449	15.78998	15.75722	15.73520
Monthly	15.90645	15.84223	15.80963	15.78771

The P: C	The Present Value of 1 due a Year hence $(v)$ , and the Discount on 1 for One Year $(d)$ corresponding to Various Rates of Interest $(i)$								
i	$v = \frac{1}{1+i}$	d=1-v	i	$v = \frac{1}{1+i}$	d=1-v				
•01 •0125 •015 •0175 •02 •0225 •025 •025 •0275	·990099010 ·987654321 ·985221675 ·982800983 ·980392157 ·977995110 ·975609756 ·973236010	·009900990 ·012345679 ·014778325 ·017199017 ·019607843 ·022004890 ·024390244 ·026763990	-03 -035 -04 -045 -05 -06 -08 -10	·970873786 ·966183575 ·961538462 ·956937799 ·952380952 ·943396226 ·925925926 ·909090909	·029126214 ·033816425 ·038461538 ·043062201 ·047619048 ·056603774 ·074074074 ·090909091				

For explanation see pp. 19, 20

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The I	Number	of Years in SIMP	i which LE ANI	an Am COMI	ount is POUND	doul INT	bled by EREST	Accu	imulation at
Rate p	er Cent.	At Sim	ple Inter	est	At Co	mpou	nd Intere	st	Rate per Cent.
1		10 8 6	00.00 30.00 56.67 57.14		69.66 55.80 46.56 39.95			I I 1 1 2 2 8 4	
	2 2 4 2 3 3 3 3 4 2 3 3 4	544	;0 •00 14 •44 10 •00 36•36			35 31 28 25	-00 -15 -07 -55		2 2 ¹ / ₄ 2 ¹ / ₂ 2 ² / ₄
			33·33 30·77 28·57 26·67		23·45 21·67 20·15 18·83			3 3 ¹ 4 3 ¹ 2 3 ⁸ 4 3 ⁸ 4	
		2 2 1	22.22 20.00 6.67			17 15 14 11	67 75 21 90		4 4≟ 5 6
10	7 1 8 1 9 1 10 1		2·50 1·11 0·00			10 9 8 7	24 01 04 27		7 8 9 10
	DECIMALS OF ONE YEAR								
Weeks	Decimal	of Ope Year	Weeks	Decima	l of One	Year	Months	Deci	mal of One Year
1 2 3 4 56 7 8	•01 •03 •05 •07 •07 •07	9231 8462 7692 6923 6154 5385 4615 2846	27 28 29 30 31 32 33	·5 ·5 ·5 ·5 ·5 ·5 ·6	19231 38462 57692 76923 96154 15385 34615		I 2 3 4 5 6 7		•083333 •166667 •250000 •333333 •416667 •500000 •583333 •66667
9 10 11 12 13 14	•17 •19 •21 •23 •25	3077 2308 1538 0769 0000	34 35 36 37 38 39 40	·6 ·6 ·7 ·7	53040 73077 92308 11538 30769 50000		9 10 11 12 Days	Deci	*750000 *833333 *916667 I *000000 mals of One Year
15 16 17 18 19	•28 •30 •32 •34 •36	8462 7692 6923 6154 5385	41 42 43 44 45	·7 ·8 ·8 ·8	88462 07692 26923 46154 65385		30 60 90 120 150		•082192 •164384 •246575 •328767 •410959
20 21 22 23 24 25 26	·38 ·40 ·42 ·44 ·46 ·48	4015 3846 3077 2308 1538 0769	46 47 48 49 50 51	•8 •9 •9 •9	84615 03846 23077 42308 61538 80709		180 210 240 270 300 330		*493151 *575342 *657534 *739726 *821918 *904110
20	20		<b>⊃</b> ″	1.0	00000		305		1.000000

For explanation see p. 21

# DECIMALS OF £1

THE	DECIMAL	CORRESPON	DING TO EV	VERY FART	HING IN T	HE £
Pence	0۹.	18.	<b>2</b> .«.	<b>3</b> s.	<b>4</b> <i>s</i> .	Pence
0 0 ¹ 4 0 ¹ 4 0 ¹ 001 04	·00000 ·00104 ·00208 ·00313	•05000 •05104 •05208 •05313	·10000 ·10104 ·10208 ·10313	·15000 ·15104 ·15208 ·15313	·20000 ·20104 ·20208 ·20313	0 041000 041000 04
I I 1 1 2 1 2 1 4	·00417 ·00521 ·00625 ·00729	·05417 ·05521 ·05625 ·05729	•10417 •10521 •10625 •10729	·15417 ·15521 ·15625 ·15729	·20417 ·20521 ·20625 ·20729	I I 1 1 2 1 4
$2 \\ 2\frac{1}{4} \\ 2\frac{1}{2} \\ 2\frac{3}{4} \\ 2\frac{3}{4} \\ 2\frac{1}{4} \\ 2\frac{1}$	·00833 ·00938 ·01042 ·01146	·05833 ·05938 ·06042 ·06146	·10833 ·10938 ·11042 ·11146	•15833 •15938 •16042 •16146	·20833 ·20938 ·21042 ·21146	2 24 24 22 23 4 24
3 3 3 3 3 3 3 4 3 4	•01250 •01354 •01458 •01563	•06250 •06354 •06458 •06563	•11250 •11354 •11458 •11563	·16250 ·16354 ·16458 ·16563	·21250 ·21354 ·21458 ·21563	3 34 31 32 34 34
4 41 41 41 2 3 4 4	·01667 ·01771 ·01875 ·01979	•06667 •06771 •06875 •06979	·11667 ·11771 ·11875 ·11979	·16667 ·16771 ·16875 ·16979	·21667 ·21771 ·21875 ·21979	4 4 ¹ 4 ¹ 4 ² 4 ³
5 54 528 54 54	•02083 •02188 •02292 •02396	·07083 ·07188 ·07292 ·07396	·12083 ·12188 ·12292 ·12396	•17083 •17188 •17292 •17396	·22083 ·22188 ·22292 ·22396	5 5 1 5 2 2 3 4 5 4
6 64 64 64	02500 02604 02708 02813	·07500 ·07604 ·07708 ·07813	·12500 ·12604 ·12708 ·12813	·17500 ·17604 ·17708 ·17813	·22500 ·22604 ·22708 ·22813	ର 61 ଜୁମ ଜୁମ ଜୁମ ଜୁମ ଜୁମ ଜୁମ ଜୁମ ଜୁମ ଜୁମ ଜୁମ
7 74 72 74 72 74 74 74 74	•02917 •03021 •03125 •03229	·07917 ·08021 ·08125 ·08229	·12917 ·13021 ·13125 ·13229	·17917 ·18021 ·18125 ·18229	·22917 ·23021 ·23125 ·23229	7 71 71 71 71 71 71 71 71 74
8 8 1 2 8 4 8 4	•03333 •03438 •03542 •03646	•08333 •08438 •08542 •08646	·13333 ·13438 ·13542 ·13646	•18333 •18438 •18542 •18646	·23333 ·23438 ·23542 ·23646	8 84 84 84 84
9 9 9 1 9 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	•03750 •03854 •03958 •04063	•08750 •08854 •08958 •09063	•13750 •13854 •13958 •14063	•18750 •18854 •18958 •19063	•23750 •23854 •23958 •24063	9 94 94 93 94 94
10 101 101 105 104	•04167 •04271 •04375 •04479	•09167 •09271 •09375 •09479	•14167 •14271 •14375 •14479	·19167 .19271 ·19375 ·19479	·24167 ·24271 ·24375 ·24479	$   \begin{array}{c}     10 \\     10\frac{1}{4} \\     10\frac{1}{2} \\     10\frac{3}{4}   \end{array} $
II II II II 11월	·04583 ·04688 ·04792 ·04896	•09583 •09688 •09792 •09896	-14583 -14688 -14792 -14896	•19583 •19688 •19792 •19896	·24583 ·24688 ·24792 ·24896	$   \begin{array}{c} 1I \\ II_{4}^{1} \\ II_{2}^{1} \\ II_{3}^{3} \\ II_{4}^{3} \end{array} $

For explanation see pp. 21-23

G 2

THE	THE DECIMAL CORRESPONDING TO EVERY FARTHING IN THE £							
Pence	5 <i>s</i> .	<b>6</b> <i>s</i> .	<b>7</b> <i>s</i> .	<b>8</b> <i>s</i> .	<b>9</b> <i>s</i> .	Pence		
0 041 0333 04	•25000 •25104 •25208 •25313	·30000 30104 ·30208 ·30313	·35000 ·35104 ·35208 ·35313	·40000 ·40104 ·40208 ·40313	*45000 *45104 *45208 *45313	0 0 ¹ / ₄ 0 ¹ / ₂ 0 ⁴ / ₂		
I I 1 1 1 2 3 3 4	·25417 ·25521 ·25625 ·25729	·30417 ·30521 ·30625 ·30729	·35417 ·35521 ·35625 ·35729	•40417 •40521 •40625 •40729	*45417 *45521 *45625 *45729	I I 1 1 2 3 1 3 4		
2 2 ¹ 4 2 ¹ 2 2 ³⁰ 2 ⁴	·25833 ·25938 ·26042 ·26146	·30833 ·30938 ·31042 ·31146	·35833 ·35938 ·36042 ·36146	·40833 ·40938 ·41042 ·41146	•45833 •45938 •46042 •46146	$ \begin{array}{c} 2 \\ 2^{\frac{1}{4}} \\ 2^{\frac{1}{2332}} \\ 2^{\frac{332}{4}} \end{array} $		
3 3 3 3 3 3 4 3 3 4	·26250 ·26354 ·26458 ·26563	·31250 ·31354 ·31458 ·31563	-36250 -36354 -36458 -36563	·41250 ·41354 ·41458 ·41563	•46250 •46354 •46458 •46563	3 34 3 ¹ / ₂₃ 3 ³ / ₃		
4 4 4 4 2 3 3 4 4	·26667 ·26771 ·26875 ·26979	·31667 ·31771 ·31875 ·31979	·36667 ·36771 ·36875 ·36979	·41667 ·41771 ·41875 ·41979	*46667 *46771 *46875 *46979	4 44 4 19 44 4 19 8 4		
5 5 5 5 5 4 5	·27083 ·27188 ·27292 ·27396	·32083 ·32188 ·32292 ·32396	·37083 ·37188 ·37292 ·37396	·42083 ·42188 ·42292 ·42396	·47083 ·47188 ·47292 ·47396	5 54 54 54 54		
6 61 61 61 61 61 61 93 91 4	·27500 ·27604 ·27708 ·27813	·32500 ·32604 ·32708 ·32813	·37500 ·37604 ·37708 ·37813	·42500 ·42604 ·42708 ·42813	•47500 •47604 •47708 •47813	6 64 619 64 64		
7 74 71 71 71 71 71 71 71 71 71 71 71	·27917 ·28021 ·28125 ·28229	* •32917 •33021 •33125 •33229	·37917 ·38021 ·38125 ·38229	·42917 ·43021 ·43125 ·43229	*47917 *48021 *48125 *48229	7 74 73 74 73		
8 814 812 812 814 811 812 814 814 814 814 814 814 814 814 814 814	·28333 ·28438 ·28542 ·28646	·33333 ·33438 ·33542 ·33646	·38333 ·38438 ·38542 ·38646	*43333 *43438 *43542 *43646	*48333 *48438 *48542 *48646	8 8 8 8 4 4 8 4 8 4		
9 94 9 <u>1</u> 9 <u>1</u> 9 <u>1</u> 9 <u>1</u> 9 <u>1</u> 9 <u>1</u>	•287 50 •28854 •289 58 •29063	·33750 ·33854 ·33958 ·34063	·38750 ·38854 ·38958 ·39063	•43750 •43854 •43958 •44063	*48750 *48854 *48958 *49063	9 9 ¹⁴¹ [3 ^{3]} 4 9 ⁴		
10 10 ¹ / ₄ 10 ¹ / ₂ 10 ³ / ₄	·29167 ·29271 ·29375 ·29479	·34167 ·34271 ·34375 ·34479	·39167 ·39271 ·39375 ·39479	·44167 ·44271 ·44375 ·44479	•49167 •49271 •49375 •49479	$     10 \\     10\frac{1}{4} \\     10\frac{1}{2} \\     10\frac{3}{4}     10\frac{4}{4}     $		
II II <u>1</u> II <u>1</u> II <u>3</u> II <u>3</u>	·29583 ·29688 ·29792 ·29896	·34583 ·34688 ·34792 ·34896	·39583 ·39688 ·39792 ·39896	•44583 •44688 •44792 •44896	*49583 *49688 *49792 *49896	$   \begin{array}{c}     II \\     II\frac{1}{4} \\     II\frac{1}{2} \\     II\frac{3}{4}   \end{array} $		

For explanation see pp. 21-23

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# DECIMALS OF £1

THE	THE DECIMAL CORRESPONDING TO EVERY FARTHING IN THE £								
Pence	<b>10</b> <i>s</i> .	<b>11</b> <i>s</i> .	<b>12</b> <i>s</i> .	<b>13</b> <i>s</i> .	<b>14</b> 8.	Pence			
0 0 ¹ 4 0 ¹ / ₄ 0 ¹ / ₄ 0 ¹ / ₄ 0 ¹ / ₄	·50000 ·50104 ·50208 ·50313	·55000 ·55104 ·55208 ·55313	-60000 -60104 -60208 -60313	•65000 •65104 •65208 •65313	·70000 ·70104 ·70208 ·70313	0 04 04 02 23 4 04			
I I 1 2 1 3 4 I 3 4	•50417 •50521 •50625 •50729	•55417 •55521 •55625 •55729	•60417 •60521 •60625 •60729	·65417 ·65521 ·65625 ·65729	•70417 •70521 •70625 •70729	I I14 I12334			
2 24 2 2 4 1 2 2 4 2 2 4	·50833 ·50938 ·51042 ·51146	·55833 ·55938 ·56042 ·56146	·60833 ·60938 ·61042 ·61146	·65833 ·65938 ·66042 ·66146	·70833 ·70938 ·71042 ·71146	2 2 ¹ 4 2 ²⁰⁰ 4 24			
3 34 33 33 4	·51250 ·51354 ·51458 ·51563	·56250 ·56354 ·56458 ·56563	·61250 ·61354 ·61458 ·61563	•66250 •66354 •66458 •66563	·71250 ·71354 ·71458 ·71563	3 34 32 34 34 34 34			
4 4 4 4 4 4 4 4	·51667 ·51771 ·51875 ·51979	·56667 ·56771 ·56875 ·56979	•61667 •61771 •61875 •61979	•66667 •66771 •66875 •66979	·71667 ·71771 ·71875 ·71979	4 44 43 43 44 43 44 43			
5 54 52 54 52 84 52	·52083 ·52188 ·52292 ·52396	•57083 •57188 •57292 •57396	·62083 ·62188 ·62292 ·62396	•67083 •67188 •67292 •67396	·72083 ·72188 ·72292 ·72396	5 5 5 5 5 5 4 5 8 4			
6 614 6128 64 64	•52500 •52604 •52708 •52813	•57500 •57604 •57708 •57813	•62500 •62604 •62708 •62813	•67500 •67604 •67708 •67813	·72500 ·72604 ·72708 ·72813	6 6 ¹ /41/3284 6 ¹ /21894			
7 74 74 732 74 74	·52917 ·53021 ·53125 ·53229	·57917 ·58021 ·58125 ·58229	•62917 •63021 •63125 •63229	•67917 •68021 •68125 •68229	·72917 ·73021 ·73125 ·73229	7 74 72 7 2 3 4 7 2 3 4			
8 84 8 8 4 8 4 8 4 8 4	·53333 ·53438 ·53542 ·53646	•58333 •58438 •58542 •58646	•63333 •63438 •63542 •63646	•68333 •68438 •68542 •68646	•73333 •73438 •73542 •73646	8 814 812 812 814 812 814			
9 9 14 9 23 4 9 23 4	·53750 ·53854 ·53958 ·54063	·58750 ·58854 ·58958 ·59063	•63750 •63854 •63958 •64063	•68750 •68854 •68958 •69063	·73750 ·73854 ·73958 ·74063	9 91 91 91 91 91 91			
10 10 <u>1</u> 10 <u>1</u> 10 <u>2</u> 10 <u>3</u>	·54167 ·54271 ·54375 ·54479	·59167 ·59271 ·59375 ·59479	·64167 ·64271 ·64375 ·64479	•69167 •69271 •69375 •69479	·74167 ·74271 ·74375 ·74479	10 10 ¹ / ₄ 10 ¹ / ₂₂ 10 ³ / ₄			
	·54583 ·54688 ·54792 ·54896	·59583 ·59688 ·59792 ·59896	•64583 •64688 •64792 •64896	·69583 ·69688 ·69792 ·69896	·745 ⁸ 3 ·74688 ·74792 ·74896	11 114 112 112 1184			

# DECIMALS OF \$1

THE	DECIMAL C	ORRESPONI	ING TO EV	ERY FARTE	LING IN TH	E £
Pence	15 <i>s</i> .	<b>16</b> <i>s.</i>	17 <i>s</i> .	<b>18</b> <i>s</i> .	<b>19</b> <i>s</i> .	Pence
0 0 1 0 1 2 1 2 1 2 2 3 4	·75000 ·75104 ·75208 ·75313	*80000 *80104 *80208 *80313	•85000 •85104 •85208 •85313	·90000 ·90104 ·90208 ·90313	•95000 •95104 •95208 •95313	0 014 014 0128 04
I 14 153 153 14	·75417 ·75521 ·75625 ·75729	•80417 •80521 •80625 •80729	·85417 ·85521 ·85625 ·85729	·90417 ·90521 ·90625 ·90729	·95417 ·95521 ·95625 ·95729	I I 1 1 2 1 2 1 2 1 2 1 2 1 2
2 2 ¹ 4 2 ¹ (0 ²³ ) 2 ⁴	·75 ⁸ 33 ·75938 ·76042 ·76146	·80833 ·80938 ·81042 ·81146	·85833 ·85938 ·86042 ·86146	·90833 ·90938 ·91042 ·91146	·95833 ·95938 ·96042 ·96146	2 24 2 ¹ 4 2 ¹ 2 ²⁵ 2 ⁴
3 3 1 2 2 2 2 3 4 3 4	·76250 ·76354 ·76458 ·76563	•81250 •81354 •81458 •81563	·86250 ·86354 ·86458 ·86563	·91250 ·91354 ·91458 ·91563	•96250 •96354 •96458 •96563	3 34 32 34 34
4 44 44 43 43 4	·76667 ·76771 ·76875 ·76979	•81667 •81771 •81875 •81979	·86667 ·86771 ·86875 ·86979	·91667 ·91771 ·91875 ·91979	·96667 ·96771 ·96875 ·96979	4 4 4 1 2 3 4 4 2 3 4
5 5 5 5 8 4 5 8 4 5 8 4	·77083 ·77188 ·77292 ·77396	·82083 ·82188 ·82292 ·82396	·87083 ·87188 ·87292 ·87396	92083 92188 92292 92396	·97083 ·97188 ·97292 ·97396	5 5 5 5 4 5 2 3 3 3 4 5 3 3 4
6 6 <del>1</del> 6 <u>1</u> 6 <u>1</u> 2 6 <u>3</u>	·77500 ·77604 ·77708 ·77813	·82500 ·82604 ·82708 ·82813	·87500 ·87604 ·87708 ·87813	·92500 ·92604 ·92708 ·92813	·97 500 ·97604 ·97708 ·97813	6 614102314 614
7 74 74 73 74 74 74	·77917 ·78021 ·78125 ·78229	·82917 ·83021 ·83125 ·83229	·87917 ·88021 ·88125 ·88229	·92917 ·93021 ·93125 ·93229	·97917 ·98021 ·98125 ·98229	7 7 ¹ / ₄ 7 ¹ / ₂ 7 ¹ / ₂ 7 ¹ / ₂
8 81 82 82 83 4	·78333 ·78438 ·78542 ·78646	·83333 ·83438 ·83542 ·83646	•88333 •88438 •88542 •88646	*93333 *93438 *93542 *93546	·98333 ·98438 ·98542 ·98646	8 81 81 81 23 84 84
9 94 92 92 92	·78750 ·78854 ·78958 ·79063	•83750 •83854 •83958 •84063	·88750 ·88854 ·88958 ·89063	•93750 •93854 •93958 •94063	•98750 •98854 •98958 •99063	9 14 100014 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
$   \begin{array}{c}     10 \\     10\frac{1}{4} \\     10\frac{1}{2} \\     10\frac{3}{4}   \end{array} $	·79167 ·79271 ·79375 ·79479	-84167 -84271 -84375 -84479	·89167 ·89271 ·89375 ·89479	·94167 ·94271 ·94375 ·94479	•99167 •99271 •99375 •99479	10 10 ¹ / ₄ 10 ¹ / ₂ 10 ³ / ₄
	-79583 -79688 -79792 -79896	·84583 ·84688 ·84792 ·84896	•89583 •89688 •89792 •89896	•94583 •94688 •94792 •94896	•99583 •99688 •99792 •99896	

For explanation see pp. 21-23

# MORTALITY TABLES

SHOWING THE

# EXPECTATION OF LIFE

AND THE

# NUMBERS SURVIVING EACH YEAR

ACCORDING TO VARIOUS MORTALITY TABLES

For explanation see pp. 23-25

# THE EXPECTATION, OR AVERAGE DURATION, OF LIFE

	North-	Conlinia	Equitable	'Seventeen	English	Actuaries' HM.	
Com-	ampton	Experience	Society's	Offices'	Experience	(Healthy Males)	Com-
pleted	Experience		hxperience		110. 3 (Males)	Experience	Age
Ago	1780	1815	1824	1842	1864	1860	
	-700		-~54			1009	
	Years	Years	Years	Years	Years	Years	
0	25.18	38.72	_ 0,010	- 0.0410	30.01		0
Ę	40.84	51'25			40.71		Ę
		.0.0	.0.0	10.00			J
10	39.78	40.02	48.03	48.30	47.05	50.291	10
11	39.14	40.04	40.02	47'08	40.31	49.530	11
12	30.49	4/27	4/20	4/01	45.54	40733	12
13	37.03	40.51	40.40	40 33	44.70	47 093	13
-4	5/17	45 / 5	45.00	45.04	43-97	4/ 032	-14
15	36.21	45.00	44.81	44.96	43.18	46.161	15
IŐ	35.85	44.27	44.04	44 27	42.40	45.292	10
17	35.20	43.27	43.27	43.28	41.64	44.438	17
18	34.28	42.87	42.52	42.88	40.90	43.609	18
19	33.99	42.17	41.28	42.19	40.12	42.817	19
20	33.43	41.46	41.06	41.40	30.48	42.061	20
21	32.90	40.75	40 33	40.70	38.80	41.326	21
22	32.39	40.04	39 60	40 00	38.13	40.603	22
23	31.88	39.31	38.88	39.39	37.46	39 <b>·8</b> 79	23
24	31.36	38.59	38.16	38.68	36.79	39.147	24
25	20.8	27.86	27.14	27.08	26.10	28:405	25
26	20.22	27.14	26.22	27.27	25.44	27.628	40 26
27	20.82	36.41	36.02	26.46	24.77	26.008	20
28	20.20	35.60	35.22	35.86	34.10	36.162	28
20	28.70	35.00	34.65	35.12	32.42	35.410	20
	_0				55 - 55	JJ T*7	
30	20.27	34.34	33.98	34.43	32.76	34.981	30
31	27.70	33.00	33.30	33.72	32.09	33.940	31
32	2/24	33.03	32.04	33.01	31.42	33 213	32
33	20.72	32 30	31.90	32 30	30.24	32 461	33
34	20.20	31.00	31'32	31.20	30.07	31.740	34
35	25.68	31.00	30.66	30 <b>·8</b> 7	29.40	31.016	35
36	25.16	30.35	30.01	30.12	28.73	30.286	36
37	24.64	29.64	29.35	29.44	28.06	29.560	37
38	24.15	28.96	28.70	28.72	27.39	28.838	38
39	23.60	28.28	28.02	28.00	26.25	28.118	39
40	23.08	27.61	27.40	27.28	26.06	27:300	40
41	22.56	26.97	26.74	26.56	25.30	26.679	41
42	22.04	26.34	26.07	25.84	24.73	25 956	42
43	21.54	25.71	25.40	25.12	24.07	25.233	43
44	21 03	25.09	24.75	24.40	23.41	24.211	44
AE	20.52	24.46	24.10	22.60	22.76	22.702	AF
46	20.02	23.82	23.41	22.07	22.11	23.070	40
47	10.11	23.17	22.78	22.27	21.46	22'375	47
48	10.00	22.50	22.12	21.56	20.82	21.670	48
40	18.40	21.81	21.47	20.87	20.17	20.080	40
לד		1	+/		1/		77

For explanation see pp. 23-25

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	THE EX	PECTATI	ON, OR	AVERAGI	E DURATIO	N, OF LIFE	1
Com- pleted Age	North- ampton Experience	Carlisle Experience	Equitable Society's Experience	' Seventeen Offices' ' Experiencc	English Experience No. 3 (Males)	Actuaries' HM. (Healthy Males) Experience	Com- pleted Age
	1/00	1015	1034	1043	1004	1809	
	Years	Years	Years	Years	Years	Years	·
50	17.99	21.11	20.93	20.18	19.24	20.300	50
51	17.20	20.30	20.30	19.20	18.90	19.627	51
52	17.02	19.68	19.20	18.82	18.28	18.921	52
53	16.24	18.92	19.00	18.19	17.67	18.281	53
54	16.00	18.38	18.43	17.20	17.06	17.618	54
55	15.28	17.58	17.85	16.86	16.42	16.962	55
56	15.10	16.89	17.28	16.22	15.86	16.316	56
57	14.63	16.21	16.71	15.20	15.26	15·679	57
58	14.12	15.22	16.15	14.97	14.68	15 052	58
59	13.68	14.92	15.00	14.37	14.10	14.435	59
60	12.21	14.24	15:06	12.77	12.57	12.820	60
61	12.75	13.82	11.51	12.18	12.06	13.237	61
62	12.28	13.31	13.06	12.61	12:41	12.650	62
63	11.81	12.81	13.42	12:05	11.87	12.002	63
64	11.35	12.30	12.88	11.21	11.34	11.247	64
65	10.88	11.70	12.25	70.07	10.82	11.015	65
66	10.42	11'27	11.83	10.46	10.32	10.480	66
67	0.06	10.75	11.32	0.00	0.83	0.077	67
68	9.50	10.23	10.82	9.47	9.36	9.475	68
60	9.05	9.70	10.32	9.00	8.90	8.980	69
70	8.60	81.0	0.84	8.54	8.45	8.405	70
71	8.17	8.65	0.36	8.10	8.03	8.026	71
72	7.74	8.16	8.88	7.67	7.62	7.575	72
72	7.33	7.72	8.42	7.26	7.22	7.148	73
74	6.92	7.33	7.97	6.86	6.85	6.749	74
75	6.54	7.01	7.52	6.48	6.40	6.376	75
76	6.18	6.69	7.08	6.11	6.15	6.017	76
77	5.83	6.40	6.64	5.76	5.82	5.674	77
78	5.48	6.12	6.20	5.42	5.21	5.344	78
79	5.11	5.80	5.78	5.09	5.21	5.025	79
80	4.75	5.21	5.38	4.78	4.93	4.719	80
81	4.41	5.21	5.00	4.48	4.66	4.433	81
82	4.09	4.93	4.63	4.18	4.41	4.171	82
83	3.80	4.65	4.30	3.90	4.17	3.930	83
84	3.28	4.39	4.00	3.63	3.95	3.213	84
85	3.37	4.12	3.73	3.36	3.73	3.211	85
86	3.10	3.90	3.20	3.10	3.23	3.310	86
87	3.01	3.71	3.31	2.84	3.34	3.101	87
88	2.86	3.29	3.11	2.29	3.16	2.884	88
89	2.66	3*47	2.91	2.32	3.00	2.634	89
90	2.41	3.28	2.65	2.11	2.84	2.322	90
91	2.09	3.26	2.36	1.89	2.69	2.077	91
92	1.75	3.37	2.03	1.67	2.22	1.202	92
93	1.37	3.48	1.20	1.42	2.41	1.490	93
94	1.02	3.23	1.31	1.58	2.29	1.504	94
95	.75	3.23	1.02	1.15	2.12	.930	95
96	•50	3.46	.75	.66	2.06	•684	96
97		3.28	•50	•89	1.92	•500	97
98		3.02	•••	-75	1.82		98
99		2.77	•••	.50	1.20	•••	99

#### ENGLISH LIFE TABLE, No. 3

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			Number Timina	at Beginning	
Age at Beginning	Number Living	Number Dying during	of Y	ear	Age at Beginning
of Year	Beginning of Year	the Year	Males	Females	of Year
0	1,000,000	149,493	511,745	488,255	0
1	850,507	28 228	420,020	422,401	2
2	768, 580	18,456	386,200	382.200	2
4	750,133	13,315	377,077	373,056	4
	736.818	9,899	370,358	366,460	5
ď	726,919	7,768	365,325	361,594	ð
7	719,151	6,559	361,372	357,779	7
8	712,592	5,458	358,062	354,530	8
9	707,134	4,025	355,328	351,800	9
.10	702,509	4,028	353,031	349,478	10
11	604.844	3,037	331,040	341,433	12
IZ	691,413	3,382	347,606	343,807	13
14	688,031	3,468	345,969	3 <b>42,</b> 062	14
15	684,563	3,669	344,290	340,273	15
ıŏ	680,894	3,957	342,509	338,385	ığ
17	676,937	4,317	340,581	336,356	17
18	672,620	4,720	338,469	334,151	18
19	669 575	5,150	330,149	331,751	19
20	667 50	5,583	333,608	329,14 <b>2</b>	20
21	651.400	5,748	330,044	320,323	22
23	645,751	5,820	325,207	320,544	23
24	639,931	5,886	322,339	317,592	24
25	634,045	5,950	319,442	314,603	25
26	628,095	6,009	316,516	311,579	26
27	622,080	6,005	313,562	308,524	27
20	600.000	6,176	307.572	302, 228	20
20	603.724	6.231	204.524	200.100	20
31	597.493	6,287	301,466	296,027	31
32	591,206	6,343	298,366	292,840	32
33	584,863	6,404	295,232	289,631	33
34	578,459	6,466	292,061	286,398	34
35	571,993	6,533	288,850	283,143	35
30	505,400	6,001	285,590	279,804	30
28	552.181	6.756	278.044	273.227	28
39	545,425	6,841	275,538	269,887	39
40	538,584	6.931	272.073	266.511	40
41	531,653	7,027	268,544	263,109	41
42	524,626	7,127	264,948	259,678	42
43	517,499	7,236	261,280	256,219	43
44	510,203	7,348	257,534	252,729	44
45	502,915	7,467	253,708	249,207	45
40	495,448	7,592	249,790	245,052	40
47	407,050	7.857	241.700	238.434	4/
40	472.277	7,997	237,508	234,769	40
ידר ן	1 77-7-77		-5775-7	-5177.9	1 72

#### ENGLISH LIFE TABLE, No. 3 Number Living at Beginning of Year Number Living Age at Number Age at Beginning 9t. Dying during the Year Beginning Beginning of Year of Year of Year Males Females 464,280 50 8,141 233,216 231.064 50 51 456,139 8,414 228,821 227,318 51 52 53 <u>5</u>2 8,590 447,725 224,195 223,530 53 8,761 439,135 219,437 219,698 54 430,374 9,259 214,552 215,822 54 55 50 421,115 9,583 209,539 55 56 211,576 411,532 9,909 204,395 207,137 57 58 199,114 57 58 401,623 10,245 202,509 193,686 391,378 10,593 197,692 188,102 380,785 10;958 <u>5</u>9 192,683 59 60 369,827 11,338 60 182,350 187,477 б1 358,489 11,737 176,421 182,068 б1 62 346,752 170,303 176,449 62 12,149 63 12,572 163,989 63 334,603 170,614 64 164,557 322,031 13,002 157,474 64 65 66 150,754 143,833 136,718 65 66 158,275 309,029 13,430 13,846 151,766 295,599 67 68 281,753 67 14,244 145,035 138,088 68 129,421 267,509 14,607 60 130,939 252,902 14,925 121,963 69 70 15,184 114,370 123,607 70 237,977 71 72 15,369 106,675 116,118 222,793 7I 98,919 108,505 15,468 72 207,424 191,956 100,807 73 15,469 91,149 73 83,416 74 176,487 15,363 93,071 74 75 70 75 70 15,136 85,347 161,124 75,777 68,294 145,988 14,789 77,694 131,199 61,026 70,173 77 78 14,319 77 116,880 62,844 13,726 54,036 78 47,381 **7**9 103,154 13,021 55,773 79 80 80 41,115 49,018 90,133 12,214 42,636 77,919 35,283 81 81 11,320 82 66,599 10,358 29,922 36,677 82 83 56,241 9,352 25,060 31,181 83 84 84 46,889 8,324 20,71" 26,178 85 16,877 21,688 85 38,565 7,300 86 86 31,265 6,298 13,549 17,716 87 88 87 88 24,967 5,346 10,709 14,258 19,621 8,325 11,296 4,459 89 15,162 6,360 8,802 80 3,653 90 11,509 2,933 4,770 6,739 00 ģι 8,576 2,310 3,510 5,066 91 92 6,266 1,781 3,735 2,698 92 2,531 4,485 1,787 93 93 1,343 1,908 94 3,142 989 1,234 94 95 96 833 95 96 2,153 713 1,320 500 548 892 1,440 588 97 98 97 98 940 342 352 378 598 228 220 99

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# INSTITUTE OF ACTUARIES MORTALITY TABLE

HEALTHY MALES (HM.)

Age at Begin-	Number Living	Number Dying	Probable Number Alive at the Beg	out of every 100 inning of a Year	Age at Begin-
ning of Year	at Beginning of Year	during the Year	who will Survive the Year	who will Die during the Year	ning of Year
I	2	3	4	5	6
10	100,000	490	99.2100	•4900	10
II	99,510	397	99.6010	.3000	· 11
12	99,113	329	99.6681	.3319	12
13	98,784	288	99-7085	2915	- 13
14	98,496	272	99.7238	•2762	14
15	08.224	282	00.7120	·2871	15
īĞ	07.042	318	00.6753	3247	61
17	97,624	379	99.6118	3882	17
18	97,245	466	99*5208	·4792	18
19	96,779	556	99.4255	.5745	19
20	06.223	600	00.3671	·6329	20
21	95,614	643	99.3275	6725	21
22	94,971	650	99.3156	6844	22
23	94,321	638	99.3236	6764	23
24	93,683	622	99.3361	6639	24
25	93,061	617	09.3370	•6630	25
2ŏ	92,444	618	99:3315	·6685	26
27	91,826	634	99.3096	•6904	27
28	91,192	654	99.2828	•7172	28
29	90,538	*673	99 2 567	*7433	29
30	89,865	694	99.2277	.7723	30
31	89,171	706	99-2083	•7917	31
32	88,465	717	99 1895	-8105	32
33	87,748	727	99.1212	·8285	33
34	87,021	740	99*1496	•8504	34
35	86,281	757	99.1226	•8774	35
36	85,524	779	99.0891	·9109	36
37	84,745	802	99.0236	.9464	37
38	83,943	821	99.0220	•9780	38
39	83,122	838	98.9918	1.0082	39
40	82,284	848	<u>98</u> •9694	1.0300	40
41	81,436	854	98.9513	1 0487	41
42	80,582	865	98.9266	1.0734	42
43	79,717	887	98.8873	1.1152	43
44	78,830	911	98.8444	1'1556	44
45	77,919	950	98.7808	1.5195	45
46	76,969	996	98.7060	1-2940	46
47	75,973	1,041	98 6298	1.3202	47
48	74,932	1,082	98.5560	1.4440	48
49	73,850	1,124	98.4780	1.5220	49
50	72,726	1,160	98.4050	1.2920	50
51	71,566	1,193	98.3330	1.6620	51
52	70,373	1,235	98.2451	1.7549	52
53	69,138	1,286	98.1400	1.8600	53
54	67,852	1,339	98.0266	1.9734	54

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#### INSTITUTE OF ACTUARIES MORTALITY TABLE

#### HEALTHY MALES (HM.)

Age at Begin-	Number Living	Number Dying	Probable Number Alive at the Beg	out of every 100 inning of a Year	Age at Begin-
of Year	of Year	the Year	who will Survive the Year	who will Die during the Year	ning of Year
I	2	3	4	5	6
55	66,513	1,399	97 <b>·8</b> 967	2.1033	55
56	65,114	1,462	97.7547	2.2453	56
57	62.125	1,527	97.4374	2.5626	58
5°	60,533	1,667	97 2461	2.7539	59
60	58,866	1,747	97.0322	2.9678	60
61	57,119	1,830	96.7962	3.2038	61
62	55,209	1,915	90.5304	3.4030	02
64	51,373	2,001	95.9590	4.0410	64
65	49,297	2,141	95.6569	4.3431	65
66	47,156	2,196	95'3431	4.0569	00 6-
07	44,900	2,243	95 0111	4 9009	68
6g	40,443	2,319	94.2660	5.7340	69
70	38,124	2,371	93.7808	6.2192	70
71	35,753	2,433	93.1950	6.8050	71
72	33,320	2,497	92-5000	8.2860	72
73	28,269	2,578	90.8805	9.1195	74
75	25,691	2,527	90.1639	9.8361	75
76	23,164	2,464	89.3028	10.0372	70
77	18.226	2,3/4	87.6787	12:3213	78
79	16,068	2,138	86 6941	13.3059	79
80	13,930	2,015	85.5348	14.4652	80
81	11,915	1,883	84.1964	15.8036	18
82	10,032	1,719	81.4147	18.2822	82
84	6,768	1,346	80.1123	19.8877	84
85	5,422	1,138	79.0115	20.9885	85
86	4,284	941	78.0345	21.9655	80 87
87	3,343	773 614	76.0700	23.0300	88
89	1,955	495	74 6804	25.3196	89
90	1,460	408	72.0548	27.9452	90
91	1,052	329	08.7203	31.2737	91
92	723	254 105	58.4222	41.5778	03
93	274	139	49.2700	50.7300	94
95	135	86	36.2964	63.7036	95
96	49	40	18.3673	81.6327	96
97	9	9	00.0000	100.0000	97

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		CARLISLI	E TABLE		
Age at	Number Living	Number Dying	Age at	Number Living	Number Dying
Beginning	at Beginning	during the	Beginning	at Beginning	during the
of Year	of Year	Year	of Year	of Year	Year
0	10,000	1,539	50	4,397	59
I	8,461	682	51	4,338	62
2	7,779	505	52	4,276	65
3	7,274	276	53	4,211	68
4	6,998	201	54	4,143	70
5	6,797	121	55	4,073	73
6	6,676	82	56	4,000	76
7	6,594	58	57	3,924	<b>8</b> 2
8	6,536	43	58	3,842	93
9 10 11 12 13	6,493 6,460 6,431 6,400 6,368 6,235	33 29 31 32 33	59 60 61 62 63	3,749 3,643 3,521 3,395 3,268	106 122 126 127 125
15 16 17 18 19	6,300 6,261 6,219 6,176 6,133	33 39 42 43 43 43 43	65 66 67 68 69	3,143 3,018 2,894 2,771 2,648 2,525	125 124 123 123 123 124
20 21 22 23 24	6,090 6,047 6,005 5,963 5,921	43 42 42 42 42 42 42	70 71 72 73 74	2,401 2,277 2,143 1,997 1,841	124 134 146 156 166
25	5,879	43	75	1,675	160
26	5,836	43	76	1,515	156
27	5,793	45	77	1,359	146
28	5,748	50	78	1,213	132
29	5,69 <b>8</b>	56	79	1,081	128
30	5,642	57	80	953	116
31	5,585	57	81	837	112
32	5,528	56	82	725	102
33	5,472	55	83	623	94
34	5,417	55	84	529	84
35	5,362	55	85	445	78
36	5,307	56	86	367	71
37	5,251	57	87	296	64
38	5,194	58	88	232	51
39	5,136	61	89	181	39
40	5,075	66	90	142	57
41	5,009	69	91	105	30
42	4,940	71	92	75	21
43	4,869	71	93	54	14
44	4,79 <b>8</b>	71	94	40	10
45	4,727	70	95	30	7
46	4,657	69	96	23	5
47	4,588	67	97	18.	4
48	4,521	63	98	14.	3
49	4,458	61	99	11	2

# TABLES

#### COMBINING

# MORTALITY OF SINGLE LIVES

AND

# INTEREST

For explanation see pp.  $25-2\delta$ 

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Age	3%	<b>4</b> %	<b>5</b> %	<b>6</b> %	Age
I	16.021	13.465	11.263	10.102	I
2	18.200	15.633	13.420	11.724	2
3	19.575	16.462	14.135	12.348	3
4	20'210	17.010	14.613	12.769	4
5	20.473	17-248	14.827	12.962	5
6	20.727	17.482	15.041	13.126	6
7	20.853	17.011	15.166	13.275	7
8	20.885	17.662	15.226	13.337	8
9	20.812	17.625	15.210	13.332	9
10	20.663	17.523	15.139	13.285	IO
11	20.480	17.393	15.043	13.212	11
12	20.283	17.221	14.937	13.130	12
13	20.081	17.103	14.826	13.044	13
14	19.872	16.920	14.710	12.953	14
15	19.657	16•791	14.288	12.857	15
16	19.435	16.625	14.460	12.755	16
17	19.218	16.462	14.334	12.655	17
18	19.013	16.309	14.212	12.262	18
19	18.820	16.102	14.108	12.472	19
20	18.038	16.033	14.002	12.398	20
21	18.470	15.912	13.917	12.329	21
22	18.311	15.797	13.833	12.265	22
23	18.148	15.080	13.746	12.300	23
24	17.983	15.200	13.058	12.132	24
25	17:014	15.430	13.207	12.003	25
26	17.642	15.312	13.473	11.992	26
27	17.407	15.184	13.372	11.012	27
20	17-269	15.053	13.278	11.841	28
29	1/10/	14.910	13.177	11.703	29
JU	10 922	14 /01	13:072	11.095	30
31	16.732	14.639	12.965	11.298	31
32	10.540	14.492	12.854	11.212	32
33	10.343	14.347	12.740	11.423	33
34	10-142	14.195	12.623	11.331	34
35	15.930	14.039	12.202	11.230	35
36	15.729	13.880	12.377	11.137	36
37	15.212	13.710	12.249	11.032	37
30	15.298	13.248	12.110	10.929	38
39	15.075	13.375	11.979	10.910	39
40	14.040	13.197	11.932	10.705	40
41	14.620	13.018	11.692	10.289	41
42	14.391	12.938	11.221	10.423	42
43	14.102	12.057	11.407	10.320	43
44	13.929	12'472	11.228	10.232	44
		70.080	774705	10.1110	

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Age	<b>3</b> %	<b>4</b> %	<b>5</b> %	<b>6</b> %	Age
46	13.450	12.089	10°947	9·980	46
47	13.203	11.890	10°784	9·846	47
48	12.951	11.685	10°616	9·707	48
49	12.693	11.475	10°443	9·563	49
50	12.436	11.264	10°269	9·417	50
51	12-183	11 °057	10 097	9 ^{.2} 73	51
52	11-930	10 °849	9 925	9 ^{.1} 29	52
53	11-674	10 °637	9 748	8 [.] 980	53
54	11-414	10 °421	9 567	8 ^{.8} 27	54
55	11-150	10 °201	9 382	8 ^{.6} 70	55
56 57 58 59 60	10·882 10·611 10·337 10·058 9·777	9 [.] 977 9 [.] 749 9 [.] 516 9 [.] 280 9 [.] 039	9·193 8·999 8·801 8·599 8·392	8·509 8·343 8·173 7·999 7·820	56 57 58 59
61	9·493	8·795	8·181	7 *637	61
62	9·205	8·547	7·966	7 *449	62
63	8·910	8·291	7·742	7 *253	63
64	8·611	8·030	7·514	7 *052	64
65	8·304	7·761	7·276	6 *841	65
66 67 68 69 70	7 ·994 7 ·682 7 ·367 7 ·051 6 ·734	7 •488 7 •211 6 •930 6 •647 6 •361	7 ·034 6 ·787 6 ·536 6 ·281 6 ·023	6·625 6·405 6·179 5·949 5·716	60 67 68 69
71	6·418	6·076	5·764	5:479	71
72	6·103	5·790	5·504	5:241	72
73	5·794	5·507	5·245	5:004	73
74	5·491	5·230	4·990	4:769	74
75	5·199	4·962	4·744	4:542	75
76 77 78 79 80	4 925 4 652 4 372 4 977 3 781	4·710 4·457 4·197 3·921 3·643	4.511 4.277 4.035 3.776 3.515	4·326 4·109 3·884 3·641 3·394	70 77 70 80
81 82 83 84 85	3 '499 3 '229 2 '982 2 '793 2 '620	3·377 3·122 2·887 2·708 2·543	3·263 3·020 2·797 2·627 2·471	3·156 2·926 2·713 2·551 2·402	8 8 8 8
86	2·462	2·393	2·328	2·266	8
87	2·312	2·251	2·193	2·138	8
88	2·185	2·131	2·080	2·031	8
89	2·013	1·967	1·924	1·882	8

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VALUE OF AN ANNUITY ON A SINGLE LIFE ACCORDING TO THE CARLISLE TABLE OF MORTALITY							
Age	3 %	4 %	5 %	<b>6</b> %	<b>7</b> %	8 %	Age
I	20.085	16.226	13.002	12.078	10.602	9.439	r
2	21.201	17.728	14.983	12.025	11.342	10.088	2
3	22.683	18.717	15.824	13.652	11.978	10.621	3
4	23.285	19.233	16.271	14.042	12.322	10.922	4
5	23.693	19.594	16.590	14.325	12.574	11 184	5
6	22.846	10.747	16.725	14:460	12.608	11.208	6
7	23.867	10.702	16.200	14 400	12.756	11.290	7
Ś.	23.801	10.766	16.786	14:526	12:770	11.271	8
ŏ	23.677	10.603	16.742	14.500	12.754	11.362	ō
10	23.512	19.285	16.660	14.448	12.717	11.334	10
	22.227	10:460	16.581	14.284	12:660	11/206	
11	23 32/	19 400	10 501	14 304	12.009	11 290	12
12	22:057	19 330	16:406	14 321	12 021	11 2 39	12
13	22.760	10:082	16.216	14 23/	12 3/2	11.182	13
14	22.582	18:056	16.227	14 191	12.472	11.102	15
-5		-9.9.0					-5
10	22 404	10.037	10.144	14.007	12.429	11.111	10
17	22.232	10 723	10.000	14.012	12.389	11.001	17
10	21.870	10 000	15.907	13.950	12-340	11-051	10
19	21.604	18:262	15 904	13.097	12-305	11.019	19
20	21 094	10 303	13 01/	13 035	12 239	10 905	20
21	21.204	18.233	15.720	13.769	12.210	10.948	21
22	21.304	18.095	15.028	13.697	12.120	10.000	22
23	21.098	17.951	15.525	13.021	12.098	10.901	23
24	20.005	17.601	15.417	13.541	12.037	10.813	24
25	20.005	17.045	15.303	13.450	11.972	10.205	25
26	20.442	17.486	15.187	13.368	11.904	10.200	26
27	20.212	17.320	15.002	13.275	11.832	10.62	27
28	19.981	17.154	14.942	13.182	11.759	10.294	28
29	19.701	10.997	14.827	13.090	11.693	10.542	29
30	19.550	10.92	14.723	13.020	11.030	10.498	30
31	19.348	16.705	14.012	12.942	11.578	10.424	31
32	19.134	16.552	14.200	12.860	11.210	10.402	32
33	18.910	16.390	14.387	12.771	11.448	10.322	33
34	18.675	16.219	14.200	12.675	11.324	10.292	34
35	10.433	10.041	14.127	12.573	11.295	10.232	35
- 36	18.183	15.856	13.987	12.465	11.511	10 <b>·1</b> 68	36
37	17.928	15.666	13.843	12.354	11.124	10.098	37
- 38	17.669	15.471	13.695	12.239	11.033	10.026	- 38
39	17.402	15.272	13.245	12.120	10.939	9.920	39
40	17.143	15.074	13.300	12.005	10.842	9.875	40
4I	16.890	14.883	13.245	11.890	10.757	9.805	41
42	16.640	14.694	13.101	11.779	10.671	9.737	42
43	16.389	14.202	12.957	11.668	10.282	9.669	43
44	16.130	14.308	12.806	11.221	10.494	9.597	44
45	15.863	14.104	12.648	11.428	10.392	9.20	45
46	15.285	13.889	12.480	11.296	10.292	9.436	46
47	15.294	13.662	12 301	11.154	10.178	9.344	47
48	14.986	13.419	12.107	10.998	10.052	9.241	48
49	14.654	13.123	11.892	10.823	9.908	9.121	49
50	14.303	12.869	11.000	10.631	9.749	8.987	50

lge	3 %	4 %	5 %	6 %	<b>7</b> %	8 %	Age
51	13.932	12·566	11.410	10·422	9·573	8.838	51
52	13.558	12·258	11.154	10·208	9·392	8.684	52
53	13.180	11·945	10.892	9·988	9·205	8.523	53
54	12.798	11·627	10.624	9·761	9·01 I	8.356	54
55	12.014	11.300	10.347	9·524	8·807	8·179	55
56	12.014	10.966	10.063	9·280	8·595	7·995	56
57	11.614	10.625	9.771	9·027	8·375	7·802	57
58	11.218	10.286	9.478	8·772	8·153	7·606	58
59	10.841	9.963	9.199	8·529	7·940	7·418	59
61 62 63 64 65	10 491 10 180 9 875 9 567 9 246 8 917	9·398 9·137 8·872 8·593 8·307	8·940 8·712 8·487 8·258 8·016 7·765	8·108 7·913 7·714 7·502 7·281	7 · 743 7 · 572 7 · 403 7 · 229 7 · 042 6 · 847	7 ° 245 7 ° 095 6 ° 947 6 ° 795 6 ° 6 30 6 ° 4 57	61 62 63 64
66	8·578	8.010	7 · 503	7.049	6.641	6·272	60
67	8·228	7.700	7 · 227	6.803	6.421	6·075	67
68	7·869	7.380	6 · 941	6.546	6.189	5·866	68
69	7·499	7.049	6 · 643	6.277	5.945	5·643	69
70	7·123	6.709	6 · 336	5.998	5.690	5·410	70
71	6.737	6.358	6.015	5.704	5.420	5·160	71
72	6.373	6.026	5.711	5.424	5.162	4·922	72
73	6.044	5.725	5.435	5.170	4.927	4·704	73
74	5.752	5.458	5.190	4.944	4.719	4·511	74
75	5.512	5.239	4.989	4.760	4.549	4·355	75
76	5.277	5.024	4.792	4.579	4·382	4.200	7077
77	5.059	4.825	4.609	4.410	4·227	4.056	
78	4.838	4.622	4.422	4.238	4·067	3.908	
79	4.592	4.394	4.210	4.040	3·883	3.736	
80	4.365	4.183	4.015	3.858	3·713	3.577	
81 82 83 84 85	4·119 3·898 3·672 3·454 3·229	3.953 3.746 3.534 3.329 3.115	3.209 3.606 3.406 3.211 3.009	3.656 3.474 3.286 3.102 2.909	3.523 3.352 3.174 2.999 2.815	3·398 3·237 3·069 2·903 2·727	8 8 8 8
86	3.033	2·928	2.830	2·739	2.652	2·571	8
87	2.873	2·776	2.685	2·599	2.519	2·440	
88	2.776	2·683	2.597	2·515	2.439	2·366	
89	2.665	2·577	2.495	2·417	2.344	2·276	
90	2.499	2·416	2.339	2·266	2.198	2·133	
91	2:481	2·398	2·321	2·248	2·180	2·115	9
92	2:577	2·492	2·412	2·337	2·266	2·198	9
93	2:687	2·600	2·518	2·440	2·367	2·297	9
94	2:736	2·650	2·569	2·492	2·419	2·350	9
95	2:757	2·674	2·596	2·522	2·451	2·383	9
96	2·704	2.628	2·555	2·486	2·420	2·358	999
97	2·559	2.492	2·428	2·368	2·309	2·253	
98	2·388	2.332	2·278	2·227	2·177	2·129	
00	2·131	2.087	2·045	2·004	1·964	1·926	

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VAL	UE OF AN Institu	ANNUIT TE OF AG	Y ON A SI CTUARIES	INGLE LI HEALTH	FE ACCOR Y Males	DING TO TABLE.	THE
Age	<b>2</b> ¹ / ₂ %	<b>3</b> %	<b>3</b> ¹ / ₂ %	<b>4</b> %	$4\frac{1}{2}\%$	<b>5</b> %	Age
10	26.732	24.148	21.954	20.077	18.459	17.057	10
II	26.535	23.995	21.834	19 982	18.385	16.998	II
12	26.307	23.814	21.689	19.865	18.289	16.919	12
13	26 055	23.610	21.523	19.728	18.176	16.824	13
14	25.785	23.390	21.341	19.578	18.049	16.212	14
15	25.202	23.128	21.149	19.417	17.914	16.602	15
16	25.215	22.922	20.953	19.252	17.774	16.482	16
17	24.930	22.686	20.757	19.082	17.634	16.362	¥Ż
18	24.653	22•458	20.262	18.928	17.499	16.248	ï8
19	24.390	22.243	20.389	18.780	17:375	16.142	<b>19</b>
20	24.145	22.043	20.2225	18.644	17.262	16.047	20
21	23.906	21.848	20.066	18.213	17.123	15.957	21
22	23.669	21 <b>.6</b> 56	19.900	18.384	17.047	15 868	22
23	23.428	21.460	19.748	18.251	16.937	15.776	23
24	23.178	21.254	19.578	18.110	16.819	15.678	24
25	22.916	21.038	19.399	17.961	16.694	15.572	25
2Ğ	22.646	20.814	19.212	17.804	16.201	15 460	20
27	22.368	20.282	19.018	17.641	16.423	15 342	27
2 <b>8</b>	22.086	20.347	18.820	17.474	16.281	15.221	28
29	21.802	20.100	18.620	17.304	16.132	15.092	29
30	21.215	19.867	18.416	17.131	15.989	14.971	30
31	21.224	19.623	18.209	16.955	15.839	14.842	31
32	20.928	19.373	17.996	16.774	15.684	14.708	32
33	20.622	19.112	17.778	16.287	15.23	14.220	33
34	20.319	18.855	17.224	16.392	15.328	14.426	34
35	20.000	18.587	17.325	16.197	15.186	14.277	35
36	19.687	18.314	17.090	15.994	15.010	14.154	36
37	19.362	18.037	16.820	15.786	14.830	13.966	37
38	19.038	17.756	16.602	15.222	14.645	13.802	- 38
39	18.708	17.469	16.328	15.328	14.422	13.638	39
40	18.371	17.176	16.103	15-135	14.260	13.466	40
41	18.026	16.876	15.840	14.904	14.056	13.287	4I
42	17.672	16.260	15.268	14.664	13.845	13.099	42
43	17.311	16.248	15.288	14.412	13.625	12.903	43
44	16.943	15.924	15.001	14.162	13.398	12.701	44
45	16.220	15.294	14.707	13.901	13.165	12.491	45
46	16.194	15.260	14.410	13.635	12.927	12.278	46
47	15.816	14.923	14.110	13.366	12.686	12.001	47
48	15.437	14.282	13.806	13.094	12.441	11.840	48
49	15.022	14.242	13.499	12.817	12.191	11.014	49
50	14.669	13.896	13.187	12.536	11.936	11.383	50
51	14.280	13.242	12.870	12.249	11.626	11.146	51
52	13.882	13.188	12.242	11.922	11.408	10.902	52
53	13.486	12.826	12.218	11.022	11.134	10.621	53
54	13.080	12.462	11.882	11.321	10.820	10.396	54

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VALI	UE OF AN Institu	ANNUITY TE OF AC	Y ON A SI TUARIES	INGLE LI HEALTHY	FE ACCOR	DING TO S TABLE	THE
Λge	$2\frac{1}{2}\%$	3%	$3\frac{1}{2}\%$	<b>4</b> %	$4\frac{1}{2}\%$	5%	Age
55	12.683	12:094	11.549	11.043	10.573	10°135	55
56	12.279	11:724	11.210	10.731	10.286	9°871	56
57	11.875	11:353	10.868	10.417	9.996	9°602	57
58	11.471	10:981	10.525	10.100	9.702	9°330	58
59	11.067	10:608	10.180	9.780	9.405	9°054	59
60	10.665	10·236	9·835	9:459	9·107	8·776	60
61	10.266	9·866	9·490	9:138	8·808	8·497	61
62	9.871	9·498	9·148	8:818	8·509	8·217	62
63	9.481	9·134	8·807	8:500	8·211	7·938	63
64	9.096	8·774	8·471	8:185	7·914	7·659	64
65	8·716	8·418	8·136	7·870	7.619	7·381	65
66	8·340	8·064	7·803	7·557	7.323	7·102	66
67	7·966	7·712	7·471	7·243	7.026	6·821	67
68	7·594	7·360	7·139	6·928	6.728	6·538	68
69	7·221	7·007	6·804	6·610	6.426	<b>6</b> ·251	69
70	6·852	6.657	6·470	6·293	6·124	5·963	70
71	6·489	6.311	6·141	5·979	5·824	5·676	71
72	6·137	5.975	5·820	5·672	5·530	5·395	72
73	5·800	5.653	5·512	5·377	5·247	5·123	73
74	5·482	5.348	5·220	5·097	4·979	4·866	74
75	5·183	5.061	4'945	4.833	4 725	4.622	75
70	4·892	4.782	4'676	4.574	4 476	4.382	76
77	4·611	4.512	4'416	4.324	4 235	4.149	77
78	4·339	4.249	4'162	4.079	3 998	3.921	78
79	4·073	3.992	3'914	3.838	3 765	3.695	79
80 81 82 83 83 84	3.815 3.572 3.348 3.142 2.955	3.742 3.507 3.290 3.089 2.908	3.672 3.444 3.233 3.038 2.862	3.604 3.382 3.178 2.989 2.818	3.539 3.323 3.125 2.941 2.774	3.475 3.266 3.073 2.894 2.732	80 81 82 83 84
85	2·781	2·739	2.698	2.658	2.619	2·581	85
86	2·608	2·570	2.534	2.498	2.464	2·430	86
87	2·425	2·393	2.361	2.330	2.299	2·270	87
88	2·234	2·206	2.178	2.152	2.125	2·100	88
89	2·010	1·987	1.964	1.942	1.920	1·898	<b>89</b>
90	1 ·758	1 ·740	1·722	1 ·704	1 ·686	1.669	90
91	1 ·501	1 ·487	1·473	1 ·459	1 ·446	1.432	91
92	1 ·239	1 ·229	1·219	1 ·208	1 ·198	1.188	92
93	·958	·951	·944	·937	·930	.924	93
94	·681	·677	·673	·668	·664	.660	94
95	·418	·415	·413	·411	·408	*406	95
96	·179	·178	·178	·177	·176	*175	96
97	·000	·000	·000	·000	·000	*000	97

VALUE OF AN ANNUITY ON A SINGLE LIFE ACCORDING TO THE GOVERNMENT EXPERIENCE, 1883 Males									
lge	$2\frac{1}{2}\%$	3 %	$3\frac{1}{2}\%$	<b>4</b> %	<b>5</b> %	Ag			
20	22.434	20.261	18.936			20			
25	21.585	19.601	18.130			25			
30	20.079	18.288	17.271			30			
35   40	18.922	17.515	10.323	14:454	12.883	35			
41	17.227	16.138	15.128	14.273	12.743	41			
42	16.950	15.897	14.947	14.088	12.599	4			
43	16.670	15.653	14.733	13.899	12.451	43			
44	16.387	15.404	14.214	13.202	12.300	- 44			
45	16.099	15.122	14.292	13.210	12.145	4			
46	15.807	14.895	14.065	13.309	11.986	40			
47	15.211	14.633	13.833	13.103	11.822	47			
48	15.209	14.305	13.295	12.891	11.053	44			
49 50	14.588	13.813	13.351	12.073	11.298	49			
51	14.268	13.526	12.845	12.210	11.110	5			
52	13.941	13.233	12.582	11.982	10.016	Š			
53	13.608	12.933	12.311	11.737	10.714	5			
54	13.267	12.625	12.032	11.484	10.200	5			
55	12.919	12.309	11.746	11.324	10.289	5			
56	12.263	11.986	11.421	10.952	10.063	50			
57	12.198	11.623	11.146	10.626	9.828	5,			
58	11.823	11.310	10.832	10.387	9.283	5			
59 60	11.439	10.920	10.200	9.783	9°320 9°065	5			
61	10.678	10.224	0.857	9.485	8.808	6			
62	10.314	9.916	9.543	9.194	8.556	6			
63	9.948	9.577	9.228	8.900	8.300	6			
64	9.286	9.239	8.913	8.605	8.041	6			
65	9.225	8.902	8.297	8.309	7.781	6			
66	8.875	8.573	8.289	8.020	7:525	6			
67	8.233	8.252	7.987	7.736	7 • 273	6			
68	8.190	7.930	7.089	7.455	7.023	0			
70	7:521	7'299	7.087	6.886	6.512	5			
71	7.101	6.086	6.200	6.604	6.257	7			
72	6.864	6.675	6.495	6.323	6.003	7			
73	6.546	6.373	6.208	6·ŏ5ŏ	5.754	7			
74	6.245	6.086	5.934	5.788	5.212	7			
75	5.955	5.809	5.669	5.232	5.283	7			
76	5.672	5.238	5.410	5.286	5.054	7			
77	5.404	5.281	5.103	5.050	4.830	2			
78	5.145	5.033	4.925	4'821	4.024	7			
79	4.091	4 /00	4 009	4 594	4 4 1 3				

#### VALUE OF AN ANNUITY ON A SINGLE LIFE ACCORDING TO THE GOVERNMENT EXPERIENCE, 1883

			FEMALES			
Age	$2\frac{1}{2}\%$	<b>3</b> %	$3\frac{1}{2}\%$	4 %	5 %	Age
20 25 30 35 40	24·479 23·397 22·223 20·939 19·523	22·292 21·415 20·451 19·380 18·180	20·409 19·695 18·898 18·001 16·980	   15 [.] 904	   14 [.] 063	20 25 30 35 40
41	19·223	17·923	16.758	15.712	13·920	41
42	18·915	17·658	16.529	15.514	13·769	42
43	18·601	17·386	16.294	15.310	13·613	43
44	18·279	17·107	16.051	15.098	13·451	44
45	17·950	16·820	15.801	14.879	13·281	45
46	17.612	16·525	15.543	14.652	13.105	46
47	17.266	16·221	15.276	14.416	12.920	47
48	16.911	15·910	15.000	14.173	12.727	48
49	16.552	15·592	14.719	13.923	12.528	49
50	16.190	15·271	14.434	13.669	12.325	50
51	15.831	14.952	14·149	13.415	12·121	51
52	15.465	14.626	13·859	13.155	11·911	52
53	15.091	14.292	13·558	12.885	11·692	53
54	14.712	13.951	13·252	12.609	11·467	54
55	14.329	13.607	12·942	12.328	11·236	55
56	13.936	13·252	12.620	12.036	10·994	56
57	13.538	12·891	12.292	11.738	10·745	57
58	13.138	12·527	11.960	11.435	10·492	58
59	12.735	12·160	11.625	11.128	10·233	59
60	12.333	11·791	11.287	10.818	9·971	60
61	11.925	11.417	10·943	10.500	9·700	61
62	11.523	11.046	10·601	10.185	9·429	62
63	11.120	10.674	10·257	9.866	9·155	63
64	10.713	10.297	9·907	9.541	8·873	64
65	10.296	9.909	9·546	9.204	8·579	65
66	9.880	9·521	9·183	8.865	8·282	66
67	9.463	9·131	8·818	8.523	7·980	67
68	9.052	8·745	8·456	8.182	7·678	68
69	8.650	8·367	8·100	7.847	7·379	69
70	8.260	8·000	7·754	7.520	7·087	70
71	7 ·893	7.654	7 • 4 26	7 ·210	6·809	71
72	7 ·539	7.319	7 • 1 10	6 ·910	6·539	72
73	7 ·196	6.994	6 • 801	6 ·617	6·274	73
74	6 ·863	6.677	6 • 500	6 ·331	6·014	74
75	6 ·537	6.367	6 • 204	6 ·048	5·757	75
76	6·220	6.064	5·915	5.773	5·504	76
77	5·911	5.769	5·633	5.502	5·256	77
78	5·613	5.483	5·359	5.240	5·015	78
79	5·323	5.205	5·092	4.983	4·777	79
80	5·044	4.937	4·834	4.735	4·547	80

SIN	GLE PAY	MENT TO THE CARI	SECURE	£1 AT I Ble of N	DEATH AG	CORDING Y	то
Age	3 %	<b>4</b> %	<b>5</b> %	6 %	<b>7</b> %	8 %	Age
0	•46641	·41224	·37700	·35251	·33421	·32015	0
1	•38587	·32483	·28595	·25974	·24079	·22674	I
2	•34463	·27076	·23891	·21179	·10258	·17867	2
34	·31021 ·29267	-24173 -22187	·19886 ·17757	·17065 ·14857	·15097 ·12847	·13696 ·11430	34
56 7	*27633 *27572 *27574	*20300 *20211 *20038	10236 15548 15286	·12491 ·12163 ·12117	·10387 ·10007	-09748 -08904 -08489 -08263	5 6 7 8
9	·28125	·20419	·15514	·12264	·10021	*08430	9
10	·28606	·20833	·15862	·12558		*08637	10
12 13 14	·29681 ·30222 ·30771	·21313 ·21789 ·22272 ·22762	·16695 ·17114 ·17543	·13277 ·13640 ·14013	10891 11211 11528	·09193 ·09474 ·09763	12 13
15	·31315	·23249	·17967	·14381	·11859	·10045	15
16	·31833	·23706	·18362	·14715	·12147	·10289	16
17	·32334	·24150	·18733	·15026	·12408	·10511	17
10 19 20 21	·32841 ·33362 ·33901	·24590 ·25052 ·25532 ·26031	·19110 ·19505 ·19919 ·20252	·15343 ·15677 ·16028	·12077 ·12958 ·13259	10733 10970 11222	18 19 20
22 23 24	·35037 ·35637 ·36252	*26562 *27115 *27690	·20819 ·21310 ·21824	·16809 ·17240 ·17692	13933 13933 14312 14711	·11807 ·12141 ·12496	22 23 24
25	·36808	·28289	·22367	·18174	·15136	·12874	25
26	·37548	·28901	·22919	·18672	·15581	·13267	26
27	·38218	·29538	·23500	·19198	·16052	·13689	27
28	·38890	·30176	·24086	·19725	·16529	·14119	28
29	·39531	·30781	·24633	·20211	·16962	·14504	29
30	·40129	·31338	·25129	·20642	·17335	·14830	30
31	·40734	·31903	·25633	·21083	·17714	·15155	31
32	·41357	·32491	·26162	·21547	·18120	·15504	32
33	·42010	·33113	·26729	·22051	·18564	·15889	33
34	·42694	·33771	·27333	·22594	·19049	·16319	34
35	*43399	'34457	·27967	·23172	·19565	·16778	35
36	*44117	'35170	·28633	·23783	·20115	·17274	36
37	*44870	'35901	·29319	·24411	·20684	·17793	37
38	*45624	'36649	·30024	·25062	·21279	·18326	3 ⁸
39	*46393	'37416	·30752	·25736	·21894	·18889	39
40	·47156	·38178	·31477	·26404	·22509	·19444	40
41	·47893	·38911	·32167	·27038	·23085	·19963	41
42	·48621	·39636	·32852	·27666	·23648	·20467	42
43	·49352	·40364	·33538	·28294	·24210	·20971	43
44	·50108	·41120	·34257	·28957	·24805	·21504	44
45	·50885	·41905	·35010	·29653	•25440	•22074	45
46	·51694	·42734	·35810	·30400	•26127	•22696	46
47	·52542	·43607	·36662	·31204	•26873	•23378	47
48	·53439	·44542	·37586	·32087	•27697	•24141	48
49	·54406	·45565	·38610	·33077	•28639	•25030	49

SIN	GLE PAY	MENT TO HE CARLI	SECURE	£1 AT D LE OF M	EATH AC ORTALITY	CORDING	то
Age	<b>3</b> %	<b>4</b> %	5 %	<b>6</b> %	<b>7</b> %	8 %	Age
50	·55429	·46658	·39714	·34164	·29679	*26022	50
51	·56509	·47824	·40905	·35347	·30831	*27126	51
52	·57598	·49003	·42124	·36558	·32015	*28267	52
53	·58699	·50211	·43371	·37804	·33238	*29459	53
54	·59812	·51436	·44648	·39089	·34507	*30696	54
55	·60948	·52694	•45967	•40431	·35842	•32007	55
56	·62096	·53977	•47319	•41812	·37229	•33370	56
57	·63260	·55286	•48710	•43243	·38668	•34800	57
58	·64413	·56591	•50105	•44687	·40121	•36252	58
59	·65512	·57833	•51433	•46062	·41514	•37644	59
60	·66531	·58987	•52667	•47336	·42803	•38926	60
61 62 63 64 65	·67436 ·68325 ·69222 ·70157 ·71112 ·72103	-60007 -61012 -62033 -63103 -64203 -65347	·53752 ·54824 ·55914 ·57067 ·58262 ·59510	-48445 -49549 -50676 -51875 -53126 -54440	·43922 ·45027 ·46165 ·47389 ·48664 ·50012	·40036 ·41133 ·42259 ·43481 ·44763 ·46133	61 62 63 64 65 66
67	·73122	·66539	·60824	•55832	·51451	47593	67
68	·74168	·67770	·62186	•57287	·52969	49141	68
69	·75246	·6 <b>9</b> 043	·63605	•58809	·54565	50793	69
70	·76340	·70349	·65067	•60389	·56234	52519	70
71	·77465	·71701	·66595	•62053	·58000	54371	71
72	·78525	·72979	-68043	-63638	·59687	·56134	72
73	·79483	·74136	-69357	-65075	·61225	·57748	73
74	·80334	·75161	-70524	-66355	·62586	·59178	74
75	·81033	·76004	-71481	-67396	·63698	·60333	75
76	·81717	·76831	-72419	-68421	·64791	·61481	76
77	-82352	•77597	·73291	·69377	·65805	·62548	77
78	-82996	•78378	·74181	·70351	·66851	·63645	78
79	-83713	•79256	·75191	·71472	·68055	·64919	79
80	-84374	•80066	·76119	·72502	·69167	·66096	80
81	-85090	•80950	·77148	·73645	·70410	·67422	81
82 83 84 85	·85734 ·86392 ·87027 ·87682 ·88253	·81745 ·82561 ·83352 ·84173 ·84891	·78067 ·79019 ·79948 ·80910 ·81762	·74675 ·75740 ·76781 ·77874 ·78836	·71529 ·72693 ·73838 ·75042 ·76108	·68615 ·69859 ·71089 ·72393 ·73548	82 83 84 85 86
87	·88719	·85477	·82452	-79628	·76978	•74496	87
88	·89002	·85833	·82870	-80101	·77502	•75067	88
89	·89325	·86242	·83357	-80658	·79078	•75733	89
90	·89809	·86861	·84103	-81513	·79196	•76793	90
91 92 93 94	-89861 -89582 -89261 -89118 -89057	-86929 -86569 -86156 -85962 -85868	·83752 ·83248 ·83005 ·82876	·81015 ·81111 ·80528 ·80234 ·80064	·78034 ·77973 ·77633 ·77512 ·77424	·76926 ·76311 ·75578 ·75185 ·74941	91 92 93 94 95
95 96 97 98 99 100	·89212 ·89633 ·90132 ·90880 ·92185	·86047 ·86569 ·87184 ·88127 ·89797	•83071 •83676 •84391 •85500 •87505	•80268 •80936 •81734 •82996 •85306	·77626 ·78352 ·79216 ·80609 ·83193	·75126 ·75904 ·76822 ·78326 ·81163	96 97 98 99 100

SIN TI	GLE PAYN He instij	IENT TO S TUTE OF A	ECURE £1 ACTUARIES	AT DEA HEALTI	ATH ACC HY MAL	ORDING ES TABI	TO E
Age	$2\frac{1}{2}\%$	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %	$4\frac{1}{2}\%$	5%	Age
10	·32361	.26752	·22378	·18937	·16204	·14015	10
11	•32841	·27198	·22783	°19299	·16524	14296	11
12	•33396	27726	•23274	•19750	·16937	·14670	12
13	•34012	·28320	·23836	·20276	17425	15122	13
14	·34672	·28962	·24450	·20856	•17970	•15632	14
15	•35360	·29637	•25099	·21473	·18553	·16182	15
ığ	·36060	·30326	•25764	22109	·19156	.16752	ığ
17	•36757	-31011	•26427	22742	·19758	.17322	17
18	*37433	•31677	•27069	·23354	•20337	17869	18
19	•38072	.32302	•27670	·23924	•20873	·18371	19
20	·38671	·32886	·28226	·24447	·21361	·18823	20
21	*39254	·33451	·28763	·24950	·21827	19254	21
22	·39830	34011	29294	·25446	•22287	19676	22
23	-40418	·34584	•29839	25957	•22761	*20113	23
24	•41030	.35183	.30413	•26499	•23267	•20582	24
25	•41668	.35812	.31019	·27074	·23808	-21087	25
2Ğ	42328	36465	31652	27678	·24378	·21621	26
27	•43005	.37139	32307	28306	24973	-22182	27
28	•43691	.37824	.32975	·28947	25583	·22758	28
29	•44385	•38518	*33653	29600	'26205	•23346	29
30	·45086	.39221	.34343	*30266	·26840	·23948	30
31	45794	*39934	.35044	30943	·27488	24563	31
32	•46516	•40662	•35762	31640	·28156	25199	32
33	·47251	<i>*</i> 41407	•36499	·32357	·28847	·25858	33
34	·48002	·42170	·37256	.33097	-29561	·26542	34
35	·48766	•42950	·38033	33858	.30299	'2725I	35
30	49543	'43745	·38828	.34639	.31057	·27981	36
37	.20329	'44553	•39637	'35437	·31834	·28731	37
38	·51125	*45372	·40461	·36251	•32629	·2950I	38
39	.21933	•46207	•41303	.37086	*33446	·30294	39
40	.52755	•47060	·42165	*37943	·34289	.31114	40
41	•53595	•47935	•43054	•38831	35164	.31969	41
42	.54457	·48836	·43974	39752	•36076	•32863	42
43	.55340	•49762	<b>'4492</b> I	40706	.37023	.33796	43
44	•56236	*50707	•45892	•41685	'37999	'34760	44
45	.57147	•51669	•46884	•42690	*39004	35755	45
46	•58064	•52642	47889	43712	40028	36772	46
47	•58985	.53621	48904	.44745	41067	37806	47
48	•59910	54608	*49930	45792	42122	·38858	48
49	•60842	•55605	•50970	46856	'43197	'39934	49
50	·61782	·56613	*52023	·479 <u>3</u> 8	'44293	41033	50
51	.62732	.57635	•53096	'49043	45416	42162	51
52	•63695	58676	·54191	50174	46569	43326	52
53	64667	.59729	55303	.51327	47748	'44518	53
	·61641	60702	.56428	172406	18047	141777	11

SIN T	GLE PAYM HE INSTITU	ENT TO SI JTE OF AG	ECURE £1 CTUARIES	AT DEA Health	ATH ACCO	ORDING S TABLE	<b>то</b> :
Age	$2\frac{1}{2}\%$	3 %	3 ¹ / ₂ %	<b>4</b> %	$4\frac{1}{2}\%$	5 %	Age
55	•66627	·61863	·57566	•53682	·50166	•46975	55
56	.67612	.62939	.58712	·54881	.51401	•48235	56
57	.68597	.64020	59866	56090	.52651	·49513	57
58	.69583	65103	·61026	.57309	.53915	-50809	58
59	.70568	•66190	·62193	•58539	•55193	.52122	59
60	.71548	67274	•63361	.59773	•56478	•53446	60
61	.72522	•68353	·64526	·61007	•57766	•54777	01
62	.73485	•69424	·65685	.62237	•59053	.20109	02
63	.74437	•70484	•66835	·63461	.60332	·57441	- 03
64	.75375	.71532	·67974	•64675	.61613	•58767	64
65	•76302	•72569	·69104	•65883	·62886	·60092	65
66	.77220	:73600	•70230	•67089	.64159	.01421	00
67	.78132	•74626	·71354	.68297	•65437	.62758	07
68	•79039	•75650	.72478	.69202	*66721	.64105	50
69	*79948	•76678	.73610	•70729	·68021	•65473	09
70	·80849	.77700	•74738	.71950	•69323	•66845	70
7I	·81734	•78706	.75852	.73159	.70615	.68210	71
72	·82593	•79685	.76937	.74339	.71879	·69549	- 74
73	.83415	.80623	.77980	•75475	•73098	•70841	73
74	.84190	.81510	.78967	.76551	•74254	•72009	74
75	·84919	·82345	.79897	.77567	.75347	.73231	7
76	·85628	·83159	-80806	.78561	.76418	'74372	- 79
77	·86313	·83946	.81686	•79525	77459	.75482	- 7
78	·86978	•84711	·82543	•80466	.78476	.76569	7
79	·87628	•85461	'83384	•81392	'79479	.77643	7
80	·88256	·86187	·84200	·82291	-80455	•78690	8
81	·88850	•86874	*84974	*83145	.81383	•79080	ð
82	·89394	•87506	*85686	*83931	*82238	.80605	ð
83	•89899	•88090	.90345	•04059	.03031	.01450	0
84	.90353	*88017	-80940	-05317	•03747	02220	0
85	•90778	•89110	•87496	•85932	•84416	-82948	8
-86	91200	•89601	•88050	·80545	*85084	*83667	8
87	·91645	.90118	.88635	·87194	*85792	*84430	8
88	.92113	•90663	·89252	07070	*80541	.05239	1 8
89	·92659	·91301	·89977	08066	'87427	*80198	ð
90	·93272	·92020	•90796	•89600	*88432	.87290	9
91	·93899	·92756	.91632	·90541	·89468	.00417	9
92	94538	•93508	·92498	·91507	•90534	-89579	9
93	·95224	·94317	·93426	·92549	•91687	.90840	9
94	·95 ⁸⁹⁹	.95116	.94344	·93583	*92834	-92096	9
95	·96542	•95878	.95222	.94575	·93934	·93304	9
96	97124	•96568	.96018	95475	.94933	.94405	5
07	1 .02201	. 97087	96618	96154	1 °95694	1 '95238	1 9

Al	INUAL PA INSTITU	YMENT D A Vite of A(	URING LI CCORDING CTUARIES	FE TO SE 7 TO THE HEALTHY	CURE £1 Y MALES	AT DEAT Table	E
Age	$2\frac{1}{2}\%$	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %	$4\frac{1}{2}\%$	<b>5</b> %	Age
10	·01 167	•01064	.00975	·00899	·00833	·00776	10
11	·01 193	•01088	.00998	·00920	·00852	·00794	11
12	·01 233	•01117	.01026	·00947	·00878	·00819	12
13	·01 257	•01151	.01058	·00978	·00909	·00848	13
14	·01 295	•01188	.01094	·01014	·00943	·00882	14
15	°01334	·01227	·01133	·01052	·00981	·00919	15
16	°01376	·01268	·01174	·01092	·01020	·00958	16
17	°01418	·01309	·01215	·01132	·01060	·00998	17
18	°01459	·01350	·01255	·01172	·01099	·01036	18
19	°01499	·01390	·01294	·01210	·01136	·01072	19
20	°01 538	*01427	·01330	·01245	·01170	·01104	20
21	°01 576	*01464	·01365	·01279	·01202	·01135	21
22	°01 61 5	*01501	·01401	·01313	·01235	·01166	22
23	°01 655	*01540	·01438	·01348	·01269	·01199	23
24	°01 697	*01581	·01478	·01387	·01306	·01 <b>2</b> 34	24
25	'01742	°01625	•01521	·01428	·01346	·01272	25
26	'01790	°01672	•01566	·01472	·01388	·01314	26
27	'01840	°01721	•01614	·01519	·01433	·01357	27
28	'01893	°01772	•01664	·01567	·01480	·01403	28
29	'01947	°01825	•01715	·01617	·01529	·01450	29
30	'02003	•01880	·01769	·01669	·01 580	·01499	30
31	'02061	•01936	·01824	·01723	·01632	·01550	31
32	'02121	•01996	·01883	·01780	·01688	·01604	32
33	'02185	•02058	·01944	·01840	·01746	·01661	33
34	'02252	•02124	·02008	·01903	·01 <b>807</b>	·01721	34
35	'02322	·02193	·02076	·01969	·01872	·01784	35
36	'02395	·02265	·02146	·02038	·01940	·01850	36
37	'02471	·02340	·02221	·02111	·02011	·01920	37
3 ⁸	'02551	·02419	·02298	·02187	·02086	·01993	38
39	'02635	·02502	·02380	·02267	·02164	·02069	39
40	·02723	·02589	·02465	·02352	·02247	·02151	40
41	·02817	·02682	·02557	·02442	·02336	·02238	41
42	·02917	·02780	·02654	·02538	·02430	·02331	42
43	·03022	·02885	·02758	·02640	·02532	·02431	43
44	·03134	·02996	·02868	·02749	·02639	·02537	44
45	·03253	·03114	·02985	·02865	·02754	·02650	45
46	·03377	·03238	·03108	·02987	·02874	·02769	46
47	·03508	·03367	·03237	·03115	·03001	·02895	47
48	·03645	·03504	·03372	·03249	·03134	·03026	48
49	·03790	·03648	·03515	·03391	·03275	·03166	49
50	•03943	·03801	·03667	·03542	·03424	·03314	50
51	•04106	·03963	·03828	·03702	·03583	·03471	51
52	•04279	·04136	·04000	·03873	·03753	·03640	52
53	•04464	·04320	·04184	·04056	·03935	·03821	53
54	•04661	·04516	·04379	·04250	·04129	·04013	54

ANNUAL PAYMENT DURING LIFE TO SECURE £1 AT DEATH ACCORDING TO THE INSTITUTE OF ACTUARIES HEALTHY MALES TABLE											
Age	$2\frac{1}{2}\%$	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %	$4\frac{1}{2}\%$	<b>5</b> %	Age				
55	·04870	•04725	·04 588	·044 58	·04335	.04210	55				
56	05092	·04046	.04809	•04678	.04555	.04437	56				
57	.05328	.05182	.05044	.04913	04788	*04670	57				
58	·05580	·05434	·05295	·05163	·05038	04918	58				
59	·05848	·05702	·05563	·05431	·05304	·05184	59				
бо	·06134	·05987	·05848	·05715	·o5588	·05467	60				
61	*06437	•06291	·06151	.00018	•05890	*05768	61				
62	.06760	•06613	•06473	*06339	•06211	*06087	62				
03	.07102	·06956	*06815	*06680	•06551	*06427	03				
04	.07466	•07319	·07177	·07042	*06912	*06787	04				
65	·07853	·0 <u>7</u> 705	·07564	•07427	•07296	·07 I 70	65				
66	*08268	·08120	·0 <u>7</u> 978	·07841	•07709	•07581	66				
67	·08714	·08566	·08423	•08286	.08153	.08025	67				
68	·09197	·09049	·08906	·08767	·08634	*08504	68				
69	·09725	·09576	·09433	·09294	·09160	•09030	69				
70	·10297	·10148	·10005	•09866	·09731	·09601	70				
71	·10914	·10766	·10622	·10483	·10348	·10218	71				
72	·I1572	·II425	11281	'11142	·11007	•11876	72				
73	·12267	·12119	•11976	11836	·11701	*11569	73				
74	·12988	•12840	•12696	·12556	·12420	•12287	74				
75	•13734	·13585	·13440	13299	·13161	·I3027	75				
76	14532	·14382	•14236	·14094	·13954	·13819	76				
77	·15382	•15230	·15083	·14939	·14798	·14660	77				
78	•16291	•16138	•15989	•15843	•1 5701	15561	78				
79	17275	•17121	•16970	•16823	•16679	•16538	79				
8o	•18329	·18174	·18022	·17873	·17727	·17584	80				
81	·19435	·19277	·19123	·18972	·18824	·18679	81				
82	·20559	•20399	·20242	•20089	·19938	·19790	82				
83	·21707	•21543	•21383	·21225	•21071	*20920	83				
84	•22844	•22676	·22510	•22348	•22189	•22032	84				
85	·24009	·23834	·23662	·23493	·23327	·23163	85				
86	·25279	·25096	·24916	·24739	·24 565	*24393	86				
87	•26755	·26563	•26373	·26187	•26003	·25823	87				
88	·28485	·28282	·28081	•27884	•27689	·27498	88				
89	•30786	•30570	•30358	•30149	•29943	·29740	89				
90	.33813	·33585	•33360	•33138	•32919	•32703	90				
91	37537	•37294	•37053	•36816	·36582	·36351	91				
92	42217	41954	41694	41438	41185	•40935	92				
93	•48624	•48338	•48055	•47776	·474 <u>9</u> 9	.47226	93				
94	•57035	•56719	•56405	•56095	•55789	*55486	94				
95	.68105	·67748	.67394	·67044	•66696	·66354	95				
<u>66</u>	82364	·81954	81546	.81144	·80742	·80350	96				
õ.	107561	107087	·06618	.06154	*05604	.05238	07				

(151)

ge	<b>2</b> ¹ / ₂ %	<b>3</b> %	<b>3</b> ¹ / ₂ %	<b>4</b> %	<b>5</b> %	A
20	17.566	12.772	9.635	•••		2
5	18.718	13.732	10.441	•••		2
	21.178	14 745	11'300	•••	•••	3
io Io	22.499	16.957	13.206	10.546	7.117	3
ц,	22.773	17.195	13.413	10.727	7:257	4
2	23.020	17.436	13.624	10.912	7.401	4
3	23.330	17.680	13.838	11.101	7.549	4
4	23.013	17.929	14.057	11.203	7.700	4
5	23 901	10 101	14:4/9	11 490	/ °55	4
5	24.193	18.700	14.500	11.691	8.178	4
8	24 409	18.067	14.730	12'100	8.247	4
9	25.100	19.242	15.220	12.327	8.523	4
õ	25.412	19.520	15.468	12 550	8.702	5
I	25.732	19.807	15.726	12.781	8.890	5
2	26.059	20.100	15.989	13.018	9 084	5
3	20.392	20.400	16.200	13.263	9.286	5
14 15	20.733 27.081	20.708	16.539	13.516	9°494 9°711	
;6	27.437	21.347	17.120	14.045	9.937	5
7	27.802	21.680	17:425	14.324	10.172	5
58	28.177	22.023	17.739	14.613	10.412	5
9	28.046	22.377	18.005	14 914	10.674	5
	20 940	22 732	18 393	15 217	10 935	
52	29 322	23.079	10.028	15 515	11-192	
53	30.022	23.756	19'343	16.100	11.200	6
<b>5</b> 4	30.414	24.094	19.658	16.392	11.959	6
5	30.775	24.431	19.974	16.91	12.219	6
6	31.125	24.760	20.282	16.980	12.475	6
7	31.407	25.081	20.284	17.264	12.727	6
0	31.004	25.397	20.882	17.545	12.977	
9	32.479	26.034	21.103	17 829	13.488	
T	32.809	26.347	21.781	18.396	13.743	7
2	33.136	26.658	22.076	18.677	13.997	1 7
3	33:454	26.960	22.363	18.950	14.246	7
74 75	33.755	27.247	22.037	19.212	14.485	7
76	34.328	27.705	22:161	10.214	14.046	
7	34.596	28.052	23'408	10.020	15.164	4
8	34.855	28.300	23.646	20.179	15:376	4
9	35.109	28.545	23.882	20 406	15.587	1 7
0	35.353	28.780	24.108	20.624	15.200	1 8

For explanation see p. 28

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A P	ENT VALUE ERSON OF A	OF REVER Age state:	SION TO A D. GOVERN	PERPETUIT	Y AT DEAT Eriênce, 1	H OF 883
			FEMALES			
Age	$2\frac{1}{2}\%$	3 %	<b>3</b> ¹ / ₂ %	<b>4</b> %	<b>5</b> %	Age
20	15.521	11.041	8.162			20
25	16.603	11.018	8.876			25
30	17.777	12.002	9.073			30
35	20:477	13.953	11.201	0.000	5.037	35
40	20 4//	-3 - 35	37-	9 0 90	5 957	
41	20.777	15.411	11.013	9.280	6.221	41
42	21.005	15:047	12 042	0.600	6.387	40
43	21 399	16.226	12.520	9.002	6.549	40
44	22.050	16.213	12.770	10.121	6.719	45
46	22:288	16.808	12.028	10.248	6.805	46
40	22 300	17.112	13.202	10.584	7.080	47
47 48	23.080	17.423	13.571	10.827	7.273	48
40	23.448	17 741	13.852	11.077	7.472	49
50	23.810	18.063	14.137	11.331	7.675	50
51	24.160	18.382	14.422	11.282	7.879	51
52	24.535	18.707	14.712	11.845	8.089	52
53	24.909	19.041	15.013	12.115	8.308	53
54	25.288	19.382	15.319	12.391	8.533	54
55	25.671	19.726	15.629	12.672	8.764	55
56	26.064	20.081	15.951	12.964	9.000	56
57	26.462	20.443	16.279	13.262	9.255	57
58	26.862	20.806	16.011	13.262	9.208	58
59	27.205	21.173	10.940	13.872	9.707	59
00	27.007	21.542	1/204	14 102	10 029	00
61	28.075	21.916	17.628	14.200	10.300	61
62	28.477	22.287	17.970	14.015	10.571	62
03	28.900	22.059	18.664	15.134	10 045	64
65	29 207	23.424	19.025	15.796	11.421	65
66	20:120	22.812	10.288	16.135	11.718	66
67	30.537	23 012	19.753	16.477	12.020	67
68	30.948	24.588	20.112	16.818	12.322	68
60	31.320	24.966	20.471	17.153	12.621	69
70	31.740	25.333	20.817	17.480	12.913	70
71	32.107	25.679	21.145	17.790	13.101	71
72	32.461	26.014	21.461	18.000	13.461	72
73	32.804	26.339	21.770	18.383	13.726	73
74	33.137	26.655	22.071	18.009	13.980	74
75	33.403	20.907	22.307	10.952	14 - 43	75
76	33.780	27 269	22.656	19.227	14 496	76
77	34.089	27.564	22.938	19:498	14.744	77
78	34.387	27.850	23.212	19.700	14.905	70
79	34.077	20 120	25 479	20.20	15.452	80

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Prese	nt Value of Rev	version to a Per Age sta NORTHAMPTO	petuity at Deat ited. ON TABLE	h of a Perso	n of
Age	<b>3</b> %	<b>4</b> %	5 %	<b>6</b> %	Age
5	12.860	7.752	5.173	3.705	5
IO	12.670	7:477	4.861	3.382	IŌ
15	13.676	8.209	5.412	3.810	15
20	14.095	8.967	5.993	4.209	20
<b>~</b> 5	15 519	9 302	0 433	4 004	2°5
30	16.411	10.219	6.928	4.985	30
35	17:395	10'901	7.498	5.431	35
40	10 405	12.717	8.805	5 902	40
50	20.897	13.736	9.731	7.250	50
EE	22182	74.700	10:618	7:007	
55 60	23.556	15.061	11.608	8.847	55
65	25.029	17.239	12.724	9.826	65
70	26.599	18.639	13.977	10.921	70
75	28.134	20.038	15.256	12.125	75
80	29.552	21.357	16.485	13.273	80
85	30.713	22.457	17 529	14.265	85
90	31.239	23.242	18.277	14.978	90
95	33.001	24.760	19.762	16.431	95
		CARLISLE	TABLE		
Age	3 %	<b>4</b> %	5 %	<b>6</b> %	Age
5	9.640	5:406	3.410	2.342	5
10	9.821	5 415	3.331	2.219	10
15	10.751	6.044	3.773	2.241	15
20	11.039	0.037	4.183	2.832	20
~ <u></u> 5	12 000	/ 355	4 09/	3 211	25
30	13.777	8.148	5.277	3.647	30
35	14.900	0.026	5.873	4.094	35
40	10 190	10.806	7.252	4.005	40
45	19.030	12.131	8.340	6.036	45
5	20:025	12.200	0.652	J.	
55	22.812	15.337	11.000	8.262	55
65	24.416	16.693	12.235	9.386	65
70	26.210	18.291	13.664	10.669	70
75	27.821	19.761	15.011	11.907	75
80	28.968	20.817	15.085	12.800	80
85	30.104	21.885	16.991	13.758	85
9ō	30.834	22.584	17.661	14.401	90
95	30.226	22.326	17.404	14.142	95

For explanation see p. 28

# TABLES

#### COMBINING

MORTALITY OF TWO AND THREE LIVES

# INTEREST

## PREMIUM CONVERSION TABLES

For explanation see pp. 29-39

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I

Value of	an Annui	ty for the the N	Joint Con ORTHAM	itinuance o PTON TAI	f Two Li [.] BLE	ves accord	ling to
Ages	3 %	4%	5 %	Ages	<b>3</b> %	<b>4</b> %	<b>5</b> %
15 15	15.220	13.411	11.964	35 45	10.622	9.706	8.921
15 20	14.660	12.961	11.285	35 50	9.912	9.110	8.412
15 25	14.230	12.630	11.324	35 55	9.13I	8.448	7.849
15 30	13.734	12.246	11.051	35 60	8.227	7.669	7.174
IS 35	13.121	11.287	10.622	35 65	7.177	6 <b>.</b> 747	0.300
15 40	12.429	11.234	10.502	35 70	5.971	5.663	5.382
<b>15 45</b>	11.687	10.002	9.690	35 75	4.720	4.210	4.327
15 50	10.299	9.872	9.076	35 80	3.200	3.303	3.208
15 55	8:700	9.077	0.403	40 40	10.704	0.281	8.642
15 00	8.790	0.1/0	7.022	40 45	10 230	9 301	0.043
15 05	7.597	7.127	0.705	40 50	9.590	0.034 8.001	0.177 7.651
15 70	4.011	5 933	5'031	40 55	8.025	7:400	7.015
-5 /5 15 80	2.621	3.402	2.272	40 65	7.020	6.614	6.240
20 20	14.132	12.232	J J J/2	40 70	5.871	5.21	5.298
20.25	12.741	12.220	10.080	40 75	4.6.6	4.457	4.272
20 20	13.286	11.872	10.202	40 / 5	3.460	3.340	3.236
20 35	12.744	11.442	10.363	45 45	9.776	8.000	8.312
20 40	12.096	10.924	9.937	45 50	9.204	8.503	7.891
20 45	11.367	10.330	9.448	45 55	8.557	7.948	7.411
20 50	10.523	9.630	8.861	45 60	7.781	7.274	6.822
20 55	9.617	8.869	8.216	45 65	6.850	6.453	6.094
20 60	8.597	7.995	7:463	45 70	5.749	5.460	5.195
20 65	7 444	6.986	6.226	45 75	4.280	4.386	4.206
20 70	6.149	5.826	5.232	45 80	3.426	3.308	3.192
20 75	4.831	4.619	4.424	50 50	8.714	8.081	7.522
20 80	3.269	3.443	3.325	50 55	8.122	7:593	7.098
25 25	13.383	11.944	10.764	50 60	7.461	6.989	6.268
25 30	12.966	11.019	10.499	50 05	0.011	6.230	5.897
25 35	12.403	11-21/	10-175	50 70	5'502	5-300	5.054
25 40	11.854	10.725	9.771	50 75	4.472	4.285	4.112
25 45	11.104	10-100	9.304	50 80	3-302	3.247	5.740
25 50	0.484	8.754	8.116	55 55	7:081	6.650	6:272
25 55	8.405	7:006	7.282	55 65	6.224	5.086	5.671
25 65	7:270	6.020	6.515	55 70	5.201	5.122	4.802
25 70	6.000	5.780	5.480	55 75	4.320	4.171	4.000
25 75	4.700	4.589	4.396	55 80	3.201	3.180	3.076
25 80	3.550	3.425	3.308	60 60	6.000	ŏ.226	5.888
30 30	12.589	11.313	10.255	60 65	5.970	5.628	5.372
30 35	12.131	10.948	9.954	60 70	5.139	4.900	4.580
30 40	11.268	10.490	9.576	60 75	4.189	4.021	3.866
30 45	10.923	9.929	9.135	60 80	3.192	3.095	2.995
30 50	10.160	9.321	8.596	65 65	5'471	5.201	4.960
30 55	9.329	0.010	7 999	05 70	4.203	4.573	4.378
30 60	8.378	7.802	7.292	<b>05 75</b>	3.928	3.806	3.665
30 65	7.286	0.844	0.447	05 80	3.003	2.965	2.873
30 70	0.043	5.729	5.442	70 70	4.201	4.007	3.930
30 75	4.704	4 557	4 305	70 /5	3 399	3.4/1	3 347
30 80	3 330	3400	3 290		2 043	2/5/	2 0/5
35 35 35 40	11.722	10.012	9.331	75 80	2.526	2.448	2.381

Value o	Value of an Annuity for the Joint Continuance of Two Lives according to the CARLISLE TABLE									
Ages	<b>3</b> %	Ages	<b>3</b> %	Ages	<b>3</b> %	Ages	<b>3</b> %			
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{c} 3 & \% \\ \hline 19.815 \\ 19.873 \\ 19.288 \\ 19.288 \\ 19.288 \\ 19.288 \\ 19.288 \\ 19.288 \\ 19.288 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 \\ 19.218 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55 55 55 55 55 55 55 55 55 55	$\begin{array}{c} 3 \% \\ \hline 6 & \circ 19 \\ 4 & 813 \\ 3 & 920 \\ 2 & 2961 \\ 2 & 307 \\ 2 & 2961 \\ 2 & 307 \\ 2 & 575 \\ 1 & 625 \\ 7 & 295 \\ 2 & 565 \\ 4 & 497 \\ 3 & 695 \\ 2 & 812 \\ 2 & 199 \\ 2 & 458 \\ 1 & 577 \\ 6 & 047 \\ 3 & 542 \\ 2 & 719 \\ 2 & 2458 \\ 1 & 577 \\ 6 & 047 \\ 3 & 542 \\ 2 & 719 \\ 2 & 2458 \\ 1 & 555 \\ 4 & 556 \\ 3 & 544 \\ 2 & 2719 \\ 2 & 245 \\ 3 & 544 \\ 2 & 2719 \\ 2 & 245 \\ 3 & 252 \\ 2 & 198 \\ 1 & 555 \\ 4 & 556 \\ 3 & 564 \\ 3 & 522 \\ 1 & 987 \\ 2 & 248 \\ 3 & 228 \\ 2 & 522 \\ 1 & 987 \\ 2 & 248 \\ 3 & 228 \\ 2 & 522 \\ 1 & 987 \\ 2 & 248 \\ 3 & 228 \\ 2 & 522 \\ 1 & 987 \\ 2 & 248 \\ 3 & 228 \\ 2 & 522 \\ 1 & 987 \\ 2 & 248 \\ 3 & 228 \\ 2 & 522 \\ 1 & 987 \\ 2 & 248 \\ 3 & 228 \\ 2 & 279 \\ 2 & 245 \\ 1 & 322 \\ 1 & 322 \\ 2 & 459 \\ 1 & 322 \\ 1 & 322 \\ 2 & 459 \\ 1 & 322 \\ 1 & 322 \\ 2 & 459 \\ 1 & 322 \\ 1 & 322 \\ 1 & 322 \\ 2 & 459 \\ 1 & 322 \\ 1 & 322 \\ 1 & 322 \\ 1 & 322 \\ 1 & 322 \\ 1 & 322 \\ 1 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15 50 15 55 15 60 15 70 15 75 15 80	13.131 11.528 9.852 8.458 6.818 5.314 4.235	30 75 30 80 30 85 30 90 30 95 30 100 35 35	5.213 4.168 3.107 2.411 2.670 1.651 14.720	50 90 50 95 50 100 55 55 55 60 55 65	2·365 2·629 1·639 9·103 8·098 <b>7·</b> 219	90 90 90 95 90 100 95 95 95 100 100 100	1.088 1.217 .979 1.383 1.072 .991			

Value of an Annuity for the Joint Continuance of Two Lives according to the								
	GOVI	ERNMEN	T EXPER	LIENCE T	ABLE, 18	883		
	TWO M	ALES			TWO FE	MALES		
Ages	$2\frac{1}{2}\%$	3 %	<b>3</b> ½ %	Ages	$2\frac{1}{2}\%$	<b>3</b> %	$3\frac{1}{2}\%$	
20 20	17·438	16·239	15·174	20 20	19·906	18·384	17.047	
20 25	16·847	15·726	14·727	20 25	19·348	17·915	16.651	
20 30	16·186	15·151	14·224	20 30	18·675	17·347	16.169	
20 35	15·445	14·505	13·658	20 35	17·867	16·661	15.584	
20 40	14·617	13·778	13·018	20 40	16·905	15·835	14.872	
20 45	13.687	12:957	12·289	20 45	15.760	14.837	14.000	
20 50	12.632	12:014	11·444	20 50	14.394	13.625	12.922	
20 55	11.409	10:907	10·441	20 55	12.856	12.241	11.673	
20 60	9.954	9:569	9·209	20 60	11.184	10.714	10.276	
20 65	8.204	7:931	7·673	20 65	9.335	8.998	8.680	
20 70	6·584	6·399	6·222	20 70	7·503	7·275	7 058	
20 75	5·141	5·021	4·905	20 75	5·742	5·598	5 460	
20 80	3·833	3·759	3·688	20 80	4·263	4·177	4 093	
20 85	2·786	2·743	2·701	20 85	3·002	2·953	2 906	
20 90	1·958	1·933	1·910	20 90	2·041	2·015	1 990	
20 95	1·125	1.115	1·105	20 95	1 • 266	1·255	1 · 243	
25 25	16·321	15.265	14·322	25 25	18 • 866	17·505	16 · 300	
25 30	15·724	14.743	13·862	25 30	18 • 27 1	16·999	15 · 868	
25 35	15·046	14.149	13·339	25 35	17 • 537	16·373	15 · 332	
25 40	14·277	13.472	12·741	25 40	16 • 64 1	15·601	14 · 664	
25 45	13·403	12.697	12.052	25 45	15·552	14.650	13.831	
25 50	12·399	11.799	11.247	25 50	14·233	13.479	12.789	
25 55	11·226	10.737	10.283	25 55	12·735	12.129	11.570	
25 60	9·817	9.441	9.089	25 60	11·096	10.631	10.198	
25 65	8·110	7.842	7.589	25 65	9·274	8.940	8.625	
25 70	6.522	6·340	6·165	25 70	7·462	7·236	7.021	
25 75	5.102	4·983	4·869	25 75	5·717	5·574	5.437	
25 80	3.809	3·737	3·666	25 80	4·248	4·163	4.080	
25 85	2.773	2·730	2·688	25 85	2·994	2·945	2.899	
25 90	1.950	1·926	1·903	25 90	2·037	2·011	1.986	
25 95	1 · 122	1.112	1·102	25 95	1 • 265	1.253	1.241	
30 30	15 · 198	14.279	13·451	30 30	17 • 763	16.564	15.493	
30 35	14 · 593	13.745	12·977	30 35	17 • 121	16.011	15.016	
30 40	13 · 893	13.126	12·428	30 40	16 • 310	15.309	14.406	
30 45	13 · 083	12.406	11·786	30 45	15 • 297	14.422	13.627	
30 50	12·139	11.560	11.026	30 50	14.042	13·306	12.631	
30 55	11·022	10.547	10.106	30 55	12.595	12·000	11.451	
30 60	9·665	9.298	8.954	30 60	10.996	10·538	10.112	
30 65	8·005	7.743	7.495	30 65	9.206	8·876	8.565	
30 70	6·452	6.273	6.101	30 70	7.418	7·194	6.981	
30 75	5.058	4'940	4·828	30 75	5.689	5.547	5.412	
30 80	3.783	3'711	3·641	30 80	4.232	4.147	4.065	
30 85	2.758	2'715	2·674	30 85	2.985	2.937	2.890	
30 90	1.942	1'918	1·895	30 90	2.032	2.006	1.981	
30 95	1.118	1'109	1·099	30 95	1.262	1.251	1.239	

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Val	Value of an Annuity for the Joint Continuance of Two Lives according to the GOVERNMENT EXPERIENCE TABLE, 1883									
TWO MALES				TWO FEMALES						
Ages	$2\frac{1}{2}\%$	<b>3</b> %	$3\frac{1}{2}\%$	Ages	$2\frac{1}{2}$ %	<b>3</b> %	$3\frac{1}{2}\%$			
35 35	14.067	13.277	12.559	35 35	16.582	15.543	14.608			
35 40	13.449	12.727	12.068	35 40	15.878	14.929	14.071			
35 45	12.718	12.074	11.483	35 45	14.965	14.127	13.363			
35 50	11.845	11.290	10.777	35 50	13.797	13.084	12.431			
35 55	10.792	10.334	9.907	35 55	12.420	11.841	11.304			
35 60	9:494	9·138	8.804	35 60	10.876	10:427	10.008			
35 65	7:886	7·630	7.389	35 65	9.127	8:801	8.495			
35 70	6:373	6·197	6.029	35 70	7.368	7:146	6.936			
35 75	5:007	4·892	4.781	35 75	5.659	5:518	5.383			
35 80	3:753	3·682	3.613	35 80	4.214	4:130	4.048			
35 85	2.740	2.698	2.657	35 85	2.975	2·927	2.881			
35 90	1.932	1.909	1.886	35 90	2.027	2·001	1.976			
35 95	1.114	1.105	1.095	35 95	1.260	1·248	1.237			
40 40	12.923	12.254	11.642	40 40	15.296	14·418	13.619			
40 45	12.285	11.681	11.126	40 45	14.510	13·721	13.001			
40 50	11·501	10.975	10·487	40 50	13.459	12·781	12.156			
40 55	10·529	10.090	9·680	40 55	12.183	11·623	11.105			
40 60	9·301	8.957	8·634	40 60	10.716	10·279	9.871			
40 65	7·753	7.504	7·269	40 65	9.025	8·706	8.406			
40 70	6·284	6.112	5·948	40 70	7.306	7·088	6.880			
40 75	4.951	4·837	4·728	40 75	5.623	5°484	5·351			
40 80	3.718	3·648	3·581	40 80	4.194	4°110	4·029			
40 85	2.720	2·679	2·638	40 85	2.964	2°917	2·871			
40 90	1.921	1·898	1·875	40 90	2.021	1°995	1·971			
40 95	1.110	1·100	1·091	40 95	1.258	1°246	1·235			
45 45	11.753	11·200	10.689	45 45	13.869	13·149	12·489			
45 50	11.079	10·589	10.134	45 50	12.969	12·338	11·757			
45 55	10.210	9·795	9.407	45 55	11.830	11·302	10·812			
45 60	9.074	8·744	8.434	45 60	10.477	10·059	9·667			
45 65	7.600	7·360	7.132	45 65	8.875	8·565	8·274			
45 70	6 • 184	6.016	5.856	45 70	7·217	7 °003	6.801			
45 75	4 • 887	4.776	4.669	45 75	5·574	5 °437	5.306			
45 80	3 • 680	3.611	3.544	45 80	4·168	4 °085	4.005			
45 85	2 • 698	2.657	2.617	45 85	2·951	2 °904	2.858			
45 90	1 • 909	1.886	1.863	45 90	2·014	1 °989	1.964			
45 95	1·105	1.095	1.086	45 95	1 • 255	1·243	1.232			
50 50	10·532	10.088	9.675	50 50	12 • 245	11·680	11.157			
50 55	9·795	9.412	9.053	50 55	11 • 284	10·801	10.351			
50 60	8·781	8.471	8.179	50 60	10 • 092	9·701	9.335			
50 65	7·411	7.181	6.963	50 65	8 • 622	8·328	8.052			
50 70	6.064	5·902	5.747	50 70	7.061	6.856	6.660			
50 75	4.813	4·705	4.601	50 75	5.484	5.351	5.223			
50 80	3.636	3·568	3.503	50 80	4.119	4.037	3.959			
50 85	2.672	2·632	2.592	50 85	2.926	2.880	2.835			
50 90	1.895	1·872	1.849	50 90	2.003	1.978	1.953			

Val	Value of an Annuity for the Joint Continuance of Two Lives according to the GOVERNMENT EXPERIENCE TABLE, 1883									
	TWO MALES TWO FEMALES									
Ages	<b>2</b> ¹ / ₂ %	<b>3</b> %	$3\frac{1}{2}\%$	Ages	$2\frac{1}{2}\%$	<b>3</b> %	$3\frac{1}{2}\%$			
50 95	1.099	1.090	1.080	50 95	1.250	1 ·239	1 ·228			
55 55	9.212	8.873	8.555	55 55	10.523	10 · 100	9 ·704			
55 60	8.361	8.080	7.814	55 60	9.534	9 · 182	8 ·852			
55 65	7.138	6.925	6.722	55 65	8.245	7 ·974	7 ·718			
55 70	5.898	5.744	5.597	55 70	6.824	6 · 630	6 ·446			
55 75	4.717	4.612	4·512	55 75	5°343	5·216	5.094			
55 80	3.582	3.516	3·453	55 80	4°038	3·959	3.883			
55 85	2.642	2.603	2·564	55 85	2°882	2·837	2.793			
55 90	1.879	1.856	1·834	55 90	1°979	1·954	1.930			
55 95	1.093	1.083	1·074	55 95	1°239	1·228	1.217			
60 60	7.705	7 •465	7·238	60 60	8·771	8·471	8·187			
60 65	6.685	6 •497	6·319	60 65	7·710	7·472	7·245			
60 70	5.608	5 •468	5·335	60 70	6·481	6·306	6·138			
60 75	4.546	4 •429	4·356	60 75	5·143	5·025	4·910			
60 80	3.491	3 •428	3·367	60 80	3·929	3·854	3·781			
60 85	2·596	2·558	2·520	60 85	2·826	2·783	2.740			
60 90	1·857	1·835	1·813	60 90	1·952	1·928	1.904			
60 95	1·085	1·076	1·066	60 95	1·229	1·217	1.206			
65 65	5·911	5·759	5·614	65 65	6·910	6·713	6.526			
65 70	5·053	4·936	4·825	65 70	5·927	5·777	5.633			
65 75	4·175	4.091	4.010	65 75	4.793	4.688	4·587			
65 80	3·262	3.206	3.152	65 80	3.722	3.654	3·587			
65 85	2·463	2.428	2.394	65 85	2.713	2.673	2·633			
65 90	1·786	1.765	1.745	65 90	1.893	1.870	1·847			
65 95	1·058	1.049	1.041	65 95	1.203	1.192	1·181			
70 70	4.407	4·314	4·225	70 70	5·206	5.086	4.971			
70 75	3.719	3·649	3·582	70 75	4·313	4.226	4.141			
70 80	2.963	2·915	2·869	70 80	3·427	3.367	3.310			
70 85	2.276	2·245	2·215	70 85	2·549	2.512	2.476			
70 90	1.676	1·657	1·638	70 90	1·806	1.785	1.764			
70 95	1.011	1.002	·994	70 95	1.165	1 •1 54	1·144			
75 75	3.215	3.161	3·108	75 75	3.671	3 ·604	3·539			
75 80	2.625	2.586	2·548	75 80	2.997	2 •949	2·903			
75 85	2.063	2.036	2·010	75 85	2.287	2 • 256	2·226			
75 90	1.551	1.534	1·518	75 90	1.657	1 •639	1·620			
75 95	·958	·950	·942	75 95	1.094	1.084	1.075			
80 80	2·199	2·169	2·141	80 80	2.523	2.486	2.451			
80 85	1·773	1·752	1·732	80 85	1.985	1.960	1.936			
80 90	1·367	1·353	1·340	80 90	1.478	1.462	1.447			
80 95	·872	·865	·858	80 95	1.004	.995	-987			
85 85	1 •469	1·453	1.438	85 85	1.617	1 · 599	1.581			
85 90	1 •164	1·153	1.143	85 90	1.243	1 · 231	1.219			
85 95	•772	·766	.760	85 95	.877	· 870	.863			
90 90	•949	·941	.932	90 90	.988	· 979	.970			
90 95	•655	·651	.646	90 95	.725	· 719	.714			
95 95	•485	·482	.478	95 95	.557	· 554	.550			

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Value of	an Annuity	y for the 3	Ioint Cont	inuance of	Two Lives	accordin	g to the
GOVER	NMENT	EXPERIE	NCE TAB	LE, 1883.	MALE	AND FEI	MALE
F	EMALE TH	E ELDER		]	MALE THE	E ELDER	
Ages	2½%	3 %	$3\frac{1}{2}\%$	Ages	<b>2</b> ¹ / ₂ %	3 %	$3\frac{1}{2}\%$
M. F. 20 20 20 25 20 30 20 35 20 40	18·580 18·124 17·568 16·890 16·067	17 ·235 16 ·848 16 ·375 15 ·797 15 ·087	16·047 15·717 15·313 14·817 14·202	F. M. 20 20 20 25 20 30 20 35 20 40	18·580 17·887 17·114 16·258 15·311	17 235 16 638 15 97 1 15 229 14 402	16.047 15.530 14.952 14.304 13.579
20 45	15.066	14·211	13.434	20 45	14.263	13.479	12·763
20 50	13.842	13·122	12.463	20 50	13.092	12.435	11·831
20 55	12.436	11·854	11.316	20 55	11.761	11.233	10·743
20 60	10.880	10·431	10.012	20 60	10.207	9.806	9·431
20 65	9.129	8·803	8.497	20 65	8.373	8.091	7·825
20 70	7·370	7·149	6·938	20 70	6.694	6·503	6·321
20 75	5·662	5·521	5·387	20 75	5.209	5·086	4·968
20 80	4·218	4·133	4·051	20 80	3.872	3·797	3·725
20 85	2·977	2·929	2·883	20 85	2.809	2·765	2·722
20 90	2·028	2·002	1·977	20 90	1.969	1·945	1·921
20 95	1 ·261	1·249	1 •238	20 95	1 · 129	1 • 1 19	1·110
25 25	17 ·497	16·304	15 •242	25 25	17 ·497	16 • 304	15·242
25 30	17 ·014	15·890	14 •886	25 30	16 ·790	15 • 689	14·705
25 35	16 •411	15·372	14 •439	25 35	15 ·993	14 • 995	14·098
25 40	15 ·659	14·721	13 •873	25 40	15 ·097	14 • 211	13·408
25 45	14.726	13.903	13.154	25 45	14.093	13·324	12.623
25 50	13.566	12.870	12.232	25 50	12.959	12·313	11.719
25 55	12.221	11.655	11.131	25 55	11.659	11·139	10.655
25 60	10.719	10.281	9.871	25 60	10.133	9·736	9.365
25 65	9.016	8.697	8.396	25 65	8.322	8·043	7.779
25 70	7 ·296	7.078	6.871	25 70	6.660	6·471	6·291
25 75	5 ·6 16	5.477	5.344	25 75	5.187	5·065	4·948
25 80	4 · 190	4.106	4.025	25 80	3.859	3·785	3·713
25 85	2 ·962	2.915	2.869	25 85	2.801	2·758	2·715
25 90	2 ·020	1.995	1.970	25 90	1.965	1·941	1·918
25 95	1 •257	1 • 246	1 •234	25 95	1.128	1·118	1·108
30 30	16 • 383	15 • 337	14 •399	30 30	16.383	15·337	14·399
30 35	15 • 864	14 • 888	14 •008	30 35	15.660	14·704	13·842
30 40	15 • 197	14 • 307	13 •501	30 40	14.833	13·976	13·199
30 45	14 • 344	13 • 557	12 •840	30 45	13.887	13·139	12·456
30 50	13.259	12.589	11.973	30 50	12.802	12·169	11.588
30 55	11.981	11.433	10.925	30 55	11.542	11·030	10.555
30 60	10.539	10.112	9.714	30 60	10.049	9·658	9.292
30 65	8.889	8.577	8.283	30 65	8.266	7·990	7.729
30 70	<b>7.</b> 212	6.998	6.794	30 70	6.623	6·435	6.257
30 75	5·564	5.427	5·296	30 75	5·164	5.043	4.926
30 80	4·160	4.077	3·996	30 80	3·845	3.771	3.700
30 85	2·945	2.898	2·853	30 85	2·793	2.750	2.708
30 90	2·011	1.986	1·961	30 90	1·961	1.937	1.913
30 95	1·253	1.242	1·231	30 95	1·126	1.116	1.106

GOVER	NMENT	EXPERI	ENCE TA	BLE, 1883.	MALE	AND FE	MALE
F	EMALE TH	HE ELDER			MALE TH	E ELDER	
Ages	<b>2</b> ¹ / ₂ %	<b>3</b> %	3 ¹ / ₂ %	Ages	$2\frac{1}{2}\%$	3 %	3 ¹ / ₂ %
M. F. 35 35 35 40 35 45 35 50 35 55	15·229 14·659 13·904 12·909 11·711	14·327 13·827 13·159 12·269 11·183	13·511 13·071 12·479 11·680 10·694	F. M. 35 35 35 40 35 45 35 50 35 55	15·229 14·488 13·621 12·603 11·399	14·327 13·671 12·901 11·989 10·898	13.511 12.928 12.242 11.423 10.433
35 60	10·338	9·924	9.537	35 60	9·950	9·566	9·206
35 65	8·747	8·443	8.156	35 65	8·201	7·929	7·671
35 70	7·117	6·907	6.708	35 70	6·582	6·396	6·219
35 75	5·505	5·370	5.241	35 75	5·138	5·018	4·902
35 80	4·125	4·043	3.964	35 80	3·830	3·757	3·686
35 85	2.926	2.880	2.835	35 85	2·784	2·741	2.699
35 90	2.001	1.976	1.951	35 90	1·956	1·932	1.909
35 95	1.249	1.237	1.226	35 95	1·124	1·114	1.104
40 40	14.022	13.258	12.562	40 40	14·022	13·258	12.562
40 45	13.379	12.687	12.052	40 45	13·256	12·574	11.949
40 50	12.497	11.893	11.337	40 50	12.331	11.742	11.199
40 55	11.399	10.895	10.427	40 55	11.205	10.721	10.270
40 60	10.109	9.710	9.337	40 60	9.820	9.445	9.093
40 65	8.587	8.292	8.013	40 65	8.119	7.852	7.598
40 70	7.010	6.806	6.611	40 70	6.531	6.348	6.174
40 75	5°438	5·306	5·180	40 75	5·108	4·989	4·875
40 80	4°085	4·004	3·926	40 80	3·813	3·740	3·669
40 85	2°904	2·858	2·814	40 85	2·775	2·732	2·690
40 90	1°989	1·965	1·940	40 90	1·951	1·927	1·903
40 95	1°244	1·232	1·221	40 95	1·122	1·112	1·102
45 45	12.736	12·108	11.529	45 45	12.736	12·108	11.529
45 50	11.988	11·430	10.914	45 50	11.932	11·381	10.871
45 55	11.017	10·544	10.103	45 55	10.918	10·458	10.028
45 60	9.837	9·457	9.101	45 60	9.627	9·265	8.926
45 65	8.402	8·117	7.849	45 65	7.999	7·739	7.493
45 70	6.889	6.691	6·502	45 70	6·460	6·280	6·109
45 75	5.363	5.234	5·110	45 75	5·067	4·950	4·837
45 80	4.040	3.961	3·884	45 80	3·791	3·718	3·649
45 85	2.879	2.834	2·790	45 85	2·763	2·720	2·679
45 90	1.976	1.952	1·927	45 90	1·945	1·921	1·898
45 95	1 •238	1 •226	1 • 215	45 95	1 • 1 19	1.110	1·100
50 50	11 •331	10 •833	10 • 370	50 50	11 • 331	10.833	10·370
50 55	10 •516	10 •084	9 • 681	50 55	10 • 465	10.040	9·643
50 60	9 •482	9 •127	8 • 795	50 60	9 • 309	8.970	8·651
50 65	8 •169	7 •899	7 • 643	50 65	7 • 79 <b>5</b>	7.546	7·311
50 70	6 •744	6·553	6·370	50 70	6·332	6 · 1 59	5·994
50 75	5 •276	5·151	5·030	50 75	4·992	4 ·878	4·768
50 80	3 •990	3·912	3·837	50 80	3·749	3 ·678	3·609
50 85	2 •851	2·806	2·763	50 85	2·740	2 ·698	2·658
50 90	1 •961	1·937	1·913	50 90	1·934	1 ·910	1·887

#### Value of an Annuity for the Joint Continuance of Two Lives according to the GOVERNMENT EXPERIENCE TABLE, 1883. MALE AND FEMALE

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Value of	an Annuity	y for the J	oint Conti	nuance of	Two Lives	according	g to the
GOVE	RNMENT	EXPERIE	NCE TAE	LE, 1883.	MALE		MALE
1	FEMALE TH	E ELDER		I	MALE THE	ELDER	
Ages	$2\frac{1}{2}\%$	3 %	$3\frac{1}{2}\%$	Ages	$2rac{1}{2}\%$	3 %	$3\frac{1}{2}\%$
M. F. 50 95 55 55 55 60 55 65 55 70	1 •231 9 •825 8 •974 7 •830 6 •539	1 ·220 9 ·447 8 ·656 7 ·582 6 ·358	1 · 208 9 · 093 8 · 356 7 · 346 6 · 186	F. М. 50 95 55 55 55 60 55 65 55 70	1 · 1 16 9 · 825 8 · 845 7 · 487 6 · 1 38	1·106 9·447 8·536 7·256 5·974	1.097 9.093 8.245 7.037 5.817
55 75	5·161	5°040	4·925	55 75	4 ^{.8} 73	4·763	4.658
55 80	3·927	3°851	3·778	55 80	3 ^{.6} 79	3·610	3.544
55 85	2·818	2°774	2·732	55 85	2 ^{.700}	2·659	2.619
55 90	1·944	1°920	1·896	55 90	1 [.] 912	1·888	1.866
55 95	1·223	1°212	1·201	55 95	1 [.] 106	1·097	1.087
60 60	8·201	7 •934	7·681	60 60	8·201	7 ·934	7·681
60 65	7·279	7 •063	6·857	60 65	7· <b>0</b> 49	6 ·843	6·647
60 70	6·182	6 •020	5·866	60 70	5·858	5 ·707	5·564
60 75	4·955	4 •844	4·737	60 75	4·706	4 ·603	4·504
60 80	3·818	3 •747	3·678	60 80	3·586	3 · 520	3·457
60 85	2·766	2·724	2·683	60 85	2·651	2.611	2·572
60 90	1·920	1·897	1·874	60 90	1·887	1.864	1·842
60 95	1·214	1·203	1·192	60 95	1·098	1.088	1·079
65 65	6·374	6·202	6·038	65 65	6·374	6.202	6·038
65 70	5·528	5·394	5·266	65 70	5·394	5.264	5·140
65 75	4·524	4·428	4 · 336	65 75	4·408	4·316	4·228
65 80	3·554	3·491	3 · 429	65 80	3·408	3·348	3·289
65 85	2·619	2·581	2 · 543	65 85	2·549	2·511	2·475
65 90	1·844	1·822	1 · 800	65 90	1·832	1·810	1·789
65 95	1·182	1·171	1 · 161	65 95	1·076	1·066	1·057
70 70	4.781	4.675	4·574	70 70	4.781	4.675	4·574
70 75	4.001	3.923	3·848	70 75	3.995	3.918	3·843
70 80	3.213	3.159	3·107	70 80	3.152	3.100	3·049
70 85	2.415	2.381	2·348	70 85	2.399	2.366	2·333
70 90	1.727	1.707	1·688	70 90	1.751	1.731	1·711
70 95	1 ·125	1.115	1·105	70 95	1.044	1.035	1.027
75 75	3 ·430	3.370	3·311	75 75	3.430	3.370	3.311
75 80	2 ·829	2.785	2·742	75 80	2.774	2.731	2.690
75 85	2 ·181	2.152	2·124	75 85	2.160	2.132	2.104
75 90	1 ·595	1.577	1·560	75 90	1.610	1.592	1.575
75 95	1 °063	1.054	1.045	75 95	•984	·976	·968
80 80	2 °352	2.320	2.288	80 80	2•352	2·320	2·288
80 85	1 °868	1.845	1.823	80 85	1•882	1·859	1·837
80 90	1 °402	1.388	1.373	80 90	1•440	1·425	1·410
80 95	°962	.954	.946	80 95	•908	·900	·893
85 85	1.540	1 • 524	1·507	85 85	1·540	1 • 524	1.507
85 90	1.191	1 • 179	1·168	85 90	1·215	1 • 203	1.192
85 95	.846	• 839	·832	85 95	·799	• 793	.787
90 90	.968	• 960	·951	90 90	·968	• 960	.951
90 95	.712	• 707	·702	90 95	·666	• 661	.657
95 95	.519	• 515	·512	95 95	·519	• 515	.512

Value	of an Annu INSTITU	ity for the JTE OF A	Joint Conti CTUARIES	inuance HEAL	of Two Liv THY MAL	ves accordi ES TABLE	ng to the
Ages	3 %	$3\frac{1}{2}\%$	<b>4</b> %	Ages	3 %	$3\frac{1}{2}\%$	<b>4</b> %
10 10	21 0079	19·3289	17.8656	20 60	9.6503	9·2849	8·9422
10 15	20 4046	18·8209	17.4348	20 65	8.0149	7·7544	7·5079
10 20	19 6575	18·1842	16.8879	20 70	6.3944	6·2197	6·0531
10 25	18 9794	17·6168	16.4105	20 75	4.8992	4·7883	4·6817
10 30	18 1217	16·8869	15.7863	20 80	3.6458	3·5784	3·5132
10 35	17 · 1325	16.0360	15.0513	20 85	2·6828	2·6429	2·6042
10 40	15 · 9913	15.0410	14.1806	20 90	1·7153	1·6974	1·6799
10 45	14 · 6570	13.8586	13.1296	20 95	·4122	·4099	·4076
10 50	13 · 1800	12.5312	11.9335	25 25	17·5703	16·3949	15·3455
10 55	11 · 5676	11.0611	10.5905	25 30	16 <b>·9</b> 261	15·8382	14·8621
10 60	9·8667	9·4891	9·1350	25 35	16 · 1 390	15·1537	14·2645
10 65	8·1707	7·9025	7·6489	25 40	15 · 1822	14·3135	13·5241
10 70	6·4997	6·3206	6·1498	25 45	14 · 01 30	13·2723	12·5945
10 75	4·9661	4·8528	4·7440	25 50	12 · 6787	12·0695	11·5075
10 80	3·6859	3·6173	3·5509	25 55	11 · 1886	10·7083	10·2615
10 85	2·7056	2.6652	2·6259	25 60	9·5902	9·229 <b>1</b>	8·8904
10 90	1·7242	1.7062	1·6885	25 65	7·9774	7·7191	7·4748
10 95	·4129	.4107	·4084	25 70	6·3726	6·1990	6·0334
15 15	19·8661	18.3635	17·0435	25 75	4·8875	4·7771	4·6710
15 20	19·1866	17.7798	16·5386	25 80	3·6400	3·5728	3·5078
15 25	18·5708	17·2617	16·1006	25 85	2.6801	2·6404	2.6017
15 30	17·7738	16·5811	15·5163	25 90	1.7145	1·6967	1.6792
15 35	16·8405	15·7762	14·8192	25 95	.4121	·4098	.4075
15 40	15·7501	14·8240	13·9848	30 30	16.3734	15·3561	14.4399
15 45	14·4623	13·6816	12·9684	30 35	15.6810	14·7501	13.9077
15 50	13·0271	12·3908	11.8045	30 40	14.8162	13.9872	13.2324
15 55	11·4524	10·9544	10.4915	30 45	13.7313	13.0182	12.3645
15 60	9·7844	9·4122	9.0633	30 50	12.4690	11.8779	11.3320
15 65	8·1160	7·8512	7.6007	30 55	11.0378	10.5688	10.1322
15 70	6·4676	6·2903	6.1213	30 60	9.4855	9.1311	8.7984
15 75	4·9502	4·8378	4·7298	30 65	7·9071	7.6525	7:4117
15 80	3·6801	3·6118	3·5459	30 70	6·3275	6.1559	5:9922
15 85	2·7055	2·6652	2·6260	30 75	4·8598	4.7503	4:6452
15 90	1·7272	1·7092	1·6915	30 80	3·6234	3.5567	3:4922
15 95	·4138	·4115	·4093	30 85	2·6705	2.6310	2:5925
20 20	18·5817	17·2554	16.0809	30 90	1.7102	1.6925	1.6750
20 25	18·0385	16·7952	15.6891	30 95	.4115	.4092	.4070
20 30	17·3149	16·1739	15.1533	35 35	15.0950	14.2329	13.4496
20 35	16·4510	15·4263	14.5035	35 40	14.3405	13.5632	12.8535
20 40	15·4240	14·5274	13.7141	35 45	13.3625	12.6859	12.0644
20 45	14·1936	13:4344	12·7402	35 50	12·1954	11.6285	11·1041
20 50	12·8092	12:1880	11·6153	35 55	10·8436	10.3896	9·9665
20 55	11·2791	10:7916	10·3381	35 60	9·3536	9.0080	8·6833

Value	Value of an Annuity for the Joint Continuance of Two Lives according to the INSTITUTE OF ACTUARIES HEALTHY MALES TABLE								
Ages	<b>3</b> %	<b>3</b> ½ %	<b>4</b> %	Ages	3 %	$3\frac{1}{2}\%$	<b>4</b> %		
35 65	7.8211	7·5714	7 ·3350	55 70	5.6627	5.5216	5·3865		
35 70	6.2742	6·1050	5 ·9437	55 75	4.4616	4.3673	4·2764		
35 75	4.8279	4·7197	4 ·61 57	55 80	3.3947	3.3349	3·2770		
35 80	3.6051	3·5389	3 ·4749	55 85	2.5429	2.5063	2·4706		
35 85	2.6600	2·6207	2 ·5825	55 90	1.6568	1.6398	1·6231		
35 90	1.7058	1.6881	1.6707	55 95	·4051	·4029	·4007		
35 95	.4110	.4087	.4065	60 60	7·1988	6·9834	6·7787		
40 40	13.7103	12.9996	12.3479	60 65	6·3213	6·1504	5·9872		
40 45	12.8622	12.2343	11.6557	60 70	5·3013	5·1755	5·0548		
40 50	11.8177	11.2841	10.7894	60 75	4·2332	4·1469	4·0638		
40 55	10·5734	10·1406	9°7366	60 80	3·2576	3·2018	3·1476		
40 60	9·1705	8·8373	8°5241	60 85	2·4634	2·4285	2·3945		
40 65	7·7034	7·4605	7°2304	60 90	1·6224	1·6059	1·5897		
40 70	6·2029	6·0372	5°8790	60 95	·4010	·3987	·3965		
40 75	4·7868	4·6802	4°5777	65 65	5·6519	5·5115	5·3771		
40 80	3 · 5821	3·5166	3 4533	65 70	4·8312	4·7242	4.6213		
40 85	2 · 6476	2·6085	2 5705	65 75	3·9266	3·8507	3.7775		
40 90	1 · 7005	1·6828	1 6655	65 80	3·0687	3·0181	2.9690		
40 95	· 4103	·4080	4058	65 85	2·3514	2·3190	2.2873		
45 45	12 · 1619	11·5979	1 1 0760	65 90	1·5719	1·5561	1.5406		
45 50	11.2685	10.7807	10·3270	65 95	·3944	·3922	·3901		
45 55	10.1663	9.7638	9·3873	70 70	4·2226	4·1378	4·0560		
45 60	8.8855	8.5709	8·2747	70 75	3·5095	3·4470	3·3865		
45 65	7.5145	7.2821	7·0618	70 80	2·8014	2·7580	2·7159		
45 70	6.0851	5.9249	5·7719	70 85	2·1880	2·1591	2·1309		
45 75	4.7171	4.6132	4·5132	70 90	1 ·4989	1·4841	1.4696		
45 80	3.5425	3.4782	3·4160	70 95	·3854	·3833	.3812		
45 85	2.6257	2.5872	2·5497	75 75	2 ·9876	2·9395	2.8928		
45 90	1.6917	1.6742	1·6570	75 80	2 ·4424	2·4077	2.3739		
45 95	.4094	.4071	·4049	75 85	1 ·9508	1·9265	1.9028		
50 50	10 • 5428	10·1123	9·7103	75 90	1 •3791	1·3659	1 •3530		
50 55	9 • 6109	9·2481	8·9078	75 95	•3684	·3663	•3643		
50 60	8 • 4864	8·1970	7·9240	80 80	•2 •0488	2·0225	1 •9969		
50 65	7 • 2447	7·0270	6·8204	80 85	1 •6761	1·6569	1 •6381		
50 70	5 • 9148	5·7624	5·6167	80 90	1 •2319	1·2206	1 •2096		
50 75	4.6152	4·5152	4·4189	80 95	·3467	·3448	·3429		
50 80	3.4839	3·4214	3·3609	85 85	1·4025	1·3877	1·3732		
50 85	2.5929	2·5551	2·5183	85 90	1·0676	1·0583	1·0491		
50 90	1.6776	1·6603	1·6433	85 95	·3172	·3155	·3138		
50 95	.4076	·4053	·4031	90 90	·8693	·8625	·8557		
55 55 55 60 55 65	8.8676 7.9310 6.8562	8·5546 7·6749 6·6590	8·2598 7·4327 6·4713	90 95 95 95	·2850 ·1321	·2835 ·1314	*2820 *1308		

Ages	<b>3</b> %	Ages	<b>3</b> %	Ages	<b>3</b> %
15 15 15 20	·5273 ·5439	30 55 30 60	·6991 ·7269 ·7787	50 75 50 80	·8406 ·8730
15 25 15 30	·5708	30 70	7949 8321	50 90	·9218
15 40	·6080	30 80	·8681	55 55	.7471
15 45	•6305	30 85	•8986	55 60	•7644
15 50	•6563	30 90	•9205	55 65	•7864
15 55	•6840	30 95	•9639	55 70	•8138
15 65 15 70 15 75	7496 7884 8278	35 35 35 40 35 45 35 50	•6443 •6615 •6822	55 75 55 80 55 85 55 90	8750 9025
15 80	·8654	35 55	·7049	55 95	·9641
15 85	·8970	35 60	·7312	60 60	·7785
20 20 20 25 20 30 20 35 20 40	•5592 •5706 •5839 •5997 •6186	35 65 35 70 35 75 35 80 25 85	•7618 •7970 •8334 •8688 •8000	60 65 60 70 60 75 60 80 60 85	•7970 •8212 •8489 •8778
20 45	•6398	35 90	•9207	60 90	·9231
20 50	•6644	35 95	•9639	60 95	·9641
20 55	•6908	40 40	•6574	65 65	·8115
20 60	•7205	40 45	•6727	65 70	·8316
20 65	·7541	40 50	•6915	65 75	*8556
20 70	·7918	40 55	•7125	65 80	*8817
20 75	·8302	40 60	•7371	65 85	*9061
20 85	*8980	40 70	·7999	65 95	'9642
20 90	*9202		·8353	70 70	'8468
25 25	•5811	40 80	-8698	70 75	*8660
25 30	•5932	40 85	-8996	70 80	*8881
25 35	•6079	40 90	-9210	70 85	*9098
25 40	•6256	40 95	-9640	70 90	*9259
25 45	•6457	45 45	·6861	70 95	*9643
25 50		45 50	·7028	75 75	*8802
25 55	*6946	45 55	•7216	75 80	*8973
25 60	*7234	45 60	•7442	75 85	*9154
25 65	*7562	45 65	•7713	75 90	*9289
25 70	*7932	45 70	•8034	75 95	*9645
25 75	-8311	45 75	•8375	80 80	•9 <b>091</b>
25 80	-8675	45 80	•8711	80 85	• <b>9230</b>
25 85	-8983	45 85	•9003	80 90	•9330
25 90	-9204	45 90	•9213	80 95	•9648
25 95	·9639	45 95	·9640	85 85 85 00	·9327
30 35	·6175	50 55 50 60	7334	85 95	·9654
30 45	•6527	50 65	*7783	90 95	·9657
Ages	3 %	Ages	<b>3</b> %	Ages	<b>3</b> %
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15 15 15 20	•4202 •4343	30 55 30 60	•6479 •6933	50 75 50 80	•8246 •8528
15 25	•4526	30 65	.7313	50 85	·8823
15 30	4739	30 70	.7768	50 90	*9020
15 35	-4903	30 75	-8190	50 95	-8943
15 40	5238	30 80	*8495	55 55	.7057
-5 45	.5884	30 00	.0004	55 65	*7606
15 55	.6351	30 95	·8931	55 70	.7956
15 60	·6839	35 35	5421	55 75	·8307
15 65	*7245	35 40	\$617	55 80	.8567
15 70	·7723	35 45	·5820	55 85	'ðð40
15 80	.8475	35 55	.6528	55 95	-8959
15 85	8792	35 60	·6968	60 60	7584
20 20	•4468	35 65	.7338	60 65	.7790
20 25	·4635	35 70	*7784 *8200	00 70 60 75	*8008*
20 30	4031	35 /5	-8501	60 80	·8622
20 40	.5302	35 85	-8807	60 85	•8890
20 45	·5571	35 90	.9009	60 90	·9068
20 50	.5924	35 95	-8933	60 95	.8993
20 55	-0300 -6860	40 40	·5702	65 70	·7948 ·8106
20 65	.7259	40 50	.6227	65 75	•8469
20 70	.7731	40 55	·6604	65 80	·8677
20 75	6618	40 60	.7022	05 85 65 00	•8917
20 85	*8793	40 05	.7811	65 05	*9088
20 90	.8999	40 75	.8219	70 70	.8382
25 25	·4782	40 80	.8514	70 75	•8601
25 30	4958	40 85	-8816	70 80	·8769
25 35	-5140	40 90	·8040	70 05	*0120
25 45	•5644	45 45	6105	70 95	.9054
25 50	•5983	45 50	·6336	75 75	·8768
25 55	.6425	45 55	•6680	75 80	-8896
25 60	.6893	45 00	•7009 •7405	75 85	·9063
25 05 25 70	1203	45 70	*7826	75 95	.9128
25 75	.8176	45 75	·8226	80 80	8992
25 80	·8484	45 80	·8518	80 85	·9128
25 85	·8797	45 85	.8819	80 90	·9246
25 90 25 05	·9002	45 90	·9017	85 85	·9183
~J 7J 20 20	-5111	50 50	.6522	85 00	'0320
30 35	•5279	50 55	•6818	85 95	·9269
30 40	.5500	50 60	•7166	90 90	.9392
30 45	•5733	50 65	•7469	90 95	9354

For explanation see pp. 29-31

Ages3 % $3\frac{1}{2}$ %4 %Ages3 % $3\frac{1}{2}$ %4 9101035900'31256'2743920 70'78463'7556'728731015'37657'32974'2909620 75'82818'80426'7814102039833'31125'3120020 80'86469'84518'82641025'41808'3745'3303620 85'89273'87681'861331030'44306'39514'3543720 90'92091'90878'869531035'50511'45756'4161225 25'45912'41177'311331045'54397'49754'4565525 30'47788'43060'38991055'63396'59214'5025125 50'60159'55804'51891060'68350'64530'6101925 45'56273'51737'477111065'73289'69895'673525 50'60159'55804'51881075'82623'82268'7790725 60'69155'65409'60407'568811095'95230'9458325 80'86486'84337'477811095'95230'9458325 90'92294'90881'866931515'37324'3250'35251'67499'60407'568941095'95230'94583'3	Single F	ayment to the INSTI	o secure £ TUTE OF	1 at the I ACTUAR	Death of eit IES HEAL	her of Two THY MAI	Lives ac LES TABL	cordi <b>ng</b> E
Io         io         is         is<	Ages	<b>3</b> %	$3\frac{1}{2}$ %	<b>4</b> %	Ages	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %
10       15       3767       32974       29996       20       75       82818       80426       7814         10       20       39833       33132       31200       20       80       86469       84518       86431         10       25       41808       37045       33036       20       85       89273       87681       8669         10       35       47187       442391       38263       20       90       92091       90878       8969         10       40       554397       49754       445655       25       30       47788       43060       3899         10       55       54397       49754       45651       25       50081       45375       4129         10       55       54397       49744       5552       25       500519       55804       51737       4129         10       55       73285       96985       65735       25       50       60159       55804       5184       51735       64499       60407       56849         10       95       89267       87666       86054       25       70       78527       7515       67493 <td< td=""><td>10 10</td><td>·35900</td><td>.31256</td><td>*27439</td><td>20 70</td><td>•78463</td><td>.75586</td><td>.72872</td></td<>	10 10	·35900	.31256	*27439	20 70	•78463	.75586	.72872
10         20         39833         35125         31200         20         80         86469         84318         8264           10         25         441808         37045         33036         20         85         89273         87681         86133           10         30         44306         39514         35437         20         90         92091         90878         89693           10         35         47187         42391         38263         20         95887         95327         94581           10         45         54397         49754         45655         25         30         47788         43060         38991           10         55         63396         59214         55421         25         5007         7177         47717         44133           10         60         68350         64530         61019         25         45         56273         51737         47717           10         65         75245         72500         25         64499         66467         75668           10         75         8263         80264         77907         25         65         73852         70515	10 15	.37657	.32974	•29096	20 75	·82818	·80426	.78147
10       25       '41808       '37045       '33036       20       85       '89273       '87681       '86133         10       30       '44186       '3914       '35437       20       90       '92091       '90878       '86691         10       35       '47187       '42391       '38263       20       95       '95887       '95232       '94588         10       45       '54397       '49754       '45655       25       30       '47788       '43060       '38991         10       50       '56396       '54243       '50255       25       '56073       '51737       '47711         10       65       '73289       '69895       '66735       25       '56073       '51737       '47711         10       65       '73289       '69895       '66735       25       '560449       '51894         10       70       '78156       '75245       '72500       25       '64499       '66407       '56667         10       80       *86352       *84386       *82496       25       '73852       '7515       '67404         10       90       '92055       '95845       95433       25       '8	10 20	39833	.35125	•31200	20 80	•86469	·84518	82641
IO         30         '44306         '39514         '35437         20         90         '92091         '90878         '8869           IO         35         '47187         '42391         '38263         20         95         '95887         '95232         '9458           IO         40         '50511         '45756         '41612         '25         '45912         '41177         '3713           IO         55         '54397         '49754         '45525         '25         '30         '7788         '43060         '3899           IO         55         '63396         '59214         '55421         '25 40         '52868         '48216         '44137           IO         65         '73259         '69895         '66735         '55         '64499         '60407         '5668           IO         75         *82623         '80208         '77907         '25         '65         '73852         '7515         '67400           IO         85         89207         '87606         86054         '25         '70         '82527         '75666         '72944           IO         90         '92055         '90849         '32543         '82646	10 25	41808	-37045	·33036	20 85	•89273	·87681	·86138
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10 30	·44306	·39514	·35437	20 90	·92091	·9 <b>0</b> 878	•89693
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	10 35	.47187	·42391	·38263	20 95	.95887	·95232	·94586
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10 40	.20211	.45756	41612	25 25	45912	41177	.37132
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10 45	.54397	*49754	45655	25 30	47788	43060	•38991
10       55       63396       59214       55421       25       40       52868       48216       4413         10       60       68350       64530       61019       25       45       56273       51737       47713         10       65       73289       69895       66735       25       50       60159       55804       51899         10       70       78166       75245       772500       25       55       64499       60407       56680         10       80       86352       84386       82496       25       65       773852       77515       67400         10       90       92065       90849       89659       25       75       82821       80464       78183         10       90       92065       90849       32543       25       80       86486       84537       82663         15       15       39225       34520       30601       25       85881       87690       86144         15       20       41205       36494       322843       25       90       92094       90881       82663         15       30       45319       40548	10 50	•58699	54243	\$0255	25 35	·50081	45375	41290
10         60         68350         64530         61019         25         45         56273         51737         44771           10         65         73289         69895         66735         25         50         60159         55804         51894           10         75         82623         84386         82496         25         65         73852         770515         67400           10         85         89207         87606         86054         25         70         78522         75566         72944           10         90         92065         90849         89659         25         75         82822         80464         78184           10         95         95885         95230         94583         25         80         86486         84537         82667           15         39225         34520         30601         25         85         89281         87690         86143           15         92094         90881         89699         189692         19533         19458         146739         42667           15         44998         44205         30475         30         30         49319         45259<	10 55	•63396	.59214	.55421	25 40	•52868	•48216	.44137
1065 $73289$ $69895$ $66735$ 2550 $60159$ $55864$ $51892$ 1075 $82623$ $80208$ $77907$ 2550 $66499$ $60407$ $56680$ 1085 $82623$ $80208$ $77907$ 2550 $66155$ $65409$ $61660$ 1080 $86352$ $84386$ $82496$ 2565 $73852$ $77515$ $67402$ 1085 $89207$ $87606$ $86054$ 2570 $78527$ $775656$ $72944$ 1090 $922055$ $99849$ $89659$ 25 $75$ $82852$ $80464$ $778184$ 1095 $95885$ $95230$ $94583$ 2580 $86486$ $84537$ $82662$ 15 $13$ $92225$ $34520$ $30601$ 25 $85$ $89281$ $87690$ $86144$ 15 $22$ $44298$ $32243$ $2590$ $92094$ $90881$ $89692$ 15 $20$ $41205$ $36494$ $32543$ $259$ $95887$ $95233$ $94586$ 15 $30$ $45319$ $40548$ $36475$ $30$ $30$ $49398$ $44600$ $440611$ 15 $35$ $48038$ $43270$ $39156$ $30$ $35$ $51415$ $46739$ $42662$ 15 $50$ $59145$ $54718$ $50751$ $30$ $50$ $60770$ $56452$ $52560$ 15 $55$ $63731$ $59575$ $55801$ $30$ $55$ </td <td>10 <b>6</b>0</td> <td>*68350</td> <td>.64530</td> <td>·61019</td> <td>25 45</td> <td>.56273</td> <td>.51737</td> <td>47713</td>	10 <b>6</b> 0	*68350	.64530	·61019	25 45	.56273	.51737	47713
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10 65	.73289	•69895	•66735	25 50	.60120	55804	·51894
10       75       82623       80208       77907       25       66       155       65409       61960         10       80       86352       84386       82496       25       65       73852       70515       67402         10       90       92065       99849       89659       25       75       82852       80464       78181         10       95       95885       95230       94583       25       80       86486       84537       82669         15       15       39225       34520       30601       25       85       89281       87600       86144         15       30       445319       40548       36475       30       30       49398       44690       40611         15       35       448038       43270       39156       30       35       51415       46739       42655         15       54965       50353       46275       30       45       57094       52596       48597         15       55       63731       59575       55801       30       55       64939       66879       57183         15       50       68589       64790       61	10 70	.78156	75245	.72500	25 55	.64499	60407	•56686
10         80         :86352         :84386         :82496         25         65         :73852         :70515         :67404           10         85         :89207         :87606         :86054         25         70         :78527         :75656         :72944           10         90         :92065         :90849         :89659         25         :75         :82852         :80464         :78184           10         95         :95885         :95230         :94583         :25         :80         :86486         :84337         :82690           15         :30225         :34520         :30601         :25         :89281         :87690         :86141           15         :30         :45319         :40548         :36475         :30         :30         :49398         :44690         :40611           15         :50         :50353         :46275         :30         :45         :57094         :52596         :48597           15         :50         :59145         :54718         :50751         :30         :50         :60707         :56452         :52560           15         :50         :59145         :575471         :50751         :506373	10 75	·82623	80208	•77907	25 60	.69155	65409	·61960
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	10 80	·86352	·84386	82496	25 65	.73852	'70515	•674 <b>0</b> 4
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	10 85	·89207	·87606	·86054	25 70	.78527	.75656	·72948
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	10 90	92065	.90849	·89659	25 75	82852	80464	*78188
1515 $39225$ $34520$ $30601$ 25 $85$ $89281$ $87690$ $8614$ 1520 $41205$ $36494$ $32543$ 2590 $92094$ $90881$ $89692$ 1525 $44298$ $38246$ $34228$ 2595 $95887$ $95233$ $94586$ 1530 $45319$ $40548$ $36475$ 3030 $49398$ $44690$ $40611$ 1535 $44638$ $42275$ 3030 $49398$ $44690$ $40611$ 1535 $48038$ $43270$ $39156$ 3035 $51415$ $46739$ $42663$ 1545 $54965$ $50353$ $46275$ 3045 $57094$ $52596$ $48597$ 1550 $59145$ $54718$ $50751$ 3055 $64939$ $66879$ $57183$ 1550 $59145$ $54718$ $50751$ 3055 $64939$ $66879$ $57183$ 1550 $68589$ $64790$ $61295$ 3060 $69460$ $65741$ $62313$ 1550 $78250$ $77347$ $72610$ 3070 $78658$ $75802$ $73182$ 1580 $82699$ $77962$ $30$ 75 $82933$ $80555$ $78285$ 1580 $8269$ $79762$ $30$ $75$ $82933$ $80555$ $78285$ 1580 $8269$ $79762$ $30$ $75$ $82933$ $80555$ $78282$ <t< td=""><td>10 95</td><td>95885</td><td>95230</td><td>94583</td><td>25 80</td><td>·86486</td><td>.84537</td><td>·82662</td></t<>	10 95	95885	95230	94583	25 80	·86486	.84537	·82662
1520 $41205$ $36494$ $32543$ 2590 $92094$ $90881$ $88669$ 1525 $42998$ $38246$ $34228$ 2595 $95887$ $95233$ $94586$ 1530 $45319$ $40548$ $36475$ 3030 $49398$ $44690$ $40611$ 1535 $448038$ $43270$ $39156$ 3035 $51415$ $46739$ $42663$ 1540 $51214$ $46488$ $42365$ 3040 $53934$ $49319$ $42565$ 1554 $54965$ $50353$ $46275$ 3045 $57094$ $52596$ $48597$ 1550 $59145$ $54718$ $50751$ 3055 $64939$ $66879$ $5718$ 1555 $63731$ $59575$ $55801$ 3055 $64939$ $66879$ $5718$ 1550 $73449$ $70069$ $66920$ 3065 $774057$ $70741$ $67644$ 1570 $78250$ $75347$ $72610$ 3075 $82933$ $80555$ $78287$ 1580 $86639$ $84405$ $82516$ 3080 $86534$ $84591$ $82722$ 1585 $89207$ $87666$ $86054$ 3085 $89309$ $87721$ $86183$ 1590 $92257$ $90839$ $89648$ 3090 $92106$ $90895$ $89711$ 1595 $95882$ $95227$ $94580$ 3095	15 15	39225	34520	.30601	25 85	89281	·87690	·86147
1525 $42998$ $38246$ $34228$ 2595 $95887$ $95233$ $995867$ 1530 $45319$ $40548$ $36475$ 3030 $49398$ $44690$ $40614$ 1535 $448038$ $43270$ $39156$ 3035 $51415$ $46739$ $42663$ 1540 $51214$ $46488$ $42365$ 3040 $53934$ $49319$ $42563$ 1545 $54965$ $50353$ $46275$ 3045 $57094$ $52596$ $48597$ 1555 $63731$ $59575$ $55801$ 3055 $64939$ $66879$ $57183$ 1560 $68589$ $64790$ $61295$ 3060 $69460$ $65741$ $62313$ 1565 $73449$ $70069$ $66920$ 3065 $74057$ $70741$ $67644$ 1570 $78250$ $75347$ $72610$ 3075 $82933$ $80555$ $78287$ 1582 $80259$ $77962$ $3075$ $82933$ $80555$ $78287$ 1585 $89207$ $87666$ $86054$ 3085 $89309$ $87721$ $86183$ 1590 $92257$ $90839$ $89648$ 3090 $92106$ $90895$ $89712$ 1595 $95882$ $95227$ $94586$ $55319$ $50753$ $46775$ 2020 $42966$ $38268$ $34303$ $3535$ $53122$ $48488$ $44242$ <	15 20	41205	.36494	·32543	25 90	·92094	·90881	89695
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15 25	.42998	·38246	•34228	25 95	.95887	.95233	·94586
1535 $\cdot 48038$ $\cdot 43270$ $\cdot 39156$ 3035 $\cdot 51415$ $\cdot 46739$ $\cdot 42662$ 1540 $51214$ $\cdot 46488$ $\cdot 42365$ 3040 $\cdot 53934$ $\cdot 49319$ $\cdot 45256$ 1545 $\cdot 54965$ $\cdot 50353$ $\cdot 46275$ 3045 $\cdot 57094$ $\cdot 52596$ $\cdot 48597$ 1550 $\cdot 59145$ $\cdot 54718$ $\cdot 50751$ 3055 $\cdot 64939$ $\cdot 60879$ $\cdot 57183$ 1550 $\cdot 68589$ $\cdot 64790$ $\cdot 61295$ 3065 $\cdot 69460$ $\cdot 65741$ $\cdot 62312$ 1555 $\cdot 73449$ $\cdot 70069$ $\cdot 66920$ 3065 $\cdot 74057$ $\cdot 70741$ $\cdot 67642$ 1570 $\cdot 78250$ $\cdot 75347$ $\cdot 72610$ 3070 $\cdot 78658$ $\cdot 75802$ $\cdot 73102$ 1575 $\cdot 82669$ $\cdot 80259$ $\cdot 779622$ 3075 $\cdot 82933$ $\cdot 80555$ $\cdot 78282$ 1580 $\cdot 86369$ $\cdot 84405$ $\cdot 82516$ 3080 $\cdot 86534$ $\cdot 84591$ $\cdot 82722$ 1585 $\cdot 89207$ $\cdot 87666$ $\cdot 86054$ 3085 $\cdot 89309$ $\cdot 87721$ $\cdot 86183$ 1590 $\cdot 92057$ $\cdot 98832$ $\cdot 95227$ $\cdot 94580$ $30$ 95 $\cdot 95882$ $\cdot 95235$ $\cdot 94582$ 2020 $\cdot 42966$ $\cdot 38268$ $\cdot 34303$ $35$ $35$ $\cdot 53122$ $\cdot 48488$ $\cdot 44424$ 2020 $\cdot 42966$ $\cdot 38268$ $\cdot 34303$ <t< td=""><td>15 30</td><td>.45319</td><td>.40548</td><td>36475</td><td>30 30</td><td>•49398</td><td>•44690</td><td>40615</td></t<>	15 30	.45319	.40548	36475	30 30	•49398	•44690	40615
1540 $\cdot 51214$ $\cdot 46488$ $\cdot 42365$ 3040 $\cdot 53934$ $\cdot 49319$ $\cdot 45259$ 1545 $\cdot 54965$ $\cdot 50353$ $\cdot 46275$ 3045 $\cdot 57094$ $\cdot 52596$ $\cdot 48597$ 1550 $\cdot 59145$ $\cdot 54718$ $\cdot 507511$ 3050 $\cdot 60770$ $\cdot 56452$ $\cdot 525661$ 1555 $\cdot 63731$ $\cdot 59575$ $\cdot 55801$ 3055 $\cdot 64939$ $\cdot 60879$ $\cdot 52364$ 1550 $\cdot 68589$ $\cdot 64790$ $\cdot 61295$ 3060 $\cdot 66770$ $\cdot 56452$ $\cdot 525661$ 1550 $\cdot 73449$ $\cdot 70069$ $\cdot 66920$ 3065 $\cdot 74057$ $\cdot 70741$ $\cdot 67642$ 1570 $\cdot 78250$ $\cdot 75347$ $\cdot 72610$ 3070 $\cdot 78658$ $\cdot 75802$ $\cdot 73107$ 1575 $\cdot 82669$ $\cdot 80259$ $\cdot 779622$ 3075 $\cdot 82933$ $\cdot 80555$ $\cdot 78287$ 1580 $\cdot 86369$ $\cdot 84405$ $\cdot 82516$ 3080 $\cdot 86534$ $\cdot 84591$ $\cdot 82722$ 1585 $\cdot 89207$ $\cdot 79642$ 3080 $\cdot 86534$ $\cdot 84591$ $\cdot 82722$ 1595 $\cdot 95882$ $\cdot 95227$ $\cdot 94580$ 3095 $\cdot 95889$ $\cdot 95235$ $\cdot 94588$ 2020 $\cdot 42966$ $\cdot 38268$ $\cdot 34303$ 3535 $\cdot 53122$ $\cdot 48488$ $\cdot 44424$ 2025 $\cdot 44548$ $\cdot 39824$ $\cdot 35810$ $\cdot 35139$ $\cdot 50753$ <td< td=""><td>15 35</td><td>48038</td><td>43270</td><td>39156</td><td>30 35</td><td>51415</td><td>•46739</td><td>42662</td></td<>	15 35	48038	43270	39156	30 35	51415	•46739	42662
1545 $54965$ $50353$ $46275$ 3045 $57094$ $52596$ $48597$ 1550 $59145$ $54718$ $50751$ 3050 $60770$ $56452$ $525661$ 1555 $63731$ $59575$ $55801$ 3055 $64939$ $66879$ $57183$ 1560 $68589$ $64790$ $61295$ 3060 $69466$ $65741$ $62312$ 1565 $73449$ $70069$ $66920$ 3065 $74057$ $77411$ $67647$ 1570 $78250$ $75347$ $72610$ 3070 $78658$ $75802$ $73107$ 1575 $82669$ $80259$ $77962$ 3075 $82933$ $80555$ $78287$ 1580 $86369$ $84405$ $82516$ 3080 $86534$ $84591$ $82722$ 1585 $89207$ $87606$ $86054$ 3085 $89309$ $87721$ $86183$ 1590 $92057$ $99839$ $89648$ 3090 $92106$ $99895$ $89711$ 1595 $95882$ $95227$ $94580$ 3095 $53122$ $48488$ $44424$ 2020 $42966$ $38268$ $34303$ 3535 $53122$ $48488$ $44424$ 2022 $44548$ $39824$ $13510$ $3545$ $58168$ $53720$ $49753$ 2035 $49172$ $44453$ $40370$ 3555 $65504$	15 40	.21214	*46488	•42365	30 40	•53934	•49319	45259
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15 45	•54965	.20323	•46275	30 45	•57094	•52596	•48597
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15 50	.59145	.54718	•50751	30 50	·60770	.564.52	52569
15 $60$ $68589$ $64790$ $61295$ $30$ $60$ $69460$ $65741$ $62312$ 15 $65$ $73449$ $70069$ $66920$ $30$ $65$ $774057$ $70741$ $67642$ 15 $70$ $78250$ $775347$ $72610$ $30$ $70$ $78658$ $778057$ $77941$ $67642$ 15 $70$ $78250$ $775347$ $772610$ $30$ $70$ $78658$ $77802$ $773107$ 15 $82669$ $80259$ $77962$ $30$ $75$ $82933$ $80555$ $78285$ 15 $80$ $86659$ $84459$ $82722$ $89309$ $87721$ $86183$ 15 $90$ $92057$ $90839$ $89648$ $30$ $90$ $92106$ $90895$ $89711$ 15 $95$ $95882$ $95227$ $94580$ $30$ $95$ $95889$ $95235$ $94588$ 20 $20$ $42966$ $38268$ $34303$ $35$ $35$ $53122$ $48488$ $44424$ 20 $25$ $44548$ $39824$ $35810$ $35$ $55119$ $507533$ $467172$ 20 $30$ $46656$ $41925$ $37871$ $35$ $45$ $55146$ $53720$ $49752$ 20 $35$ $49172$ $44453$ $40370$ $35$ $55$ $65504$ $61485$ $57821$ 20 $45$ $55747$ $51189$ $47152$ $35$ $60$ $69844$ $66157$ $62756$ 20 $59779$ $55403$ <td< td=""><td>15 <u>5</u>5</td><td>·63731</td><td>.59575</td><td>·55801</td><td>30 55</td><td>•64939</td><td>-60879</td><td>57183</td></td<>	15 <u>5</u> 5	·63731	.59575	·55801	30 55	•64939	-60879	57183
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15,60	•68589	64790	·61295	30 60	·69460	•65741	62313
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15 65	'73449	•70069	•66920	30 65	*74057	·70741	67647
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15 70	.78250	75347	72610	30 70	•78658	.75802	.73107
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<b>1</b> 5 75	*82669	·80259	·77962	30 75	·82933	·80555	·78287
15       85       ·89207       ·87606       ·86054       30       85       ·89309       ·87721       ·86183         15       90       ·92057       ·90839       ·89648       30       90       ·92106       ·90895       ·89711         15       95       ·95882       ·95227       ·94580       30       95       ·95889       ·95235       ·94586         20       22       ·42966       ·38268       ·34303       35       35       ·53122       ·48488       ·44424         20       25       ·44548       ·39824       ·35810       35       40       ·55319       ·50753       ·46717         20       35       ·49172       ·44443       ·40370       35       55       ·58168       ·53720       ·49753         20       35       ·49172       ·44453       ·40370       35       55       ·61567       ·57295       ·53444         20       40       ·52163       ·47493       ·43407       35       55       ·65504       ·61485       ·57821         20       45       ·55747       ·51189       ·47152       35       65       ·64844       ·66157       ·62756         20	15 80	•86369	·84405	·82516	30 80	·86534	·84591	82722
15         90         '92057         '90839         '89648         30         90         '92106         '90895         '89711           15         95         '95882         '95227         '94580         30         95         '95889         '95235         '94588           20         20         '42966         '38268         '34303         35         35         '53122         '48488         '4424           20         25         '44548         '39824         '35810         35         40         '55319         '50753         '46717           20         30         '46656         '41925         '37871         35         45         '58168         '53720         '49752           20         35         '49172         '44453         '40370         35         55         '61567         '57295         '53446           20         40         '52163         '47493         '43407         35         55         '65504         '61485         '57821           20         45         '55747         '51189         '47152         35         60         '69844         '66157         '62756           20         55         '64336         '50126	15 85	*89207	·87606	·86054	30 85	89309	.87721	·86183
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15 90	·92057	·90839	·89648	30 90	92106	·90895	·89711
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15 95	·95882	·95227	·94580	30 95	·95889	·95235	94588
20         25         :44548         :39824         :35810         35         40         :55319         :50753         :46712           20         30         :46656         :41925         :37871         35         45         :58168         :53720         :49752           20         35         :49172         :44453         :40370         35         50         :61567         :57295         :53444           20         40         :52163         :47493         :43407         35         55         :65504         :61485         :57821           20         45         :55747         :51189         :47152         35         65         :69844         :66157         :62756           20         50         :59779         :55403         :51479         35         55         :74308         :71015         :67942           20         50         :64236         :60126         :56391         :35         :70         :74883         :71015         :67942           20         :64236         :60126         :56391         :35         :70         :78813         :75974         :73803           20         :66880         :65221         :61760         :35	20 20	'42966	·38268	•34303	35 35	.53122	·48488	•44424
20         30         :46656         :41925         :37871         35         45         :58168         :53720         :49752           20         35         :49172         :44453         :40370         35         50         :61567         :57295         :53446           20         40         :52163         :47493         :43407         35         55         :65504         :61485         :57821           20         45         :55747         :51189         :47152         35         65         :69844         :66157         :62756           20         50         :59779         :55403         :51479         35         55         :74308         :71015         :67942           20         55         :64236         :60126         :56391         35         :70         :78813         :75974         :73203           20         56         :64236         :60126         :56391         :35         :70         :74813         :75974         :73203           20         :60         :68868         :65221         :61760         :25         :74308         :75974         :73203           20         :68868         :65221         :61760         :2	20 25	44548	39824	.35810	35 40	*55319	50753	46717
20         35         :49172         :44453         :40370         35         :50         :61567         :57295         :53440           20         40         :52163         :47493         :43407         35         :55         :65504         :61485         :57821           20         45         :55747         :51189         :47152         :35         :60         :69844         :66157         :62756           20         50         :59779         :55403         :51479         :35         :65         :74308         :71015         :67944           20         :55         :60126         :56391         :35         :75         :75813         :75974         :73203           20         :68806         :661261         :61261         :75631         :75974         :73203           20         :60168         :61261         :61276         :757         :75813         :75974         :73203           20         :600         :68806         :65221         :61760         :35         :75         :75813         :75974         :73203           20         :66880         :65221         :61760         :75         :75         :75803         :75974         :7580	20 30	•46656	•41925	37871	35 45	·58168	.53720	49752
20         40         ·52163         ·47493         ·43407         35         55         ·65504         ·61485         ·57821           20         45         ·55747         ·51189         ·47152         35         60         ·69844         ·66157         ·62756           20         50         ·59779         ·55403         ·51479         35         65         ·74308         ·71015         ·67942           20         55         ·64236         ·60126         ·56391         35         75         ·78813         ·75974         ·73290           20         60         ·68886         ·661221         ·61766         25         ·55         ·74308         ·75974         ·73290	20 35	49172	44453	·40370	35 50	·Ğ1567	.57295	•53446
20         45         :55747         :51189         :47152         35         60         :69844         :66157         :62756           20         50         :59779         :55403         :51479         35         65         :74308         :71015         :67942           20         55         :64236         :60126         :56391         35         70         :78813         :75974         :73292           20         :66880         :65221         :61760         :25         :75         :78976         :73292           20         :66880         :65221         :61760         :25         :75         :78976         :73292	20 40	-52163	'47493	·43407	35 55	65504	·61485	.57821
<b>20</b> 50 59779 55403 51479 <b>35</b> 65 74308 71015 67942 <b>20</b> 55 64236 60126 56391 <b>35</b> 70 78813 75974 73293 <b>20</b> 60 68880 65221 61760 <b>25</b> 75 82026 86658 78403	20 45	•55747	.51189	47152	35 60	·69844	·66157	·62756
<b>20</b> 55 •64236 •60126 •56391 <b>35</b> 70 •78813 •75974 •73293 <b>20</b> 60 •68980 •65221 •61760 <b>35</b> 75 •83026 •80658 •78403	20 50	.59779	*55403	51479	35 65	74308	.71015	·67942
20 60 68080 65221 61760 25 75 82026 80658 78401	20 55	•64236	60126	56391	35 70	78813	75974	73293
	20 60	•689Šo	·65221	61760	35 75	·8302ŏ	80658	•78401
20 65 73743 70396 67277 35 80 86587 84651 82780	20 65	73743	.70396	·67277	35 80	·86587	·84651	·82789

For explanation see pp. 29-31

Single Payment to secure £1 at the Death of either of Two Lives according to the INSTITUTE OF ACTUARIES HEALTHY MALES TABLE							
Ages	3 %	$3\frac{1}{2}\%$	<b>4</b> %	Ages	<b>3</b> %	$3\frac{1}{2}\%$	4 %
35 85	·89340	•87756	·86220	55 75	•84093	·81850	•79706
35 90	·92119	•90910	·89728	55 80	•87200	·85341	•83550
35 95	·95890	•95236	·94590	55 85	•89681	·88143	•86651
40 40	·57155	•52659	·48661	55 90	•92262	·91073	•89911
40 45	·59625	•55247	·51324	55 95	•95908	·95256	•94613
40 50	·62667	•58460	·54656	60 60	·76120	•73003	•70082
40 55	·66291	•62327	·58705	60 65	·78676	•75820	•73126
40 60	·70377	•66734	·63368	60 70	·81647	•79117	•76712
40 65	·74650	•71390	·68344	60 75	·84758	•82595	•80524
40 70	·79021	•76203	·73542	60 80	·87599	•85791	•84048
40 75	·83145	•80792	·78547	60 85	•89913	·88406	•86944
40 80	·86654	•84727	·82872	60 90	•92362	·91188	•90039
40 85	·89376	•87797	·86267	60 95	•95919	·95270	•94629
40 90	·92135	•90928	·89748	65 65	•80626	·77981	•75472
40 95	·95892	•95239	·94593	65 70	•83016	·80643	•78379
45 45	·61665	•57399	•53553	65 75	•85651	·83597	·81625
45 50	·64267	•60162	•56434	65 80	•88150	·86412	·84734
45 55	·67477	•63601	•60048	65 85	•90239	·88776	·87356
45 60	·71207	•67635	•64328	65 90	•92509	·91356	·90228
45 65	·75201	•71993	•68993	65 95	•95939	·95292	·94653
45 70	·79364	•76583	•73954	70 70	•84789	•82626	•80554
45 75	·83348	•81018	•78795	70 75	•86866	•84962	•83129
45 80	·86770	•84857	•83015	70 80	•88928	•87292	•85708
45 85	·89440	•87870	•86347	70 85	•90715	•89317	•87958
45 90	·92160	•90957	•89781	70 90	•92722	•91600	•90501
45 95	·95895	·95242	·94596	70 95	*95965	·95322	•94688
50 50	·66380	·62423	·58806	75 75	*88386	·86678	•85028
50 55	·69095	·65345	·61893	75 80	*89974	·88477	•87023
50 60	·72370	·68899	·65677	75 85	*91405	·90104	•88835
50 65	·75986	·72856	·69921	75 90	*93071	·91999	•90950
50 70	•79863	·77132	·74551	75 95	·96014	·95380	·94753
50 75	•83645	·81350	·79158	80 80	·91120	·89779	·88473
50 80	•86940	·85049	·83227	80 85	·92206	·91015	·89853
50 85	•89535	·87978	·86468	80 90	·93499	·92491	·91501
50 90	•92201	·91004	·89833	80 95	·96078	·95452	·94835
50 95 55 55 55 60 55 65 55 70	·95900 ·71260 ·73988 ·77118 ·80594	·95248 ·67690 ·70665 ·74100 ·77947	•94603 •64385 •67566 •71264 •75436	85 85 85 90 85 95 90 90 90 95 95 95	·93002 ·93978 ·96164 ·94555 ·96257 ·96703	·91926 ·93040 ·95552 ·93702 ·95660 ·96174	·90872 ·92119 ·94947 ·92863 ·95069 ·95651

Annual Fayment during the Joint Continuance of Two Lives to secure £1 at the First Death according to the INSTITUTE OF ACTUARIES HEALTHY MALES TABLE							
Ages	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %	Ages	3 %	<b>3</b> ¹ / ₂ %	<b>4</b> %
IO IO	•016	·015	·015	30 55	•0 <b>5</b> 4	•0 <b>5</b> 3	°051
IO 20	•019	·018	·017	30 60	•066	•065	°064
10 30 10 40	•023 •030	·022 ·028	·021 ·027	30 70 30 80	·107 ·187	·106 ·186 ·228	·105 ·184
10 50	·063	·062	.090 .000	30 90 35 35 35 40	·033 ·036	-032 -035	335 1031 1034
10 80	·184	·183	·181	35 45	°040	·039	·038
10 90	·338	·336	·333	35 50	°047	·045	·044
15 15	*019	,010	.017	35 55	·055	·054	.053
15 20	*020	610,	.019	35 60	·067	·066	.065
15 30	°024	°023	·022	35 80	·18 <b>8</b>	·186	·184
15 35	°027	°026	·025	35 90	·340	·338	·336
15 40 15 45 15 50	·031 ·036	.029 .034	·028 ·033	40 40 40 45	·039 ·043 ·040	•038 •042 •048	.030 .041 .046
15 55	·051	·050	•049	40 55	·057	·056	•055
15 60	·064	·062	•061	40 60	·069	·068	•067
15 70	·105	·103	•102	40 70	·110	·108	•107
15 80 15 90 20 20	·185 ·338	*183 *336	·181 ·333	40 80 40 90	·189 ·341 ·047	·188 ·339 ·046	•186 •337 •044
20 25 20 30	·023 ·025	·022 ·024	·021 ·023	45 45 45 50 45 55	·052 ·060	·051 ·059	·050 ·058
20 35 20 40 20 45 20 50	·028 ·032 ·037 ·043	-027 -031 -035 -042	·026 ·029 ·034 ·041	45 60 45 70 45 80 45 90	·072 ·112 ·191 ·342 ·078	•071 •111 •189 •340	·069 ·109 ·188 ·338
20 53 20 60 20 70 20 80 20 90	•065 •106 •186 •339	·063 ·105 ·185	·062 ·103 ·183 ·335	50 55 50 60 50 70 50 80	•065 •076 •115 •194	•064 •075 •114 •192	·062 ·074 ·113 ·191
25 25	·025	*024	·023	50 90	·344	·342	·340
25 30	·027	*026	·025	55 55	·072	·071	·070
25 35	·029	·028	·027	55 00	·083	·081	·080
25 40	·033	·031	·030	55 70	·121	·120	·118
25 45	·037	·036	·035	55 80	·198	·197	·195
25 50	·044	·043	·041	55 90	·347	·345	·343
25 55	·053	·052	•050	60 60	·093	·091	·090
25 60	·065	·064	•063	60 70	·130	·128	·126
25 70	·107	·105	•104	60 80	·206	·204	·203
25 80	·186	·185	•183	60 90	·352	·350	·348
25 00	·320	·337	•325	70 70	·162	·161	·159
30 30	·028	·027	·026	70 80	·234	·232	·231
30 35	·031	·030	·029	70 90	·372	·369	·366
30 40	·034	·033	·032	80 80	·299	·297	·295
30 45	·039	·038	·036	80 90	·419	·416	·414
30 50	·045	·044	·043	90 90	·471	·468	·465

For explanation see pp. 29-31

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MORTALITY	TABLES-TWO	LIVES
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Value of an Annuity during the Continuance of either of Two Lives according to the NORTHAMPTON TABLE								
Ages	3 %	<b>4</b> %	<b>5</b> %	6 %	Ages			
15 15 15 25 15 35 15 45 15 55	24.015 23.241 22.444 21.662 20.957	20.171 19.599 19.043 18.467 17.915	17.216 16.831 16.435 16.003 15.567	14.954 14.665 14.368 14.027 13.674	15 15 15 25 15 35 15 45 15 55			
15 05 15 75 20 20 20 30 20 40 20 50	20'304 19'945 23'143 22'274 21'390 20'551	17 425 17 058 19 531 18 941 18 306	15 155 14·837 16·782 16·372 15·907 15·415	13 343 13 069 14 640 14 348 14 003 13 620	15 75 20 20 20 30 20 40 20 50			
20 50 20 70 20 80 25 25 25 35	19.818 19.223 18.850 22.245 21.289	17·077 16·568 16·233 18·932 18·260	14·936 14·498 14·197 16·370 15·894	13·228 12·852 12·578 14·382 13·979	20 60 20 70 20 80 25 25 25 35			
25 45 25 55 25 65 25 75 30 30	20·342 19·480 18·748 18·214 21·255	17·561 16·885 16·279 15·811 18·249	15·368 14·833 14·324 13·915 15·889	13.569 13.142 12.719 12.369 14.004	25 45 25 55 25 65 25 75 30 30			
30 40 30 50 30 60 30 70	20·202 19·198 18·321 17·613	17·488 16·724 16·018 15·413	15·333 14·745 14·172 13·653 13·207	13.592 13.133 12.665 12.218	30 40 30 50 30 60 30 70 30 80			
35 35 35 45 35 55 35 55 35 65	17 173 20·154 19·008 17·957 17·065	17.466 16.616 15.792 15.053	15·324 14·686 14·035 13·414	13·557 13·070 12·547 12·024	35 35 35 45 35 55 35 65			
35 75 40 40 40 50 40 60 40 70	18.932 17.694 16.600 15.711	14 485 16 574 15 627 14 746 13 987	12 919 14:658 13:929 13:214 12:562	13.088 12.520 11.935 11.374	55 75 40 40 40 50 40 60 40 70			
40 80 45 45 45 55 45 65 45 75	15·160 17·608 16·285 15·146 14·311	13.491 15.576 14.536 13.591 12.859	13.898 13.076 12.283 11.643	12.463 11.809 11.252 10.594	40 80 45 45 45 55 45 65 45 75			
50 50 50 60 50 70 50 80 55 55	16·158 14·752 13·588 12·855 14·619	14·447 13·314 12·319 11·660 13·223	13:016 12:093 11:238 10:644 12:029	11.804 11.048 10.311 9.772 10.965	50 50 50 60 50 70 50 80 55 55			
55 65 55 75 60 60 60 70 60 80	13.120 11.999 12.948 11.372 10.361	11.976 10.992 11.852 10.500 9.590	10.983 10.120 10.896 9.735 8.915	10.100 9.342 10.061 9.058 8.315	55 05 55 75 60 60 60 70 60 80			

Value of	'an Annni	ty during to	the Conti the CARI	nuance of LISLE TA	'either af ' BLE	Two Lives	according
Ages	3 %	Ages	3 %	Ages	3 %	Ages	3 %
5 5	27.570	15 80	22.712	35 40	21.528	55 55	15.715
5 10	27.332	15 85	22.663	35 45	20.965	55 60	14.802
5 15	26.986	15 90	22.640	35 50	20.423	55 65	14.107
5 20	26.665	15 95	22.639	35 55	19.924	55 70	13.513
5 25	26.343	20 20	25.398	35 60	19.515	55 75	13.107
5 30	26.032	20 25	24.941	35 65	19·211	55 80	12.854
5 35	25.737	20 30	24.505	35 70	18·949	55 85	12.677
5 40	25.444	20 35	24.098	35 75	18·767	55 90	12.600
5 45	25.174	20 40	23.707	35 80	18·651	55 95	12.591
5 50	24.902	20 45	23.351	35 85	18·567	60 60	13.688
5 55	24.638	20 50	23.003	35 90	18.530	60 65	12.820
5 60	24.411	20 55	22.676	35 95	18.527	60 70	12.050
5 65	24.238	20 60	22.404	40 40	20.803	60 75	11.506
5 70	24.079	20 65	22.201	40 45	20.137	60 80	11.161
5 75	23.961	20 70	22.029	40 50	19.490	60 85	10.909
5 80	23.883	20 75	21.909	40 55	18.893	60 90	10·791
5 85	23.820	20 80	21.835	40 60	18.409	60 95	10·790
5 90	23.786	20 85	21.782	40 65	18.054	65 65	11·788
5 95	23.792	20 90	21.757	40 70	17.750	65 70	10·847
10 10	27.060	20 95	21.756	40 75	17.540	65 75	10·173
10 15 10 20 10 25 10 30 10 35	26.685 26.335 25.989 25.659 25.350	25 25 25 30 25 35 25 40 25 45	24·417 23·912 23·440 22·986 22·575	40 80 40 85 40 90 40 95 45 45	17:406 17:306 17:261 17:261 17:261 19:355	65 80 65 85 65 90 65 95 70 70	9.740 9.428 9.285 9.277 9.691
10 40	25.049	25 50	22·176	45 50	18.585	70 75	8·831
10 45	24.774	25 55	21·801	45 55	17.871	70 80	8·259
10 50	24.505	25 60	21·489	45 60	17.292	70 85	7·830
10 55	24.253	25 65	21·255	45 65	16.870	70 90	7·635
10 60	24.046	25 70	21·054	45 70	16.521	70 95	7·633
10 65	23.892	25 75	20.915	45 75	16·286	75 75	7·793
10 70	23.761	25 80	20.827	45 80	16·140	75 80	7·086
10 75	23.671	25 85	20.765	45 85	16·036	75 85	6·524
10 80	23.614	25 90	20.737	45 90	15·987	75 90	6·253
10 85	23.575	25 95	20.735	45 95	15·987	75 95	6·276
10 90	23·557	30 30	23·330	50 50	17.662	80 80	6·271
10 95	23·555	30 35	22·782	50 55	16.787	80 85	5·601
15 15	26·256	30 40	22·251	50 60	16.064	80 90	5·274
15 20	25·855	30 45	21·771	50 65	15.528	80 95	5·315
15 25	25·456	30 50	21·308	50 70	15.088	85 85	4·802
15 30	25.075	30 55	20.877	50 75	14·792	85 90	4·393
15 35	24.721	30 60	20.519	50 80	14·613	85 95	4·478
15 40	24.377	30 65	20.251	50 85	14·491	90 90	3·909
15 45	24.062	30 70	20.018	50 90	14·436	90 95	4·039
15 50	23.753	30 75	19.856	50 95	14·430	95 95	4·131
15 55 15 60 15 65 15 70 15 75	23·463 23·221 23·041 22·887 22·779	30 80 30 85 30 90 30 95 35 35	19·753 19·679 19·645 19·644 22·148				

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Value of an Annuity during the Continuance of either of Two Lives according to the INSTITUTE OF ACTUARIES HEALTHY MALES TABLE								
Ages	<b>3</b> %	<b>3</b> ½ %	<b>4</b> %	Ages	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %	
10 10	27·2889	24·5789	22·2874	30 55	20·9234	19·3953	18:0413	
10 20	26·5334	23·9943	21·8324	30 60	20·6178	19·1192	17:7915	
10 30	25·8941	23·4826	21·4211	30 70	20·1964	18·7300	17:4317	
10 40	25·3333	23·0155	21·0306	30 80	19·9864	18·5311	17:2430	
10 50	24·8647	22·6101	20·6790	30 90	19·8971	18·4448	17:1598	
10 60	24·5176	22·2995	20·4005	35 35	22.0792	20·4161	18·9440	
10 70	24·3052	22·1036	20·2197	35 40	21.4228	19·8639	18·4780	
10 80	24·2049	22·0088	20·1299	35 45	20.8181	19·3458	18·0329	
10 90	24·1641	21·9694	20·0919	35 50	20.2880	18·8834	17·6287	
15 15	26·4501	23·9351	21·7903	35 55	19.8373	18·4834	17·2729	
15 20	26.0140	23·5941	21 •5221	35 60	19·4694	18 • 1 5 1 2	16.9725	
15 25	25.6252	23·2862	21 •2770	35 70	18·9694	17 • 6898	16.5461	
15 30	25.2517	22·9838	21 •0315	35 80	18·7244	17 • 4 578	16.3262	
15 35	24.9047	22·6976	20 •7945	35 90	18·6212	17 • 3581	16.2300	
15 40	24.5842	22·4279	20 •5668	40 40	20·6421	19 • 2056	17.9215	
15 45	24·2893	22·1749	20·3490	40 45	19·9075	18.5755	17·3795	
15 50	24·0273	21·9459	20·1484	40 50	19·2548	18.0059	16·8813	
15 55	23·7995	21·7434	19·9680	40 55	18·6966	17.5105	16·4407	
15 60	23·6096	21·5718	19·8126	40 60	18·2416	17.1000	16·0696	
15 70	23·3470	21·3293	19·5886	40 70	17·6298	16.5357	15·5487	
15 80	23·2204	21·2097	19·4753	40 80	17.3365	16·2582	15.2857	
15 90	23·1708	21·1618	19·4293	40 90	17.2156	16·1415	15.1731	
20 20	25·5033	23·1938	21·2067	45 45	19.0251	17·8165	16.7250	
20 25	25·0419	22·8280	20·9154	45 50	18.2213	17·1139	16.1095	
20 30	24·5950	22·4663	20·6214	45 55	17.5210	16·4919	15.5558	
20 35	24·1786	22·1228	20·3371	45 60	16 9439	15.9710	15.0848	
20 40	23·7947	21·7998	20·0644	45 70	16 1649	15.2526	14.4216	
20 45	23·4424	21·4974	19·8041	45 80	15 7934	14.9012	14.0888	
20 50	23·1296	21·2240	19·5645	45 90	15 6417	14.7547	13.9474	
20 55	22·8572	20·9815	19·3483	50 50	17 2498	16.2625	15.3617	
20 60	22.6281	20·7744	19·1606	50 55	16·3792	15·4878	14-6708	
20 70	22.3046	20·4752	18·8837	50 60	15·6458	14·8251	14-0710	
20 80	22.1391	20·3184	18·7349	50 70	14·6380	13·8953	13-2123	
20 90	22.0671	20·2489	18·6678	50 80	14·1548	13·4382	12-7794	
25 25	24.5055	22·4023	20·5759	50 90	13·9586	13·2488	12-5966	
25 30	23.9792	21.9760	20·2295	55 55	15·3200	14·5424	13·8254	
25 35	23.4860	21.5694	19· <b>8</b> 930	55 60	14·3987	13·7083	13·0689	
25 40	23.0319	21.1877	19·5713	55 70	13·0876	12·4972	11·9491	
25 45	22.6184	20.8335	19·2667	55 80	12·4415	11·8858	11·3699	
25 50	22.2555	20.5165	18·9892	55 90	12·1769	11·6304	11·1234	
25 55	21 •9431	20·2388	18.7418	60 60	13.2730	12.6860	12-1393	
25 60	21 •6836	20·0042	18.5293	60 70	11.5911	11.1295	10-6972	
25 70	21 • 3218	19·6699	18.2203	60 80	10.7207	10.3051	9-9157	
25 80	21 • 1403	19·4980	18.0572	60 90	10.3534	9.9505	9-5732	
25 90	21 • 0633	19·4236	17.9854	70 70	9.0904	8.8028	8-5300	
30 30	23·3614	21.4751	19 [.] 8219	70 80	7 • 5975	7·3845	7·1814	
30 35	22·7735	20.9900	19 [.] 4200	70 90	6 • 8975	6·7079	6·5273	
30 40	22·2274	20.5310	19 [.] 0332	80 80	5 • 4360	5·3219	5·2117	
30 45	21·7296	20.1046	18 [.] 6669	80 90	4 • 2504	4·1733	4·0986	
30 50	21·2947	19.7251	18 [.] 3349	90 90	2 • 6 105	2·5809	2·5521	

Single	Payment to se accordin	cure £1 at t g to the NOF	he Death of th THAMPTON	he Last of Tw TABLE	70 Lives
Ages	3%	Ages	3 %	Ages	3 %
20 20	·2968	15 15	*2693	35 55	*4479
21 21	·3019	15 20	*2824	35 60	*4615
22 22	·3070	15 25	*2939	35 65	*4738
23 23	·3122	15 30	*3055	35 70	*4844
24 24	·3175	15 35	*3172	35 75	*4927
25 25	·3230	15 40	·3288	35 80	*4986
26 26	·3285	15 45	·3399	40 45	*4378
27 27	·3341	15 50	·3506	40 50	*4555
28 28	·3399	15 55	·3605	40 55	*4720
29 29	·3458	15 60	·3696	40 60	*4874
30 30	·3518	15 65	*3777	40 65	·5013
31 31	·3580	15 70	*3846	40 70	·5133
32 32	·3642	15 75	*3899	40 75	·5226
33 33	·3707	15 80	*3937	40 80	·5293
34 34	·3772	20 25	*3094	45 50	·47 <b>79</b>
35 35	*3839	20 30	·3221	45 55	-4965
36 36	*3907	20 35	·3350	45 60	-5139
37 37	*3977	20 40	·3479	45 65	-5297
38 38	*4048	20 45	·3603	45 70	-5434
39 39	*4121	20 50	·3723	45 75	-5540
40 40	*4195	20 55	-3833	45 80	-5617
41 41	*4270	20 60	-3936	50 55	-5213
42 42	*4346	20 65	-4029	50 60	-5412
43 43	*4422	20 70	-4110	50 65	-5593
44 44	*4501	20 75	-4173	50 70	-5751
45 45	*4580	20 80	·4218	50 75	-5875
46 46	*4662	25 30	·3368	50 80	-5964
47 47	*4745	25 35	·3508	55 60	-5678
48 48	*4829	25 40	·3648	55 65	-588 <b>7</b>
49 49	*4916	25 45	·3784	55 70	-6070
50 50	·5003	25 50	·3914	55 75	-6214
51 51	·5090	25 55	·4035	55 80	-6318
52 52	·5178	25 60	·4147	60 65	-6181
53 53	·5267	25 65	·4248	60 70	-6396
54 54	·5358	25 70	·4335	60 75	-6567
55 55	•5451	25 75	*4403	60 80	•6691
56 56	•5545	25 80	*4453	65 70	•6721
57 57	•5641	30 35	*3671	65 75	•6928
58 58	•5738	30 40	*3825	65 80	•7081
59 59	•5837	30 45	*3974	70 70	•70 <b>27</b>
60 60	-5937	30 50	•4117	70 75	·7281
61 61	-6039	30 55	•4250	70 80	·7474
62 62	-6142	30 60	•4372	75 75	·7587
63 63	-6248	30 65	•4483	75 80	·7829
64 64	-6355	30 70	•45 <b>7</b> 9	80 80	·8124
65 65	-6465	30 75	*4653	80 85	-8323
66 66	-6575	30 80	*4707	80 90	-8451
67 67	-6687	35 40	*4008	85 85	-8564
68 68	-6800	35 45	*4172	85 90	-8736
69 69	-6913	35 50	*4332	90 90	-8937

Ages	<b>2</b> 0/	Ages	2 0/	A mos	<b>9</b> 0/
	U 70	.1800	J %	Ages	[%] ت
15 15	·2061	30 40	·3228	50 60	.2030
15 20	·2178	30 45	·3368	50 65	•5186
15 25	·2294	30 50	•3503	50 70	•5314
15 30	-2405	30 55	·3628	50 75	•5400
15 35	-2508	30 60	•3732	50 80	•5453
15 40	·2609	30 65	-3810	50 85	·5488
¹ 5 45	·2700	30 70	*3878	50 90	•5504
15 50	.2790	30 75	•3926	50 95	·5 <b>5</b> 06
15 55	2875	30 80	3955	55 55	.5132
15 00	.2945	30 85	*3977	55 00	.5398
15 65	•2998	30 90	·3987	55 65	•5600
15 70	•3043	30 95	·3987	55 70	•5773
15 75	*3074	35 35	-3258	55 75	•5891
15 00	3094	35 40	3439	55 80	•5905
15 05	-3108	35 45	-3002	55 85	'0010
15 90	.3115	35 50	.3760	55 90	.6039
15 95	-3115	35 55	.3906	55 95	·604 I
20 20	-2311	35 00	4025	00 00	.5722
20 25	2444	35 05	4113	60 5	-5975
20 30	25/1	35 70	4190	00 70	-0199
20 35	2090	35 75	•4243	00 75	6358
20 40	2004	35 00	4270	00 80 60 85	-0450
20 45	2900	35 05	4301	60.00	·0531
20 50	'3104	25 05	4312	60.05	·6566
	12181	33 73	-15-5	6r 6r	6077
20 00	2242	40 40	12844	65 70	-6550
20 70	.3203	40 50	*4032	65 75	·6746
20 75	.3328	40 55	•4206	65 80	6872
20 80	*3349	40 60	4347	65 85	•6963
20 85	*3364	40 65	•4450	65 90	•7004
20 gõ	3372	40 70	4539	65 95	•7007
20 95	·3372	40 75	•4600	70 70	-6886
25 25	·2597	40 80	•4639	70 75	.7137
25 30	·2744	40 85	·4668	70 80	•7303
≥5.35	·2882	40 90	·4681	70 85	•7428
25 40	•3014	40 95	·4681	70 90	•7485
25 45	·3134	45 45	.4071	70 95	•7486
25 50	•3250	45 50	·4296	75 75	•7439
25 55	•3359	45 55	.4504	75 80	•7045
25 60	.3450	45 60	4672	75 ⁸ 5	*7809
25 65	.3518	45 05	4795	75 90	•7887
25 70	3577	45 70	-4097 1406r	75 95	-788-
45 75	*2642	45 /5	4905	80.85	-2002 •8077
45 OU	3043	45 00	3000	80.05	.0
25 85	•3001	45 85	-5030	80 90	·0173
25 90	•3009	45 90	5052	00 95 8r 8r	1010
25 95	-3009	45 95	*4564	85 00	-8420
ვს ვს	2914	<u> </u>	+2V4	~ ~ ~	24-79

MORTALITY '	TABLES	TWO	LIVES
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Single Payment to secure £1 at the Death of the Last of Two Lives according to the INSTITUTE OF ACTUARIES HEALTHY MALES TABLE							
Ages	<b>3</b> %	$3\frac{1}{2}\%$	4 %	Ages	<b>3</b> %	$3\frac{1}{2}\%$	4 %
10 10	.1761	1350	1043	39 55	.3615	.3103	·2676
10 20	·1981	1548	1218	30 60	.3703	•3196	·2773
10 30	•2167	·1721	1376	30 70	•3826	•3328	·2911
IC 40	•2330	.1879	·1527	30 80	.3888	·3395	•2983
10 50	•2467	*2016	*1062	30 90	•3914	•3424	.3012
10 60	•2568	'2121	*1769	35 35	•3278	·2758	•2329
10 70	•2630	2187	1838	35 40	*3469	*2945	·2508
10 80	-2059	.2219	1873	35 45	3045	13120	*2080 *2825
	2071	2233	1000	35 50	12021	32/0	2035
-5-5	2003	1300	1233	35 55	393*	34	-972
15 20	2132	1003	1330	35 00	4030	*2680	12252
15 20	*2254	1/0/	1432	25 80	4104	-2758	2226
15 35	-334	1086	1518	35 00	*4285	3793	*3373
15 40	·2548	·2088	1705	40 40	*3697	3167	2723
15 45	•2634	.2163	.1780	40 45	.3011	.3380	2031
15 50	2711	2241	•1866	40 50	'410I	.3573	.3123
15 55	·2777	2309	·1935	40 55	4263	.3740	•3292
15 60	·2832	•2367	·1995	40 60	•4396	•3879	*3435
15 70	•2909	•2449	*2081	40 70	°4574	*4070	*3635
15 80	•2946	·2489	.2125	40 80	•4659	·4164	•3736
15 90	-2960	·2506	.2143	40 90	•4694	'4203	-3780
20 20	.55281	.1810	°1459	45 45	<b>'</b> 4167	*3637	.3183
20 25	•2515	1942	1571	45 50	.4402	*3875	•3419
20 30	2545	2004	1004	45 55	4000	4005	3032
20 35	'2000	2181	1794	45 00	4774	4261	-3814
20 40	2770	2290	1098	45 70	15001	4504	4009
20 50	2001	-2485	'200I	45 00	5153	4672	·4251
20 55	.3051	2567	'2174	50 50	•4685	4162	.3707
20 60	.3118	2637	-2246	50 55	4038	.4424	12073
20 70	.3212	·2738	2352	50 60	15152	*4648	4203
20 80	•3260	·2791	'2410	50 70	5445	•4963	[.] 4534
20 90	-3281	·2814	*2435	50 80	•5586	.211	·4700
25 25	.2571	•2086	.1205	50 90	'5643	.2182	-477I
25 30	.2725	.2230	•1835	55 55	·5247	'4744	·4298
25 35	*2868	•2368	*1964	55 60	5515	•5026	'4589
25 40	-3000	12497	-2088	55 %	5097	-5430	.5020
25 45	3121	2017	2205	55 00	6162	5042	5242
20 50	10018	12818	-3	60 60	17844	57-9	3337
25 60	-3310	-2807	-2407	60 70	5043	·5808	4940
25 70	-3498	-3010	*2608	60 80	•6586	6177	*5802
25 80	3551	.3068	·2670	60 90	.6693	6297	.5933
25 90	*3574	.3093	•2698	70 70	7061	•6685	•6335
30 30	2905	2400	1001	70 80	.7496	.7165	.6853
30 35	.3076	•2564	'2146	70 90	.7700	.7393	.7105
30 40	·3235	.2719	•2295	80 80	.8125	.7862	.7611
30 45	.3380	•2863	·2436	80 90	8471	*8251	·8039
30 50	•3506	•2992	•2564	90 90	·8948	. 8789	*8634

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Annual	Annual Payment during the Continuance of either of Two Lives to secure £1 at the Last Death according to the											
	INSTITU	TE OF A	TUARIES	HEALTI	HY MAL	ES TABLI	E					
Ages	3 %	$3\frac{1}{2}\%$	4 %	Ages	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %					
10 10	·0062	•0053	·0045	30 55	·0165	·0152	·0141					
10 20	·0072	1.0062	·0053	30 60	·0171	·0159	·0148					
10 30	1800	'0070	·0061	30 70	.0181	•0169	·0158					
10 40	•0088	*0078	·0069	30 80	·0185	·0174	·0164					
10 50	*0095	*0085	·0077	30 90	·0187	·0176	·0166					
10 60	10101	10091	'0083	35 35	.0142	·0129	·0117					
10 70	·0104	·0095	·0087	35 40	·0155	·0141	'0129					
10 80	·0105	*00 <u>9</u> 6	·0089	35 45	·0167	.0153	·0141					
10 90	·0106	*0097	•0090	35 50	·0178	·0165	0152					
15 15	·0073	*0063	·0054	35 55	·0189	·0175	0163					
15 20	.0079	·0068	'0059	35 60	.0102	°0184	·0I72					
15 25	·0084	.0074	*0064	35 70	.0209	.0107	·0185					
15 30	.0000	*0079	.0060	35 80	·0216	·0204	·0193					
15 35	.0005	·0084	.0074	35 90	·0218	·0207	·0196					
15 40	.0100	·0089	*0079	40 40	·0171	.0157	'0144					
15 45	.0104	10003	.0084	10 15	0187	0173	·0160					
15 50	.0108	10008	·0088	40 50	*0203	.0188	0175					
15 55	.0112	.0102	'0092	40 55	·0216	.0202	-0180					
15 60	.0112	.0102	10096	40 60	.0228	.0214	·0201					
15 70	'01 20	0110	1010	40 70	·0246	'0232	.0220					
15 80	.0122	10112	.0104	40.80	·02E4	·0241	.0220					
15 00	.0122	.0113	-0105	40 00	0254	10245	0224					
20 20	·0086	.0075	*0066	45 45	.0208	.0103	10180					
20 25	*0003	10082	*0072 [`]	45 50	.0220	.0214	10200					
20 30	.0000	*0088	.0078	45 55	·0249	.0234	'0219					
20.25	.0106	*0004	*0084	45 60	.0266	10251	:0227					
20 35	.0112	0100	:0000	45 00	'020U	10277	10264					
20 45	8110	0106	.0006	45 /0	10204	:0201	0278					
20 50	0123	.0112	.0102	45 00	0310	10207	.0284					
20 55	0128	.0112	*0107	50 50	.0257	0241	'0227					
20 60	10122	10121	.0111		:0284	10268	10254					
20 00	10128	:0127	.0118	50 55	:0210	10200	0234					
20 /0	0141	0127	.0122	50 70	10248	:0294	:0210					
20 00	0142	.0132	0124	50 80	10360	0354	0341					
25 25	1010	10080	.0070	50 00	*0377	. 0364	.0351					
25 20	0100	10007	10086		10222	1020F	10200					
25 25	0117	10105	*0004	55 60	.0258	.0342	*0326					
25 40	0125	.0113	1010	55 70	*0410	10403	10388					
25 45	10122	10120	-0100	55 80	·04 52	0428	0424					
25 50	10120	10127	.0110	55 00	10468	.0454	*0440					
25 50	37	10122	:0122	60 60	*0400	0202	10276					
45 55	143	0128	0122	60 70	·0502	0486	*0470					
25 70	10150	01/6	10126	60 80	*0562	0546	0522					
25 80	.0160	-0150	*0140	60 00	10500	0575	0561					
25 00	'0162	0152	0142	70 70	0700	0682	.0665					
23 90	10110	10107	:0006	70 80	10872	108FF	10828					
30 30	10120	0107	10105	70 00	10072	0050	10044					
30 35	0129	011	0115	80.80	1262	1244	1225					
30 40	0139	10126	10124	80.00	1612	1505	1577					
30 45	0149	0130	0122		-2478	-2454	-2/21					
30 50	015/	0144	0133	90 90	24/0	~434						

	NO	RTHAMPI	ON	HE.	ALTHY MA	LES	ĺ .				
Ages	<b>3</b> %	<b>4</b> %	4 % 5 %		<b>3</b> % <b>3</b> ¹ / ₂ %		Ages				
15 15	18.113	11.589	8.036	13:467	10·208	7 957	15 15				
20 20	19.200	12.465	8.768	14:752	11·316	8 919	20 20				
25 25	19.950	13.056	9.236	15:763	12·176	9 654	25 25				
30 30	20.744	13.687	9.745	16:960	13·215	10 560	30 30				
35 35	21.611	14.388	10.320	18:238	14·338	11 550	35 35				
40 40	22·569	15·180	10·984	19 [.] 623	15·572	12.652	40 40				
45 45	23·557	16·010	11·688	21 [.] 171	16·974	13.924	45 45				
50 50	24·619	16·919	12·478	22 [.] 791	18·459	15.290	50 50				
55 55	25·652	17·821	13·265	24 [.] 466	20·017	16.740	55 55				
60 60	26·727	18·774	14·112	26 [.] 134	21·588	18.221	60 60				
65 65	27.862	19.799	15.040	27.681	23.060	19·623	65 65				
70 70	29.072	20.913	16.070	29.111	24.434	20·944	70 70				
75 75	30.219	21.985	17.083	30.346	25.632	22·107	75 75				
80 80	31.211	22.932	17.982	31.285	26.549	23·003	80 80				
85 85	32.024	23.661	18.744	31.931	27.184	23·627	85 85				

# Value of the Reversion to a Perpetuity on the Death of the FIRST of Two Lives

# Value of the Reversion to a Perpetuity on the Death of the LAST of Two Lives

	NC	RTHAMPT	ON	HE	ALTHY MA	LES		
Ages	3 %	<b>4</b> %	5 %	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %	Ages	
15 15	9.318	4.829	2.7 <b>8</b> 4	6.883	4.636	3.210	15 15	
20 20	10.190	5.469	3.218	7.830	5.378	3.793	20 20	
25 25	11.088	6.068	3.630	8.828	6.169	4.424	25 25	
30 30	12.078	6.751	4.111	9.972	7.096	5.178	30 30	
35 35	13.179	7.534	4.676	11.254	8.155	6.056	35 35	
40 40	14·401	8·426	5·342	12.691	9·366	7.07 <b>8</b>	40 40	
45 45	15·725	9·424	6·102	14.308	10·755	8.275	45 45	
50 50	17·175	10·553	6·984	16.084	12·309	9.638	50 50	
55 55	18·714	11·777	7·971	18.013	14·029	11.175	55 55	
60 60	20·385	13·148	9·104	20.060	15·885	12.861	60 60	
65 65	22 •196	14.639	10·408	22 149	17.810	14.637	65 65	
70 70	24 • 126	16.365	11·884	24 243	19.769	16.470	70 70	
75 75	26 • 049	18.053	13·429	26 198	21.622	18.228	75 75	
80 80	27 • 893	19.782	14·988	27 897	23.250	19.788	80 80	
85 85	29 • 402	21.253	16·314	29 258	24.564	21.058	85 85	

# Value of an Annuity during the Life of y after the Death of x

Age of	Age of	NORTHAMPTON	CARLISLE	E	IEALTHY MALE	s
x x	x y	3 %	3.%	3 %	$3\frac{1}{2}\%$	<b>4</b> %
45	20	7°271	7·487	7.849	6.790	5·904
45	25	6°650	6·711	7.025	6.126	5·366
45	30	5°998	5·906	6.136	5.397	4·766
45	35	5°315	5·102	5.225	4.639	4·132
45	40	4°612	4·275	4.314	3.868	3·479
60	20	10:042	11.912	12·392	10·940	9·702
60	30	8:544	10.027	10·382	9·284	8·332
60	35	7:711	9.023	9·233	8·316	7·513
60	40	6:822	7.919	8·006	7·265	6·611
60	50	4:975	5.574	5·410	4·990	4·612
75	30	12'157	14·343	15.008	13.665	12·486
75	40	10'191	12·028	12.389	11.422	10·557
75	50	7'964	9·281	9.281	8.672	8·117
75	60	5'588	5·993	6.003	5.688	5·395
75	70	3'135	3·319	3.147	3.023	2·906

# Value of an Annuity during the Life of y, who is to be nominated at the Death of x

Age o		NORTHAMPTON	OARLISLE	1	HEALTHY MAL	ES
Age of x	Death of x	3 %	3 %	3 %	$3\frac{1}{2}\%$	<b>4</b> %
45 45 45 45 45 60	10 25 30 35 40 10	12.393 10.763 10.253 9.690 9.066 14.863 12.296	12.473 11.024 10.460 9.888 9.232 16.308 13.676	12.994 11.387 10.782 10.120 9.391 16.918 14.038	10.762 9.564 9.103 8.591 8.018 14.544 12.302	8.998 8.094 7.740 7.341 6.888 12.598 10.837
60 60 60	35 40 50	11.621 10.873 9.218	12·929 12·071 10·181	13.177 12.228 10.021	11.610 10.836 8.989	10 [.] 279 9 [.] 644 8 [.] 091
75 75 75 75 75	10 30 50 60 70	17.751 14.685 11.010 8.831 6.338	19:863 16:657 12:400 9:311 6:582	20.708 17.183 12.266 9.252 6.305	10.340 15.512 11.335 8.657 5.968	10-348 14-063 10-499 8-113 5-657

Ages	3 %	Ages	<b>3</b> %	Ages	3 %
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	·26366 ·30838 ·27962 ·31846 ·29054	x y 50 20 50 30 50 40 50 50 55 15	•47767 •45221 •41378 •35853 •53896	x y 65 35 65 40 65 45 65 50 65 55	*59587 *57855 *55766 *53073 *40004
0 10 0 20 0 30 35 15 35 25	·36038 ·32987 ·30210 ·37643 ·34755	55 25 55 35 55 45 55 55 60 10	•51226 •48319 •43830 •37357 •60306	65 60 65 65 70 10 70 15 70 20	*45822 *40576 *71527 *70284 *68822
15 35 10 10 10 20 10 30 10 40	·31472 ·42717 ·39579 ·36815 ·32868	60 20 60 30 60 40 60 50 60 60	·57287 ·55136 ·51734 ·46567 ·38923	70 25 70 30 70 35 70 40 70 45	·68087 ·67236 ·66139 ·64650 ·62843
45 15 45 25 45 35	•45053 •42208 •38980	65 IO 65 I5 65 20	·65695 ·64308 ·62784	70 50 70 55 70 60	·60461 ·57691 ·54027
45 45 50 10	·34306 ·50891	05 25 65 30	•60899	70 05 70 70	·49020 ·42338
45 45 50 10 Single Pa	-34306 -50891 ayment to sec acco	05 25 65 30 ure £1 at the ording to the (	Death of x pr	70 05 70 70 rovided he die ABLE	-49020 -42338 s before 3
45 45 50 10 Single Pa	-34306 -50891 Lyment to sec acco 3 %	05 25 65 30 ure £1 at the rding to the (	$\frac{1920}{.60899}$ Death of x present of x of	70     05       70     70   rovided he die ABLE       Ages	-49020 -42338 s before 3
Ages <i>x y</i> 15 15 20 10 20 20 25 15 25 25	·34306 ·50891 <b>ayment to sec</b> <b>acco</b> <b>3</b> % ·2101 ·2503 ·2234 ·2705 ·2391	$\begin{array}{c cccc} 05 & 25 \\ 65 & 30 \\ \hline \\  ure \pounds1 at the \\ rding to the 0 \\ \hline \\  & x & y \\ 50 & 20 \\ 50 & 30 \\ 50 & 50 \\ 55 & 15 \\ \hline \end{array}$	-61920 -60899 Death of x pr ARLISLE T 3 % -4681 -4681 -4400 -3965 -3260 -5409	70         05           70         70           rovided he die ABLE           Ages	·49020 ·42338 s before 3 ·6236 ·6236 ·6088 ·5940 ·5644 ·5137
45 45 50 10 Single Pa Ages x y 15 15 20 20 25 15 25 25 30 10 30 20 30 30 35 15 35 25	·34306 ·50891 hyment to sec acco 3 % ·2101 ·2503 ·2234 ·2705 ·2391 ·3190 ·2928 ·2928 ·2556 ·3427 ·3136	$\begin{array}{c ccccc} 05 & 25 \\ 65 & 30 \\ \hline \\ ure \pounds1 at the rding to the 0 \\ \hline \\ Ages \\ \hline \\ x & y \\ 50 & 20 \\ 50 & 20 \\ 50 & 30 \\ 50 & 30 \\ 50 & 40 \\ 50 & 50 \\ 55 & 15 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & 55 \\ 55 & $	·61920 ·60899 Death of x pi ARLISLE T 3 % ·4681 ·4400 ·3965 ·3260 ·5409 ·5211 ·4931 ·4931 ·4454 ·3528 ·6147	70         05           70         70           rovided he die         ABLE           ABLE         \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$	·49020 ·42338 s before 3 ·6236 ·6088 ·5940 ·5644 ·5137 ·4534 ·3973 ·7265 ·7265 ·7161
45         45           50         10           Single Pa           Ages           x         y           15         15           20         10           20         20           25         15           26         20           30         30           30         30           35         25           35         25           35         35           40         10           40         30           40         30           40         40	·34306 ·50891 <b>accol</b> <b>3</b> % ·2101 ·2503 ·2234 ·2705 ·2391 ·3190 ·2928 ·2556 ·3427 ·3136 ·2710 ·3959 ·3733 ·3388 ·2891	$\begin{array}{c ccccc} 05 & 25 \\ 65 & 30 \\ \hline \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\ 100 \\$	·61920 ·60899 Death of x pi ARLISLE T 3 % ·4681 ·4400 ·3965 ·3260 ·5409 ·5211 ·4454 ·3528 ·6147 ·5986 ·5766 ·5766 ·5472 ·4917 ·3792	70         05           70         70           rovided he die           ABLE           Ages           x         y           65         35           65         40           65         45           65         50           65         55           65         65           70         15           70         20           70         25           70         30           70         40           70         45	·49020 ·42338 s before 3 ·6236 ·6088 ·5940 ·5644 ·5137 ·4534 ·5644 ·5137 ·4534 ·7205 ·7161 ·7082 ·6988 ·6908 ·6788 ·6692

TA	BLE						
Ages	<b>3</b> %	$3\frac{1}{2}\%$	4%	Ages	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %
$ \begin{array}{r} x & y \\ 15 & 15 \\ 15 & 25 \\ 15 & 35 \\ 15 & 45 \\ 15 & 55 \\ \end{array} $	·1961 ·1638 ·1318 ·1014 ·0730	•1726 •1467 •1204 •0944 •0690	·1530 ·1322 ·1105 ·0882 ·0655	x y 45 15 45 20 45 25 45 30 45 35	*4483 *4343 *4211 *4022 *3778	·4091 ·3969 ·3856 ·3693 ·3480	·3746 ·3638 ·3540 ·3399 ·3213
15 70	·0359	·0347	·0336	45 40	·3466	·3207	·2975
20 15	·2326	·2101	·1831	45 45	·3083	·2870	·2678
20 20	·2148	·1913	·1715	45 55	·2217	·2094	·1982
20 30	·1785	·1619	·1475	45 70	·1068	·1033	·1000
20 40	·1412	·1306	·1212	50 15	·5045	·4655	·4307
20 50	·1061	·0999	·0943	50 20	·4917	·4541	•4205
20 60	·0744	·0713	·0683	50 25	·4808	·4445	•4120
20 70	·0476	·0461	·0447	50 30	·4647	·4303	•3995
25 15	·2662	·2358	·2101	50 35	·4433	·4115	•3828
25 20	·2482	·2209	·1979	50 40	·4146	·3861	•3603
25 25	·2296	·2059	·1857	50 45	·3769	·3524	·3302
25 35	·1860	·1697	·1556	50 50	·3319	·3121	·2940
25 45	·1416	·1318	·1231	50 60	·2303	·2196	·2097
25 55	·1011	·0959	·0911	50 70	·1388	·1342	·1300
25 70	·0520	·0504	·0489	55 15	·5643	·5268	·4925
30 15	·3057	·2720	·2434	55 20	·5524	·5160	·4828
30 20	·2881	·2574	·2312	55 25	·5439	·5082	·4758
30 25	·2697	·2422	·2187	55 30	·5304	·4961	·4649
30 30	·2470	·2234	·2031	55 35	·5124	·4800	·4505
30 40	·1955	·1799	·1662	55 40	·4877	·4579	·4305
30 50	•1430	·1342	·1262	55 45	·4531	·4266	·4023
30 60	•0970	·0927	·0886	55 50	·4092	·3868	·3661
30 70	•0603	·0585	·0567	55 55	·3563	·3384	·3219
35 15	•3486	·3123	·2811	55 70	·1850	·1790	·1734
35 20	•3321	·2983	·2693	60 15	·6264	·5911	·5588
35 25	·3148	·2841	·2573	60 20	·6154	·5809	·5493
35 30	·2922	·2650	·2412	60 25	·6086	·5747	·5436
35 35	·2656	·2424	·2221	60 30	·5976	·5647	·5345
35 45	·2039	·1892	·1762	60 35	·5832	·5516	·5226
35 55	·1426	·1349	·1277	60 40	·5630	·5331	·5057
35 70	•0705	·0683	·0662	60 45	·5332	•5060	·4808
40 15	•3956	·3574	·3243	60 50	·4934	•4694	·4471
40 20	•3804	·3443	·3129	60 60	·3806	•3650	·3504
40 25	•3651	·3314	·3019	60 70	·2484	•2409	·2336
40 30	•3438	·3132	·2864	70 20	·7370	•7098	·6840
40 35	·3174	·2905	·2669	70 30	·7263	*6995	·6744
40 40	·2858	·2633	·2433	70 40	·7058	*6803	·6563
40 50	·2121	·1986	·1863	70 50	·6598	*6371	·6155
40 60	·1408	·1342	·1280	70 60	·5681	*5503	·5335
40 70	·0844	·0817	·0791	70 70	·4239	*4131	·4028

# Single Payment to secure $\pounds$ 1 at the Death of x provided he dies before y, according to the INSTITUTE OF ACTUARIES HEALTHY MALES TABLE

Ages	4 %	Ages	<b>4</b> %	Ages	<b>4</b> %
0 10 10	12.200	30 30 30	9.221	50 50 50	6.317
IIII	12.043	31 31 31	9.000	51 51 51	6.161
2 12 12	11.865	32 32 32	8.975	52 52 52	6.011
3 13 13	11.678	33 33 33	8.848	53 53 53	5.859
4 14 14	11.481	34 34 34	8.718	54 54 54	5.202
5 15 15	11.274	35 35 35	8.282	55 55 55	5.220
ŏ ıŏ ıŏ	11.016	36 36 36	8.448	56 56 56	5:393
7 17 17	10.845	37 37 37	8.309	57 57 57	5.235
8 18 18	10.626	38 38 38	8.165	58 58 58	5.076
( <b>9 19 19</b>	10.490	39 39 39	8.017	59 59 59	4.916
20 20 20	10.342	40 40 40	7.865	60 60 60	4.755
21 21 21	10.222	41 41 41	7.714	61 61 61	4.593
22 22 22	10.118	42 42 42	7.567	62 62 62	4.432
3 23 23	10.015	43 43 43	7.423	63 63 63	4 263
24 24 24	9.905	44 44 44	7.276	65 65 65	3.914
25 25 25	9.796	45 45 45	7.126	70 70 70	2.005
26 26 26	9.685	46 46 46	6.972	75 75 75	2.119
27 27 27	9.572	47 47 47	6.813	80 80 80	1.400
28 28 28	9.457	48 48 48	6.620	85 85 85	•782
29 29 29	9.340	49 49 49	6.482	90 90 90	•563
Value of an	Annuity for	the Joint Con to the CARLIS	tinuance of SLE TABL	Three Lives a	ccording
Value of an Ages	Annuity for 3 %	the Joint Con to the CARLIS	tinuance of SLE TABL	Three Lives a	ccording
Ages 0 25 30	Annuity for 3 % 8.460 0.468	the Joint Con to the CARLIS Ages 25 50 55	tinuance of SLE TABLE 3 % 7.959	Ages           50         75         80	ccording 3 %
Ages 0 25 30 1 26 31 2 37 22	Annuity for 3 % 8 460 9 684 10 257	the Joint Con to the CARLI Ages 25 50 55 26 51 56	tinuance of SLE TABL 3 % 7.959 7.689	Ages           50         75         80           51         76         81	<b>3 %</b> 2:499 2:349
Ages 0 25 30 1 26 31 2 27 32 2 28 22	Annuity for 3 % 8 .460 9 .684 10 .257 10 .257	the Joint Cont           to the CARLIS           Ages           25 50 55           26 51 56           27 52 57           28 52 57           28 52 57	tinuance of SLE TABL 3 % 7.959 7.689 7.411 7.122	Ages           50         75         80           51         76         81           52         77         82	<b>3</b> % 2.499 2.349 2.220 2.220
Ages 0 25 30 1 20 31 2 27 32 3 28 33 4 20 34	Annuity for 3 % 8.460 9.684 10.257 10.726 10.726 10.930	the Joint Con to the CARLI; Ages 25 50 55 26 51 56 27 52 57 28 53 58 20 54 50	<b>3</b> % 7:959 7:689 7:411 7.133 6:870	2 Three Lives a E 50 75 80 51 76 81 52 77 82 53 78 83 54 70 84	<b>3</b> % 2:499 2:349 2:220 2:086 1:042
Ages 0 25 30 1 26 31 2 27 32 3 28 33 4 29 34 5 20 34	Annuity for 8:460 9:684 10:257 10:726 10:930 U:956	the Joint Con to the CARLI; 25 50 55 26 51 56 27 52 57 28 53 58 29 54 59 20 57 60	tinuance of SLE TABL 3 % 7.959 7.689 7.411 7.133 6.870 6.666	Ages           50         75         80           51         76         81           52         77         82           53         78         83           54         79         84           56         85         85	<b>3</b> % 2:499 2:349 2:220 2:086 1:942
Ages 0 25 30 1 26 31 2 27 32 3 28 33 4 29 34 5 30 35 6 21 26	Annuity for 8:460 9:684 10:257 10:726 10:930 11:056 11:056	the Joint Con to the CARLI; 25 50 55 26 51 56 27 52 57 28 53 58 29 54 59 30 55 60 27 56 61	tinuance of <b>SLE TABL</b> <b>3 %</b> 7'959 7'689 7'411 7'133 6'870 6'626 6'405	Ages           50         75         80           51         76         81           52         77         82           53         78         83           54         79         84           55         80         85           56         88         86	<b>3</b> % 2·499 2·349 2·320 2·2086 1·942 1·796
Ages 0 25 30 1 26 31 2 27 32 3 28 33 4 29 34 5 30 35 6 31 36 7 32 37	Annuity for 3 % 8 460 9 684 10 257 10 726 10 930 11 056 11 063 11 000	the Joint Con to the CARLI 25 50 55 26 51 56 27 52 57 28 53 58 29 54 59 30 55 60 31 56 61 32 57 62	tinuance of SLE TABL: 7'959 7'689 7'411 7'133 6'870 6'626 6'405 6'405 6'183	Ages           50         75         80           51         76         81           52         77         82           53         78         83           54         79         84           55         80         85           56         81         86           57         82         87	<b>3</b> % 2:499 2:349 2:220 2:086 1:942 1:796 1:530
Ages 0 25 30 I 26 3I 2 27 32 3 28 33 4 29 34 5 30 35 6 3I 36 7 32 37 8 33 38	Annuity for 3 % 8.460 9.684 10.257 10.726 10.930 11.056 11.063 11.009 10.910	the Joint Con to the CARLIS 25 50 55 26 51 56 27 52 57 28 53 58 29 54 59 30 55 60 31 56 61 32 57 62 33 58 63	tinuance of SLE TABL: 7.959 7.689 7.411 7.133 6.870 6.626 6.405 6.183 5.959	Ages           50         75         80           51         76         81           52         77         82           53         78         83           55         80         85           56         81         85           56         81         83           57         78         83           58         85         56           57         82         87           58         83         88	<b>3</b> % 2.499 2.349 2.222 2.086 1.942 1.796 1.652 1.530 1.433
Ages 0 25 30 I 26 3I 2 27 32 3 28 33 4 29 34 5 30 35 6 3I 36 7 32 37 8 33 38 0 34 39	Annuity for 3 % 8.460 9.684 10.257 10.726 10.930 11.056 11.056 11.053 11.059 10.910 10.910	the Joint Con to the CARLI; 25 50 55 26 51 56 27 52 57 28 53 58 29 54 59 30 55 60 31 56 61 32 57 62 33 58 63 34 59 64	tinuance of <b>SLE TABL</b> : <b>3</b> % 7.959 7.689 7.411 7.133 6.870 6.626 6.405 6.183 5.959 5.734	Ages           50         75         80           51         76         81           52         77         82           53         78         83           54         79         84           55         80         85           56         81         80           57         82         83           56         81         80           57         82         87           58         83         88           59         84         80	<b>3</b> % 2 · 499 2 · 349 2 · 222 2 · 086 1 · 942 1 · 796 1 · 652 1 · 533 1 · 334
Ages 0 25 30 I 26 3I 2 27 32 3 28 33 4 29 34 5 30 35 6 3I 36 7 32 37 8 33 38 9 34 39 10 25 40	Annuity for 8 .460 9 .684 10 .257 10 .726 10 .930 11 .053 11 .003 11 .053 11 .003 10 .910 10 .780 10 .780	the Joint Con to the CARLI; 25 50 55 20 51 56 27 52 57 28 53 58 29 54 59 30 55 60 31 56 61 32 57 62 33 58 63 34 59 64 35 60 65	tinuance of SLE TABL: 3 % 7.959 7.689 7.411 7.133 6.870 6.626 6.405 6.405 6.183 5.959 5.734 5.510	Ages           50         75         80           51         76         81           52         77         82           53         78         83           54         79         84           55         80         85           50         81         86           57         82         87           58         83         83           59         84         89           60         85         90	<b>3</b> % 2 · 499 2 · 349 2 · 222 2 · 086 1 · 942 1 · 796 1 · 652 1 · 533 1 · 334 1 · 184
Ages 0 25 30 1 26 31 2 27 32 3 28 33 4 29 34 5 30 35 6 31 36 7 32 37 8 33 38 9 34 39 10 35 40 11 36 41	Annuity for 8:460 9:684 10:257 10:726 10:930 11:056 11:063 11:009 10:910 10:780 10:632 10:479	the Joint Con to the CARLI 25 50 55 20 51 56 27 52 57 28 53 58 29 54 59 30 55 60 31 56 61 32 57 62 33 58 63 34 59 64 35 60 65 36 61 66	tinuance of <b>SLE TABL</b> : <b>3</b> % 7.959 7.689 7.411 7.133 6.870 6.626 6.405 6.183 5.959 5.734 5.519 5.7318	Ages           50         75         80           51         76         81           52         77         82           53         78         83           54         79         84           55         80         85           56         81         86           57         82         87           58         83         88           59         84         89           60         85         90           61         86         91	<b>3</b> % 2:499 2:349 2:349 2:220 2:086 1:942 1:796 1:652 1:530 1:437 1:334 1:184
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Ages           0         25         30           1         26         31           2         27         32           3         28         33           4         29         34           5         30         35           6         31         36           7         32         37           8         33         38           9         34         39           10         35         40           11         36         41           12         37         42           13         38         43           14         39         44           15         40         45           15         43         44           15         44         45           15         44         44           15         44         49           16         41         46           17         42         47           18         43         48           19         44         49           10         44         49           10         <	Annuity for 3 % 8.460 9.684 10.257 10.726 11.056 11.056 11.063 11.009 10.780 10.632 10.479 10.331 10.182 10.029 9.877 9.732 9.588 9.438 9.270 9.088	the Joint Con to the CARLI; 25 50 55 20 51 56 27 52 57 28 53 58 29 54 59 30 55 60 31 56 61 32 57 62 33 58 63 34 59 64 35 60 65 36 61 66 37 62 67 38 63 68 39 64 69 40 65 70 41 66 71 42 67 72 43 68 73 44 69 74 45 70 75	tinuance of SLE TABL: 7959 7:689 7:411 7:133 6:870 6:626 6:405 6:183 5:959 5:734 5:519 5:318 5:112 4:900 4:673 4:439 4:192 3:953 3:729 3:520 3:336	Ages           50         75         80           51         76         81           52         77         82           53         78         83           54         79         84           55         80         85           56         81         80           57         82         87           58         83         88           59         84         89           60         85         90           61         86         91           62         87         92           63         88         93           64         90         95           66         91         96           67         92         97           68         93         98           93         94         99           70         95         100	<b>3</b> % 2:499 2:349 2:222 2:086 1:055 1:652 1:533 1:165 1:652 1:533 1:184 1:109 1:019 1:117 1:111 1:062 1:055 1:076 1:081 1:081 1:081
Ages           0         25         30           1         26         31           2         27         32           3         28         33           4         29         34           5         30         35           7         32         37           8         33         38           9         34         39           10         35         40           11         36         41           12         37         42           13         38         43           14         39         44           15         40         45           16         41         45           16         41         46           17         42         47           18         43         48           19         44         49           20         45         50           20         45         50           21         40         51	Annuity for 3 % 8.460 9.684 10.257 10.726 11.056 11.056 11.056 11.056 11.057 10.910 10.910 10.632 10.479 10.331 10.182 10.229 9.877 9.732 9.588 9.438 9.270 9.088 8.887	the Joint Con to the CARLI; 25 50 55 26 51 56 27 52 57 28 53 58 29 54 59 30 55 60 31 56 61 32 57 62 33 58 63 34 59 64 35 60 65 36 61 66 37 62 67 38 63 68 39 64 69 40 65 70 41 66 71 42 67 72 43 68 73 44 59 74 45 70 75 40 71 76	tinuance of SLE TABL: 7 959 7 689 7 411 7 133 6 870 6 626 6 405 6 183 5 959 5 734 5 519 5 318 5 112 4 900 4 673 4 439 4 192 3 953 3 729 3 729 3 520 3 326 3 145	Ages           50         75         80           51         76         81           52         77         82           53         78         83           54         79         84           55         80         85           56         81         86           57         82         87           58         83         88           59         84         89           60         85         90           61         86         91           62         87         92           63         88         93           64         89         94           65         90         95           66         91         96           67         92         97           68         93         98           69         94         99           70         95         100           71         96         101	<b>3</b> % 2:499 2:349 2:222 2:086 1:055 1:652 1:533 1:433 1:1652 1:533 1:433 1:1652 1:059 1:117 1:111 1:065 1:070 1:105 1:070 1:105 1:075
Ages           0         25         30           1         26         31           2         27         32           3         28         33           4         29         34           5         30         35           6         7         32         37           8         33         36         41           12         37         42         37           8         33         38         9           9         34         39         11           11         35         40         11           12         37         42         37           13         38         43         11           14         39         44         15           15         40         45         10           16         41         46         17           17         42         43         48           19         44         49         20           20         45         50         22           21         40         51         22           20         45	Annuity for 8 ·460 9 ·684 10 ·257 10 ·726 10 ·930 11 ·063 11 ·063 11 ·063 10 ·910 10 ·780 10 ·632 10 ·479 10 ·331 10 ·182 10 ·029 9 ·877 9 ·732 9 ·588 9 ·438 9 ·438 9 ·438 8 ·877 8 ·676	the Joint Con to the CARLI; 25 50 55 20 51 56 27 52 57 28 53 58 29 54 59 30 55 60 31 56 61 32 57 62 33 58 63 34 59 64 35 66 65 36 61 66 37 62 67 38 63 68 39 64 69 40 65 70 41 66 71 42 67 72 43 68 73 44 69 74 45 70 75 46 71 76 47 72 77	tinuance of SLE TABL: 7:959 7:689 7:411 7:133 6:870 6:626 6:405 6:183 5:959 5:734 5:519 5:318 5:112 4:900 4:673 4:439 4:192 3:953 3:729 3:520 3:326 3:145 2:971	Ages           50         75         80           51         76         81           52         77         82           53         78         83           54         79         84           55         80         85           50         81         86           57         82         87           58         83         88           59         84         89           60         85         90           61         86         91           62         87         92           63         88         93           64         89         94           65         90         95           66         91         96           67         92         97           68         93         98           69         94         99           70         95         100           71         96         101           72         97         102	<b>3</b> % 2:499 2:349 2:249 2:249 2:249 2:249 1:499 1:452 1:530 1:433 1:530 1:433 1:530 1:433 1:334 1:1652 1:530 1:433 1:334 1:1652 1:052 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:105 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070 1:070

For explanation see p. 35

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Value accord	of an Annui ing to the I	ty for the J NSTITUTE	eint Continu OF ACTUA	ance of RIES H	Three Liv EALTHY	ves of Equ MALES	al Ages TABLE
Ages	3 %	$3\frac{1}{2}\%$	<b>4</b> %	Ages	<b>3</b> %	$3\frac{1}{2}\%$	<b>4</b> %
0	11.534	10.633	9.850	50	8.621	8.320	8.036
I	16.013	14.760	13.669	51	8.312	8.030	7.764
2	17.358	16.004	14.824	52	8.004	7.740	7.492
3	18.100	10.090	15.470	53	7.090	7.451	7.219
4	18 534	17 107	15 059	- 04 57	7 309	6.8 7 2	6.672
5	10.006	17 393	10134	55	6.782	6.587	6.401
7	19 000	17.642	16.386	57	6.483	6.303	6.131
8	19.046	17.633	16.301	58	6.187	6.021	5.862
ŭ	18.946	17:555	16.332	59	5.895	5.742	5.597
10	18.787	17.424	16.222	60	5.607	5.468	5.334
11	18.589	17.257	16.079	61	5.325	5.197	5.022
12	18.361	17.060	15.910	62	5.048	4.931	4 820
13	18.110	16.843	15.720	63	4.777	4 671	4.569
14	17.846	16.612	15.218	64	4.212	4.416	4.324
15	17.572	16.372	15.305	65	4.254	4.167	4.084
16	17.300	16.135	15.003	00	4.004	3.925	3.820
17	17.030	15.895	14.884	07	3.200	3.690	3.022
18	10.773	15.009	14.003	60	3.525	3.402	3.401
19	10.520	15 452	14 492	59	3 497	3 241	3.100
20	10.293	15.240	14-312	70	2.868	3.020	2.979
21	10 0/3	13 033	14 142	72	2.665	2.625	2.587
22	15.656	14.691	13.823	73	2.472	2.437	2.402
24	15.453	14.514	13 668	74	2.287	2.256	2.226
25	15.251	14.337	13.513	75	2.111	2.083	2.057
26	15.046	14.159	13.356	76	1.943	1.919	1.896
27	14.837	13.976	13.194	77	1.784	1.764	1.243
28	14.623	13.787	13.028	78	1.634	1.010	1.208
29	14.404	13.203	12.857	79	1.492	1'470	1.400
30	14.129	13.394	12.681	80	1.328	1.344	1.331
31	13.947	13.189	12.497	82	1.232	1.220	1.200
32	13.710	12.9/8	12 309	82	1.004	1 104	·087
33.	13.218	12.538	11.014	84	.001	-894	•886
25	12:06/	12.300	11.708	85	·806	.799	.793
20	12.704	12.075	11.497	86	•717	•711	.706
37	12.439	11.836	11.280	87	•635	•630	•626
38	12.167	11.200	11.057	88	*559	*555	.221
39	11.892	11.339	10.829	89	•490	•486	•483
40	11.015	11.084	10.296	90	.425	•423	*420
41	11.327	10.824	10.328	91	368	•366	•363
42	11.037	10.220	10.112	92	*266	-315	-313
43	10.740	10.291	0.616	93	200	*225	203
44	10 449	0.743	0.260	94 05	+187	•186	•185
45	0.847	9742	9.300	95	157	157	1156
40	0.542	9.180	8.830	97	146	.145	.145
48	9.237	8.895	8.573	<u> </u>	.112	.112	.111
49	8.930	8.608	8.305	99	•087	·086	·086
				100	.012	·015	•015

#### MORTALITY TABLES--THREE LIVES

Value of an Annuity during the Longest of Three Livee according to the NORTHAMPTON TABLE										
Ages	3 %	<b>4</b> %	Ages	3 %	4 %					
10 10 10	26.642	21.938	20 40 40	22.762	19.250					
10 10 30	25.812	21.400	20 40 60	21.697	18.582					
10 10 50	25.340	20.835	20 45 45	22.008	18.741					
10 10 70	25.007	20.781	20 45 65	21.123	18.134					
10 20 20	25.707	21.263	20 50 50	21.396	18.380					
10 20 40	24.645	20.606	20 50 70	20.294	17.704					
10 20 60	24.292	20.333	20 55 55	20.948	18.01					
10 25 25	25.077	20.944	20 55 75	20.273	17.350					
10 25 45	24.401	20.491	20 60 60	20.401	17.671					
10 25 65	23.905	20.072	20 65 65	19.983	17-242					
10 30 30	24.785	20.635	20 70 70	19.000	16.916					
10 30 50	23.780	20'021	30 30 30	23.266	19.625					
10 30 70	23.472	19746	30 30 50	21.896	18.793					
10 35 35	24.217	20.380	30 30 70	21.376	18.357					
10 35 55	23.221	19.628	3° 35 35	22.485	19.220					
10 35 75	23.029	19.426	30 35 55	21.141	18.233					
10 40 40	23.746	19.851	30 35 75	20.713	17.887					
10 40 60	22.878	19.321	30 40 40	21.814	18.628					
10 45 45	23.271	19.495	30 40 <b>6</b> 0	20.220	17.81					
10 45 65	22.462	19.035	30 45 45	21.062	18.241					
10 50 50	22.647	19.202	30 45 65	19.902	17.298					
10 50 70	22.028	18.664	30 50 50	20.227	17.585					
10 55 55	22.341	18.958	30 50 70	19.267	16.783					
10 55 75	21.768	18.484	30 55 55	19.670	17.164					
10 60 60	22.004	18.705	3° 55 75	18.651	16-263					
10 65 65	21.464	18.225	30 60 60	19.107	16.708					
10 70 70	21.308	18.110	30 65 65	18.221	15.971					
15 25 25	24.773	20.776	30 70 70	18.042	15.805					
15 25 45	23.932	20.192	40 40 40	20.909	17.996					
15 25 65	23.375	19.723	40 40 60	19.414	16.997					
15 35 35	23.738	20.078	40 45 45	20°01 I	17.201					
15 35 55	22.687	19.263	40 45 65	18.001	16.364					
15 35 75	22.407	19.002	40 50 50	19.020	16.231					
15 45 45	22.081	19.114	40 50 70	17.817	15.736					
15 45 65	21.283	18.281	40 55 55	18.301	16.124					
IS 55 55	21.639	18.208	40 55 75	17.264	12.303					
15 55 75	21.035	17.984	40 60 60	17.567	15.200					
15 65 65	20*781	17.800	40 65 65	16.283	14.747					
20 20 20	25.152	20.836	40 70 70	16.232	14.464					
20 20 40	23.941	20.182	50 50 50	17.913	15.866					
20 20 60	23.372	19.740	50 50 70	16.328	14.63 <b>3</b>					
20 25 25	24.430	20.557	50 55 55	16.953	15.165					
20 25 45	23.488	19'904	50 55 75	15.618	14.040					
20 25 65	22.807	19.369	50 60 60	15.994	14.394					
20 30 30	23.980	20.110	50 05 05	14.823	13.398					
20 30 50	22.795	19.390	50 70 70	14.269	12.935					
20 30 70	22.390	19.042	00 00 60	14.002	13.194					
20 35 35	23.282	19.782	00 05 05	13.103	12.002					
20 35 55	22.129	18.900	00 70 70	12.280	11.319					
20 35 75	21.902	18.005	70 70 70	10.240	9.912					

Value of		Value	e of £1 at Deat	h	
Annuity	$2\frac{1}{2}\%$	3 %	<b>3</b> ½ %	<b>4</b> %	5 %
0	·97 56 I	·97087	.06618	.06154	.05238
I	.95122	94175	93237	92308	.90476
2	92683	91262	89855	·88462	.85714
3	·90244	·88350	·86473	·84615	80952
4	·87805	·85437	·83092	·80769	•76190
5	·85366	·82524	•79710	.76923	.71429
6	·82927	•79612	•76329	*73077	•66667
7	·80488	<b>·76</b> 699	`72947	69231	.61905
8	78049	•73786	•69565	-65385	.57143
9	•75610	-70874	•66184	·61538	.52381
10	.73171	-67961	·62802	.57692	-47619
II	.70732	.65049	.59420	•53846	·42857
12	·68293	•62136	•56039	.20000	-38095
13	•65854	.59223	.52657	•46154	'33333
14	·63415	.26311	*49275	•42308	-28571
15	·60976	•53398	·45894	·38462	•23810
16	·5 ⁸ 537	•50485	•42512	•34615	•19048
17	.26098	47573	•39130	.30769	·14286
18	•53659	•44060	35749	26923	.09524
19	-51220	-41748	-32307	*23077	·04702
20	.48780	.38835	*28986	19231	*00000
21	•46341	*35922	·25604	-15385	
22	•43902	*33010	22222	•11538	
23	*20024	-30007	16041	*07092	
-+	39024	2/104	-3439	03040	
25	-30585	24272	12077	*00000	
20	*34140	121359	08090		
27	*20268	10447	*01032		
29	•26829	12621			
Difference	Dif	ference (subtra	ctive) of Value	e of £1 at Dea	th
of			1 1		1 -
Annuity	$2\frac{1}{2}$ %	3 %	$3\frac{1}{2}\%$	4 %	5 %
·I	.00244	·00291	.00338	.00385	·00476
2	·00488	·00 <u>5</u> 83	·00676	·00769	00952
·3	.00732	.00874	*01014	-01154	01429
-4	·00976	01165	.01353	•01538	.01905
·5	·01220	01450	.01001	.01923	·02381
·6	·01463	·01748	·02029	·02308	·02857
7	·01707	.02039	02367	·02692	•03333
·8	·01951	.02330	.02705	•03077	.03810
•0	02195	·02621	.03043	·03462	04286

#### Annual Premium Conversion Table for Finding by Inspection the Annual Premium to secure £1 at Death from the Value of an Annuity for Life. INTEREST 3 PER CENT.

	Annual Fremium									
Value of Aunuity				Decima	als of Va	lue of A	nnuity			
2	•0	.I	'2	•3	<b>'</b> 4	°5	•6	.7	•8	•9
0- 0'9 I- I'9 2- 2'9	·9709 ·4709 ·3042	·8800 ·4471 ·2935	·8042 ·4254 ·2834	·7401 ·4057 ·2739	·6852 ·3875 ·2650	·6375 ·3709 ·2566	·5959 ·3555 ·2487	·5591 ·3412 ·2411	·5264 ·3280 ·2340	·4972 ·3157 ·2273
3- 3'9 4- 4'9	·2209 ·1709	·1670	·1632	·2034 ·1596	·1981 ·1561	1931	1883	1463	1433	·1750 ·1404
5- 5.9 6- 6.9 7- 7.9 8- 8.9 9- 9.9	·1375 ·1137 ·0959 ·0820 ·0709	·1348 ·1117 ·0943 ·0808 ·0699	·1322 ·1098 ·0928 ·0796 ·0689	·1296 ·1079 ·0914 ·0784 ·0680	·1271 ·1060 ·0899 ·0773 ·0670	·1247 ·1042 ·0885 ·0761 ·0661	·1224 ·1025 ·0872 ·0750 ·0652	·1201 ·1007 ·0858 ·0740 ·0643	·1179 ·0991 ·0845 ·0729 ·0635	·1158 ·0975 ·0832 ·0719 ·0626
10-10'9 11-11'9 12-12'9 13-13'9 14-14'9	·0618 ·0542 ·0478 ·0423 ·0375	·0610 ·0535 ·0472 ·0418 ·0371	•0602 •0528 •0466 •0413 •0367	•0594 •0522 •0461 •0408 •036 <b>2</b>	•0586 •0515 •0455 •0403 •0358	•0578 •0509 •0449 •0398 •0354	·0571 ·0502 ·0444 ·0394 ·0350	•0563 •0496 •0439 •0389 •0346	·0556 ·0490 ·0433 ·0384 ·0342	•0549 •0484 •0428 •0380 •0338
15-15 [.] 9 16-16 [.] 9 17-17 [.] 9 18-18 [.] 9 19-19 [.] 9	·0334 ·0297 ·0264 ·0235 ·0209	·0330 ·0294 ·0261 ·0232 ·0206	·0326 ·0290 ·0258 ·0230 ·0204	·0322 ·0287 ·0255 ·0227 ·0201	·0318 ·0283 ·0252 ·0224 ·0199	·0315 ·0280 ·0249 ·0222 ·0197	·0311 ·0277 ·0246 ·0219 ·0194	·0308 ·0274 ·0243 ·0216 ·0192	·0304 ·0271 ·0241 ·0214 ·0190	·0300 ·0267 ·0238 ·0211 ·0187
20-20.9 21-21.9 22-22.9 23-23.9 24-24.9	·0185 ·0163 ·0144 ·0125 ·0109	·0183 ·0161 ·0142 ·0124 ·0107	•0180 •0159 •0140 •0122 •0106	•0178 •0157 •0138 •0120 •0104	·0176 ·0155 ·0136 ·0119 ·0102	•0174 •0153 •0134 •0117 •0101	·0172 ·0151 ·0132 ·0115 ·0099	·0170 ·0149 ·0131 ·0114 ·0098	·0167 ·0147 ·0129 ·0112 ·0096	·0165 ·0145 ·0127 ·0110 ·0095
25-25.9 26-26.9 27-27.9 28-28.9 29-29.9	•0093 •0079 •0066 •0054 •0042	·0092 ·0078 ·0065 ·0052 ·0041	·0090 ·0076 ·0063 ·0051 ·0040	·0089 ·0075 ·0062 ·0050 ·0039	·0088 ·0074 ·0061 ·0049 ·0038	·0086 ·0072 ·0060 ·0048 ·0037	*0085 *0071 *0058 *0047 *0036	·0083 ·0070 ·0057 ·0045 ·0034	·0082 ·0068 ·0056 ·0044 ·0033	·0080 ·0067 ·0055 ·0043 ·0032
30-30.9 31-31.9 32-32.9 33-33.9	·0031 ·0021 ·0012 ·0003	*0030 *0020 *0011 *0002	·0029 ·0019 ·0010 ·0001	•0028 •0018 •0009 •0000	·0027 ·0017 ·0008 	·0026 ·0016 ·0007 	•0025 •0015 •0006 	·0024 ·0015 ·0005 	·0023 ·0014 ·0005	*0022 *0013 *0004
Fo	or inter	est at add	1 •0:	1 192	1 <u>1</u> •0168	1 <u>1</u> '01	43	1 ⁸ pe 0119	er cent.	
Fo	r inter	est at add	: •00	<b>2</b> . 995	2 ¹ •0071	<b>2</b> ¹ / ₂ '004	17	2 ⁸ 0024	"	
Fo	r i <b>n</b> ter sul	est at otract	.00	<b>3</b> 200	.3 ¹ ₄ ∙0024	3 ¹ /2 •00/	47	3 ⁸ •0070	"	
Fo	r intere sul	est at otract	ړ ۰۵۵	<b>H</b> 993	<b>4</b> 1 0116	4 ¹ / ₂ 013	39 ⁻	4 ⁸ 0162	**	
Fo	r intere sub	est at tract	·01	<b>5</b> 185	<b>6</b> •0275	.7 ∙03€	i3 ·	8 •0449	19	

For explanation see pp. 35-39

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# RATES

### FOR

# **ANNUITIES AND ASSURANCES**

CHARGES BY GOVERNMENT

AND BY

BRITISH LIFE OFFICES

For explanation see pp. 39, 40

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	COST OF I	MMEDIATE LI	FE ANN	UITIES OF 4	:1
Age Next Birth- day	Males	Females	Age Next Birth- day	Males	Females
6 7 8 9 10	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	£ s. d. 27 12 6 27 9 1 27 5 8 27 2 2 26 18 8	46 47 48 49 50	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	£ s. d. 18 6 9 18 0 0 17 13 2 17 6 1 16 18 11
11	24 18 10	26 15 1	51	14 19 11	16 11 9
12	24 14 9	26 11 6	52	14 13 6	16 4 7
13	24 10 6	26 7 10	53	14 7 1	15 17 4
14	24 6 4	26 4 1	54	14 0 5	15 9 11
15	24 2 1	26 0 4	55	13 13 8	15 2 4
16	23 17 10	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	56	13 6 9	14 14 9
17	23 13 6		57	12 19 8	14 6 11
18	23 9 1		58	12 12 5	13 19 0
19	23 4 9		59	12 4 11	13 11 1
20	23 0 4		60	11 17 4	13 3 1
21	22 15 10	24 16 6	61	11 9 8	12 15 1
22	22 11 4	24 12 4	62	11 2 2	12 7 0
23	22 6 9	24 8 1	63	10 14 11	11 19 0
24	22 2 3	24 3 10	64	10 7 8	11 11 0
25	21 17 7	23 19 5	65	10 0 6	11 2 11
26	21 12 11	23 15 0	66	9 I3 4	10 14 7
27	21 8 3	23 10 6	67	9 6 4	10 6 4
28	21 3 6	23 5 11	68	8 I9 7	9 18 1
29	20 18 9	23 1 3	69	8 I2 I0	9 9 10
30	20 13 11	22 16 6	70	8 6 2	9 1 10
31	20 9 I	22 11 8	71	$\begin{array}{cccccccc} 7 & 19 & 5 \\ 7 & 12 & 10 \\ 7 & 6 & 4 \\ 7 & 0 & 1 \\ 6 & 14 & 1 \end{array}$	8 14 2
32	20 4 2	22 6 9	72		8 6 10
33	19 19 2	22 1 9	73		7 19 10
34	19 14 2	21 16 7	74		7 13 0
35	19 9 2	21 11 5	75		7 6 4
36	19 4 1	21 6 2	76	6 8 4	6 19 10
37	18 18 11	21 0 9	77	6 2 8	6 13 7
38	18 13 9	20 15 3	78	5 17 4	6 7 5
39	18 8 6	20 9 7	79	5 12 3	6 1 6
40	18 3 2	20 3 11	80	5 7 2	5 15 9
41 42 43 44 45	17 17 10 17 12 4 17 6 10 17 1 4 16 15 8	19 18 0 19 12 1 19 5 11 18 19 8 18 13 3	81 or over	524	5 10 3

For explanation see pp. 39, 40

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### POST OFFICE ANNUITIES

	COS	ST OF DEFE Mor	RRED LIFE 1ey Returnabl	ANNUITIES. 0		
Age Next	Years	Annual I	Payment	Single Payment		
Birthday	Deferred	Males	Females	Males	Females	
10 10 10	10 20 30	£ s. d. I I6 II 0 I5 3 0 7 II	£ s. d. 2 0 2 0 16 10 0 8 10	£ s. d. 17 19 7 12 12 7 8 13 2	£ s. d. 19 11 1 13 18 7 9 12 7	
10	40	0 4 5	0 4 11	5 14 0	6 6 3	
10	50	0 2 5	0 2 8	3 9 1	3 16 7	
15 15 15 15	20 30 40 50	0 14 4 0 7 4 0 3 11 0 2 0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
20	10	I 13 2	1 16 7	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	17 16 7	
20	20	0 13 5	0 14 11		12 6 6	
20	30	0 6 8	0 7 5		8 1 7	
20	35	0 4 10	0 5 4		6 7 5	
20	40	0 3 5	0 3 10		4 18 0	
20	45	0 2 5	0 2 8	3 6 0	3 13 5	
25	10	1 11 3	1 14 7	15 4 0	16 17 0	
25	20	0 12 5	0 13 9	10 4 10	11 7 10	
25	25	0 8 6	0 9 5	8 5 2	9 2 10	
25	30	0 6 0	0 6 7	6 10 6	7 4 2	
25	35	0 4 2	0 4 8	5 0 0	5 10 11	
25	40	0 2 II	0 3 3	3 14 8	4 3 0	
30	10	1 9 2	1 12 5	14 3 9	15 15 6	
30	15	0 I7 4	0 19 4	11 11 9	12 17 9	
30	20	0 II 4	0 12 6	9 6 10	10 6 10	
30	25	0 7 8	0 8 5	7 7 7	8 3 1	
30	30	0 5 2	0 5 9	5 13 2	6 5 5	
30	35	0 3 6	0 3 11	4 4 6	4 13 11	
30	40	0 2 5	0 2 8	3 1 11	3 7 9	
35	10	1 6 11	1 9 11	13 2 3	14 11 7	
35 35 35 35 35 35	15 20 25 30 35	0 15 10 0 10 1 0 6 8 0 4 5 0 2 11	0 17 6 0 11 2 0 7 4 0 4 11 0 3 3	10 11 4 8 7 0 6 8 0 4 15 7 3 10 0	11 14 0 9 4 6 7 1 11 5 6 3 3 16 8	
40	10	I 4 7	1 7 2	11 19 2	13 4 10	
40	15	0 I4 2	0 15 8	9 8 11	10 8 9	
40	20	0 8 9	0 9 9	7 4 10	8 0 7	
40	25	0 5 7	0 6 3	5 8 2	6 0 3	
40	30	0 3 8	0 4 0	3 19 3	4 6 9	
45	10	I 2 0	I 4 3	10 13 9	11 16 3	
45	15	0 12 3	0 13 7	8 3 10	9 1 8	
45	20	0 7 5	0 8 3	6 2 4	6 16 0	
45	25	0 4 8	0 5 I	4 9 8	4 18 1	
50	10	0 19 1	I I I	9 5 5	10 5 6	
50	15	0 10 5	0 11 6	6 18 5	7 I3 II	
50	20	0 6 2	0 6 9	5 1 5	5 II 0	
55	10	0 16 1	0 17 11	7 16 8	8 I4 I	
55	15	0 8 7	0 9 5	5 14 9	6 5 7	
55	10	0 13 4	0 14 7	6 9 10	7 2 I	

### POST OFFICE ANNUITIES

#### COST OF DEFERRED LIFE ANNUITIES. Money not Returnable

Money not defuinable							
Age Next	Years	Annual	Payment	Single Payment			
Birthday	Deferred	Males	Females	Males	Females		
10 10 10 10 10	10 20 30 40 50	£ s. d. 1 15 1 0 13 7 0 6 5 0 3 1 0 1 5	£ s. d. 1 18 6 0 15 4 0 7 6 0 3 10 0 1 10	$\begin{array}{c} \pounds & s. & d. \\ 16 & 11 & 10 \\ 10 & 9 & 8 \\ 6 & 5 & 0 \\ 3 & 8 & 6 \\ 1 & 12 & 9 \end{array}$	$\begin{array}{c} \pounds & s. & d. \\ 18 & 6 & 7 \\ 12 & 1 & 2 \\ 7 & 11 & 3 \\ 4 & 8 & 1 \\ 2 & 4 & 11 \\ \end{array}$		
15	10	I 13 I	1 16 9	15 11 10	17 8 8		
15	20	0 12 6	0 14 5	9 11 10	11 4 6		
15	30	0 5 9	0 6 10	5 10 1	6 16 3		
15	40	0 2 8	0 3 4	2 16 11	3 15 0		
15	50	0 I I	0 1 5	1 4 2	1 14 5		
20	10	I II I	1 14 10	14 10 11	16 9 6		
20	20	0 II 6	0 13 4	8 13 5	10 6 8		
20	30	0 5 0	0 6 1	4 15 1	6 0 3		
20	35	0 3 4	0 4 2	3 7 2	4 7 9		
20	40	0 2 2	0 2 9	2 5 4	3 1 4		
20	45	0 I 4	0 1 9	1 8 7	2 0 4		
25	10	I 8 II	I I2 9	13 9 4	15 8 10		
25	20	0 I0 4	0 I2 2	7 14 7	9 7 6		
25	25	0 6 8	0 8 0	5 13 0	7 1 4		
25	30	0 4 4	0 5 4	3 19 10	5 3 2		
25 25 30 30 30	35 40 10 15 20	0 2 9 0 1 8 1 6 9 0 15 1 0 9 3	0 3 5 0 2 2 1 10 6 0 17 6 0 10 11	1 13 11 12 6 10 9 5 1 6 15 4	3 12 1 2 7 4 14 6 5 11 1 2 8 6 9		
30	25	0 5 9	0 7 0	4 15 8	6 I 8		
30	30	0 3 7	0 4 5	3 4 7	4 5 0		
30	35	0 2 2	0 2 9	2 0 8	2 I5 I0		
30	40	0 I 2	0 I 7	1 3 0	I I3 7		
35	10	I 4 5	I 8 0	11 3 6	I3 2 I		
35	15	0 13 6	0 15 9	8 3 4	9 17 7		
35	20	0 8 0	0 9 6	5 15 6	7 4 2		
35	25	0 4 10	0 5 10	3 18 0	5 0 9		
35	30	0 2 10	0 3 6	2 9 1	3 6 2		
35	35	0 1 6	0 2 0	1 7 9	1 19 9		
40	10	I 2 0	1 5 3	9 19 2	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		
40	15	0 II I0	0 13 10	7 0 10			
40	20	0 6 9	0 8 0	4 15 1			
40	25	0 3 I0	0 4 8	2 19 10			
40	30	0 2 0	0 2 7	1 13 10			
45	10	0 19 4	1 2 2	8       13       7         5       17       2         3       13       9         2       1       8         7       6       3	10 5 0		
45	15	0 10 0	0 11 8		7 3 7		
45	20	0 5 4	0 6 5		4 14 4		
45	25	0 2 9	0 3 5		2 16 8		
50	10	0 16 7	0 18 11		8 13 0		
50	15	0 8 0	0 9 5	4 12 0	5 13 8		
50	20	0 3 11	0 4 10	2 12 0	3 8 3		
55	10	0 13 5	0 15 5	5 16 5	6 19 0		
55	15	0 5 11	0 7 2	3 5 9	4 3 5		
60	10	0 10 0	0 11 10	4 4 6	5 3 11		

#### POST OFFICE ASSURANCES

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#### SINGLE PREMIUMS FOR LIFE ASSURANCE FOR £100 Sum Assured Payable Age at Entry Age at Entry At Death In 10 Years In 15 Years In 20 Years d. £ 8. £. ۴. đ £. 8. đ £ \$. d. 16 80 6 64 37 o 4 71 13 ο 7 16 5 n 6 80 5 6 6 6 6 19 64 17 37 38 7I 14 9 17 18 18 13 6 6 80 6 71 IĠ 6 64 12 0 6 80 7 8 6 6 6 19 39 71 17 64 13 10 18 20 39 19 ο 80 0 71 6 64 15 0 20 8 80 40 11 ο o o 64 16 ο 21 71 19 21 8 80 6 6 22 41 3 ο 71 19 64 17 ο 22 80 8 6 23 41 15 ο 72 ο o 64 17 6 23 8 24 42 6 80 6 72 ο 6 64 19 ο 24 7 o 80 9 o ο 65 ο 25 43 I 72 I ò 25 6 6 26 43 14 80 9 72 2 ο 6٢ I 6 26 8 6 80 IO ο 65 6 27 28 44 72 3 ο 3 27 28 6 80 10 6 65 5 45 2 72 4 o ο 45 I7 20 ο 80 11 o 72 56 ο 65 78 o 29 46 11 80 11 65 30 6 6 ο 6 72 30 47 48 6 o 80 11 6 78 65 10 6 31 72 ο 31 80 12 6 72 6 32 I ο ο 65 12 32 48 16 80 13 33 ο ο 6 65 15 72 9 ο 33 34 35 80 13 6 6 6 49 11 72 10 65 17 ο 34 80 14 6 66 50 7 0 72 12 ο ò ο 35 36 6 80 14 6 6 66 6 36 5 I 3 2 72 I 3 37 38 80 15 37 38 51 19 6 o 72 15 66 5 8 6 ο ıó 8a 1Ğ ο 72 16 6 66 6 52 ο 80 16 6 72 18 6 0 6 66 11 53 I3 <u>3</u>9 40 80 17 54 10 6 6 66 15 6 ο 0 73 40 80 18 6 66 19 41 55 56 ο o 2 ο 7 73 41 5 ο 80 19 ο 5 7 6 **4**2 ο 67 **4**2 73 38 **4**3 57 58 3 0 81 ò 6 6 67 6 73 **4**3 6 81 ο 6 I 2 73 10 67 14 ο 44 44 6 81 45 59 ο 3 ο 73 14 ο 67 19 6 45 6 81 56 46 59 19 60 18 o 73 17 ο 68 6 o 46 47 48 6 8т 6 ο 68 12 6 I 47 48 74 8 61 17 6 81 ο 68 19 6 5 ο 74 62 17 81 10 ο o 49 74 9 ο 69 7 ο **49** 6 81 12 50 63 16 o 74 13 6 69 14 6 50 81 14 51 64 16 18 6 51 52 53 54 55 ο o 74 70 ο 3 16 81 16 6 52 53 54 55 65 ο ο 6 75 4 70 12 66 16 ο 81 19 ο 6 75 9 71 2 ο 67 16 82 ıó ο 2 o 75 ο 7I I2 6 68 16 6 82 5 ο 76 3 ο 72 4 o 56 57 58 59 60 6 56 57 58 59 60 69 16 ... . . . ... 70 I7 ο . . . ... ... 71 17 6 ... ... ••• 18 72 ο ... ... ... 73 18 ο 61 61 74 18 ο 18 62 ο 62 75 . . . 63 76 18 63 ο • • 64 64 77 17 o ... . . . 78 16 65 6 65 . . . ... . . .

### POST OFFICE ASSURANCES

### SINGLE PREMIUMS FOR LIFE ASSURANCE FOR £100

Ageat		Sum Assured	Payable		Age at
Entry	In 25 Years	In 30 Years	In 35 Years	In 40 Years	Entry
16 17 18 19 20	r' s. d. 58 3 6 58 7 0 58 10 0 58 12 6 58 14 6	£ s. d. 53 0 0 53 4 6 53 8 0 53 11 6 53 14 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	16 17 18 19 20
21 22 23 24 25	58 16 0 58 17 6 58 19 0 59 1 0 59 3 0	53 16 6 53 19 0 54 1 0 54 4 0 54 7 0	49 15 6 49 19 0 50 2 6 50 6 6 50 10 6	46 II 6 46 I6 0 47 I 0 47 6 6 47 I2 6	21 22 23 24 25
26 27 28 29 30	59 5 6 59 8 0 59 10 6 59 13 6 59 16 6	54 10 6 54 14 6 54 18 6 55 2 6 55 7 0	50 15 6 51 1 0 51 6 6 51 12 6 51 18 6	47 19 0 48 6 0 48 13 6 49 1 6 49 10 0	26 27 28 29 30
31 32 33 34 35	59 19 6 60 3 0 60 6 6 60 10 0 60 14 6	55 11 6 55 16 6 56 2 0 56 7 6 56 14 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	49 18 6 50 8 0 50 17 6 51 8 0 51 19 0	31 32 33 34 35
36 37 38 39 40	60 19 0 61 3 6 61 8 6 61 14 0 62 0 0	57 0 6 57 7 6 57 15 0 58 3 0 58 11 6	54 5 6 54 15 0 55 5 0 55 16 0 56 7 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	36 37 38 39 40
41 42 43 44 45	62 6 0 62 13 0 63 1 0 63 9 6 63 18 0	59 I 0 59 II 0 60 I 6 60 I3 0 6I 5 6	56 19 6 57 13 0 58 7 0 59 1 6 59 17 0	···· ··· ···	41 42 43 44 45
46 47 48 49 50	64       7       6         64       17       6         65       8       0         65       19       0         66       10       6	61 18 6 62 12 0 63 6 0 64 0 6 64 16 0	   	···· ···· ···	46 47 48 49 50
51 52 53 54 55	67 3 0 67 16 6 68 10 6 69 5 6 70 1 0	···· ··· ···	···· ··· ···	····	51 52 53 54 55

# POST OFFICE ASSURANCES

ANNUAL PREMIUMS FOR LIFE ASSURANCE FOR £100						
_		Sums	Assured Payabl	eat		ļ
Age	Death	Death	Age 55	Age 60	Age 65	Age
Entry		Premium	s Payable Annu	ally till		Entry
	Death	Age 50	Age 55	Age 60	Age 65	
-6	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	-6
10	190	1 12 0 1 13 0	2 1 0	1 17 0	1 14 0	10 Tケ
18	1 11 6	I I4 6	246	1 19 6	1 16 0	18
19	1 12 0	1 15 6	260	2 1 0	1 17 6	19
20	1 13 0	1 10 0	2 8 0	220	1 10 0	20
22	1 14 6	1 18 6	2 11 6	250	206	21
23	I 15 6	1 19 6	2130	266	220	23
24 25	1 16 6 1 17 6	2 1 0 2 2 6	2150	280	230	24
26	1 18 6	236	2 19 6	2 9 5	260	20
27	1 19 6	250	320	2 13 6	276	27
28	206	270	350	2 15 6	290	28
30	230	2 10 0	3110	217 0	2 10 0	29 30
31	240	2 12 0	3 14 0	320	214 0	31
32	256	2 14 0	3 17 6	346	2 16 0	32
33	266	2100	4 1 6	376	2186	33
35	296	3 1 0	4 10 6	3 13 6	3 3 0	34
36	211 0	3 3 6	4 15 6	3170	356	36
37	2 13 0	366	516	4 0 6	380	37
30	214 0	3 9 0	570	440	3 11 0	38
40	2 18 0	3 16 6	626	4 13 6	3 17 6	40
41	300	406	6 11 6	4 19 0	4 I O	41
42	326	4 5 0	7 1 6	546	4 5 0	42
43	370	4 15 6	8 7 6	5 18 6	490	43
45	396	516	936	ŏ 6 6	4190	45
46	3 12 0	586		6 16 0	546	46
47 48	315 0	5100	•••	700	510 0	47
49	4 1 0	6 15 6		8 12 0	646	49
50	440	776	•••	986	6130	50
51 52	470		•••	•••	7 2 6	51
53	4 15 0				8 5 6	52
54	4 19 6				8 19 6	54
55	540		•••		9166	55
57	5 13 6			••		50
58	5 19 0	•••	•••			50
59	646					59
00 61	617 0				•••	60 6-
62	740	•••	•••			01 62
63	7 11 6		•••	•••		63
64 67	7 19 0					64
v5	070		•••			05

For explanation see pp. 39, 40

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#### **IMMEDIATE LIFE ANNUITIES**

Granted through the National Debt Office for £100 of 2¹/₂ per Cent. Stock when the Price of £100 Stock is above £99 10s. ld.

Age of the Nominee	Male	Female	Age of the Nominee	Male	Female
16 17 18 19 20	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	£ s. d. 3 17 7 3 18 3 3 18 10 3 19 6 4 0 1	51 52 53 54 55	£ s. d. 6 15 1 6 18 1 7 1 5 7 4 10 7 8 7	£ s. d. 6 2 3 6 5 0 6 8 0 6 11 2 6 14 6
21	4 8 1	4 0 10	56	7 12 7	6 18 2
22	4 9 0	4 1 6	57	7 16 11	7 2 1
23	4 9 11	4 2 3	58	8 1 8	7 6 2
24	4 10 10	4 3 0	59	8 6 10	7 10 7
25	4 11 10	4 3 9	60	8 12 4	7 15 3
26	4 12 10	4 4 6	61	8 18 0	8 0 4
27	4 13 10	4 5 4	62	9 4 0 .	8 5 8
28	4 14 11	4 6 3	63	9 10 4	8 11 4
29	4 16 0	4 7 1	64	9 17 1	8 17 6
30	4 17 2	4 8 0	65	10 4 4	9 4 3
31	4 18 4	4 9 0	66	10 11 10	9 11 6
32	4 19 6	4 10 0	67	10 19 9	9 19 6
33	5 0 10	4 11 1	68	11 8 2	10 7 11
34	5 2 1	4 12 2	69	11 17 2	10 17 0
35	5 3 5	4 13 4	70	12 7 0	11 6 6
36	5 4 10	4 14 6	71	12 17 6	11 16 3
37	5 6 4	4 15 9	72	13 8 9	12 6 6
38	5 7 10	4 17 0	73	14 0 7	12 17 4
39	5 9 4	4 18 5	74	14 13 0	13 8 9
40	5 11 0	4 19 10	75	15 5 10	14 1 0
41	5 12 8	5 I 4	76	15 19 7	14 14 0
42	5 14 6	5 3 0	77	16 13 10	15 7 11
43	5 16 4	5 4 8	78	17 8 10	16 2 8
44	5 18 3	5 6 5	79	18 4 10	16 18 5
45	6 0 4	5 8 4	80	19 1 9	17 15 0
46 47 48 49 50	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 10 4 5 12 6 5 14 9 5 17 1 5 19 8			

Life annuities are payable quarterly at the National Debt Office by warrant on the Bank of England.

The warrants may be received at the National Debt Office either on personal demand or by power of attorney, or they can be transmitted by post to the proprietor at his or her own risk.

Life annuities are transferable, but cannot be transferred in parts or shares, nor can the original nominee ever be changed.

# LIFE OFFICES ANNUITIES AND ASSURANCES

AVE	RAGE RATES	5 FOR ANNUI BY BRITISH	TIES A	ND ASSURANC	ES CHARGED
	Annuit	y Granted for ea	ch £100	of Purchase Mo	ney
Age	Males	Females	Age	Males	Females
	£ s. d.	£ s. d.		£ s. d.	£ s, d.
40	5 16 7	564	55	7 14 10	7 0 5
41	5 18 4	579	50	7 18 10	7 4 0
43	6 1 11	5 10 9	58	8 7 11	7 I2 I
44	6 3 11	5 12 5	59	8 13 0	7 16 6
45	6 5 11	5 14 2	60	8185	8 1 0
46	681	5 16 1	61	943	863
47 48	6 12 10	5 18 2	62	9104	8 11 10
49	6 15 6	629	64	10 3 7	9 3 8
50	6 18 3	653	65	10 11 1	9 10 4
51	7 1 2	6 7 10	66	10 18 8	9 18 I
52	7 4 3	6 10 7	67	11 6 9	10 5 3
53	777	6 16 10	08 70	11 15 2	
	Annue	Promium for A	1	of £100 at Dea	+
Age	With Profits	Without Profits	Age	With Profits	Without Profits
	£ s. d.	£ s. d.		£ s. d.	£ s d.
21	1196	I I 3 8	41	369	2 17 10
22	203	I I4 4	42	3 8 8	2 19 10
23		1 15 1	43	3 13 3	3 1 11 3 4 2
25	2 3 1	I 16 7	45	3 15 9	3 6 7
26	24 I	I 17 6	46	3 18 5	390
27	2 5 2	1 18 5	47	4 I 3	3 11 8
28	200	206	40	441	3 14 5
30	289	2 1 7	50	4 11 6	407
31	2 10 0	2 2 9	51	4 14 9	442
32	2 11 3	2 3 11	52	4 18 7	479
33	2 12 8	252	53	529	4 11 8
35	2 15 8	279	55	5 12 0	5 0 3
36	2 17 3	293	56	5 I7 I	550
37	2 18 11	2 10 10	57	6 2 7	5 10 1
38	308	2 12 5	50	0 8 4 6 14 5	5 15 5
40	346	2 15 11	60	7 0 8	668
	Annual H	remiums for En	dowmen	t Assurance of A	3100
Age at Entry	Years to W Maturity Pr	ith Without	Age at Entry	Years to W Maturity Pr	ith Without
	£	s. d. £ s. d.	-	£	s, d, £ s, d.
25	<b>30</b> 3	5 0 2 16 9	35	30 31	0 10 3 2 2
25	35 2 1	10 1 2 9 0	40	15 7	0 2 6 6 I
25 20	40 21 25 A		40	25 5	7 0 3 16 0
30	30 3	7 5 2 18 11	45	10 10 1	3 6 9 15 10
30	35 21	962114	45	15 7	4 1 6 9 6
35	20 5	2 6 4 11 0	45	20 5 1	I 2 4 19 9
35	25 4	2 9 3 13 0	11		

AT 5d., 6d., 7d., 8d., AND 9d. IN THE POUND

# £1–200

### TAX THEREON AT PER £

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Income						
	<b>5</b> <i>d</i> .	<b>6</b> <i>d</i> .	<b>7</b> d.	<b>8</b> <i>d</i> .	<b>9</b> <i>d</i> .	
£ 12 34 56 78 90 11 12 15 20 25	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} \pounds & d \\ 6 \\ 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0$	$\begin{array}{c} \pounds & \xi & \xi & \xi \\ 0 & 0 & 7 \\ 0 & 1 & 2 \\ 0 & 1 & 9 \\ 0 & 2 & 4 \\ 0 & 2 & 11 \\ 0 & 3 & 6 \\ 0 & 4 & 1 \\ 0 & 4 & 8 \\ 0 & 5 & 3 \\ 0 & 5 & 10 \\ 0 & 6 & 5 \\ 0 & 7 & 0 \\ 0 & 8 & 9 \\ 0 & 11 & 8 \\ 0 & 14 & 7 \end{array}$	£ 8. d. 0 0 8 0 1 4 0 2 8 0 3 4 0 4 8 0 5 4 0 6 8 0 7 4 0 6 8 0 7 4 0 8 0 0 10 0 0 13 4 0 16 8	£ 0 6 0 1 6 0 2 3 0 0 3 9 0 5 0 0 5 0 0 5 0 0 5 0 0 0 0 11 0 0 3 0 0 11 0 0 3 0 0 11 0 0 3 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
30 35 40 55 55 60 55 77 5 80 85 90 95 100	0 12 6 0 14 7 0 16 8 1 0 10 1 2 11 1 5 0 1 7 1 1 9 2 1 11 3 1 13 4 1 15 5 1 17 6 1 19 7 2 1 8	0       15       0         0       17       6         1       0       0         1       2       6         1       7       6         1       10       0         1       12       6         1       15       0         1       17       6         2       2       6         2       2       6         2       5       0         2       7       6         2       10       0	0 17 6 1 0 5 1 3 4 1 6 3 1 9 2 1 12 1 1 15 0 1 17 11 2 0 10 2 6 8 2 9 7 2 12 6 2 12 5 2 18 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200	2 3 9 2 5 10 2 7 11 2 10 0 2 12 1 2 14 2 2 16 3 2 18 4 3 0 5 3 2 16 3 4 7 3 6 8 3 8 9 3 10 10 3 12 11 3 15 0 3 17 1 3 19 2 4 1 3 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	

# $\pm 205 - 450$

Income	
£	

TAX THEREON AT PER £

# **£4**55–**7**00

# £705-1,000

Income	TAX THEREON AT PER £				
	5d.	<b>6</b> <i>d</i> .	<b>7</b> d.	<b>8</b> <i>d</i> .	<b>9</b> <i>d</i> .
£ 705 710 715 720	£ s. d. 14 13 9 14 15 10 14 17 11	£ s. d. 17 12 6 17 15 0 17 17 6 18 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
725 730 735 740 745 750	15       2       1         15       4       2         15       6       3         15       8       4         15       10       5         15       12       6	18       2       6         18       5       0         18       7       6         18       10       0         18       12       6         18       15       0	21 2 11 21 5 10 21 8 9 21 11 8 21 14 7 21 17 6	24       3       4         24       6       8         24       10       0         24       13       4         24       16       8         25       0       0	27       3       9         27       7       6         27       11       3         27       15       0         27       18       9         28       2       6
755 760 765 770 775	15 14 7 15 16 8 15 18 9 16 0 10 16 2 11	18 17 6 19 0 0 19 2 6 19 5 0 19 7 6	22       0       5         22       3       4         22       6       3         22       9       2         22       12       1	25       3       4         25       6       8         25       10       0         25       13       4         25       16       8	28 6 3 28 10 0 28 13 9 28 17 6 29 1 3
780 785 790 795 800	16 5 0 16 7 1 16 9 2 16 11 3 16 13 4	19 10 0 19 12 6 19 15 0 19 17 6 20 0 0	22 15 0 22 17 11 23 0 10 23 3 9 23 6 8	26 0 0 26 3 4 26 6 8 26 10 0 26 13 4	29 5 0 29 8 9 29 12 6 29 16 3 30 0 0
810 815 820 825	10 15 5 16 17 6 16 19 7 17 1 8 17 3 9	20       2       6         20       5       0         20       7       6         20       10       0         20       12       6	23 9 7 23 12 6 23 15 5 23 18 4 24 1 3	26 16 8 27 0 0 27 3 4 27 6 8 27 10 0	30       3       9         30       7       6         30       11       3         30       15       0         30       18       9
830 835 840 845 850	17 5 10 17 7 11 17 10 0 17 12 1 17 14 2	20       15       0         20       17       6         21       0       0         21       2       6         21       5       0	24 4 2 24 7 I 24 IO O 24 I2 II 24 I5 IO	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	31 2 6 31 6 3 31 10 0 31 13 9 31 17 6
855 860 865 870 875	17 16 3 17 18 4 18 0 5 18 2 6 18 4 7	21 7 6 21 10 0 21 12 6 21 15 0 21 17 6	24 18 9 25 1 8 25 4 7 25 7 6 25 10 5	28 10 0 28 13 4 28 16 8 29 0 0 29 3 4	32       I       3         32       5       0         32       8       9         32       12       6         32       I6       3
880 885 890 895 900	18 6 8 18 8 9 18 10 10 18 12 11 18 15 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	25 I3 4 25 I6 3 25 I9 2 26 2 I 26 5 0	29 6 8 29 10 0 29 13 4 29 16 8 30 0 0	33 0 0 33 3 9 33 7 6 33 11 3 33 15 0
910 920 930 940 950	18 19 2 19 3 4 19 7 6 19 11 8 19 15 10	22 15 0 23 0 0 23 5 0 23 10 0 23 15 0	26       10       10         26       16       8         27       2       6         27       8       4         27       14       2	30 6 8 30 13 4 31 0 0 31 6 8 31 13 4	34 2 6 34 10 0 34 17 6 35 5 0 35 12 6
960 970 980 990 1,000	20       0       0         20       4       2         20       8       4         20       12       6         20       16       8	24 0 0 24 5 0 24 10 0 24 15 0 25 0 0	28 0 0 28 5 10 28 11 8 28 17 6 29 3 4	32 0 0 32 6 8 32 13 4 33 0 0 33 6 8	36 0 0 36 7 6 36 15 0 37 2 6 37 10 0

# $\pounds1,010-1,500$

TAX THEREON AT PER £

Income					
	<b>5</b> <i>d</i> .	<b>6</b> <i>d</i> .	<b>7</b> d.	<b>8</b> <i>d</i> .	<b>9</b> <i>d</i> .
£	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ 8. d.
1,010	21 0 10	25 5 0	29 9 2	33 13 4	37 17 0
1,020	21 5 0	25 15 0	29 15 0	24 6 8	28 12 6
1,030	21 9 2	26 0 0	30 6 8	34 13 4	30 0 0
1,040	21 13 4	26 5 0	30 12 6	35 0 0	39 7 6
1,050	21 1/ 0	26 10 0	30 18 4	35 6 8	30 15 0
1,000	22 I 0 22 I 0	26 15 0	31 4 2	35 13 4	40 2 6
1,070	22 5 10	27 O C	31 10 0	36 0 0	40 το 0
1,090	22 14 2	27 5 0	31 15 10	36 6 8	40 17 6
1,100	22 18 4	27 10 0	32 1 8	30 13 4	41 5 0
1,110	23 2 6	27 15 0	32 7 6	37 0 0	41 12 6
1,120	23 6 8	28 0 0	32 13 4	37 0 8	42 0 0
1,130	23 10 10	28 10 0	33 5 0	38 0 0	42 7 0
1,150	23 19 2	28 15 0	33 10 10	38 6 8	43 2 6
1,160	24 3 4	29 0 0	33 16 8	38 13 4	43 10 0
1,170	24 7 6	29 5 0	34 2 6	39 0 0	43 17 6
1,180	24 11 8	29 10 0	34 8 4	39 6 8	44 5 0
1,190	24 15 10	29 15 0	34 14 2	39 13 4	44 12 0
1,200	25 0 0	30 5 0	25 5 10	40 6 8	45 5 6
1,210	25 8 A	30 10 0	35 J 8	40 0 8	45 7 0
1,230	25 12 6	30 15 0	35 17 6	41 0 0	46 2 6
1,240	25 16 8	31 0 0	36 3 4	41 6 8	46 10 0
1,250	26 0 10	31 5 0	36 9 2	41 13 4	46 17 6
1,260	26 5 0	31 10 0	36 15 0	42 0 0	47 5 0
1,270	20 9 2	31 15 0	37 0 10	42 6 8	47 12 0
1,200	2013 4	32 5 0	37 12 6	44 13 4	48 7 6
1,300	27 1 8	32 10 0	37 18 4	43 6 8	48 15 0
1,310	27 5 10	32 15 0	38 4 2	43 13 4	49 2 6
1,320	27 10 0	33 0 0	38 10 0	44 0 0	49 10 0
1,330	27 14 2	33 5 0	38 15 10	44 6 8	49 17 6
1,340	27 10 4	33 10 0	39 1 8	44 13 4	50 5 0
T 260	28 6 8	33 15 0	39 / 0	45 0 0	50 12 0
1,300	28 10 10	34 5 0	39 13 4	45 0 8	51 0 0
1,380	28 15 0	34 10 0	40 5 0	46 0 0	51 15 0
1,390	28 19 2	34 15 0	40 10 10	46 6 8	52 2 6
1,400	29 3 4	35 0 0	40 16 8	46 13 4	52 10 0
1,410	29 7 6	35 5 0	41 2 6	47 0 0	52 17 6
1,420	29 11 8	35 10 0	41 8 4	47 6 8	53 5 0
1,430	30 0 0	35 15 0	41 14 2	47 13 4	53 12 0
1,450	30 4 2	36 5 0	42 5 10	48 6 8	54 7 6
1,460	30 8 4	36 10 0	42 11 8	48 13 4	54 15 0
1,470	30 12 6	36 15 0	42 17 6	49 0 0	55 2 6
1,480	30 16 8	37 0 0	43 3 4	49 6 8	55 10 0
1,490	31 0 10	37 5 0	43 9 2	49 13 4	55 17 6
1,500	31 5 0	37 10 0	43 15 0	5000	56 5 0

For explanation see p. 40

(202)
# INCOME TAX TABLES £1,510-2,000

Income	TAX THEREON AT PER £					
	<b>5</b> <i>d</i> .	<b>6</b> <i>d</i> .	<b>7</b> d.	<b>8</b> <i>d</i> .	<b>9</b> <i>d</i> .	
£ 1,510 1,520 1,530 1,540 1,550	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	£ s. d. 50 6 8 50 13 4 51 0 0 51 6 8 51 13 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
1,560 1,570 1,580 1,590 1,600 1,610	32       10       0         32       14       2         32       18       4         33       2       6         33       6       8         33       10       10	39 0 0 39 5 0 39 10 0 39 15 0 40 0 0 40 5 0	45 10 0 45 15 10 46 1 8 46 7 6 46 13 4 46 19 2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	58 10 0 58 17 6 59 5 0 59 12 6 60 0 0 60 7 6	
1,620 1,630 1,640 1,650	33 15 0 33 19 2 34 3 4 34 7 6	40 10 0 40 15 0 41 0 0 41 5 0	47 5 0 47 10 10 47 16 8 48 2 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	60 15 0 61 2 6 61 10 0 61 17 6	
1,600 1,670 1,680 1,690 1,700	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	41 15 0 41 15 0 42 0 0 42 5 0 42 10 0	48 14 2 49 0 0 49 5 10 49 11 8	55 0 8 55 13 4 56 0 0 56 6 8 56 13 4	62 5 6 62 12 6 63 0 0 63 7 6 63 15 0	
1,710 1,720 1,730 1,740 1,750	35 12 6 35 16 8 36 0 10 36 5 0 36 9 <b>2</b>	42 15 0 43 0 0 43 5 0 43 10 0 43 15 0	49 17 6 50 3 4 50 9 2 50 15 0 51 0 10	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	64       2       6         64       10       0         64       17       6         65       5       0         65       12       6	
1,760 1,770 1,780 1,790 1,800	36 13 4 36 17 6 37 1 8 37 5 10 37 10 0	44 0 0 44 5 0 44 10 0 44 15 0 45 0 0	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	58 13 4 59 0 0 59 6 8 59 13 4 60 0 0	66       0         66       7       6         66       15       0         67       2       6         67       10       0	
1,810 1,820 1,830 1,840 1,850	37 14 2 37 18 4 38 2 6 38 6 8 38 10 10	45 5 0 45 10 0 45 15 0 46 0 0 46 5 0	52 15 10 53 1 8 53 7 6 53 13 4 53 19 2	60 6 8 60 13 4 61 0 0 61 6 8 61 13 4	67 17 6 68 5 0 68 12 6 69 0 0 69 7 6	
1,860 1,870 1,880 1,890 1,900	38       15       0         38       19       2         39       3       4         39       7       6         39       11       8	46 10 0 46 15 0 47 0 0 47 5 0 47 10 0	54 5 0 54 10 10 54 16 8 55 2 6 55 8 4	62 0 0 62 6 8 62 13 4 63 0 0 63 6 8	69 15 0 70 2 6 70 10 0 70 17 6 71 5 0	
1,910 1,920 1,930 1,940 1,950	39 15 10 40 0 0 40 4 2 40 8 4 40 12 6	47 15 0 48 0 0 48 5 0 48 10 0 48 15 0	55 14 2 56 0 0 56 5 10 56 11 8 56 17 6	63 13 4 64 0 0 64 6 8 64 13 4 65 0 0	71 12 6 72 0 0 72 7 6 72 15 0 73 2 6	
1,960 1,970 1,980 1,990 2,000	40 16 8 41 0 10 41 5 0 41 9 2 41 13 4	49 0 0 49 5 0 49 10 0 49 15 0 50 0 0	57 3 4 57 9 2 57 15 0 58 0 10 58 6 8	65       6       8         65       13       4         66       0       0         66       6       8         66       13       4	73 10 0 73 17 6 74 5 0 74 12 6 75 0 0	

INCOME TAX TABLES

### £2,050-5,000

Income		TAX TI	HEREON AT	PER £					
	<b>5</b> <i>d</i> .	<b>6</b> <i>d</i> .	<b>7</b> d.	<b>8</b> <i>d</i> .	<b>9</b> <i>d</i> .				
£ 2,050 2,100 2,150 2,200 2,250	£ s. d. 42 14 2 43 15 0 44 15 10 45 16 8 46 17 6	£ s. d. 51 5 0 52 10 0 53 15 0 55 0 0 56 5 0	£ s. d. 59 15 10 61 5 0 62 14 2 64 3 4 65 12 6	£ s. d. 68 6 8 70 0 0 71 13 4 73 6 8 75 0 0	£ s. d. 76 17 6 78 15 0 80 12 6 82 10 0 84 7 6				
2,300 2,350 2,400 2,450 2,500	47 18 4 48 19 2 50 0 0 51 0 10 52 1 8	57 10 0 58 15 0 60 0 0 61 5 0 62 10 0	67 I 8 68 IO IO 70 O O 71 9 2 72 I8 4	76 13 4 78 6 8 80 0 0 81 13 4 83 6 8	86 5 0 88 2 6 90 0 0 91 17 6 93 15 0				
2,550 2,650 2,750 2,750 2,750	53 2 0 54 3 4 55 4 2 56 5 0 57 5 10	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	74 7 6 75 16 8 77 5 10 78 15 0 80 4 2 81 12 4	86 13 4 88 6 8 90 0 0 91 13 4	95 12 0 97 10 0 99 7 6 101 5 0 103 2 6				
2,800 2,850 2,900 2,950 3,000	50 0 0 59 7 6 60 8 4 61 9 2 62 10 0	70 0 0 71 5 0 72 10 0 73 15 0 75 0 0	83 2 6 84 11 8 86 0 10 87 10 0	93 0 8 95 0 0 96 13 4 98 6 8 100 0 0	105 0 0 106 17 6 108 15 0 110 12 6 112 10 0				
3,050 3,100 3,200 3,250	63 10 10 64 11 8 65 12 6 66 13 4 67 14 <b>2</b> 68 15 0	70 5 0 77 10 0 78 15 0 80 0 0 81 5 0	90 8 4 91 17 6 93 6 8 94 15 10	101 13 4 103 6 8 105 0 0 106 13 4 108 6 8	114 7 0 116 5 0 118 2 6 120 0 0 121 17 6				
3,350 3,400 3,450 3,500	69 15 10 70 16 8 71 17 6 72 18 4	82 10 0 83 15 0 85 0 0 86 5 0 87 10 0	90 5 0 97 14 2 99 3 4 100 12 6 102 1 8	110 0 0 111 13 4 113 6 8 115 0 0 116 13 4	123 15 0 125 12 6 127 10 0 129 7 6 131 5 0				
3,550 3,650 3,700 3,750	73 19 2 75 0 0 76 0 10 77 1 8 78 2 6	88 15 0 90 0 0 91 5 0 92 10 0 93 15 0	103 10 10 105 0 0 106 9 2 107 18 4 109 7 6	118 6 8 120 0 0 121 13 4 123 6 8 125 0 0	133       2       6         135       0       0         136       17       6         138       15       0         140       12       6				
3,800 3,850 3,900 3,950 4,000	79 3 4 80 4 2 81 5 0 82 5 10 83 6 8	95 0 0 96 5 0 97 10 0 98 15 0 100 0 0	110 16 8 112 5 10 113 15 0 115 4 2 116 13 4	126 13 4 128 6 8 130 0 0 131 13 4 133 6 8	142 10 0 144 7 6 146 5 0 148 2 6 150 0 0				
4,100 4,200 4,300 4,400 4,500	\$5         8         4           87         10         0           89         11         8           91         13         4           93         15         0	102       10       0         105       0       0         107       10       0         110       0       0         112       10       0	119       11       8         122       10       0         125       8       4         128       6       8         131       5       0	136 13 4 140 0 0 143 6 8 146 13 4 150 0 0	153 15 0 157 10 0 161 5 0 165 0 0 168 15 0				
4,600 4,700 4,800 4,900 5,000	95 16 8 97 18 4 100 0 0 102 1 8 104 3 4	115       0         117       10       0         120       0       0         120       10       0         125       0       0	134 3 4 137 1 8 140 0 0 142 18 4 145 16 8	153 6 8 156 13 4 160 0 0 163 6 8 166 13 4	172 10 0 176 5 0 180 0 0 183 15 0 187 10 0				

For explanation see p. 40

#### THE

#### LOGARITHMS OF NATURAL NUMBERS

TOGETHER WITH

THOMAN'S LOGARITHMIC TABLES of

COMPOUND INTEREST AND ANNUITIES

AND AN

EXPLANATION OF THE TABLES

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#### LOGARITHMS OF NATURAL NUMBERS

PAGES 229-266 contain the logarithms of the natural numbers from 1 to 10,000.

The logarithm of a number is the index of the power to which the base must be raised to be equal to the number. Thus  $5 \times 5 = 5^2$ , where 5 is raised to the second power, and 2 is the index of the power. Again,  $5 \times 5 \times 5 = 5^3$ , where 5 is raised to the third power, and 3 is the index of the power. The base adopted for common logarithms such as are here given is 10, so that the logarithm

of	100	is	2	because	$10^2 = 10 \times 10 =$	100
of	1,000	"	3	,,	$10^3 = 10 \times 10 \times 10 =$	r,000
of	10,000	,,	4	"	$10^4 = 10 \times 10 \times 10 \times 10 = 1$	0,000

and so on. But we may raise a number to any power we please, without confining ourselves to whole numbers. Thus  $10^{6666} = 4.641$ as may be seen from page 244, where 6666612 is given as the logarithm of 4.641. Now  $10^{6666} = 10^{\frac{6666}{10000}} = 10^{\frac{2}{3}}$  very nearly, but  $10^{\frac{2}{3}} = {}^{3}\sqrt{10}{}^{2}$  that is the cube root of 100. The cube root of 100 is approximately 4.641, that is to say 4.641 × 4.641 = 90.96, which is very nearly 100. By means of logarithms we may get our results as nearly exact as we please, and the larger number of figures we have in our logarithms the more exact will our results be.

We have said that '6666 is the logarithm of 4.641, but there is nothing in the table to show where the decimal point ought to come. For anything that appears in the table to the contrary, 6666 is the log of 4641, or 46.41 or 464.1. The explanation of this is, that only one part of the logarithm, called the *mantissa*, is given in the table; the other part of the logarithm, called the *index* or *characteristic*, is supplied by inspection, according to certain rules which will be described presently. The rationale of these rules is very easy to follow. The mantissa is the decimal part of the index of the power to which 10 must be raised to equal a given number, and if the index is 0, it means that the power to which 10 has to be raised is less than unity, but as 10⁴ or 10 to the first power = 10, it is plain that 10⁶⁶⁶⁶ must be less than 10, whence it follows that the natural number corresponding to log 6666 cannot be 46.4 or 464, because these numbers are more than 10.

If we want to find the logarithm of 46.41, the complete logarithm must clearly be between 1 and 2, because 1 is the logarithm of 10, 2 is the log of 100 and 46 is between 10 and roo. Clearly, therefore, the log of 46 must have 1 for its index, and, looking in the table for the decimal part of the log corresponding to 464r, we find it to be 6666. Therefore the complete log of 46.4r is r.66666. This means that ro must be raised to a power the index of which is 1.6666, that is to say  $10^{\frac{1}{1000}} = 10^{\frac{5}{3}} = \sqrt[3]{10^5}$ . Now  $10^5$  equals 100,000, and the cube root of this is 46.4r, more nearly 46.416, more nearly still 46.4158020. The reason why the index part of the log can be so readily determined by inspection, and why therefore it is unnecessary to tabulate more than the mantissa or decimal part of the logarithm, is based upon the fact that multiplication of numbers can be performed by adding their logarithms together. Now, as we have just seen, the log of 10 is 1, the log of 100 is 2, the log of 1,000 is 3, and so on. Hence, if we want to multiply a number by 10, we add 1 to the log : to multiply by roo we add 2 to the logarithm, and to multiply by 1,000 we add 3 to the logarithm of the number. Hence,

 $4.641 \times 10 = \log 0.6666 + \log 1 = \log 1.6666 = 46.41$   $46.41 \times 10 = \log 1.6666 + \log 1 = \log 2.6666 = 464.1$   $464.1 \times 10 = \log 2.6666 + \log 1 = \log 3.6666 = 464.1$  $4641 \times 10 = \log 3.6666 + \log 1 = \log 4.6666 = 464.1$ 

This leads us to the rule for determining the index part of the logarithm. If the number whose logarithm is sought contain one or more integral figures the index or characteristic is always one less than the number of integral figures in the number, and is positive.

#### Negative Index

Frequently, however, we have to deal with numbers that are less than unity, in which case the index of the logarithm becomes negative, although the decimal part remains positive. Dealing with these negative figures as we previously dealt with the positive ones, we see that

$10^{1} = 10,$	therefo	ore r	is the	log of	10
$10^{\circ} = 1$	,,	0	,,	,,	r
10-1 = .	ı ,,	— 1 or	r ,,	,,	۲.
ro-2 ·	oi "	— 2 Or	2 ,,	,,	·o1
10-3= .	., 100	— 3 or	3 "	,,	·001.

and so on. This leads us to the rule for finding the index of quantities less than unity, which is that the index is the same as the place (208). from the decimal point which the first significant figure of the number occupies. Thus the first significant figure of 'oor is r, which is in the third place from the decimal point, and the index of the log is consequently  $\overline{3}$ , while the mantissa is o. This index, as stated above, is minus, the minus sign being written over the index thus  $\overline{3}$ , not in front of it thus -3, in order to signify that the index only is minus, the mantissa remaining positive.

In dealing with numbers less than unity the mantissa is kept positive, and the index only is made negative for the sake of convenience in working; but if there were any advantage in doing so the mantissa as well as the index could, of course, be made negative. We know that the log of 4.641 is 0.6666, while the log of roo is 2, and we can divide 4.641 by roo by subtracting log 2 from log 0.6666. This gives us log 1.3334, the whole of which is minus, and is the log of 0.4641. Log -1.3334 is exactly the same as log  $\overline{2.6666}$ , where the index only is minus, and the mantissa is plus. It is, however, found in practice much more convenient to keep the mantissa invariably positive, or plus, letting the index only be minus.

Referring again to the example we have already quoted, and applying these two rules, we get the following results :---

<b>.000</b> 4641	$= \log 4.666612.$
<b>'004641</b>	$= \log \frac{3}{5} \cdot 666612.$
' <b>0</b> 4641	$= \log \overline{2.666612}$ .
•464 r	$= \log 1.666612.$
4.641	$= \log 0.666612.$
46.41	$= \log 1.666612.$
464'1	$= \log 2.666612.$
464 I	$= \log 3.666612.$

The special convenience of logarithms, and it is a very great one, is that by their aid numbers

can be multiplied by the addition of their logs.

" divided " subtraction

" raised to any power by the multiplication of their logarithms and their roots extracted by the division of their logarithms.

#### To find the Logarithm of a Number

Before giving examples of the use of logarithms, however, we must explain how to find the logarithm of a given number, and the number corresponding to a given logarithm. Where the number consists of only four figures it is immediately found from the tables by looking in the first column for the first three figures, and on the same line in the column headed with the fourth figure the logarithm of the number will be found.

Thus on p. 232 we see that the decimal part of the logarithm of 1501 is 176381.

Again on p. 242 we find that the decimal part of the logarithm of 4341 is 637590.

If, however, we want to find the logarithm of 43405, which is half way between 4340 and 4341, we must take the logarithm as half way between 637490 and 637590, which = log 637540.

In order to facilitate finding the logarithms of numbers containing five or more figures, a column of differences is given on each page of the tables. In the case just given the difference is seen to be 100, which means that there is a difference of 000100 between the logs of one number and the next.

To obtain the logarithm of a number containing five figures we take the logarithm of the first four figures direct from the table, then multiply the difference by the fifth figure of the number, divide the result by 10 and add it to the logarithm of the first four numbers. Thus to repeat the example just given :

4340		$= \log$	637490
the difference	100 X 5	$\div$ 10 = log	50
434 <b>0</b> 5		$= \log$	637540

If we wish to find the logarithm of a number containing six figures we take the first five figures in the way just described, and to obtain the difference for the sixth figure we multiply the difference by the sixth figure and divide the result by 100.

Thus to find the log of 434054.

43405					=	log	637540
the difference	for 6th	figure	100	× 4 ÷	100 =	log	4
434054					=	log	637544

The differences in this case are exceptionally simple to calculate because in the example chosen the difference is exactly 100, but the simplicity of the calculation serves to show with special clearness the principle involved. This principle of course is, that to find the difference for the 5th figure of a number we must multiply the difference given in the table by a fraction of which 10 is the denominator and the 5th figure of the number is the numerator. To obtain the 6th figure the difference must be multiplied by a fraction of which the denominator is 100 and the numerator the 6th figure. To find the difference corresponding to the 7th figure the denominator is 1000 and the numerator the 7th figure and so on, as far as we please.

In dealing with these differences it must always be borne in mind that the figures printed in the Table of Differences come at the extreme right-hand end of the logarithms in the main part of the table. That is to say, if the difference printed in the last column is 100 it is understood to be really '000100. If the printed difference is 99 it is to be understood as '000099, while obviously the difference corresponding to the 5th figure must be in all cases less than the printed difference. If this is remembered there will be no fear of any mistake in taking out the logarithms for numbers containing five or six figures.

#### To find the Number Corresponding to a Logarithm

To find a number corresponding to a given logarithm we must look in the table for the nearest logarithm to the one we are dealing with. The first three figures of the logarithms are printed in large type on the top of the page. On the left-hand pages the first three figures of the *first* logarithm on the page are given. On the righthand pages the first three figures of the *last* logarithm on the page are given, so that we can readily see whether the logarithm with which we are concerned does or does not come on a given page.

Now, let us suppose that we wish to find the natural number corresponding to log 735868. From p. 246 we see that log 735838 (which is 30 less than the logarithm we are dealing with) = 5443. The difference printed in the last column on this line is 80, and signifies that 80 corresponds to a difference of 1 in the 4th figure of the natural numbers, therefore 30 corresponds to a difference of  $\frac{30}{80} \times 10$  in the 5th figure of the natural numbers. This = 375, so that the total number corresponding to log 735868 = 5443375.

Thus to find the number corresponding to a logarithm that is not given exactly in the table we must take from the table the nearest logarithm below the given logarithm and obtain the 5th and following figures of the natural number by dividing the difference between these two logarithms by the difference printed in the tables. The numerator of this fraction consisting of the difference between the given logarithm and the nearest logarithm below it printed in the tables, being multiplied by 10 to obtain the 5th figure of the natural number and by 100 to obtain the 6th figure, and so on.

#### Multiplication by Logarithms

Having seen how to find the logarithm corresponding to a number and the number corresponding to a logarithm, we may now proceed to the practical use of logarithms.

Multiplication of numbers is accomplished by the addition of the logarithms of their numbers, thus :

$$2547 = \log 3.406029 \text{ (p. } 237)$$
  

$$7383 = \log 3.868233 \text{ (p. } 254)$$
  

$$2547 \times 7383 = \log \overline{7.274262} = 18804500.$$

The Index of the log being 7, there must be 8 figures in the answer.

A reference to p. 232 shows that the nearest logarithm to the logarithm of the answer is 274158, giving a difference of 104, which divided by the Tabular Difference of 231 equals very approximately 45 for the 5th and 6th figures of the answer.

Other examples of Multiplication by means of logarithms are appended.

Multiply 25.75 by 4.217.

$$25.75 = \log 1.410777 \text{ (p. 237)} \\ 4.217 = \log 0.625004 \text{ (p. 243)} \\ 25.75 \times 4.217 = \log 2.035781 = 108.58775 \text{ (p. 231)} \\ \end{array}$$

Multiply 3847 by .0632.

$$3847 = \log 3.585122 \text{ (p. 241)}$$
  
$$\cdot 0632 = \log 2.800717 \text{ (p. 250)}$$
  
$$3847 \times \cdot 0632 = 2.385839 = 243.1302 \text{ (p. 234)}$$

The exact answer in this case is 243.1304, which is obtained by using seven-figure logarithms, as follows :—

$$3847 = \log 3 \cdot 5851222$$
  
$$\cdot 0632 = \log 2 \cdot 8007171$$
  
$$3847 \times \cdot 0632 = 2 \cdot 3858393 = 243 \cdot 1304.$$

It must, therefore, be borne in mind that to obtain exact results it is necessary to use a large number of figures in the logarithm, but the six figures given in the tables are sufficient for most practical purposes.

#### Division by Logarithms

The division of numbers is accomplished by subtraction of their logarithms, the logarithm of the divisor being taken from the dividend, the remainder being the logarithm of the quotient. Thus to divide 4364 by 2536 we have

$$4364 = \log 3.639885 (p. 242)$$

$$2536 = \log 3.404149 (p. 237)$$

$$4364 \div 2536 = \log 0.235736 = 1.7208 (p. 232)$$
Divide 426.53 by 32.79.  

$$426.53 = \log 2.629950 (p. 243)$$

$$32.79 = \log 1.515741 (p. 239)$$

$$426.53 \div 32.79 = \log 1.515741 (p. 239)$$

$$426.53 = \log 2.629950 (p. 243)$$

$$32.79 \Rightarrow \log 1.515741 (p. 239)$$

$$426.53 = \log 2.629950 (p. 243)$$

$$32.79 \div 426.53 = \log 2.629950 (p. 243)$$

$$32.79 \div 426.53 = \log 2.629950 (p. 243)$$

$$32.79 \div 426.53 = \log 2.629950 (p. 243)$$
Divide 8652 by 0.461.  

$$8652 = \log 3.937117 (p. 260)$$

$$0.461 = \log 2.663701 (p. 244)$$

$$8652 \div 0.461 = \log 5.273416 = 187679 (p. 233)$$

In the last example we are subtracting a negative characteristic, and of course the subtraction of a minus quantity is accomplished by the addition of the corresponding positive or plus quantity.

Divide .0461 by 8652.

$$\begin{array}{c} \cdot 0461 = \log 2 \cdot 663701 \text{ (p. 244)} \\ 8652 = \log 3 \cdot 937117 \text{ (p. 260)} \\ \cdot 0461 \div 8652 = \log \overline{6 \cdot 726584} = \cdot 000005328 \text{ (p. 247)} \end{array}$$

In this example we are subtracting a positive characteristic from a negative one, and this involves the addition of the corresponding negative quantity. If, as we have just seen,

$$8652 \div \cdot 0461 = 187679 = \log 5 \cdot 273416 \text{ and} \cdot 0461 \div 8652 = \cdot 000005328 = \log 6 \cdot 726584 187679 \times \cdot 000005328 = \log 0 \cdot 000000 = 1,$$

thus affording an instructive proof of the accuracy of the results by adding the two logarithms together and obtaining the answer.

#### Involution by Logarithms

To raise a number to any given power we multiply the logarithm of the number by the index of the power. Thus the cube of 100 is  $\log 2000 \times 3 = \log 6000 = 1,000,000 = 100 \times 100 \times 100$ .

Similarly

 $733^{2} = \log 2.865104 \times 2 = \log 5.730208 = 537289$  $\cos 733^{2} = \log 3.865104 \times 2 = \log 5.730208 = \cos 537$  $\cos 733^{3} = \log 3.865104 \times 3 = \log 7.595312 = \cos 338$ 

In the last two examples we had negative characteristics to deal with, and it will be noticed that after multiplying the decimal part of the logarithm by 2 there was a positive remainder of  $\tau$ , which is subtracted from twice the negative characteristic. Similarly in the cube there was a remainder of 2, which was subtracted from three times the negative characteristic. This treatment of the matter is an obvious consequence of the mantissa being positive and the characteristic negative.

#### Evolution by Logarithms

To find the root of a given number we must divide the logarithm of the number by the exponent of the root. Thus to find

the square root of a number we divide the log by 2;

"	cube	,,	"	**	"	3;
"	fourth	"	"	37	,,	4;

and so on.

For example :

¥5 <b>37</b> 289	$= \log 5.730208 \div 2 = \log 2.865104 = 733$
∛17'43	$= \log 1.241297 \div 3 = \log 0.413766 = 2.5928$
∜2560000	$= \log 6.408240 \div 4 = \log 1.602060 = 40$
∛ 0081	$= \log 3.908485 \div 3 = \log 1.302828 = .20083$
<b>∛'000</b> 81	$= \log \frac{1}{4} \cdot 908485 \div 3 = \log \frac{1}{2} \cdot 969495 = \cdot 093217$

In this last instance we had a negative characteristic to deal with, and the most convenient way of treating it was to add -2 to the  $\frac{1}{4}$ of the index, so obtaining a number, 6, which is exactly divisible by 3. To compensate for thus dealing with the index we must prefix an index of +2 to the mantissa, and divide this result also by 3. The process thus becomes :

$$\log 4 + 2 \dots = \log 6 \qquad \text{this} \div 3 = \log 2$$
  
$$\log 908485 + 2 = \log 2908485 \text{ this} \div 3 = \log 90969495$$
  
$$\log 4908485 \div 3 = \log 2969495$$
  
$$\log 4908485 \div 3 = \log 2969495$$
  
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This produces the same result as if we had stated our entire logarithm as negative, divided it by 3, and subsequently converted it into a logarithm with a negative index and a positive mantissa. Thus :

	log — 4.000000
	log+0.908485
is the same as	log- <u>3</u> .091212

when both index and mantissa are negative.

This divided by  $3 = \log - 1 \cdot 030505$ , the whole of which is still negative. But this equals  $\log 2 \cdot 969495$ , where the index is negative and the mantissa positive, and this is the result obtained by dividing  $\overline{4} \cdot 908485$  by 3.

Thus the rule for dividing a logarithm with a negative index if the index is not exactly divisible by the divisor, is to add such a negative number to it as will make it exactly divisible, and prefix to the fractional part of the logarithm a positive integer equal to the negative integer added to the negative index. Of course, by adding a minus quantity to one part of the logarithm and a corresponding plus quantity to another part of it, the value of the logarithm is unaltered.

#### COMPOUND INTEREST

#### The Amount of I in any Number of Periods

Pages 269-316 contain M. Thoman's logarithmic tables of the amount of  $f_{11}$  at the end of any number of years and the logarithm of the annuity which  $f_{11}$  will purchase. The great value of these tables. and the various uses to which they may be put, will be at once apparent when the use of logarithms is understood. On p. 9 we showed that the amount of  $\pounds_{I}$  in any number of years—or, more generally, the amount of 1 in any number of periods-is the amount of 1 in 1 period raised to the *n*th power. This is expressed as  $(1+i)^n$ . where i is the rate of interest and n the number of years. M. Thoman uses the symbol r as the equivalent of 1+i, which means the amount of 1 in 1 period, but the modern practice is to use i for the rate of interest and 1+i for the amount of 1 in 1 period. Now, as a number may be raised to any power by multiplying the logarithm of the number by the index of the power, we can obviously obtain the amount of  $f_{1}$  in any number of years with very little trouble. Thus, if we want to know the amount of  $\pounds_1$  in 25 years at 4 %, we have to find the value of 1'04²⁵. The log of 1'04 is seen from p. 230 This multiplied by 25 equals log 0.425825, which, to be 0'017033. from p. 237, we find to be 2.6658, which agrees with the result given in the interest table on p. 70. On turning to Thoman's table on p. 291 the logarithm is seen to be 0.4258335, and taking the natural number corresponding to this logarithm we get 266584, which agrees with the 5 places of decimals in the interest table of p. 70. It thus appears that to obtain the amount of I at the end of any number of periods we must multiply the log of 1 + i at the end of I period by the number of periods. The natural number corresponding to the logarithm thus obtained gives the required result.

Further examples are appended.

What is the amount of  $\mathcal{L}_1$  at the end of 73 years at  $5\frac{7}{8}$  % per annum?

Turning to M. Thoman's table on p. 306 we find in the column headed log  $r^n$  year 73, log 1.8099199, which is the logarithm of the answer. From the logarithmic table on p. 251 we find that this corresponds to 64.5535.

What is the amount of  $\pounds_I$  at the end of 27 years at  $3\frac{1}{5}\%$  per annum?

This rate of interest is not tabulated, so we must take the log of  $(1+i)^{27}$ . Now, as  $i = 3\frac{1}{5}\frac{9}{6}$  or  $\cdot 032$ , the value of  $1 + i = 1\cdot032$ ,  $= \log 0.01368$ , which is the logarithm given on p. 230. Multiplying this by 27, we obtain as our answer log  $\cdot 36936 = 2\cdot3408$ .

If we wish to extend the calculation and show what income would be yielded from such an amount as this at 5 % interest every second to every man, woman, and child on the face of the earth, we have simply to divide by 20 to find the annual income from this sum, then by  $365\frac{1}{4}$  to find the daily income, by 24 to find the income hourly, by 60 to find the income per minute, by 60 again to find the income per second, and finally by (say) 1,483 millions to find the income in each second for every individual in the world. These divisions are readily accomplished by adding the logarithms of the numbers together and subtracting the total from the logarithm of the amount of 1*d*. at the end of 1900 years. Thus,

 $1.05^{1000} = \log 40.259670$ 

1,483,000,000	$=\log 9.171141$	108	20.351485
60	$= \log 1.778151$	1	
60	= log 1.778151		
24	$= \log 1.380211$		
365.25	$=\log 2.562590$		
20	=log 1.301030		
240	= log 2.380211		

which gives us  $\pounds 80,944,000,000,000,000$  per second as the income for every man, woman, and child in every second from the accumulations of 1*d*. at 5% compound interest for 1900 years.

We often require to know, not so much what  $\pounds I$  will amount to in any number of times, but what various other amounts will come to. This is arrived at by the help of logarithms with very great ease. We have only to add the logarithm of the amount to the logarithm of the amount of  $\pounds I$  in the given number of years to at once obtain the logarithm of the answer. What will  $\pounds_{4372}$  amount to in 46 years at 4 %?

$$1.04^{46} = \log 0.7835336 \text{ (p. 291)} \\ 4372 = \log 3.6406802 \text{ (p. 242)} \\ 1.04^{46} \times 4372 = \log 4.4242138 = \pounds 26,559.$$

Again, what will  $\pounds$ 987 amount to at the end of 22 years at  $3\frac{7}{12}\%$ ?

$$3\frac{7}{12} = 3.583, \text{ so that } 1 + i = 1.03583 = \log 0.0152899 \text{ (p. 320)}$$
  

$$1.03583^{22} = \log 0.0152899 \times 22 = \log 3.363778$$
  

$$987 = \log 2.9943172 = \log 2.9943172 \text{ (p. 264)}$$
  

$$1.03583^{22} \times 987 = \log 3.3306950 = \pounds 2141.4.$$

#### Present Value of £1

On p. 10 we showed that  $v = \frac{1}{1+i}$ , where v is the present value of  $\pounds I$ , and  $v^n = \left(\frac{1}{1+i}\right)^n$ , where *n* represents the term. Hence to obtain the present value of  $\pounds I$  due at the end of any number of years we subtract the log of  $(1+i)^n$  from the log of  $1^n$ . Thus, suppose we require to know the present value of  $\pounds I$  due at the end of 20 years at 5%, we have  $(1+i)^n = 1.05^\infty = \log .021189 \times 20$  $= \log 0.42378$  to be subtracted from  $1^n = \log 0.00000$ . Now log  $0.000000 - \log 0.42378 = \log 1.57622 = .3769$ , this agreeing with the result given in the interest tables on p. 74. The log of  $(1+i)^n$  is obtained from the columns headed log  $r^n$  on p. 299, and by subtracting the logarithm there given from the log of 1 we obtain the logarithm of the present value of 1 due at the end of *n* years. Further examples are appended.

What is the present value of  $\pounds_1$  due at the end of 22 years at  $4\frac{7}{8}\%$ ?

From p. 298 we see that  $\log (1 + i)^n = \log r^n = 0.4547834$ .

What is the present value of  $\pounds I$  due at the end of 47 years at  $2\frac{3}{8}$  %?

This equals  $\log 0.000000 - \log 0.4791140$  (p. 278) =  $\log 1.5208860 = 33181$ .

What is the present value of  $\pounds_I$  due at the end of 30 years at  $3\frac{1}{16}\%$ ?

This rate of interest is equivalent to 3.0625, and is not tabulated, so we must find from the table on p. 230 the logarithm of 1.030625, multiply by 30, and subtract it from the logarithm of 1.

$$1 = \log 0.000000$$
  
1.030625³⁰ = log .0131007 × 30 = log .393021  
$$\frac{1}{1.030625^{30}} = \log \overline{1.606979} = \pounds.40456$$

What is the present value of  $\pounds_1$  due at the end of 25 years at  $3\frac{6}{5}$  %?

This rate of interest also is not tabulated, but the logarithm corresponding to 1 + i when i is at the rate of  $3\frac{5}{6}$ % is given in the column log r, p. 320. It is there seen to be 0.0163368. Multiplying this by 25 we have log 0.40842, which, subtracted from log 1, leaves log  $\overline{1.59158}$ , corresponding to .39046.

#### Annuity which £I will Purchase

On pp. 16 and 17 we explain the Sinking Fund Tables given on pp. 106-115. It is there shown that the Sinking Fund is obtained by dividing unity by the amount of  $f_{1}$  per annum. It is, however, further explained (p. 17) that in this table no provision is made for paying interest on the capital. If this has to be done, the amounts given in the Sinking Fund Table must be increased each year by the annual interest on  $\pounds_{I}$ . Thus, if the Sinking Fund required to replace  $\pounds_1$  in ten years at 4 % is  $\pounds$  083291 per annum, we must add the annual interest on  $f_{1} = 04$  to this amount, in order to obtain the annuity which  $f_{1}$  will purchase for ten years at 4 %. The result of this addition is (.083291 + .04 =) .123291, the logarithm of which is 1.000031, which is the logarithm given in the column headed  $a^n$  on p. 291. M. Thoman uses the symbol  $a^n$  to represent this quantity, but in modern notation it is more usually expressed by the symbol  $\frac{I}{a_{-}}$ . It will, moreover, be noticed that in M. Thoman's tables the index of the logarithm is given as 9 instead of 1, as given above. The reason of this is that some people think it more convenient to avoid the negative characteristics of logarithms by adding 10 to the index, subtracting the negative index, when it occurs, from this 10, and so always dealing with a positive index. The 10 that has been added is subsequently deducted from the index. and thus the same result is arrived at. The more usual and, we think, the more convenient plan is not to employ this artifice, but to

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deal with negative characteristics, whenever they occur, in the manner already explained. Another point to be noticed in M. Thoman's logarithmic tables is that he puts a comma between the index and mantissa, and a decimal point between the 5th and 6th decimal places. It is more in accordance with modern English custom to put the decimal point between the index and mantissa of the logarithm, while there is nothing to be gained by putting any mark at all between the 5th and 6th decimal places. Thus 0,17033'34 in Thoman=0'1703334 in modern notation; and in regard to negative characteristics 9,0903'12 in Thoman=1'0909312 in modern notation, and so on throughout wherever the index is seen by inspection, as it readily can be, to have had 10 added to it.

From what has already been said, it will be seen that in dealing with annuities there are four things to be considered. One is the sum to which an annuity will amount in any number of years ; another is the present value of an annuity for any number of years ; the third is the annuity for any number of years which I or any other given amount will purchase; and the fourth is the sinking fund which will redeem a debt in a given number of years. The third and fourth of these only differ by the amount of the interest on the debt for one year or one period, as has just been explained. It is the third of these for which the logarithm is given in M. Thoman's tables on pp. 269-316 in the column headed  $a^n$ . The fourth is tabulated in natural numbers under the head of Sinking Fund on pp. 106-115. Dealing with the third of these first, namely the annuity which  $f_{1}$  will purchase for any number of years, we have to notice that it is the reciprocal of the present value of  $f_{1}$  per annum tabulated in natural numbers on pp. 50-85. Obviously if the present value of an annuity of  $\pounds_1$  per annum for 20 years at 4 % is 13.59033 (p. 70) an annuity for 20 years at 4 %, of which  $\frac{1}{13.59033}$  of £1. the present value is  $\pounds_I$ , is equivalent to _ This equals  $\pounds$ ,  $\circ_{735817}$ , the logarithm of which is  $\overline{2}\cdot 866770$ , thus agreeing with the logarithm given on p. 201, where, however, the logarithm is stated as 8,86677.02. This difference in the method of stating the logarithm has already been explained.

As another example we may take the present value of an annuity for 26 years at  $2\frac{3}{4}$ %. This is £18.40226 (p. 64), and taking the reciprocal of this amount we have  $05434115 = \log 2.735129$ , which agrees with the logarithm given on p. 281.

Thus to find the annuity which I will purchase, we have only to take the natural number corresponding to the logarithm given on pp. 269-316 under the heading log  $a^n$ .

A few examples may be added. What annuity for 27 years will  $\pounds$  1 buy at  $3\frac{1}{4}$  %? Ans. (p. 285) log 2'7497045='056196. For 86 years at  $5\frac{1}{8}$  %? Ans. (p. 300) log 2'7156373='051956. For 7 years at 3 %? Ans. (p. 283) log 1'2054922='160506='130506+'03(see p. 110).

If we require to know the annuity which any amount other than r will purchase, we have simply to multiply the annuity which r will purchase by the amount.

This is readily done by taking the logarithm of the amount, adding it to the logarithm of the annuity which I will purchase, and taking the natural number corresponding to the logarithm. Take, for example, the annuity for 27 years at  $3\frac{1}{4}$ % that may be purchased for  $\pounds 3,927$ .

 $\begin{array}{rcl} 3927 = \log & 3.594061 & (p. \ 241) \\ \text{The annuity which } I & \text{will purchase} = \log & 2.749704 & (p. \ 285) \\ n, & n, & 3927 & n, & = \log & 2.343765 = \pounds & 220.68. \end{array}$ 

What annuity for 68 years may be purchased for £5,737, reckoning interest at  $4\frac{1}{2}$  %?

 $5737 = \log 3.758685$  (p. 249) The annuity which I will buy= $\log 2.675548$  (p. 295)

", ", 5737 ",  $=\log 2.434233 = \pounds 271.79$ .

The annuity that may be bought for I at rates not given in the table may be calculated from the formula  $\frac{I}{a_{\bar{n}}} = \frac{i(1+i)^n}{(1+i)^n - 1}$  $= \log i + \log(1+i)^n - \log \left[ (1+i)^n - 1 \right].$ 

What annuity for 30 years will  $\pounds$  1 purchase at 5%?  $i = .05 = \log \overline{2}.6989700$  (p. 318) (1 + i)ⁿ = 1.05³⁰ = log 0.0211893 × 30 = log 0.6356790 = 4.32194  $i (1 + i)^n = .05 \times 1.05^{30} = \log 1.3346490$ (1 + i)ⁿ - 1 = 4.32194 - 1 = log 0.5213918  $\frac{i (1 + i)^n}{(1 + i)^n - 1} = \frac{.05 \times 1.05^{30}}{3.32194} = \log \overline{2}.8132572 = .065051$ 

This is the figure given on p. 299, save that the last figures of the logarithm are 70 instead of 72, a difference that is inappreciable.

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What annuity for 10 years will £683 purchase at 4.1 %?

#### Present Value of £1 per Annum

We have just seen that the present value of an annuity is the reciprocal of the amount of the annuity which 1 will purchase for the same period at the same rate of interest. In other words, the annuity which 1 will purchase and the present value of an annuity multiplied together produce unity—the period and the rate of interest, of course, being the same in both cases. The logarithms of the annuity which 1 will purchase are given in the column headed  $a^n$ , on pp. 269–316. By subtracting this tabulated logarithm from 0, which is the log of 1, we obtain the logarithm of the present value of an annuity of 1.

What is the present value of an annuity of  $\pounds_1$  per annum for 43 years at  $3\frac{7}{8}$  %?

I = log 0 0000000 Annuity I will purchase for 43 years at  $3\frac{7}{8}\%$  . . . . . = log  $\overline{2}.6824736$  (p. 290) Present value of  $\pounds$ I per annum for 43 years at  $3\frac{7}{8}\%$  . . . = log  $\underline{1.3175264} = \pounds 20.7743$ 

What is the present value of  $\pounds_1$  per annum for 30 years at 5 %?

The annuity which I will purchase for 30 years at 5 % . . . =  $\log \frac{2.8132570}{2.8132570}$  (p. 299) Present value of £1 per annum for 30 years at 5 % . . . = $\log 1.1867430 = £15.37245$ 

This result may be seen in the table on p. 74. Although the present values of annuities are given in natural numbers on pp. 50-85, it is often convenient to have the logarithms of the values rather than the natural numbers. Thus, suppose we want to know the present value of an annuity of  $\pounds 47^{25}$  per annum for 30 years at 5%. To obtain the result we must multiply the value of  $\pounds 1$  per annum by 47²⁵, and this, as has been already explained, can be most readily done by the addition of the logarithms of the two numbers.

Present value of  $\pounds_1$  per annum for 30 years at 5%.  $=\log 1.186743$  (p. 299)  $47.25 = \log 1.674402$  (p. 245)  $15.37245 \times 47.25 = \log 2.861145 = \pounds726.35$ ,

which is the present value of an annuity of  $\pounds 47.25$  per annum for 30 years at 5%.

What is the present value of an annuity of £8642 for 68 years at  $2\frac{7}{8}$  %?

 $\begin{array}{rcl} 8642 & = & \log 3.9366143 \ (p. \ 260) \\ \text{Value of annuity of } \pounds 1 \ (\log \circ & \\ & -\log \ \overline{2}.5269372) & . & = & \log 1.4730628 \ (p. \ 282) \\ \text{Value of annuity of } \pounds 8642 \ \text{for} & \\ & 68 \ \text{years at } 2\frac{2}{8} \frac{9}{6} & . & = & \log 5.4096771 = \pounds 256849. \end{array}$ 

The value of an annuity for some other rate of interest than is given in the tables may sometimes be needed, and we must therefore explain how the value may be arrived at.

We have already shown (p. 221) that the present value of an annuity is the reciprocal of the annuity that 1 will purchase, and that the annuity which 1 will purchase may be obtained from the formula  $\frac{i(1+i)^n}{(1+i)^n-1}$ . Hence the formula for finding the present value of an annuity is  $\frac{(1+i)^n-1}{i(1+i)^n} = \log[(1+i)^n-1] - \log i - \log (1+i)^n$ .

We may repeat the example already dealt with. What is the present value of  $\pounds_1$  per annum for 30 years at 5 %?

$$(1+i)^{n} = 1^{\circ} 05^{3^{\circ}} = \log 0^{\circ} 0211893 \times 30 = \log 0^{\circ} 6356790 = 4^{\circ} 32194$$

$$(1+i)^{n} - 1 = 4^{\circ} 32194 - 1 = 3^{\circ} 32194 = \log 0^{\circ} 5213918$$

$$i = 0^{\circ} 05 = \log 2^{\circ} 6989700$$

$$(1+i)^{n} = 1^{\circ} 05 \times 1^{\circ} 05^{3^{\circ}} = \log 1^{\circ} 3346490 = \log 1^{\circ} 3346490$$

$$(1+i)^{n} - 1 = 4^{\circ} 32194 - 1$$

$$= \log 1^{\circ} 1867428 = 15^{\circ} 372$$

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If the logarithm here found is added to the logarithm found in the converse problem on p. 221, we have

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log 1.1867428
log 2.8132572
log 0.0000000=1
```

thus showing that the answers are reciprocals of each other.

What is the present value of  $\pounds_1$  per annum for 75 years at 3.7 %?

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\begin{array}{rcl} 1 \cdot 037^{75} &= \log & 0 \cdot 0157788 \times 75 = \log & 1 \cdot 1834100 = 15 \cdot 255 \\ 1 \cdot 037^{75} - 1 = & 14 \cdot 255 = \log & 1 \cdot 1539672 \\ \cdot 037 &= \log & \overline{2} \cdot 5682017 \\ 1 \cdot 037^{75} &= \log & 1 \cdot 1834100 & \log & 1 \cdot 7516117 \\ \hline & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \overline{1 \cdot 037^{75} - 1} \\ \hline & & & & & \hline \end{array} \end{array}
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#### The Amount of $\pounds$ I per Annum

Another calculation that we sometimes require to make is the sum to which an annuity will amount in a given number of years at a specified rate of interest.

If we know the present value of the annuity, and if we know also the sum to which  $\pounds_{I}$  will amount in the given period, we can, by multiplying the present value by the amount of  $\pounds_{I}$ , obtain the sum to which the annuity will amount in the period. Thus, suppose we wish to ascertain the amount of  $\pounds_{I}$  per annum for 20 years at 5 %. Turning to p. 74, we see that the present value of  $\pounds_{I}$ per annum is 12:46221, and on the same page we see that the amount of  $\pounds_{I}$  in 20 years is 2.6533. Multiplying these two amounts together we have 33:066, which agrees with the amount of  $\pounds_{I}$  per annum given on the same page.

The reason of this connection is plain, for since the possession of an annuity of  $\pounds_{I}$  for 20 years at 5% is mathematically equivalent to having  $\pounds_{I2}$ .46221 in hand now, and as the sum to which  $\pounds_{I2}$ .46221 will amount in 20 years is the amount of  $\pounds_{I}$  in 20 years multiplied by 12.46221 (=  $2.6533 \times 12.46221 = 33.066$ ), this must also be the sum to which an annuity of  $\pounds_{I}$  will amount in 20 years at 5%.

This result may very easily be obtained by logarithms from the tables on pp. 269-316. In the column headed  $a^n$  we have, as already explained, the reciprocal of the present value of an annuity, and in the column headed  $r^n$  we have the amount of  $\pounds_i$ , and we

make use of these two tables in the following way to obtain, as in the example just given, the amount of  $\pounds_I$  per annum in 20 years at 5 %.

Turning to p. 299, we have

Value of annuity =  $(\log \circ - \log 2.9044049 =) \log 1.0955951$ Amount of  $\pounds_1$  =  $\log \circ.4237860$ Amount of annuity in 20 years at 5% =  $\log 1.5193811$ 

= £33.066, thus agreeing with the result previously obtained.

Some additional examples are appended.

What is the amount of  $\pounds_1$  per annum at the end of 63 years at  $3\frac{1}{4}$ %?

Value of annuity = log 1.4259707 (p. 285) Amount of  $\pounds_1 = \log \frac{0.8750738}{2.3010445}$  (p. 285) Amount of annuity = log 2.3010445 = 200.007.

What is the amount of  $\pounds_{735}$  per annum at the end of 34 years at  $2\frac{7}{8}$  %?

Value of annuity = log 1'3327200 (p. 282) Amount of  $\pounds_1$  = log 0'4185348 (p. 282) 735 = log 2'8662873 (p. 254) Amount of  $\pounds_735$  p.a. in 34 years = log 4'6175421 =  $\pounds_41,451'68$ .

It will be noticed that the logarithm of the annual payment is added to the other two logarithms, thus conveniently effecting the necessary multiplication.

#### Sinking Fund

A reference to the remarks on pp. 16, 17, and 219 will show the connection between the sinking fund and the annuity which  $\pounds I$  will purchase; it will be seen that it is only necessary to deduct the rate of interest from the annuity which  $\pounds I$  will purchase to obtain the sinking fund. Thus the sinking fund which will redeem a debt of  $\pounds I$  in 25 years at 4 % is obtained by taking from p. 291 the annuity which I will purchase = log 2.8062612 = 064012, and subtracting from this amount the rate of interest 04; whence we have '024012, which is the sinking fund given on p. 112.

Further examples as obtained by logarithms are appended.

What annual payment will redeem a debt of  $\mathcal{L}_1$  in 65 years at  $4\frac{1}{8}$  %?

The annuity 1 will purchase (p. 292) =  $\overline{2}$ .6479998 =  $\cdot 044463$ Subtract the interest for 1 year =  $\cdot 04125$ Sinking fund =  $\overline{\cdot 003213}$ 

What is the annual sinking fund that will amount to £337 in 43 years at  $2\frac{5}{8}$  %?

Annuity 1 will buy = log  $\overline{2} \cdot 5918772$  (p. 280)  $337 = \log 2 \cdot 5276299$  (p. 238) Annuity 337 will buy = log  $1^{\cdot}1195071 = 13^{\cdot}16760$ Deduct interest on 337 for 1 year =  $337 \times \frac{21}{8 \times 100} = 8.84625$ Sinking fund to redeem 337 in 43 years = 4.32135

Or the calculation may be made in a slightly different way :—

Annuity 1 will buy  $= \log 2.5918772 = .039073$ Sinking fund to redeem 1  $= .039073 - .02625 = \log 2.1079896 = .012823$  $337 = \log 2.5276299$ Sinking fund to redeem  $337 = \log 0.6356195 = \pounds 4.32135$ 

#### Annuities for which the Rate of Interest on Capital is Different from the Rate for Sinking Fund

As explained on p. 18, we require for this calculation to know the annual sinking fund that will amount to  $\pounds_1$  in a given period at the lower rate of interest, and to know also the annual interest upon  $\pounds_1$ . The present value of an annuity equal to the addition of these two is 1, and the present value of an annuity of 1 is the reciprocal of the present value just mentioned.

What annuity must be paid during 29 years to repay a debt of  $\pounds$  r by accumulation at  $3\frac{1}{4}$ % and to pay interest on the loan at  $4\frac{1}{2}$ %?

The annuity which will amount to  $\pounds I$  in 29 years at  $3\frac{1}{4}\%$  is obtained by multiplying the annuity which I will purchase for 29 years by the present value of I due at the end of 29 years.

Annuity  $\pounds_{I}$  will purchase (p. 285) = log  $\overline{2}$ ,7305144 Present value of  $\pounds_{I}$  (p. 285) = log  $\overline{1}$ ,5971883 Annuity to amount to  $\pounds_{I}$  in 29 years = log 2,3277027 = .021267 Annual interest on  $\pounds_{I}$  = .045 Annual payment required = log  $\overline{2}$ ,8212973 = .066267 If, on the other hand, we want to know the present value of an annuity of  $\pounds_1$  for 29 years on the condition that interest on the loan is being paid at  $4\frac{1}{2}$ %, and the principal is being replaced by accumulation at  $3\frac{1}{4}$ %, we must take the reciprocal of the above amount. This is log 0.0 - log  $2.8212973 = 1.1787027 = \pounds_15.0905$ .

What is the value of an annuity of  $\pounds_1$  for 50 years yielding interest on capital at 5%, and replacing capital when invested at 3%?

Annuity  $\pounds_{I}$  will purchase (p. 283) = log  $\overline{2} \cdot 5895642$ Present value of  $\pounds_{I}$  (p. 283) = log  $\overline{1} \cdot 3581388$ Annuity to amount to  $\pounds_{I}$  in 50 years = log  $\overline{3} \cdot 9477030$  =  $\cdot 00886555$ Annual interest on  $\pounds_{I}$  =  $\cdot 0500$ Annuity to pay  $\pounds_{I}$  and interest = log  $\overline{2} \cdot 7698608$  =  $\cdot 05886555$ 

Required value of annuity = log or  $-\log 2.7698608 = \log 1.2301392 = £16.98788$ , which agrees with the amount given on p. 120.

As in other cases, the values or amounts of annuities other than  $\pounds_{I}$  may be obtained by the addition of the logarithms.

#### Logarithm of the Rate of Interest

The Tables on pp. 318-320 give the logarithm of the rate of interest under the heading t. This is in modern notation represented by the symbol *i*. On p. 318 this is given to 10 places of decimals for every rate given in M. Thoman's first Table (pp. 269-316). On p. 319 it is given for every  $\frac{1}{10}$ th % up to 10 %, and on p. 320 for every  $\frac{1}{12}$ th % also up to 10 %.

This Table is convenient for such calculations as the present value of  $\mathcal{L}_{I}$  per annum, as may be seen from the first example on p. 222.

It has several times been pointed out that the more decimals are taken in the logarithm the more nearly exact will be the results. This is especially the case when the logarithm has to be multiplied.

#### Logarithm of the Amount of I in I Period

This logarithm is given to 7 places of decimals on pp. 269-316in the column  $r^{2}$ , but on p. 318 the logarithm is given to 10 places of decimals. As has just been said, the use of 10 places gives more nearly exact results than 7 places, though for most purposes 7 places are sufficient. As an example of a fairly large difference, as differences go, take the amount of  $\pounds_1$  for 90 years at  $z_8^7 \% :=$ 

 $1^{\circ}02875^{\circ}$  (see p. 216) = log 0°0123098482 (p. 318) × 90 = log 1°1078863380 = 12°8199544.  $1^{\circ}02875^{\circ}$  = log 0°0123098 × 90 = log 1°1078820 = 12°8198265.

This only gives a difference of 25 shillings in the amount of  $\pounds_{10,000}$  in 90 years, thus showing that 7 places are usually ample. Even this difference does not occur if we take the logarithm from p. 282, where it is seen to be log 1.1078863 = 12.8199533, giving a difference of  $\pounds_1$  in the amount of one million pounds in 90 years.

The 10-figure logarithms are useful, however, for the construction of a table of  $(1+i)^n$  (or  $r^n$ ), as in pp. 269-316, where the multiplication is worked to 10 places, and the nearest 7 places are printed. This accounts for the smaller variation when  $(1+i)^{\infty}$  is taken from p. 282.

The tables on pp. 319 and 320 give log (1+i), or log r, as M. Thoman called it, for every  $\frac{1}{10}$ th and  $\frac{1}{12}$ th %, and it is more convenient to take these logarithms from this table than from the table of logarithms on pp. 230-266.

#### The Logarithms of Log r

Under the heading of  $(\log^2 r)$  we have the logarithm of  $(\log r)$ . Thus at  $\frac{1}{2}$  %  $(\log r) = 0.00216606$ ; and from p. 235 we see that this number = log 3.33567, which agrees with the value of  $(\log^2 r)$  on p. 318.

We sometimes find it convenient to multiply a logarithm by taking the logarithm of the logarithm and adding the logarithm of the multiplier. This gives us a logarithm of the second order, as it were  $(\log^2)$ , and the number corresponding to this  $\log^2$  is the log we require.

Thus to get the logarithm of  $(1+i)^{87}$  when i = 0.04, we have

thus agreeing with the figure given on p. 291 and with log  $(1+i) \times 87$  by ordinary multiplication.

### TABLE

#### OF

## THE LOGARITHMS

### THE NATURAL NUMBERS

FROM 1 то 10,000

For explanation see pp. 207-215 (229)

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### Log. 000. No. 100.

No.	0	1	2	3	4	Diff.
100	000000	000434	000868	001301	001734	433
101	004321	004751	005181	005009	000038	429
102	008000	009020	009451	009870	010300	425
103	012037	013259	013000	018284	014521	416
104	01/033	01/451	022016	000204	022841	412
105	021109	021003	022010	022428	022041	400
100	025300	020780	020105	020555	021004	405
107	029304	022826	024227	024628	035020	401
109	037426	037825	038223	038620	039017	397
110	041393	041787	042182	042576	042969	393
III	045323	045714	046105	046495	046885	390
112	049218	049606	049993	050380	050766	387
113	053078	053463	053840	054230	054613	383
114	056905	057286	057666	058046	058420	380
115	060698	061075	061452	061829	062206	377
110	064458	064832	065206	065580	065953	374
117	008180	068557	068928	069298	009008	370
118	071882	072250	072017 076276	072985 076640	073352	364
120	070181	070542	070004	080266	080626	261
121	082785	083144	083503	083861	084210	358
122	086260	086716	087071	087426	087781	355
123	089905	090258	090611	090963	091315	352
124	093422	093772	094122	094471	094820	349
125	096910	097257	097604	097951	098298	347
126	100371	100715	101059	101403	101747	344
127	103804	104146	104487	104828	105109	341
128	107210	107549	107888	108227	108505	330
129	110590	110920	111203	111599	111934	330
130	113943	114277	114611	114944	115278	333
131	117271	117003	117934	118205	110595	330
132	120574	120903	121231	121500	121000	226
133 134	123052	127429	124304	124030	128399	323
135	130334	130655	130977	131298	131619	321
136	133539	133858	134177	134496	134814	319
137	136721	137037	137354	137671	137987	316
138	139879	140194	140508	140822	141136	314
139	143015	143327	143639	143951	144203	312
140	146128	146438	146748	147058	147367	310
141	149219	149527	149835	150142	150449	307
142	152208	152594	152900	153205	153510	305
143	155350	158664	155943	159266	1 59 567	301
145	161368	161667	161967	162266	162564	299
146	164353	164650	164947	165244	165541	297
147	167317	167613	167908	168203	168497	295
148	170262	170555	170848	171141	171434	293
149	173186	173478	173769	174060	174351	291

For explanation see pp. 207-215

### Log. 175. No. 149.

No.	5	6	7	8	9	Diff.
100	002166	002508	003020	003461	003801	431
101	006466	006804	007321	007748	008174	427
102	010724	011147	011570	011003	012415	423
103	014040	015360	015779	016107	016616	419
104	010116	019532	019947	020361	020775	415
TOF	092252	022664	024075	024486	024806	411
105	023252	023004	024075	0224400	024090	407
100	027350	021812	022216	020571	023021	402
107	025420	025820	026220	036620	037028	200
109	039414	039811	040207	040602	040998	396
110	043362	043755	044148	044540	044932	392
III	047275	047664	048053	048442	048830	389
112	051153	051538	051924	052309	052694	385
113	054996	055378	055760	056142	056524	382
114	058805	059185	059563	059942	060320	379
115	062582	062958	063333	063709	064083	375
116	066326	066699	067071	067443	067815	372
117	070038	070407	070776	071145	071514	369
118	073718	074085	074451	074816	075182	366
119	077368	077731	078094	078457	078819	363
120	080987	081347	081707	082067	082426	360
121	084576	084934	085291	085647	086004	357
122	088136	088490	088845	089198	089552	354
123	091667	092018	092370	092721	093071	351
124	095169	095518	095866	096215	096562	348
125	098644	098990	099335	099681	100026	345
120	102091	102434	102777	103119	103462	343
127	105510	105851	106191	106531	106871	340
128	108903	109241	109579	109916	110253	337
129	112270	112605	112940	113275	113609	335
130	115611	115943	116276	116608	116940	332
131	118926	119256	119586	119915	120245	329
132	122216	122544	122871	123198	123525	327
133	125481	125806	126131	126456	126781	325
134	128722	129045	129368	129690	130012	322
I35	131939	1 32260	132580	1 32900	133219	320
136	135133	135451	135769	136086	136403	318
137	138303	138618	138934	139249	139564	315
138	141450	141763	142076	142389	142702	313
139	144574	144885	145196	145507	145818	311
140	147676	147985	148294	148603	148911	309
141	150756	151063	151370	151676	151982	306
142	153815	154120	154424	154728	155032	304
143	156852	157154	157457	157759	158061	302
144	1 59868	100108	160469	160769	101068	300
145	162863	163161	163460	163758	164055	298
146	165838	166134	166430	166726	167022	296
147	168792	169086	169380	169674	169968	294
148	171726	172019	172311	172603	172895	292
149	174641	174932	175222	175512	175802	290

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### Log. 176. No. 150.

No.	0	1	2	3	4	Diff.
150	176091	176381	176670	176959	177248	289
152	181844	182120	1/9332	1/9039	1800120	287
152	181644	182129	185250	182700	185825	203
154	187521	187803	188084	188266	188647	281
-34		10,003	100004	100300	100047	201
155	190332	190612	190892	191171	191451	279
150	193125	193403	193081	193959	194237	278
122	195900	1901/0	190453	190729	197005	270
150	201207	201670	201042	199431	199735	2/4
-39	201397	2010/0	201945	202210	202400	2/3
100	204120	204391	204663	204934	205204	271
101	206826	207096	207365	207634	207904	269
102	209515	209783	210051	210319	210586	268
103	212188	212454	212720	212986	213252	200
104	214844	215109	215373	215638	215902	204
165	217484	217747	218010	218273·	218536	263
166	220108	220370	220631	220892	221153	261
167	222716	222976	223236	223496	223755	260
168	225309	225568	225826	226084	226342	258
169	227887	228144	228400	228657	228913	257
170	230449	230704	230960	231215	231470	255
171	232996	233250	233504	233757	234011	254
172	235528	235781	236033	236285	236537	252
173	238046	238297	238548	238799	239049	251
174	240549	240799	241048	241297	241546	249
175	243038	243286	243534	243782	244030	248
176	245513	245759	246006	246252	246499	246
177	247973	248219	248464	248709	248954	245
178	250420	250664	250908	251151	251395	244
179	252853	253096	253338	253580	253822	242
180	255273	255514	255755	255006	256237	241
181	257670	257018	258158	258308	258637	240
182	260071	260310	260548	260787	261025	238
183	262451	262688	262925	263162	263399	237
184	264818	265054	265290	265525	265761	236
185	267172	267406	267641	267875	268110	234
186	269513	269746	260080	270213	270446	233
187	271842	272074	272306	272538	272770	232
188	274158	274389	274620	274850	275081	231
189	276462	276692	276921	277151	277380	229
700	278751	278082	270211	270420	270667	228
101	281022	281261	281488	281715	281042	227
102	283301	283527	283753	283070	284205	226
103	285557	285782	286007	286232	286456	225
194	287802	288026	288249	288473	288696	224
TOF	200027	200257	200480	200702	200025	222
106	202256	290237	290400	290/02	202141	221
107	204466	204687	204007	205127	205347	220
108	29666=	206884	207104	207323	207542	210
100	298852	200071	200280	200507	200725	218
				- / / / /		

For explanation see pp. 207-215

Log. 300. No. 199.

No.	5	6	7	8	9	Diff.
150	177536	177825	178113	178401	178680	288
757	180412	180600	180086	181272	181558	286
152	182220	182555	182820	18/102	181330	284
152	186108	186201	186674	186056	184407	204
155	188008	180391	180074	180950	18/239	203
154	100920	189209	189490	189771	190051	201
155	191730	192010	192289	192567	192846	279
156	194514	194792	195069	195346	195623	277
157	197281	197556	197832	198107	198382	275
158	200029	200303	200577	200850	201124	274
159	202761	203033	203305	203577	203848	272
160	205475	205746	206016	206286	206556	270
161	208173	208441	208710	208979	209247	269
162	210853	211121	211388	211654	211921	267
163	213518	213783	214049	214314	214 579	265
164	216166	216430	216694	216957	217221	264
165	218798	219060	219323	219585	219846	262
166	221414	221675	221936	222196	222456	260
167	224015	224274	224533	224792	225051	259
168	226600	226858	227115	227372	227630	257
169	229170	229426	229682	229938	230193	256
170	231724	231979	232234	232488	232742	254
171	234264	234517	234770	235023	235276	253
172	236789	237041	237292	237544	237795	251
173	239299	239550	239800	240050	240300	250
174	241795	242044	242293	242541	242790	249
175	244277	244525	244772	245019	245266	247
176	246745	246991	247237	247482	247728	246
177	249198	249443	249687	249932	250176	244
178	251638	251881	252125	252368	252610	243
179	254064	254306	254548	254790	255031	242
180	256477	256718	256958	257198	257439	240
181	258877	259116	259355	259594	259833	239
182	261263	261501	261739	261976	262214	238
183	263636	263873	264109	264346	264582	236
184	265996	266232	266467	266702	266937	235
185	268344	268578	268812	269046	269279	234
186	270679	270912	271144	271377	271609	233
187	273001	273233	273464	273696	273927	231
188	275311	275542	275772	276002	276232	230
189	277609	277838	278067	278296	278525	229
190	279895	280123	280351	280578	280806	228
191	282169	282396	282622	282849	283075	226
192	284431	284656	284882	285107	285332	225
193	286681	286905	287130	287354	287 578	224
194	288920	289143	289366	289589	289812	223
195	291147	291369	291591	291813	292034	222
196	293363	293584	293804	294025	294246	221
197	295567	295787	296007	296226	296446	220
108	297761	297979	298198	298416	298635	218
IQO	200943	300161	300378	300595	300813	217
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### Log. 301. No. 200.

No.	0	1	2	3	4	Diff.
200	301030	301247	301464	301681	301898	217
201	303196	303412	303628	303844	304059	216
202	305351	305 <b>5</b> 66	305781	305996	306211	215
203	307496	307710	307924	308137	308351	214
203	309630	309843	310056	310268	310481	213
205	311754	31 1966	312177	312389	312600	212
206	313867	314078	314289	314499	314710	211
207	315970	316180	316390	316599	316809	210
208	318063	318272	318481	318689	318898	209
209	320146	320354	320562	320769	320977	208
210 211 212 213 213 214	322219 324282 326336 328380 330414	322426 324488 326541 328583 330617	322633 324694 326745 328787 330819	322839 324899 326950 328991 331022	323046 325105 327155 329194 331225	207 206 205 204 203
215	332438	332640	332842	333044	333246	202
216	334454	334655	334856	335057	335257	201
217	336460	336660	336860	337060	337260	200
218	338456	338656	338855	339054	339253	199
219	340444	340642	340841	341039	341237	198
220	342423	342620	342817	343014	343212	197
221	344392	344589	34478 <b>5</b>	344981	345178	196
222	346353	346549	346744	346939	347135	195
223	348305	348500	348694	348889	349083	194
224	350248	350442	350636	350829	351023	194
225	352183	352375	352568	352761	352954	193
226	354108	354301	354493	354685	354876	192
227	356026	356217	356408	356599	356790	191
228	357935	358125	358316	358506	358696	190
229	359835	360025	360215	360404	360593	190
230	361728	361917	362105	362294	362482	189
231	363612	363800	363988	364176	364363	188
232	365488	365675	365862	366049	366236	187
233	367356	367542	367729	367915	368101	186
233	369216	369401	369587	369772	369958	185
235	371068	371253	371437	371622	371806	185
236	372912	373096	373280	373464	373647	184
237	374748	374932	375115	375298	375481	183
238	376577	376759	376942	377124	377306	182
239	378398	378580	378761	378943	379124	182
240	380211	380392	380573	380754	380934	181
241	382017	382197	382377	382557	382737	180
242	383815	383995	384174	384353	384533	179
243	385606	385785	385964	386142	386321	179
243	387390	387568	387746	387923	388101	178
245	389166	3 ⁸ 9343	389520	389698	389875	177
246	390935	391112	391288	391464	391641	176
247	392697	392873	393048	393224	393400	176
248	394452	394627	394802	394977	395152	175
249	396199	396374	396548	396722	396896	174

For explanation see pp. 207-215

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### Log. 397. No. 249.

No.	5	6	7	8	9	Diff.
200 201 202 203	302114 304275 306425 308564	302331 304491 306639 308778	302547 304706 306854 308991	302764 304921 307068 309204	302980 305136 307282 309417	216 215 214 213
204 205 206 207 208 209	310693 312812 314920 317018 319106 321184	310906 313023 315130 317227 319314 321391	313234 315340 317436 319522 321598	311330 313445 315551 317646 319730 321805	311542 313656 315760 317854 319938 322012	212 211 210 209 208 207
210 211 212 213 213 214	323252 325310 327359 329398 331427	323458 325516 327563 329601 331630	323665 325721 327767 329805 331832	323871 325926 327972 330008 332034	324077 326131 328176 330211 332236	206 205 204 203 202
215 216 217 218 219	333447 335458 337459 339451 341435	333649 335658 337659 339650 341632	333850 335859 337858 339849 341830	334051 336059 338058 340047 342028	334253 336260 338257 340246 342225	201 200 199 199 198
220 221 222 223 223 224	343409 345374 347330 349278 351216	343606 345570 347525 349472 351410	343802 345766 347720 349666 351603	343999 345962 347915 349860 351796	344196 346157 348110 350054 351989	197 196 195 19 <b>4</b> 193
225 226 227 228 229	353147 355068 356981 358886 360783	353339 355260 357172 359076 360972	353532 355452 357363 359266 361161	353724 355643 357554 359456 361350	35 39 16 35 58 34 35 77 44 35 96 46 36 1 53 9	192 192 191 190 189
230 231 232 233 234	362671 364551 366423 368287 370143	362859 364739 366610 368473 370328	363048 364926 366796 368659 370513	363236 365113 366983 368845 370698	363424 365301 367169 369030 370883	188 187 187 186 186 185
235 236 237 238 239	371991 373831 375664 377488 379306	372175 374015 375846 377670 3794 ⁸ 7	372360 374198 376029 377852 379668	372544 374382 376212 378034 379849	372728 374565 376394 378216 380030	184 183 183 182 181
240 241 242 243 243 244	381115 382917 384712 386499 388279	381296 383097 384891 386677 388456	381476 383277 385070 386856 388634	381656 383456 385249 387034 388811	381837 383636 385428 38721 <b>2</b> 388989	180 180 179 178 177
245 246 247 248 249	390051 391817 393575 395326 397071	390228 391993 393751 395501 397245	390405 392169 393926 395676 397419	390582 392345 394101 395850 397592	390759 392521 394277 396025 397766	177 176 175 175 174

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Log. 397. No. 250.

No.	0	1	2	3	4	Diff.
250	397940	398114	398287	398461	398634	173
251	399674	399847	400020	400192	400365	173
252	401401	401573	401745	401917	402089	172
253	403121	403292	403464	403635	403807	171
254	404834	405005	405176	405346	405517	171
255	406540	406710	406881	4070 <b>5</b> 1	407221	170
256	408240	408410	408579	408749	408918	169
257	409933	410102	410271	410440	410609	169
258	411620	411788	411956	412124	412293	168
259	413300	413467	413635	413803	413970	167
260	414973	415140	415307	41 5474	415641	167
261	416641	416807	416973	4171 39	417306	166
262	418301	418467	418633	418798	418964	165
263	419956	420121	420286	420451	420616	165
264	421604	421768	421933	422097	422261	164
265	423246	423410	423574	423737	423901	163
260	424882	425045	425208	425371	425534	163
267	426511	426674	426836	426999	427161	162
268	428135	428297	428459	428621	428783	162
269	429752	429914	430075	430236	430398	161
270 271 272 273 273 274	431364 432969 434569 436163 437751	431525 433130 434729 436322 437909	431685 433290 434888 436481 438067	431846 433450 435048 436640 438226	432007 433610 435207 436799 438384	160 160 159 159 158
275 276 277 278 278 279	439333 440909 442480 44404 <b>5</b> 445604	439491 441066 442637 444201 445760	439648 441224 442793 444357 445915	439806 441381 442950 444513 446071	439964 441538 443106 444669 446226	157 157 156 156 155
280	447158	447313	447468	447623	447778	155
281	448706	448861	449015	449170	449324	154
282	450249	450403	450557	450711	450865	154
283	451786	451940	452093	452247	452400	153
283	453318	453471	453624	453777	453930	153
285 286 287 288 288 289	454845 456366 457882 459392 460898	454997 456518 458033 459543 461048	455150 456670 458184 459694 461198	455302 456821 458336 459845 461348	455454 456973 458487 459995 461499	152 152 151 151 150
290	462398	462548	462697	462847	462997	149
291	463893	464042	464191	464340	464490	149
292	465383	465532	465680	465829	465977	148
293	466868	467016	467164	467312	467460	148
294	468347	468495	468643	468790	468938	147
295	469822	469969	470116	470263	470410	147
296	471292	471438	471585	471732	471878	146
297	472756	472903	473049	473195	473341	146
298	474216	474362	474508	474653	474799	146
299	475671	475816	475962	476107	476252	145

For explanation see pp. 207-215

### Log. 476. No. 299.

No.	5	6	7	8	9	Diff.
250	398808	398981	3991 54	399328	399501	173
251	400538	400711	400883	401056	401228	173
252	402261	402433	402605	402777	402949	172
253	403978	404149	404320	404492	404663	171
253	405688	405858	406029	406199	406370	171
255	407391	407561	407731	407901	408070	170
256	409087	409257	409426	409595	409764	169
257	410777	410946	411114	411283	411451	169
258	412461	412629	412796	412964	413132	168
259	414137	414305	414472	414639	414806	167
260	415808	41 5974	416141	416308	416474	167
261	417472	417638	417804	417970	418135	166
262	419129	419295	419460	419625	419791	165
263	420781	420945	421110	421275	421439	165
263	422426	422590	422754	422918	423082	164
265	424065	424228	424392	424555	424718	163
266	425697	425860	426023	426186	426349	163
267	427324	427486	427648	427811	427973	162
268	428944	429106	429268	429429	429591	162
269	430559	430720	430881	431042	431203	161
270	432167	432328	432488	432649	432809	160
271	433770	433930	434090	434249	434409	160
272	435367	435526	435685	435844	436004	159
273	436957	437116	437275	437433	437592	159
274	438542	438701	438859	439017	439175	158
275 276 277 278 278 279	440122 441695 443263 444825 446382	440279 441852 443419 444981 446537	440437 442009 443576 445137 446 <b>6</b> 92	440594 442166 443732 445293 446848	440752 442323 443889 445449 447003	157 157 156 156 155
280	447933	448088	448242	448397	448552	155
281	449478	449633	449787	449941	450095	154
282	451018	451172	451326	451479	451633	154
283	452553	452706	452859	453012	453165	153
283	454082	454235	454387	454540	454692	153
285 286 287 288 288 289	455606 457125 458638 460146 461649	455758 457276 458789 460296 461799	455910 457428 458940 460447 461948	456062 457579 459091 460597 462098	456214 457731 459242 460748 462248	152 152 151 150 150
290	463146	463296	463445	463594	463744	149
291	464639	464788	464936	465085	465234	149
292	466126	466274	466423	466571	466719	148
293	467608	467756	467904	468052	468200	148
294	469085	469233	469380	469527	469675	147
295	470557	470704	470851	470998	471145	147
296	472025	472171	472318	472464	472610	146
297	473487	473633	473779	473925	474071	146
298	474944	475090	475235	475381	475526	146
299	<b>476</b> 397	476542	476687	476832	47697 <b>6</b>	145

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Log. 477. No. 300.

No.	0	1	2	3	4	Diff,
300	477121	477266	477411	477555	477700	145
301	478566	478711	478855	478999	479143	144
302	480007	480151	480294	480438	480582	144
303	481443	481586	481729	481872	482016	143
304	482874	483016	483159	483302	483445	143
305 306 307 308 309	484300 485721 487138 488551 489958	484442 485863 487280 488692 490099	484585 486005 487421 488833 490239	484727 486147 487563 488974 490380	484869 486289 487704 489114 490520	142 142 141 141 141 140
310	491362	491 502	491642	491782	491922	140
311	492760	492900	493040	493179	493319	139
312	494155	494294	494433	494572	494711	139
313	495544	495683	495822	495960	496099	138
314	496930	497068	497206	497344	497483	138
315	498311	498448	498586	498724	498862	138
316	499687	499824	499962	500099	500236	137
317	501059	501 196	501333	501470	501607	137
318	502427	502 564	502700	502837	502973	136
319	503791	503927	504063	504199	504335	136
320	505150	505286	505421	505557	505693	136
321	506505	506640	506776	506911	507046	135
322	507856	507991	508126	508260	508395	135
323	509203	509337	509471	509606	509740	134
324	510545	510679	510813	510947	511081	134
325	511883	512017	512151	512284	512418	133
326	513218	513351	513484	513617	513750	133
327	514548	514681	514813	514946	515079	133
328	515874	516006	516139	516271	516403	132
329	517196	517328	517460	517592	517724	132
330 331 332 333 333 334	518514 519828 521138 522444 523746	518646 519959 521269 522575 523876	518777 520090 521400 522705 524006	518909 520221 521530 522835 524136	519040 520353 521661 522966 524266	131 131 131 130 130
335	525045	525174	525304	525434	525563	129
336	526339	526469	526598	526727	526856	129
337	527630	527759	527888	528016	528145	129
33 ⁸	528917	529045	529174	529302	529430	128
339	530200	530328	530456	530584	530712	128
340	531479	531607	531734	531862	531990	128
341	532754	532882	533009	533136	533264	127
342	534026	534153	534280	534407	534534	127
343	535294	535421	535547	535674	535800	126
343	536558	536685	536811	536937	537063	126
345 340 347 348 349	537819 539076 540329 541579 542825	537945 539202 540455 541704 542950	538071 539327 540580 541829 543074	538197 539452 540705 541953 543199	538322 539578 540830 542078 543323	126 125 125 125 125 124

For explanation see pp. 207-215
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#### Log. 543. No. 349.

No.	5	6	7	8	9	Diff.
300	477844	477989	478133	478278	478422	145
301	479287	479431	479575	479719	479863	144
302	480725	480869	481012	481156	481299	144
303	482159	482302	482445	482588	482731	143
304	483587	483730	483872	484015	484157	143
305 306 307 308 309	485011 486430 487845 489255 490661	485153 486572 487986 489396 490801	485295 486714 488127 489537 490941	485437 486855 488269 489677 491081	485579 486997 488410 489818 491222	142 142 141 141 141 140
310	492062	492201	492341	492481	492621	139
311	493458	493597	493737	493876	494015	139
312	494850	494989	495128	495267	495406	139
313	496238	496376	496515	496653	496791	138
314	497621	497759	497 ⁸ 97	498035	49 ⁸ 173	138
315	498999	499137	499275	499412	499550	138
316	500374	500511	500648	500785	500922	137
317	501744	501880	502017	502154	502291	137
318	503109	503246	503382	503518	503655	136
319	504471	504607	504743	504878	505014	136
320	505828	505964	506099	506234	506370	136
321	507181	507316	507451	507586	507721	135
322	508530	508664	508799	508934	509068	135
323	509874	510009	510143	510277	510411	134
324	511215	511349	511482	511616	511750	134
325	512551	512684	512818	512951	513084	133
326	513883	514016	514149	514282	514415	133
327	515211	515344	515476	515609	515741	133
328	516535	516668	516800	516932	517064	132
329	517855	517987	518119	518251	518382	132
330 331 332 333 333 334	519171 520484 521792 523096 524396	519303 520615 521922 523226 524526	519434 520745 522053 523356 524656	519566 520876 522183 523486 524785	519697 521007 522314 523616 524915	131 131 131 130 130
335	525693	525822	525951	526081	526210	129
336	526985	527114	527243	527372	527501	129
337	528274	528402	528531	528660	528788	129
338	529559	529687	529815	529943	530072	128
339	530840	530968	531096	531223	531351	128
340	532117	532245	532372	532500	532627	128
341	533391	533518	533645	533772	533899	127
342	534661	534787	534914	535041	535167	127
343	535927	536053	536180	536306	536432	126
344	537189	537315	537441	537567	537693	126
345 346 347 348 349	538448 539703 540955 542203 543447	53 ⁸ 574 539829 541080 542327 543571	538699 539954 541205 542452 543696	538825 540079 541330 542576 543820	538951 540204 541454 542701 543944	126 125 125 125 125 124

## Log. 544. No. 350.

No.	0	1	2	3	4	Diff.
350 351 352 353 354	544068 545307 546543 547775 549003	544192 545431 546666 547898 549126	544316 545555 546789 548021 549249	544440 545678 546913 548144 549371	544564 545802 547036 548267 549494	124 124 123 123 123
355 356 357 358 359	550228 551450 552668 553883 555094	550351 551572 552790 554004 555215	550473 551694 552911 554126 555336	550595 551816 553033 554247 555457	550717 551938 553155 554368 555578	122 122 121 121 121
360 361 362 363 364	556303 557507 558709 559907 561101	556423 557627 558829 560026 561221	556544 557748 558948 560146 561340	556664 557868 559068 560265 561459	556785 557988 559188 560385 561578	120 120 120 119 119
365 366 367 368 369	562293 563481 564666 565848 567026	562412 563600 564784 565966 567144	562531 563718 564903 566084 567262	562650 563837 565021 566202 567379	562769 563955 565139 566320 567497	119 119 118 118 118 118
370 371 372 373 373 374	568202 569374 570543 571709 572872	568319 569491 570660 571825 572988	568436 569608 570776 571942 573104	568554 569725 570893 572058 573220	568671 569842 571010 572174 573336	117 117 117 116 116
375 376 377 378 379	574031 575188 576341 577492 578639	574147 575303 576457 577607 578754	574263 575419 576572 577722 578868	574379 575534 576687 577836 578983	574494 575650 576802 577951 579097	116 115 115 115 115 114
380 381 382 383 384	579784 580925 582063 583199 584331	579898 581039 582177 583312 584444	580012 581153 582291 583426 584557	580126 581267 582404 583539 584670	580241 581381 582518 583652 584783	114 114 114 113 113
385 386 387 388 389	585461 586587 587711 588832 589950	585574 586700 587823 588944 590061	585686 586812 587935 589056 590173	585799 586925 588047 589167 590284	585912 587037 588160 589279 590396	113 112 112 112 112 112
390 391 392 393 394	591065 592177 593286 594393 595496	591176 592288 593397 594503 595606	591287 592399 593508 594614 595717	591399 592510 593618 594724 595 ⁸² 7	591 510 592621 593729 594834 595937	111 111 111 110 110
395 396 397 398 <b>399</b>	596597 597695 598791 599883 600973	596707 597805 598900 599992 601082	596817 597914 599009 600101 601191	596927 598024 599119 600210 601299	597037 598134 599228 600319 601408	110 110 109 109

## Log. 601. No. 399.

No.	5	6	7	8	9	Diff.
350 351 352 353 353 354	544688 545925 547159 548389 549616	544812 546049 547282 548512 549739	544936 546172 547405 548635 549861	545060 546296 547529 548758 549984	545183 546419 547652 548881 550106	124 124 123 123 123
355 356 357 35 ⁸ 359	550840 552060 553276 5544 <b>8</b> 9 555699	550962 552181 553398 554610 555820	551084 552303 553519 554731 555940	551206 552425 553640 554852 556061	551328 552547 553762 554973 556182	122 122 121 121 121
360 361 362 363 364	556905 558108 559308 560504 561698	557026 558228 559428 560624 561817	557146 55 ⁸ 349 559548 5 ⁶⁰ 743 5 ⁶¹ 936	557267 558469 559667 560863 562055	5573 ⁸ 7 558589 559787 560982 562174	120 120 120 119 119
365 366 367 368 369	562887 564074 565257 566437 567614	563006 564192 565376 566555 567732	563125 564311 565494 566673 567849	563244 564429 565612 566791 567967	563362 564548 565730 566909 568084	119 119 118 118 118
370 371 372 373 373 374	568788 569959 571126 572291 573452	568905 570076 571243 572407 573568	569023 570193 571359 572523 573684	569140 570309 571476 572639 573 ⁸⁰⁰	569257 570426 571592 572755 573915	117 117 117 116 116
375 376 377 378 379	574610 575765 576917 578066 579212	574726 575880 577032 578181 579326	574841 575996 577147 578295 579441	574957 576111 577262 578410 579555	575072 576226 577377 578525 579669	116 115 115 115 115 114
380 381 382 383 383 384	580355 581495 582631 583765 584896	580469 581608 582745 583879 585009	580583 581722 582858 583992 585122	580697 581836 582972 584105 585235	580811 581950 583085 584218 585348	114 114 114 113 113
3 ⁸ 5 386 3 ⁸ 7 388 389	586024 587149 588272 589391 590507	586137 587262 588384 589503 590619	586250 587374 588496 589615 590730	586362 587486 588608 589726 590842	586475 587599 588720 589838 590953	113 112 112 112 112 112
390 391 392 393 394	591621 592732 593840 594945 596047	591732 592843 593950 595055 596157	591843 592954 594061 595165 596267	591955 593064 594171 595276 596377	592066 593175 594282 595386 596487	111 111 111 110 110
395 396 397 398 399	597146 598243 599337 600428 601517	597256 598353 599446 600537 601625	597366 598462 599556 600646 601734	597476 598572 599665 600755 601843	597586 598681 599774 600864 601951	110 110 109 109

Log. 602. No. 400.

No.	0	1	2	3	4	Diff.
400	602060	602169	602277	602386	602494	108
401	603144	603253	603361	603469	603577	108
402	604226	604334	604442	604550	604658	108
403	605305	605413	605521	605628	605736	108
404	606381	606489	606596	606704	606811	107
405	607455	607 562	607669	607777	607884	107
400	608526	608633	608740	608847	608954	107
407	609594	609701	609808	609914	610021	107
408	610660	610767	610873	610979	611086	106
409	611723	611829	611936	612042	612148	106
410	612784	612890	612996	613102	613207	106
411	613842	613947	614053	614159	6142 <b>6</b> 4	106
412	614897	615003	615108	615213	615319	105
413	615950	616055	616160	616265	616370	105
414	617000	617105	617210	617315	617420	105
415	618048	618153	618257	618362	618466	105
416	619093	619198	619302	619406	619511	104
417	620136	620240	620344	620448	620552	104
418	621176	621280	621384	621488	621592	104
419	622214	622318	622421	622525	622628	104
420	623249	623353	623456	623559	623663	103
421	624282	624385	624488	624591	624695	103
422	625312	625415	625518	625621	625724	103
423	626340	626443	626546	626648	626751	103
424	627366	627468	627571	627673	627775	102
425	628389	628491	628593	628695	628797	102
426	629410	629512	629613	629715	629817	102
427	630428	630530	630631	630733	630835	102
428	631444	631545	631647	631748	631849	101
429	632457	632559	632660	632761	632862	101
430	633468	633569	633670	633771	633872	101
431	634477	634578	634679	634779	634880	101
432	635484	635584	635685	635785	635886	100
433	636488	636588	636688	636789	636889	100
434	637490	637590	637690	637790	637890	100
435	638489	638589	638689	638789	638888	100
436	639486	639586	639686	639785	639885	100
437	640481	640581	640680	640779	640879	99
438	641474	641573	641672	641771	641871	99
439	642465	642563	642662	642761	642860	99
440	643453	643551	643650	643749	643847	98
441	644439	644537	644636	644734	644832	98
442	645422	645521	645619	645717	645815	98
443	646404	646502	646600	646698	646796	98
444	647383	647481	647579	647676	647774	98
445 446 447 448 449	648360 649335 650308 651278 652246	648458 649432 650405 651375 652343	648555 649530 650502 651472 652440	648653 649627 650599 651569 652536	648750 649724 650696 651666 652633	97 97 97 97 97 97

## Log. 653. No. 449.

No.	5	6	7	8	9	Diff.
400	602603	602711	602819	602928	603036	108
401	603686	603794	603902	604010	604118	108
402 403 404	605844 605010	605951 607026	606059 607122	605089 606166	605197 606274	108 108
405	607991	608098	608205	608312	608419	107
407 408	610128 611192	610234 611298	610341 611405	610447 611511	610554 611617	107 107 106
409	612254 613313	612360	612466	612572 613630	612678 613736	106 106
412 413 414	615424 616476 617525	615529 616581 617629	615634 616686 617734	614080 615740 616790 617839	614792 615845 616895 617943	105 105 105
415	618571	618676	618780	618884	618989	105
416	619615	619719	619824	619928	620032	104
417	620656	620760	620864	620968	621072	104
418	621695	621799	621903	622007	622110	104
419	622732	622835	622939	623042	623146	104
420	623766	623869	623973	624076	624179	103
421	624798	624901	625004	625107	625210	103
422	625827	625929	626032	626135	626238	103
423	626853	626956	627058	627161	627263	103
424	627878	627980	628082	628185	628287	102
425	628900	629002	629104	629206	629308	102
426	629919	630021	630123	630224	630326	102
427	630936	631038	631139	631241	631342	102
428	631951	632052	632153	632255	632356	101
429	632963	633064	633165	633266	633367	101
430	633973	634074	634175	634276	634376	101
431	634981	635081	635182	635283	635383	101
432	635986	636087	636187	636287	636388	100
433	636989	637089	637189	637290	637390	100
434	637990	638090	638190	638290	638389	100
435	638988	639088	639188	639287	639387	100
436	639984	640084	640183	640283	640382	100
437	640978	641077	641177	641276	641375	99
438	641970	642069	642168	642267	642366	99
439	642959	643058	643156	643255	643354	99
440	643946	644044	644143	644242	644340	98
441	644931	645029	645127	645226	645324	98
442	645913	646011	646110	646208	646306	98
443	646894	646992	647089	647187	647285	98
444	647872	647969	648067	648165	648262	98
445	648848	648945	649043	649140	649237	97
446	649821	649919	650016	650113	650210	97
447	650793	650890	650987	651084	651181	97
448	651762	651859	651956	652053	652150	97
449	652730	652826	652923	653019	653116	97

## Log. 653. No. 450.

No.	0	1	2	3	4	Diff.
450 451 452 453 454	653213 654177 655138 656098 657056	653309 654273 655235 656194 657152	653405 654369 655331 656290 657247	653502 654465 655427 656386 657343	653598 654562 655523 656482 657438	96 96 96 96 96
455 45 ⁶ 457 458 459	658011 658965 659916 660865 661813	658107 659060 660011 660960 661907	658202 659155 660106 661055 662002	658298 659250 660201 661150 662096	658393 659346 660296 661245 662191	95 95 95 95 94
460 461 462 463 464	662758 663701 664642 665581 666518	662852 663795 664736 665675 666612	662947 663889 664830 665769 666705	663041 663983 664924 665862 666799	663135 664078 665018 665956 666892	94 94 94 94 94 94
465 466 467 468 469	667453 668386 669317 670246 671173	667546 668479 669410 670339 671265	667640 668572 669503 670431 671358	667733 668665 669596 670524 671451	667826 668759 669689 670617 671543	93 93 93 93 93 93
470 471 472 473 473 474	672098 673021 673942 674861 675778	672190 673113 674034 674953 675870	672283 673205 674126 675045 675962	672375 673297 674218 675137 676053	672467 673390 674310 675228 676145	92 92 92 92 92 92
475 476 477 478 479	676694 677607 678518 679428 680336	676785 677698 678609 679519 680426	676876 677789 678700 679610 680517	676968 677881 678791 679700 680607	6770 <b>5</b> 9 677972 678882 679791 680698	91 91 91 91 91 91
480 481 482 483 484	681241 682145 683047 683947 684845	681332 682235 683137 684037 684935	681422 682326 683227 684127 685025	681513 682416 683317 684217 685114	681603 682506 683407 684307 685204	90 90 90 90
485 486 487 488 489	685742 686636 687529 688420 689309	685831 686726 687618 688509 689398	685921 686815 687707 688598 689486	686010 686904 687796 688687 689 <b>5</b> 75	686100 686994 687886 688776 689664	90 89 89 89 89 89
490 491 492 493 494	690196 691081 691965 692847 693727	690285 691170 692053 692935 693815	690373 691258 692142 693023 693903	690462 691347 692230 693111 693991	690550 691435 692318 693199 694078	89 88 88 88 88 <b>88</b>
495 496 497 498 499	694605 695482 696356 697229 698101	694693 695569 696444 697317 698188	694781 695657 696 <b>5</b> 31 697404 698275	694868 695744 696618 697491 698362	69495 <b>6</b> 695832 696706 697578 698449	88 87 87 87 87 87

# Log. 698. No. 499.

No.	5	6	7	8	9	Diff.
450 451 452 453 454	653695 654658 655619 656577 657534	653791 654754 655715 656673 657629	653888 654850 655810 656769 657725	653984 654946 655906 656864 657820	654080 655042 656002 656960 657916	96 96 96 96 96
455 456 457 458 459	658488 659441 660391 661339 662286	658584 659536 660486 661434 662380	658679 659631 660581 661529 662475	658774 659726 660676 661623 662569	658870 659821 660771 661718 662663	95 95 95 95 95 94
460 461 462 463 464	663230 664172 665112 666050 666986	663324 664266 665206 666143 667079	663418 664360 665299 666237 667173	663512 664454 665393 666331 667266	663607 664548 665487 666424 667360	94 94 94 94 94 94
465 466 467 468 469	667920 668852 669782 670710 671636	668013 668945 669875 670802 671728	668106 669038 669967 670895 671821	668199 669131 670060 670988 671913	668293 669224 670153 671080 672005	93 93 93 93 93 92
470 471 472 473 474	672560 673482 674402 675320 676236	672652 673574 674494 675412 676328	672744 673666 674586 675503 676419	672836 673758 674677 675595 676511	672929 673850 674769 675687 676602	92 92 92 92 92 92
475 476 477 478 478 479	677151 678063 678973 679882 680789	677242 678154 679064 679973 680879	677333 678245 679155 680063 680970	677424 678336 679246 680154 681060	677516 678427 679337 680245 681151	91 91 91 91 91 91
480 481 482 483 484	681693 682596 683497 684396 685294	681784 682686 683587 684486 685383	681874 682777 683677 684576 685473	681964 682867 683767 684666 685563	682055 682957 683857 684756 685652	90 90 90 90 90
485 486 487 488 489	686189 687083 687975 688865 689753	686279 687172 688064 688953 689841	686368 687261 688153 689042 689930	686458 687351 688242 689131 690019	686547 687440 688331 689220 690107	90 89 89 89 89 89
490 491 492 493 494	690639 691524 692406 693287 694166	690728 691612 692494 693375 694254	690816 691700 692583 693463 694342	690905 691789 692671 693551 694430	690993 691877 692759 693639 694517	89 88 88 88 88 88
495 496 497 498 <b>499</b>	695044 695919 6 <b>9</b> 6793 697665 <b>69</b> 8535	695131 696007 696880 697752 698622	695219 696094 696968 697839 698709	695307 696182 6970 <b>55</b> 697926 698796	695394 696269 697142 698014 69888 <b>3</b>	88 87 87 87 <b>87</b>

#### Log. 698. No. 500.

No.	0	1	2	3	4	Diff.
500 501 502 503 504	698970 699838 700704 701568 702431	699057 699924 700790 701654 702517	699144 700011 700877 701741 702603	699231 700098 700963 701827 702689	699317 700184 701050 701913 702775	87 87 86 86 86 86
505 506 507 508 509	703291 704151 705008 705864 706718	703377 704236 705094 705949 706803	703463 704322 705179 706035 706888	703549 704408 705265 706120 706974	703635 704494 705350 706206 707059	86 86 86 <b>8</b> 5 85
510 511 512 513 514	707570 708421 709270 710117 710963	707655 708506 709355 710202 711048	707740 708591 709440 710287 711132	707826 708676 709524 710371 711217	707911 708761 709609 710456 711301	85 85 85 85 84
515 516 517 518 519	711807 712650 713491 714330 715167	711892 712734 713575 714414 715251	711976 712818 713659 714497 715335	712060 712902 713742 714581 715418	712144 712986 713826 714665 715502	84 84 84 84 84
520 521 522 523 524	716003 716838 717671 718502 719331	716087 716921 717754 718585 719414	716170 717004 717837 718668 719497	716254 717088 717920 718751 719580	716337 717171 718003 718834 719663	83 83 83 83 83
525 526 527 528 529	720159 720986 721811 722634 723456	720242 721068 721893 722716 723538	720325 721151 721975 722798 722620	720407 721233 722058 722881 723702	720490 721316 722140 722963 723784	83 83 82 82 82 82
530 531 532 533 533 534	724276 725095 725912 726727 727541	724358 725176 725993 726809 727623	724440 725258 726075 726890 727704	724522 725340 726156 726972 727785	724604 725422 726238 727053 727866	82 82 82 81 81
535 536 537 538 539	728354 729165 729974 730782 731589	728435 729246 730055 730863 731669	728516 729327 730136 730944 731750	728597 729408 730217 731024 731830	728678 729489 730298 731105 731911	81 81 81 81 81 81
540 541 542 543 544	732394 733197 733999 734800 735599	732474 733278 734079 734880 735679	732555 733358 734160 734960 735759	732635 733438 734240 735040 735838	732715 733518 734320 735120 735918	80 80 80 80 80
545 546 547 548 549	736397 737193 737987 738781 739572	736476 737272 738067 738860 739651	736556 737352 738146 738939 739731	736635 737431 738225 739018 739810	736715 737511 - 738305 739097 739889	80 79 79 79 79 79

#### Log. 740. No. 549.

No.	5	6	7	8	9	Di <b>ff.</b>
500 501 502 503 504	699404 700271 701136 701999 702861	699491 700358 701222 702086 702947	699578 700444 701309 702172 703033	699664 700531 701395 702258 703119	699751 700617 701482 702344 703205	87 87 86 86 86
505 500 507 508 509	703721 704579 705436 706291 707144	703807 704665 705522 706376 707229	703893 704751 705607 706462 707315	703979 704837 705693 70654 <b>7</b> 707400	704065 704922 705778 706632 707485	86 86 85 85
510 511 512 513 514	707996 708846 709694 710540 711385	708081 708931 709779 710625 711470	708166 709015 709863 710710 711554	708251 709100 709948 710794 711639	708336 709185 710033 710879 711 <b>7</b> 23	85 85 85 85 84
515 516 517 518 519	712229 713070 713910 714749 715586	712313 713154 713994 714833 715669	712397 713238 714078 714916 715753	712481 713323 714162 715000 715836	7 12 566 7 13 407 7 14 246 7 1 50 84 7 1 59 20	84 84 84 84 84
520 521 522 523 524	716421 717254 718086 718917 719745	716504 717338 718169 719000 719828	716588 717421 718253 719083 719911	716671 717504 718336 719165 719994	7 16754 7 17587 7 184 19 7 19248 720077	83 83 83 83 83
525 526 527 528 529	720573 721398 722222 723045 723866	720655 721481 722305 723127 723948	720738 721563 722387 723209 724030	720821 721646 722469 723291 724112	720903 721728 722552 723374 724194	83 83 82 82 82 82
530 531 532 533 534	724685 725503 726320 727134 727948	724767 725585 726401 727216 728029	724849 725667 726483 727297 728110	724931 725748 726564 727379 728191	725013 725830 726646 727460 728273	82 82 82 81 81
535 536 537 538 539	728759 729570 730378 731186 731991	728841 729651 730459 731266 732072	728922 729732 730540 731347 732152	729003 729813 730621 731428 73 ²² 33	729084 729893 730702 731508 732313	81 81 81 81 81 81
540 541 542 543 544	732796 733598 734400 735200 735998	732876 733679 734480 735279 736078	732956 733759 734560 735359 736157	733037 733839 734640 735439 736237	733117 733919 734720 735519 736317	80 80 80 80 80 80
545 546 547 548 549	736795 737590 738384 739177 739968	736874 737670 738463 739256 740047	736954 737749 738543 739335 740126	737034 737829 738622 739414 740205	737113 737908 738701 739493 740284	80 79 79 79 79 79

#### Log. 740. No. 550.

No.	0	1	2	3	4	Diff.
550 551 552 553 554	740363 741152 741939 742725 743510	740442 741230 742018 742804 743588	740521 741309 742096 742882 743667	740600 741388 742175 742961 743745	74067 <b>8</b> 741467 742254 743039 743823	79 79 79 78 78
555 556 557 558 559	744293 745075 745855 746634 747412	744371 745153 745933 746712 7474 ⁸ 9	744449 745231 746011 746790 747567	74452 <b>8</b> 745309 746089 746868 747645	744606 745387 746167 746945 747722	78 78 78 78 78 78
560 561 562 563 564	748188 748963 749736 750508 751279	748266 749040 749814 750586 751356	748343 749118 749891 750663 751433	748421 749195 749968 750740 751510	748498 749272 750045 750817 751587	77 77 77 77 77 77
565 566 567 568 569	752048 752816 753583 754348 755112	752125 752893 753660 754425 755189	752202 752970 753736 754501 755265	752279 753047 753813 754578 755341	752356 753123 753889 754654 755417	77 77 77 76 76
570 571 572 573 574	755 ⁸ 75 756636 757396 758155 758912	755951 756712 757472 758230 75898 <b>8</b>	756027 756788 757548 758306 759063	756103 756864 757624 758382 759139	756180 756940 757700 758458 759214	76 76 76 76 76
575 576 577 578 578 579	759668 760422 761176 761928 762679	759743 760498 761251 762003 762754	759819 760573 761326 762078 762829	759894 760649 761402 762153 762904	759970 760724 761477 762228 762978	75 75 75 75 75
580 581 582 583 584	763428 764176 764923 765669 766413	763503 764251 764998 765743 766487	763578 764326 765072 765818 766562	763653 764400 765147 765892 766636	763727 764475 765221 765966 766710	75 75 75 74 74
585 586 587 588 589	767156 767898 768638 769377 770115	767230 767972 768712 769451 770189	767304 768046 768786 769525 770263	767379 768120 768860 769599 770336	767453 768194 768934 769673 770410	74 74 74 74 74 74
590 591 592 593 594	770852 771587 772322 773055 7737 <b>8</b> 6	770926 771661 772395 773128 773860	770999 771734 772468 773201 773933	771073 771808 772542 773274 774006	771146 771881 772615 773348 774079	74 73 73 73 73
595 596 597 598 5 <b>99</b>	774517 775246 775974 776701 777427	774590 775319 776047 776774 777499	774663 775392 776120 776846 777572	774736 775465 776193 776919 777644	774809 775538 776265 776992 777717	73 73 73 73 73 72

Log. 778. No. 599.

No.	5	6	7	8	9	Diff.
550	740757	740836	740915	740994	741073	79
551	741546	741624	741703	741782	741860	79
552	742332	742411	742489	742568	742647	79
553	743118	743196	743275	743353	743431	78
554	743902	743980	744058	744136	744215	78
555 556 557 558 559	744684 745465 746245 747023 747800	744762 745543 746323 747101 747878	744840 745621 746401 747179 747955	744919 745699 746479 747256 748033	744997 745777 746556 747334 748110	78 78 78 78 78 78
560 561 562 563 564	748576 749350 750123 750894 751664	748653 749427 750200 750971 751741	748731 749504 750277 751048 751818	748808 749582 750354 751125 751895	748885 749659 750431 751202 751972	77 77 77 77 77 77
565	752433	752509	752586	752663	752740	77
566	753200	753277	753353	753430	753506	77
567	753966	754042	754119	754195	754272	77
568	754730	754807	754883	754960	755036	76
569	755494	755570	755646	755722	755799	76
570	756256	756332	756408	756484	756560	76
571	757016	757092	757168	757244	757320	76
572	757775	757851	757927	758003	758079	76
573	75 ⁸ 533	758609	758685	758761	758836	76
574	759290	759366	759441	759517	759592	76
575 576 577 578 578 579	760045 760799 761552 762303 763053	760121 760875 761627 762378 763128	760196 760950 761702 762453 763203	760272 761025 761778 762529 763278	760347 761101 761853 762604 763353	75 75 75 75 75
580	763802	763877	763952	764027	764101	75
581	764550	764624	764699	764774	764848	75
582	765296	765370	765445	765520	765594	75
583	766041	766115	766190	766264	766338	74
5 ⁸ 4	766785	766859	766933	767007	767082	74
585 586 587 588 589	767527 768268 769008 769746 770484	767601 768342 769082 769820 779557	767675 768416 769156 769894 770631	767749 768490 769230 769968 770705	767823 768564 769303 770042 770778	74 74 74 74 74 74
590	771220	771293	771367	771440	771514	74
591	771955	772028	772102	772175	772248	73
592	772688	772762	772835	772908	772981	73
593	773421	773494	773567	773640	773713	73
594	774152	774225	774298	774371	774444	73
595	774882	774955	775028	775100	775173	73
596	775610	775683	775756	775829	775902	73
597	776338	776411	776483	776556	776629	73
598	777064	777137	777209	777282	777354	73
599	777789	777862	777934	778006	778079	72

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# Log. 778. No. 600.

No.	0	1	2	3	4	Diff.
600 601 602 603 604	778151 778874 779596 780317 781037	778224 778947 779669 780389 781109	778296 779019 779741 780461 781181	778368 779091 779813 780533 781253	778441 779163 779885 780605 781324	72 72 72 72 72 72
605 606 607 608 609	781755 782473 783189 783904 784617	781827 782544 783260 783975 784689	781899 782616 783332 784046 784760	781971 782688 783403 784118 784831	782042 782759 783475 784189 784902	72 72 71 71 71 71
610 611 612 613 614	785330 786041 786751 787460 788168	785401 786112 786822 787531 788239	785472 786183 786893 787602 788310	785543 786254 786964 787673 788381	785615 786325 787035 787744 788451	71 71 71 71 71 71
615	788875	788946	789016	789087	789157	71
616	789581	789651	789722	789792	789863	70
617	790285	790356	790426	790496	790567	70
618	790988	791059	791129	791199	791269	70
619	791 <b>6</b> 91	791761	791831	791901	791971	70
620	792392	792462	792532	792 <b>6</b> 02	792672	70
621	793092	793162	793231	793301	793371	70
622	793790	793860	793930	794000	794070	70
623	794488	794558	794627	794697	794767	70
624	795185	795254	795324	795393	795463	70
625	795880	795949	796019	796088	796158	69
626	796574	796644	796713	796782	796852	69
627	797268	797337	797406	797475	797545	69
628	797960	798029	798098	798167	798236	69
629	798651	798720	798789	798858	798927	69
630	799341	799409	799478	799547	799616	69
631	800029	800098	800167	800236	800305	69
632	800717	80078 <b>6</b>	800854	800923	800992	69
633	801404	801472	801541	801609	801678	69
634	802089	802158	802226	802295	802363	69
635	802774	802842	802910	802979	803047	68
636	803457	803525	803594	803662	803730	68
637	804139	804208	804276	804344	804412	68
638	804821	804889	804957	805025	805093	68
639	805501	805569	805637	805705	805773	68
640	806180	806248	806316	806384	806451	68
641	806858	806926	806994	807061	807129	68
642	807535	807603	807670	807738	807806	68
643	808211	808279	808346	808414	808481	67
644	808886	808953	809021	809088	809156	67
645	809560	809627	809694	809762	809829	67
646	810233	810300	810367	810434	810501	67
647	810904	810971	811039	811106	811173	67
648	811575	811642	811709	811776	811843	67
649	812245	812312	812379	812445	812512	67

Log. 812. No. 649.

No.	5	6	7	8	9	Diff.
600 601 602 603 604	778513 779236 779957 780677 781396	778585 779308 780029 780749 781468	778658 779380 780101 780821 781540	778730 779452 780173 780893 781612	778802 779524 780245 780965 781684	72 72 72 72 72 72 72
605 606 607 608 609	782114 782831 783546 784261 784974	782186 782902 783618 784332 785045	782258 782974 783689 784403 785116	782329 783046 783761 784475 785187	782401 783117 783832 784546 785259	72 72 71 71 71 71
610 611 612 613 614	785686 786396 787106 787815 788522	785757 786467 787177 787885 788593	785828 786538 787248 787956 788663	785899 786609 787319 788027 788734	785970 786680 787390 788098 788804	71 71 71 71 71 71
615	789228	789299	789369	789440	789510	71
616	789933	790004	790074	790144	790215	70
617	790637	790707	790778	790848	790918	70
618	791340	791410	791480	791550	791620	70
619	792041	792111	792181	792252	792322	70
620	792742	792812	792882	792952	793022	70
621	793441	793511	793581	793651	793721	70
622	794139	794209	794279	794349	794418	70
623	794836	794906	794976	795045	795115	70
624	795532	795602	795672	795741	795811	70
625	796227	796297	796366	796436	796505	69
626	796921	796990	797060	797129	797198	69
627	797614	797683	797752	797821	797890	69
628	798305	798374	798443	798513	798582	69
629	798996	799065	799134	799203	799272	69
630	799685	799754	799823	799892	799961	69
631	800373	800442	800511	800580	800648	69
632	801061	801129	801198	801266	801335	69
633	801747	801815	801884	801952	802021	69
634	802432	802500	802568	802637	802705	69
635	803116	803184	803252	803321	803389	68
636	803798	803867	803935	804003	804071	68
637	804480	804548	804616	804685	804753	68
638	805161	805229	805297	805365	805433	68
639	805841	805908	805976	806044	806112	68
640	806519	806587	806655	806723	806790	68
641	807197	807264	807332	807400	807467	68
642	807873	807941	808008	808076	808143	68
643	808549	808616	808684	808751	808818	67
644	809223	809290	809358	809425	809492	67
645	809896	809964	810031	810098	810165	67
646	810569	810636	810703	810770	810837	67
647	811240	811307	811374	811441	811508	67
648	811910	811977	812044	812111	812178	67
649	812579	812646	812713	812780	812847	67

Log. 812. No. 650.

No.	0	1	2	3	4	Diff.
650	812913	812980	813047	813114	813181	67
651	813581	813648	813714	813781	813848	67
652	814248	814314	814381	814447	814514	67
653	814913	814980	815046	815113	815179	66
654	815578	815644	815711	815777	815843	66
655 656 657 658 659	816241 816904 817565 818226 818885	816308 816970 817631 818292 818951	816374 817036 817698 818358 818358 819017	816440 817102 817764 818424 819083	816506 817169 817830 818490 818149	66 66 66 66 66
660 661 662 663 664	819544 820201 820858 821514 822168	819610 820267 820924 821579 822233	819676 820333 820989 821645 822299	819741 820399 821055 821710 822364	819807 820464 821120 821775 822430	66 66 65 65
665	822822	822887	822952	823018	823083	65
666	823474	823539	823605	823670	823735	65
667	824126	824191	824256	824321	824386	65
668	824776	824841	824906	824971	825036	65
669	825426	825491	825556	825621	825686	65
670	826075	826140	826204	826269	826334	65
671	826723	826787	826852	826917	826981	65
672	827369	827434	827499	827563	827628	65
673	828015	828080	828144	828209	828273	64
674	828660	828724	828789	828853	828918	64
675	829304	829368	829432	829497	829561	64
676	829947	830011	830075	830139	830204	64
677	830589	830653	830717	830781	830845	64
678	831230	831294	831358	831422	831486	64
679	831870	831934	831998	832062	832126	64
680	832509	832573	832637	832700	832764	64
681	833147	833211	833275	833338	833402	64
682	833784	833848	833912	833975	834039	64
683	834421	834484	834548	834611	834675	64
684	835056	835120	835183	835247	835310	63
685	835691	835754	835817	835881	835944	63
686	836324	836387	836451	836514	836577	63
687	836957	837020	837083	837146	837210	63
688	837588	837652	837715	837778	837841	63
689	838219	838282	838345	838408	838471	63
690	838849	838912	838975	839038	839101	63
691	839478	839541	839604	839667	839729	63
692	840106	840169	840232	840294	840357	63
693	840733	840796	840859	840921	840984	63
694	841359	841422	841485	841547	841610	63
695 696 697 698 699	841985 842609 843233 843855 844477	842047 842672 843295 843918 844539	842110 842734 843357 843980 844601	842172 842796 843420 844042 844664	842235 842859 843482 844104 844726	62 62 62 62 62 62

Log. 845. No. 699.

No.	5	6	7	8	9	Diff.
650 651 652 653 654	813247 813914 814581 815246 815910	813314 813981 814647 815312 815976	813381 814048 814714 815378 816042	813448 814114 814780 815445 816109	813514 814181 814847 815511 816175	67 67 67 66 66 66
655	816573	816639	816705	816771	816838	66
656	817235	817301	817367	817433	817499	66
657	817896	817962	818028	- 818094	818160	66
658	818556	818622	818688	818754	818820	66
659	819215	818281	819346	819412	819478	66
660	819873	819939	820004	820070	820136	66
661	820530	820595	820661	820727	820792	66
662	821186	821251	821317	821382	821448	66
663	821841	821906	821972	822037	822103	65
664	822495	822560	822626	822691	822756	65
665	823148	823213	823279	823344	823409	65
666	823800	823865	823930	823996	824061	65
667	824451	824516	824581	824646	824711	65
668	825101	825166	825231	825296	825361	65
669	825751	825815	825880	825945	826010	65
670	826399	826464	826528	826593	826658	65
671	827046	827111	827175	827240	827305	65
672	827692	827757	827821	827886	827951	65
673	828338	828402	828467	828531	828595	64
674	828982	829046	829111	829175	829239	64
675	829625	829690	829754	829818	829882	64
676	830268	830332	830396	830460	830525	64
677	830909	830973	831037	831102	831166	64
678	831550	831614	831678	831742	831806	64
679	832189	832253	832317	832381	832445	64
680	832828	832892	832956	833020	833083	64
681	833466	833530	833593	833657	833721	64
682	834103	834166	834230	834294	834357	64
683	834739	834802	834866	834929	834993	64
684	835373	835437	835500	835564	835627	63
685 686 687 688 689	836007 836641 837273 837904 838534	836071 836704 837336 837967 838597	836134 836767 837399 838030 838660	836197 836830 837462 838093 838723	836261 836894 837525 838156 838786	63 63 63 63 63 63
690 691 692 693 694	839164 839792 840420 841046 841672	839227 839855 840482 841109 841735	839289 839918 840545 841172 841797	839352 839981 840608 841234 841860	839415 840043 840671 841297 841922	63 63 63 63 63 63
695 696 697 698 699	842297 842921 843544 844166 844788	842360 842983 843606 844229 844850	842422 843046 843669 844291 844912	842484 843108 843731 844353 844974	842547 843170 843793 844415 845036	62 62 62 62 62 62

#### Log. 845. No. 700.

No.	0	1	2	3	4	Diff.
700 701 702 703 704	845098 845718 846337 846955 847573	845160 845780 846399 847017 847634	845222 845842 846461 847079 847696	845284 845904 846523 847141 847758	845346 845966 846585 847202 847819	62 62 62 62 62 62
705	848189	848251	848312	848374	848435	62
700	848805	848866	848928	848989	849051	61
707	849419	849481	849542	849604	849665	61
708	850033	850095	850156	850217	850279	61
709	850646	850707	850769	850830	850891	61
710	851258	851320	851381	851442	851503	61
711	851870	851931	851992	852053	852114	61
712	852480	852541	852602	852663	852724	61
713	853090	853150	853211	853272	853333	61
714	853698	853759	853820	853881	853941	61
715	854306	854367	854428	854488	854549	61
716	854913	854974	855034	855095	855156	61
717	855519	855580	855640	855701	855761	61
718	856124	856185	856245	856306	856366	60
719	856729	856789	856850	856910	856970	60
720	857332	857393	857453	857513	857574	60
721	857935	857995	858056	858116	858176	60
722	858537	858597	858657	858718	858778	60
723	859138	859198	859258	859318	859379	60
724	859739	859799	859859	859318	859978	60
725	860338	860398	860458	860518	860578	60
726	860937	860996	861056	861116	861176	60
727	861534	861594	861654	861714	861773	60
728	862131	862191	862251	862310	862370	60
729	862728	862787	862847	862906	862966	60
730 731 732 733 733 734	863323 863917 864511 865104 865696	863382 863977 864570 865163 865755	863442 864036 864630 865222 865814	863501 864096 864689 865282 865874	863561 864155 864748 865341 865933	59 59 59 59 59 59
735 736 737 738 739	866287 866878 867467 868056 868644	866346 866937 867526 868115 868703	866405 866996 867585 868174 868762	866465 867055 867644 868233 868821	866524 867114 867703 868292 868879	59 59 59 59 59 59
740	869232	869290	869349	869408	869466	59
741	869818	869877	869935	869994	870053	59
742	870404	870462	870521	870579	870638	58
743	870989	871047	871106	871164	871223	58
744	871573	871631	871690	871748	871806	58
745 746 747 748 <b>749</b>	872156 872739 873321 873902 874482	872215 872797 873379 873960 874540	872273 872855 873437 874018 874598	872331 872913 873495 874076 874656	872389 872972 873553 874134 874714	58 58 58 58 58 58

Log. 875. No. 749.

No.	5	6	7	8	9	Diff.
700 701 702 703 704	845408 846028 846646 847264 847881	845470 846090 846708 847326 847943	845532 846151 846770 847388 848004	845594 846213 846832 847449 848066	845656 846275 846894 847511 848128	62 62 62 62 62 62
705	848497	848559	848620	848682	848743	62
706	849112	849174	849235	849297	849358	61
707	849726	849788	849849	849911	849972	61
708	850340	850401	850462	850524	850585	61
709	850952	851014	851075	851136	851197	61
710	851564	851625	851686	851747	851809	61
711	852175	852236	852297	852358	852419	61
712	852785	852846	852907	852968	853029	61
713	853394	853455	853516	853577	853637	61
714	8540 <b>0</b> 2	854063	854124	854185	854245	61
715 716 717 718 719	854610 855216 855822 856427 857031	85467 <b>0</b> 855277 855882 856487 857091	854731 855337 855943 856548 857152	854792 855398 856003 856608 857212	854852 855459 856064 856668 857272	61 61 60 60
720	857634	857694	857755	857815	857875	60
721	858236	858297	858357	858417	858477	60
722	858838	858898	858958	859018	859078	60
723	859439	859499	859559	859619	859679	60
724	860038	860098	860158	860218	860278	60
725 726 727 728 728 729	860637 861236 861833 862430 863025	860697 861295 861893 862489 863085	860757 861355 861952 862549 863144	860817 861415 862012 862608 863204	860877 861475 862072 862668 863263	60 60 60 60 60
730 731 732 733 733 734	863620 864214 864808 865400 865992	863680 864274 864867 865459 866051	863739 864333 864926 865519 866110	863799 864392 864985 865578 866169	863858 864452 865045 865637 866228	59 59 59 59 59 59
735	866583	866642	866701	866760	866819	5 <b>9</b>
73 ⁶	867173	867232	867291	867350	867409	59
737	867762	867821	867880	867939	867998	59
738	868350	868409	868468	868527	868586	59
739	868938	868997	869056	869114	869173	59
740	869525	869584	869642	869701	869760	59
741	870111	870170	870228	870287	870345	59
742	870696	870755	870813	870872	870930	58
743	871281	871339	871398	871456	871515	58
744	871865	871923	871981	872040	872098	58
745	872448	872506	872564	872622	872681	58
746	873030	873088	873146	873204	873262	58
747	873611	873669	873727	873785	873844	58
748	874192	874250	874308	874366	87442 <b>4</b>	58
749	874772	874830	874888	874945	875003	<b>5</b> 8

Log. 875. No. 750.

No.	0	1	2	3	4	Diff.
750 751 752 753 754	87 5061 87 5640 87 62 18 87 67 95 87 67 95	875119- 875698 876276 876853 877429	875177 875756 876333 876910 877487	87 5235 87 58 13 87 63 9 1 87 69 6 8 87 7 5 4 4	875293 875871 876449 877026 877602	58 58 58 58 58 58
755 750 757 758 758 759	877947 878522 879096 879669 880242	878004 878579 879153 879726 880299	878062 878637 879211 879784 880356	878119 878694 879268 879841 880413	878177 878752 879325 879898 880471	57 57 57 57 57 57
760 761 762 763 764	880814 881385 881955 882525 883093	880871 881442 882012 882581 883150	880928 881499 882069 882638 883207	880985 881556 882126 882695 883264	881042 881613 882183 882752 883321	57 57 57 57 57 57
765 766 767 768 769	883661 884229 884795 885361 885926	883718 884285 884852 885418 885983	883775 884342 884909 885474 886039	883832 884399 884965 885531 886096	883888 884455 885022 885587 886152	57 57 57 57 57 56
770 771 772 773 774	886491 887054 887617 888179 888741	886547 887111 887674 888236 888797	886604 887167 887730 888292 888853	886660 887223 887786 888348 8883909	886716 887280 887842 888404 888965	56 56 56 56 56
775 776 777 778 778 779	889302 889862 890421 890980 891537	889358 889918 890477 891035 891593	889414 889974 890533 891091 891649	889470 890030 890589 891147 891705	889526 890086 890645 891203 891760	56 56 56 56 56
780 781 782 783 784	892095 892651 893207 893762 894316	892150 892707 893262 893817 894371	892206 892762 893318 893873 894427	892262 892818 893373 893928 894482	892317 892873 893429 893984 894538	56 56 5 <b>6</b> 55 55
785 786 787 788 788 789	894870 895423 895975 896526 897077	894925 895478 896030 896581 897132	894980 895533 896085 896636 897187	895036 895588 896140 896692 897 <b>2</b> 42	895091 895644 896195 896747 897297	55 55 55 55 55
790 791 792 793 794	897627 898176 898725 899273 899821	897682 898231 898780 899328 899875	897737 898286 898835 899383 899930	897792 898341 898890 899437 899985	897847 898396 898944 899492 900039	55 55 55 55 55
795 796 797 798 798	900367 900913 901458 902003 902547	900422 900968 901513 902057 902601	900476 901022 901567 902112 902655	900531 901077 901622 902166 902710	900586 901131 901676 902221 902764	55 55 54 54 54 54

For explanation see pp. 207-215

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Log. 903. No. 799.

Ņo.	5	6	7	8	9	Diff.
750 751 752 753 754	875351 875929 876507 877083 877659	875409 875987 876564 877141 877717	875466 876045 876622 877199 877774	875524 876102 876680 877256 877832	875582 876160 876737 877314 877889	58 58 58 58 58 58
755 756 757 758 759	878234 878809 879383 879956 880528	878292 878866 879440 880013 880585	878349 878924 879497 880070 880642	878407 878981 879555 880127 880699	878464 879039 879612 880185 880756	57 57 57 57 57 57
760 761 762 763 764	881099 881670 882240 882809 883377	881156 881727 882297 882866 883434	881213 881784 882354 882923 883491	881271 881841 882411 882980 883548	881328 881898 882468 883037 883605	57 57 57 57 57 57
765 766 767 768 769	883945 884512 885078 885644 886209	884002 884569 885135 885700 886265	884059 884625 885192 885757 886321	884115 884682 885248 885813 886378	884172 884739 885305 885870 886434	57 57 57 57 56
770 771 772 773 774	886773 887336 887898 888460 889021	886829 887392 887955 888516 889077	886885 887449 888011 888573 889134	886942 887505 888067 888629 889190	886998 887561 888123 888685 889246	56 56 56 56 56
775 776 777 778 778 779	889582 890141 890700 891259 891816	889638 890197 890756 891314 891872	889694 890253 890812 891370 891928	889750 890309 890868 891426 891983	889806 890365 890924 891482 892039	56 56 56 56 56
780 781 782 783 784	892373 892929 893484 894039 894593	892429 892985 893540 894094 894648	892484 893040 893595 894150 894704	892540 893096 893651 894205 894759	89259 <b>5</b> 893151 893706 894261 894814	56 56 56 55 55
785 786 787 788 788 789	895146 895699 896251 896802 897352	895201 895754 896306 896857 897407	895257 895809 896361 896912 897462	895312 895864 896416 896967 897517	895367 895920 896471 897022 897572	55 55 55 55 55
790 791 792 793 794	897902 898451 898999 899547 900094	897957 898506 899054 899602 900149	898012 898561 899109 899656 900203	898067 898615 899164 899711 900258	898122 898670 899218 899766 900312	55 55 55 55 55
795 796 797 798 799	900640 901186 901731 902275 902818	900695 901240 901785 902329 902873	900749 901295 901840 902384 9029 <b>2</b> 7	900804 901349 901894 902438 902981	900859 901404 901948 902492 903036	55 55 54 54 54 54

#### Log. 903. No. 800.

No.	0	1	2	3	4	Diff.
800 801 802 803 804	903090 903633 904174 904716 905256	903144 903687 904229 904770 905310	903199 903741 904283 904824 905364	903253 903795 904337 904878 905418	903307 903849 904391 904932 905472	54 54 54 54 54 54
805 806 807 808 808 809	905796 906335 906874 907411 907949	905850 906389 906927 907465 908002	905904 906443 906981 907519 908056	905958 906497 907035 907573 908110	906012 906551 907089 907626 908163	54 54 54 54 54 54
810 811 812 813 814	908485 909021 909556 910091 910624	908539 909074 909610 910144 910678	908592 909128 909663 910197 910731	908649 909181 909716 910251 910784	90 <b>8</b> 699 909235 909770 910304 910838	54 54 53 53 53
815 816 817 818 819	911158 911690 912222 912753 913284	911211 911743 912275 912806 913337	911264 911797 912328 912859 913390	911317 911850 912381 912913 913443	911371 911903 912435 912966 913496	53 53 53 53 53 53
820 821 822 823 824	913 <b>8</b> 14 914343 914872 915400 915927	913867 914396 914925 915453 915980	913920 914449 914977 915505 916033	913973 914502 915030 915558 916085	914026 914555 915083 915611 916138	53 53 53 53 53 53
825 826 827 828 829	916454 916980 917506 918030 918555	916507 917033 917558 918083 918607	916559 917085 917611 918135 918659	916612 917138 917663 918188 918712	916664 917190 917716 918240 918764	53 53 52 52 52 52
830 831 832 833 833 834	919078 919601 920123 920645 921166	919130 919653 920176 920697 921218	919183 919706 920228 920749 921270	919235 919758 920280 920801 921322	919287 919810 920332 920853 921374	52 52 52 52 52 52
835 836 837 838 838 839	921686 922206 922725 923244 923762	921738 922258 922777 923296 923814	921790 922310 922829 923348 923865	921842 922362 922881 923399 923917	921894 922414 922933 923451 923969	52 52 52 52 52 52
840 841 842 843 844	924279 924796 925312 925828 926342	924331 924848 925364 925879 926394	924383 924899 925415 925931 926445	924434 924951 925467 925982 926497	924486 925003 925518 926034 926548	52 52 52 51 51
845 846 847 848 849	926857 927370 927883 928396 928908	926908 927422 927935 928447 928959	926959 927473 927986 928498 929010	927011 927524 928037 928549 929061	927062 927576 928088 928601 929112	51 51 51 51 51 51

# Log. 929. No. 849.

No.	5	6	7	8	9	Diff.
800 801 802 803 804	903361 903904 904445 904986 905526	903416 903958 904499 905040 905580	903470 904012 904553 905094 905634	903524 904066 904607 905148 905688	903578 904120 904661 905202 905742	54 54 54 54 54
805 806 807 808 809	906066 906604 907143 907680 908217	906119 906658 907196 907734 908270	906173 906712 907250 907787 908324	906227 906766 907304 907841 908378	906281 906820 907358 907895 908431	54 54 54 54 54
810 811 812 813 814	908753 909289 909823 910358 9108 <b>91</b>	908807 909342 909877 910411 910944	908860 909396 909930 910464 910998	908914 909449 909984 910518 911051	908967 909503 910037 910571 911104	54 54 53 53 53
815 816 817 818 819	91 1424 91 1956 91 2488 91 301 9 91 3549	91 1477 91 2009 91 2541 91 3072 91 3602	911530 912063 912594 913125 913655	911584 912116 912647 913178 913708	911637 912169 912700 913231 913761	53 53 53 53 53 53
820 821 822 823 823 824	914079 914608 915136 915664 916191	914132 914660 915189 915716 916243	914184 914713 915241 915769 916296	914237 914766 915294 915822 916349	914290 914819 915347 915875 916401	53 53 53 53 53 53
825 826 827 828 829	916717 917243 917768 918293 918816	916770 917295 917820 918345 918869	916822 917348 917873 918397 918397 918921	916875 917400 917925 918450 918973	916927 917453 917978 918502 919026	53 53 52 52 52 52
830 831 832 833 833 834	919340 919862 920384 920906 921426	919392 919914 920436 920958 921478	919444 919967 920489 921010 921530	919496 920019 920541 921062 921582	919549 920071 920593 921114 921634	52 52 52 52 52 52
835 836 837 838 838 839	921946 922466 922985 923503 924021	921998 922518 923037 923555 924072	922050 922570 923089 923607 924124	922102 922622 923140 923658 924176	922154 922674 923192 923710 924228	52 52 52 52 52 52
840 841 842 843 844	924538 925054 925570 926085 926600	924589 925106 925621 926137 926651	924641 925157 925673 926188 926702	924693 925209 925725 926240 926754	924744 925261 925776 926291 926805	52 52 52 51 51
845 846 847 848 849	927114 927627 928140 928652 929163	927165 927678 928191 928703 929215	92 <b>72</b> 16 92773 <b>0</b> 928242 928754 9 <b>2</b> 9266	927268 927781 928293 928805 929317	927319 927832 928345 928857 929368	51 51 51 51 51

#### Log. 929. No. 850.

No.	0	1	2	3	<b>4</b> ·	Diff.
850 851 852 853 853	929419 929930 930440 930949 931458	929470 929981 930491 931000 931509	929521 930032 930542 931051 931560	929572 930083 930592 931102 931610	929623 930134 930643 931153 931661	51 51 51 51 51 51
855 856 857 858 858 859	931966 932474 932981 933487 933993	932017 932524 933031 933538 934044	932068 932575 933082 933589 934094	932118 932626 933133 933639 934145	932169 932677 933183 933690 934195	51 51 51 51 51 51
860 861 862 863 864	934498 935003 935507 936011 936514	934549 935054 935558 936061 936564	934599 935104 935608 936111 936614	934650 935154 935658 936162 936665	934700 935205 935709 936212 936715	50 50 50 50 50
865 866 867 868 869	937016 937518 938019 938520 939020	937066 937568 938069 938570 939070	937117 937618 938119 938620 939120	937167 937668 938169 938670 939170	937217 937718 938219 938720 939220	50 50 50 50 50
870 871 872 873 874	939519 940018 940516 941014 941511	939569 940068 940566 941064 941561	939619 940118 940616 941114 941611	939669 940168 940666 941163 941660	939719 940218 940716 941213 941710	50 50 50 50 50
875 876 877 878 878 879	942008 942504 943000 943495 943989	942058 942554 943049 943544 944038	942107 942603 943099 943593 944088	942157 942653 943148 943643 944137	942207 942702 943198 943692 944186	50 50 49 49 49
880 881 882 883 883 884	944483 944976 945469 945961 946452	944532 945025 945518 946010 946501	944581 945074 945567 946059 946551	944631 945124 945616 946108 946600	944680 945173 945665 946157 946649	49 49 49 49 49 49
885 886 887 888 888 889	946943 947434 947924 948413 948902	946992 947483 947973 948462 948951	947041 947532 948022 948511 948999	947090 947581 948070 948560 949048	947140 947630 948119 948609 949097	49 49 49 49 49
890 891 892 893 894	949390 949878 950365 950851 951338	949439 949926 950414 950900 951386	949488 949975 950462 950949 951435	949536 950024 950511 950997 951483	949585 950073 950560 951046 951532	49 49 49 49 49
895 896 897 898 899	951823 952308 952792 953276 953760	951872 952356 952841 953325 953808	951920 952405 952889 953373 953856	951969 952453 952938 953421 953905	952017 952502 952986 953470 953953	48 48 48 48 48 48

For explanation see pp. 207-215 (260)

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Log. 954. No. 899

No.	5	6	7	8	9	Diff.
850 851 852 853 853	929674 930185 930694 931204 931712	929725 930236 930745 931254 931763	929776 930287 930796 931305 931814	929827 930338 930847 931356 931865	929879 930389 930898 931407 931915	51 51 51 51 51 51
855 856 857 858 858 859	932220 932727 933234 933740 934246	932271 932778 933285 933791 934296	932322 932829 933335 933841 934347	932372 932879 933386 933892 934397	932423 932930 933437 933943 934448	51 51 51 51 51 51
860 861 862 863 864	934751 935255 935759 936262 936765	934801 935306 935809 936313 936815	934852 935356 935860 936363 936865	934902 935406 935910 936413 936916	934953 935457 935960 936463 936966	50 50 50 50 50
865 866 867 868 869	937267 937769 938269 938770 939270	937317 937819 938320 938820 939320	937367 937869 938370 938870 939369	937418 937919 938420 938920 939419	93746 <b>8</b> 937969 938470 938970 939469	50 50 50 50 50
870 871 872 873 874	939769 940267 940765 941263 941760	939819 940317 940815 941313 941809	939869 940367 940865 941362 941859	939918 940417 940915 941412 941909	939968 940467 940964 941462 941958	50 50 50 50 50
875 876 877 878 878 879	942256 942752 943247 943742 944236	942306 942801 943297 943791 944285	942355 942851 943346 943841 944335	942405 942901 943396 943890 944384	9424 <b>55</b> 942950 943445 943939 944433	50 50 49 49 49
880 881 882 883 883 884	944729 945222 945715 946207 946698	944779 945272 945764 946256 946747	944828 945321 945813 946305 946796	944877 945370 945862 946354 946845	944927 945419 945912 946403 946894	49 49 49 49 49 49
885 886 887 888 888 889	947189 947679 948168 948657 949146	947238 947728 948217 948706 949195	947287 947777 948266 948755 949244	947336 947826 948315 948804 949292	947385 947875 948364 948853 949341	49 49 49 49 49 49
890 891 892 893 894	949634 950121 950608 951095 951580	949683 950170 950657 951143 951629	949731 950219 950706 951192 951677	949780 950267 950754 951240 951726	949829 950316 950803 951289 951775	49 49 49 49 49 49
895 896 897 898 8 <b>99</b>	952066 952550 953034 953518 954001	952114 952599 953083 953566 954049	952163 952647 953131 953615 954098	952211 952696 953180 953663 954146	952260 952744 953228 953711 954194	48 48 48 48 48 48

Log. 954. No. 900.

No.	0	1	2	3	4	Diff.
900	954243	954291	954339	954387	954435	48
901	954725	954773	954821	954869	954918	48
902	955207	955255	955303	955351	955399	48
903	955688	955736	955784	955832	955880	48
904	956168	956216	956265	956313	956361	48
905 906 907 908 909	956649 957128 957607 958086 958564	956697 957176 957655 958134 958612	956745 957224 957703 958181 958659	956793 957272 957751 958229 958707	956840 957320 957799 958277 95 ⁸ 755	48 48 48 48 48 48
910 911 912 913 914	959041 959518 959995 960471 960946	959089 959566 960042 960518 960994	959137 959614 960090 960566 961041	959185 959661 960138 960613 961089	959232 959709 960185 960661 961136	48 48 48 48 48 47
915 916 917 918 919	961421 961895 962369 962843 963316	961469 961943 962417 962890 963363	961516 961990 962464 962937 963410	961563 962038 962511 96298 <b>5</b> 963457	961611 962085 962559 963032 963504	47 47 47 47 47 47
920	963788	963835	963882	963929	963977	47
921	964260	964307	964354	96440 <b>1</b>	964448	47
922	964731	964778	964825	964872	964919	47
923	965202	965249	965296	965343	965390	47
924	965672	965 <b>7</b> 19	965766	965813	965860	47
925 926 927 928 929	966142 966611 967080 967548 968016	966189 966658 967127 967595 968062	966236 966705 967173 967642 968109	966283 966752 967220 967688 968156	966329 966799 967267 967735 968203	47 47 47 47 47 47
930	968483	968530	968576	968623	968670	47
931	968950	968996	969043	969090	969136	47
932	969416	969463	969509	969556	969602	47
933	969882	969928	969975	970021	970068	47
934	970347	970393	970440	970486	970533	46
935	970812	970858	970904	9709 <b>51</b>	970997	46
936	971276	971322	971369	97141 <b>5</b>	971461	46
937	971740	971786	971832	971879	971925	46
938	972203	972249	972295	972342	972388	46
939	972666	972712	972758	972804	972851	46
940	973128	973174	973220	973266	973313	46
941	973590	973636	973682	973728	973774	46
942	974051	974097	974143	974189	974235	46
943	974512	974558	974604	974650	974696	46
944	974972	975018	975064	975110	975156	46
945	975432	975478	975524	975570	975616	46
946	975891	975937	975983	976029	976075	46
947	976350	976396	976442	976488	976533	46
948	976808	976854	976900	976946	976992	46
949	977266	977312	977358	977403	977449	46

Log. 977. No. 949.

No.	5	6	7	8	9	Diff.
900	954484	954532	954580	954628	954677	48
901	954966	955014	955062	955110	955158	48
902	955447	955495	955543	955592	955640	48
903	955928	955976	956024	956072	956120	48
904	956409	956457	956505	956553	956601	48
905	956888	956936	956984	957032	957080	48
906	957368	957416	957464	957512	957559	48
907	957847	957894	957942	957990	958038	48
908	95832 <b>5</b>	958373	958421	958468	958516	48
909	958803	958850	958898	958946	958994	48
910	959280	959328	959375	959423	959471	48
911	959757	959804	959852	959900	959947	48
912	960233	960280	960328	960376	960423	48
913	960709	960756	960804	960851	960899	48
914	961184	961231	961279	961326	961374	48
915 916 917 918 919	961658 962132 962606 963079 963552	961706 962180 962653 963126 963599	961753 962227 962701 963174 963646	961801 962275 962748 963221 963693	961848 962322 962795 963268 963741	47 47 47 47 47 4 <b>7</b>
920 921 922 923 924	964024 964495 964966 965437 965907	964071 964542 965013 965484 965954	964118 964590 965061 965531 966001	964165 964637 965108 965578 966048	964212 964684 965155 965625 966095	47 47 47 47 47 47
925 926 927 928 929	966376 966845 967314 967782 968249	966423 966892 967361 967829 968296	966470 966939 967408 967875 968343	966517 966986 967454 967922 968390	966564 967033 967501 967969 968436	47 47 47 47 47 47
930	968716	968763	968810	968856	968903	47
931	969183	969229	969276	969323	969369	47
932	969649	969695	969742	969789	969835	47
933	970114	970161	970207	970254	970300	47
934	970579	970626	970672	970719	970765	46
935	971044	971090	971137	971183	971229	46
936	971508	971554	971601	971647	971693	46
937	971971	972018	972064	972110	972157	46
938	972434	972481	972527	972573	972619	46
939	972897	972943	972989	973035	973082	46
940	973359	973405	973451	973497	973543	46
941	973820	973866	973913	973959	974005	46
942	974281	974327	974374	974420	974466	46
943	974742	974788	974834	974880	974926	46
944	975202	975248	975294	975340	975386	46
945	975662	975707	975753	975799	975845	46
946	976121	976167	976212	976258	976304	46
947	976579	976625	976671	976717	976763	46
948	977037	977083	977129	977175	977220	46
949	977495	977541	977586	977632	977678	46

#### Log. 977. No. 950.

No.	0	1	2	3	4	Diff,
950	977724	977769	977815	977861	977906	46
951	978181	978226	978272	978317	978363	46
952	978637	978683	978728	978774	978819	46
953	979093	979138	979184	979230	979275	46
954	979548	979594	979639	979685	979730	46
955	980003	980049	980094	980140	980185	45
956	980458	980503	980549	980594	980640	45
957	980912	980957	981003	981048	981093	45
958	981366	981411	981456	981501	981547	45
959	981819	981864	981909	981954	982000	45
960	982271	982316	982362	982407	982452	45
961	982723	982769	982814	982859	982904	45
962	983175	983220	983265	983310	983356	45
963	983626	983671	983716	983762	983807	45
964	984077	984122	984167	984212	984257	45
965	984527	984572	984617	984662	984707	45
966	984977	985022	985067	985112	985157	45
967	985426	985471	985516	985561	985606	45
968	985875	985920	985965	986010	986055	45
969	986324	986369	986413	986458	986503	45
970	986772	986817	986861	986906	986951	45
971	987219	987264	987309	987353	987398	45
972	987666	987711	987756	987800	987845	45
973	988113	988157	988202	988247	988291	45
974	988559	988604	988648	988693	988737	45
975	98900 <b>5</b>	989049	989094	989138	989183	45
976	989450	989494	989539	989583	989628	44
977	98989 <b>5</b>	989939	989983	990028	990072	44
978	990339	990383	990428	990472	990516	44
979	990783	990827	990871	990916	990960	44
980	991226	991270	991315	991359	991403	44
981	991669	991713	991758	991802	991846	44
982	992111	992156	992200	992244	992288	44
983	992554	992598	992642	992686	992730	44
984	992995	993039	993083	993127	993172	44
985	993436	993480	993524	993568	993613	44
986	993877	993921	993965	994009	994053	44
987	994317	994361	994405	994449	994493	44
988	994757	994801	994845	994889	994933	44
989	995196	995240	995284	995328	995372	44
990	995635	995679	995723	995767	995811	44
991	996074	996117	996161	996205	996249	44
992	996512	996555	996599	996643	996687	44
993	996949	996993	997037	997080	997124	44
994	997386	997430	997474	997517	997561	44
995	997823	997867	997910	997954	997998	44
996	998259	998303	998347	998390	998434	44
997	998695	998739	998782	998826	998869	44
998	999131	999174	999218	999261	999305	44
999	999565	999609	999652	999696	999739	43

Log. 999. No. 999.

No.	5	6	7	8	9	Diff.
950	977952	977998	978043	978089	978135	46
951	978409	978454	978500	978546	978591	46
952	978865	978911	978956	979002	979047	46
953	979321	979366	979412	979457	979503	46
954	979776	979821	979867	979912	979958	<b>4</b> 6
955	980231	980276	980322	980367	980412	45
956	980685	980730	980776	980821	980867	45
957	981139	981184	981229	981275	981320	45
958	981592	981637	981683	981728	981773	45
959	982045	982090	982135	982181	982226	45
9 <b>60</b>	982497	982543	982588	982633	982678	45
961	982949	982994	983040	983085	983130	45
962	983401	983446	983491	983536	983581	45
963	983852	983897	983942	983987	984032	45
964	984302	984347	984392	984437	984482	45
965	984752	984797	984842	984887	984932	45
966	985202	985247	985292	985337	985382	45
967	985651	985696	985741	985786	985830	45
968	986100	986144	986189	986234	986279	45
969	986548	986593	986637	986682	986727	45
970	986996	987040	987085	987130	987175	45
971	987443	987488	987532	987577	987622	45
972	987890	987934	987979	988024	988068	45
973	988336	988381	988425	988470	988514	45
974	988782	988826	988871	988916	988960	45
975	989227	989272	989316	989361	989405	45
976	989672	989717	989761	989806	989850	44
977	990117	990161	990206	990250	990294	44
978	990561	990605	990650	990694	990738	44
979	991004	991049	991093	991137	991182	44
980	991448	991492	991 536	991 580	991625	44
981	991890	991935	991979	992023	992067	44
982	992333	992377	992421	992465	992509	44
983	992774	992819	992863	992907	992951	44
984	993216	993260	993304	993348	993392	44
985 986 987 988 988 989	993657 994097 994537 994977 995416	993701 994141 994581 995021 995460	993745 994185 994625 995065 995504	993789 994229 994669 995108 995547	993 ⁸ 33 994273 994713 995152 995591	44 44 44 44 44
990	995854	995898	995942	995986	996030	44
991	996293	996337	996380	996424	996468	44
992	996731	996774	996818	996862	996906	44
993	997168	997212	997255	997299	997343	44
994	997605	997648	997692	997736	997779	44
995	998041	998085	998129	998172	998216	44
996	998477	998521	998564	998608	998652	44
997	998913	998956	999000	999043	999087	44
998	999348	999392	999435	999479	999522	44
999	999783	999826	999870	999913	999957	43

#### LOGARITHMS OF NUMBERS

No.	Log.	No.	Log.	No.	Log.	No.	Log.
1	000000	51	707570	101	004321	151	178977
2	301030	52	716003	102	008600	152	181844
3	477121	53	724276	103	012837	153	184691
4	602060	54	732394	104	017033	154	187521
5	698970	55	740363	105	021189	155	190332
6	778151	56	748188	106	025306	156	193125
7	845098	57	755875	107	029384	157	195900
8	903090	58	763428	108	033424	158	198657
9	954243	59	770852	109	037426	159	201397
10	000000	60	778151	110	041393	160	204120
11	041393	61	785330	111	045323	161	206826
12	079181	62	792392	112	049218	162	209515
13	113943	63	799341	113	053078	163	212188
14	146128	64	806180	114	056905	164	214844
15	176091	65	812913	115	060698	165	217484
16	204120	66	819544	116	064458	166	220108
17	230449	67	826075	117	068186	167	222716
18	255273	68	832509	118	071882	168	225309
19	278754	69	838849	119	075547	169	227887
20	301030	70	845098	120	079181	170	230449
21	322219	71	851258	121	082785	171	232996
22	342423	72	857333	122	086360	172	235528
23	361728	73	863323	123	08990 <b>5</b>	173	238046
24	380211	74	869232	124	093422	174	240549
25	397940	75	875061	125	096910	175	243038
26	414973	76	880814	126	100371	176	245513
27	431364	77	886491	127	103804	177	247973
28	447158	78	892095	128	107210	178	250420
29	462398	79	897627	129	110590	179	252853
30	477121	80	903090	130	113943	180	255273
31	491362	81	908485	131	117271	181	257679
32	505150	82	913814	132	120574	182	260071
33	518514	83	919078	133	123852	183	262451
34	531479	84	924279	134	127105	184	264818
35	544068	85	929419	135	130334	185	267172
36	556303	86	934498	136	133539	186	269513
37	568202	87	939519	137	136721	187	271842
38	579784	88	944483	138	139879	188	274158
39	591065	89	949390	139	143015	189	276462
40	602060	90	954243	140	146128	190	278754
41	612784	91	959041	141	149219	191	281033
42	623249	92	963788	142	152288	192	283301
43	633468	93	968483	143	155336	193	285557
44	643453	94	973128	144	158362	194	287802
45	653213	95	977724	145	161368	195	290035
46	662758	96	982271	146	164353	196	292256
47	672098	97	986772	147	167317	197	294466
48	681241	98	991226	148	170262	198	296665
49	690196	99	995635	149	173186	199	298853
50	698970	100	000000	150	176091	200	3010 <b>30</b>

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#### LOGARITHMIC TABLES

#### OF

#### COMPOUND INTEREST AND ANNUITIES

BY

FÉDOR THOMAN

#### TABLE I.

SHOWING

(A) The Logarithms of the Amount of  $\pounds$ I at the end of any number of years from 1 to 100 years.

 $\operatorname{Log} r^{n}$ .

(B) The Logarithms of the Annuity  $\pounds a$  per annum which  $\pounds_1$  will purchase for any number of years from 1 to 100 years.

 $\text{Log } a^n$ .

In the notation used in the explanation on pages 216-228, the symbol  $(1+i)^n$  is employed instead of M. Thoman's symbol  $r^n$ , and  $\frac{1}{a_{m1}}$  instead of his symbol  $a^n$ .

For explanation see pp. 216-228

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Table 1. Shev	ving: 1st Logarithm	
of the amount	of $\pounds 1$ . at the end of	
any number of	f years.	

 $\frac{1}{2}$   $\mathcal{L}^{2nd}_{\mathcal{L}a.}$ 

2nd the Logarithm of the annuity  $\pounds a$ , per annum which  $\pounds 1$ , will purchase for any number of years.

Years	Log. r*.	Log. a".	Log. a ⁿ .	Log. r [*] .	Years
I	0.00216.61	0.00216.61	8.34757.77	0.11046'01	51
2	0.00433.21	0.70221 77	8.34018.12	0.11203.52	52
2	0.00640.82	0.52720*73	8.33204.45	0.11480'12	52
4	0.00866.42	0.40334.84	8.32586.16	0.11606 73	5.1
- 21	0.01083.03	0.30751.74	8.31802.67	0.11013.31	1 22
- 6	0.01200.64	0.22041.42	8.31212.45	0.12120.05	55
7	0.01516.24	0.16354.47	8.30547.00	0.12246.55	57
	0.01732.85	0.10662.00	8.20805-81	0.12562.16	1 28
ŏ	0.01040.46	0.05655.18	8.20256.45	0.12770.76	1 50
iói	0,02166.00	9,01186-88	8,28629.48	0,12996.37	60
п	0,02382-67	8,97154.97	8,28014.49	0,13212.98	61
12	0,02599.27	8,93483.38	8,27411.08	0,13429.58	62
13	0,02815.88	8,90114.35	8,20818.87	0,13646.10	63
14	0,03032.49	8,87002.97	8,26237.52	0,13862.80	64
15	0,03249.09	8,84113.04	8,25666.70	0,14079.40	65
16	0,03465.70	8,81417.67	8,25100.05	0,14296.01	60
17	0,03082.30	8,78891.01	8,24555.30	0,14512.01	07
18	0,03898.91	8,76515.97	8,24014.12	0,14729.22	68
19	0,04115.52	8,74274.50	8,23482.25	0,14945.83	69
20	0,04332-12	8,72153.41	8,22959.42	0,15162.43	70
21	<b>0,045</b> 48•73	8,70140.94	8,22445.35	0,15379.04	71
22	0,04765.34	8,68226.97	8,21939.82	0,15595.64	72
23	0,04981.94	8,66402.73	8,21442.58	0,15812.25	1 73
24	0,05198.55	8,64660.57	8,20953.39	0,16028.86	74
25	0,05415115	8,62993 79	8,20472.05	0,10245.46	75
26	0,05631.76	8,61396.47	8,19998.33	0,16462.07	76
27	0,05848.37	8,59863.34	8,19532.05	0,16678.68	77
28	0,06064.97	8,58389.75	8,19073.01	0,16895.28	78
29	0,06281.58	8,56971.49	8,18021.02	0,17111.89	1 79
30	0,06498.19	8,55604.81	8,18175.89	0,17328.49	80
31	0,06714.79	8,54286.33	8,17737.40	0,17545.10	81
32	0,00931.40	8,53012.90	8,17305.50	0,17761.71	82
33	0,07148.00	8,51781.95	8,16880.04	0,17978•31	83
34	0,07364.61	8,50590.74	8,16460.73	0,18194.92	84
35	0,07581.22	8,49437.03	8,10047.48	0,18411.52	85
- 36	0, <b>0</b> 7797 [.] 82	8,48318.09	8,15040.10	0,18628.13	80
37	0,08014.43	8,47233.78	8,15238.01	0,18844.74	l 87
38	0,08231.03	8,40180*52	8,14842.72	0,19001.34	88
- 39	0,08447.64	8,45157.20	8,14452.35	0,19277*95	89
40	0,08664.25	8,44102.47	8,14007.37	0,19494.50	90
-41	0,08880.85	8,43194.75	8,13687.67	0,1971116	9I
42	0,09097.46	8,42252.77	8,13313.12	0,19927.77	92
43	0,09314.07	8,41335.33	8,12943.01	0,20144.37	93
44	0,09530.67	8,40441.31	8,12579.04	0,20300.98	94
45	0,09747.28	8,39509.02	8,12219.29	0,20577.59	95
46	0,09963.88	8,38719.30	8,11804.27	0,20794.19	90
47	0,10180.49	8,37889.42	8,11513.86	0,21010.80	1 97
48	0,10397.10	8,37079.11	8,11107.99	0,21227.41	98
49	0,10013.70	8,30287.57	8,10820.55	0,21444.01	99
50	0,10830.31	8,35514 <b>°0</b> 3	0,10489.45	0,21000.02	100
+			7,09897.00		Ir.erb

For explanation see pp. 216-228

(269)

1 Per Cent.

Years	Log. r.	Log. a ⁿ .	Log. an.	Log. r.	Years
I	0,00432.14	0,00432.14	8,40013.73	0,22039.01	51
2	0,00864.27	9,70544.67	8,39368.10	0,22471.14	52
3	0,01296.41	9,53150.71	8,38738.20	0,22903.28	53
4	0,01728.55	9,40871.66	8,38123.39	0,23335.42	54
5	0,02160.69	9,31395.11	8,37523.13	0,23767.56	55
- 0	0,02592.82	9,23691.09	8,36936.88	0,24199.69	56
7	0,03024.96	9,17210.14	8,36364 13	0,24631.83	57
8	0,03457.10	9,11624-34	8,35804.40	0,25063.07	58
9	0,03889.24	9,06722.10	8,35257.23	0,25490.11	59
10	0,04321.37	9,02359.02	8,34722.17	0,25928.24	66
11	0,04753.51	8,98432.06	8,34198.82	0,26360.38	61
12	0,05185.65	8,94865.15	8,33686.80	0,26792.52	62
13	0,05617.79	8,91600.53	8,33185.73	0,27224 65	63
14	0,06049.92	8,88593.30	8,32695.27	0,27(156.70	64
15	0,06482.06	8,85807.85	8,32215.04	0,28088.03	65
16	0,06914.20	8,83215.49	8,31744.74	0,28521.07	66
17	0,07346.34	8,80792.76	8,31284.06	0.28053.20	67
18	0,07778.47	8,78520.21	8,30832.70	0.20385.34	68
19	0,08210.61	8,76381.54	8,30300.41	0,20817.48	60
20	0,08642.75	8,74362.98	8,29956.87	0,30249.62	70
21	0,09074.88	8,72452.77	8,29531.85	0.30681.75	71
22	0,09507.02	8,70640.81	8,20115.10	0.31113.80	72
23	0,09939.16	8,68918.31	8,28706.38	0.31540.03	73
24	0,10371.30	8,67277.62	8,28305.45	0.31078.17	74
25	0,10803.43	8.65712.04	8.27012.12	0.32410.30	75
26	0,11235.57	8,64215.65	8.27526.16	0.32842.44	56
27	0,11667.71	8.62783.20	8.27147.36	0.33274.58	77
28	0,12000.85	8.61410.00	8.26775.54	0.33706.72	1 78
20	0.12531.08	8.60001.87	8.26410 51	0.24128.8	170
30	0,12964.12	8,58825.06	8,26052.10	0,34570.00	80
23	0,13396.26	8,57606.17	8.25700-14	0.35003.12	81
3-1	0,13828.40	8.56432.14	8.25354.42	0.35425.27	82
33	0,14260 53	8.55300.10	8.25014.80	0.25867.40	82
34	0,14602.67	8.54207.78	8.24681.18	0.26200.54	84
35	0,15124.81	8.53152.50	8.24353.36	0.36731.68	85
36	0.15556.05	8.52132.52	8.24031.21	0.27162.81	86
37	0.15080.08	8.51145.62	8.23714.56	0 27505.05	87
38	0.16421.22	8.50100.10	8.23403.34	0.28028.00	88
30	0.16853.36	8.40264.30	8.22007-20	0,30020 00	80
40	0,17285.50	8,48366.72	8,22796.52	0.38802.36	00
41	0.17717.62	8 47405.02	8 22500:72	0.2022/170	á
42	0.181/0.77	8 46650'62	8 22200-81	0,39324 50	91
43	0.18:81.01	8 45820.50	8 21022.69	0,39/50.04	94
44	0.10014.04	8 45021.20	8 216/2/20	0,40100.78	93
45	0.10446.18	8 44255 80	8 21 26 5.25	0,40020 91	1 22
72	0.10878.22	8 42501.17	8 21 202 35	0,41053.05	122
47	0.20210.46	8 42766.62	8 2082 482	0,41405.19	90
18	0 207 12:50	8 42051-42	8 20161120	0,41917-33	197
10	0 21174- 39	8 41254.60	8 20201 12	0,42349-40	90
20	0.21606.87	8 40675.60	8 200 16:01	0,42701.00	1.99
	-,	0,400/500	0,20040.04	0.432 2.74	11(3()

COMPOUND INTEREST AND ANNUITIES

Years	Log. r ⁿ .	Log. a.	Log. a".	Log. r.	Years
1	0,00646.60	0,00646.60	8,45016.73	0,32976.82	51
2	0,01293.21	9,70865.71	8,44455.80	0,33623.42	52
3	0,01939.81	9,53577.87	8,43910.15	0,34270.02	53
4	0,02586.42	9,41404.49	8,43379.10	0,34916.63	54
5	0,03233.02	9,32033.19	8,42862.34	0,35563.23	55
6	0,03879.63	9,24433.95	8,42359.09	0,36209-84	56
7	0,04526.23	9,18057.36	8,41868.00	0.36856.44	57
8	0,05172.83	9,12575.45	8,41301.32	0.37503.04	58
9	0,05819.44	9,07776.69	8.40025.87	0.38140.65	59
10	0,06466.04	9,03516 62	8,40472.13	0,38796.25	66
11	0,07112.65	8,99692.23	8.40020.60	0.30442.86	61
12	0,07759.25	8,96227.45	8,30508.15	0.40080.46	62
13	0,08405.85	8,03064.52	8.30177.13	0.40730.07	63
14	0.00052.46	8.00158.54	8.38766.27	0.41282.67	64
15	0,00600.06	8.87473.80	8.38365.27	0.42020.27	65
١Ğ	0,10345.67	8.84081.00	8.37073.78	0.42675.88	66
17	0.10002.27	8.82650.08	8.37501.50	0 42222:48	67
18	0.11638.88	8.80486.00	8 27218.12	0,43060.00	68
10	0.13285.48	8.78446.37	8.26852.40	0,4590909	60
20	0,12932.08	8,76526.42	8,36407 01	0.45262.30	70
21	0.13578.60	8.74714.27	8 261 48.74	0.45008:00	71
22	0.14225'20	8,73000'10	8 25808-22	0,45900 90	72
23	0.14871.00	8.71274.88	8 25475.52	0,40555 50	172
24	0.15518.50	8 60822.02	8 2515012	0,47848.77	13
25	0.1616:11	8 68 61 84	8 24821.80	0,4/040 /1	14
26	0.16811.71	8 66061.41	8 24520.62	0,40495 32	12
27	0 17458.21	8 6 6 2 4 4 6	8 24216-12	0,49141 92	77
28	0,18104.02	8 64246-22	8 22018:21	0,49700 52	1.8
20	0 18751-52	8 62122 84	8 22626.68	0,5043513	170
30	0,10308.13	8.61050.22	8.33341.34	0.51728.34	80
21	0.20044:72	8 60825-10	8 22062:07	0 52274:04	81
22	0,20001.24	8 50744:40	8 22588.65	0,52374 94	81
22	0,21227:04	8 58 50 5 12 2	8 22700 05	0,53021 55	02
33	0,21337.94	8 50705 33	8 222 8.8	0,53000 15	33
24	0.22621.15	8 567 49 20	8 2202200	0,54314 /5	8
22	0,22031 15	8 50742 20	8 327002 07	0,54901 30	82
27	0,23277 75	8 5 10 1 5 10 5	8 31750 01	0,55007 90	87
28	0,23924 30	8,54917.95	8 31504 20	0,50254 57	88
30	0,245/0 90	0,54053.14	8 31202.90	0,50901-17	80
39	0,25217.50	8 53217 02	8,31020-49	0,57547.78	00
1.	0,23004 17	0,5240907	0,50/94/9	0,50194 50	90
41	0,20510.77	8,51028.49	8,30507.71	0,58840'98	91
42	0,27157.38	8,50872.18	0,30345.14	0,59487*59	92
43	0,27803.98	8,50139.08	8,30120.97	0,00134 19	93
44	0,28450.59	8,49429.90	8,29913.08	0,00780.80	94
45	0,29097.19	8,48741.78	8,29703.39	0,01427.40	95
40	0,29743.79	8,48074 32	0,29497.78	0,02074.01	90
47	0,30390'40	8,47420.01	8,29296.14	0,62720.61	97
48	0,31037.00	8,40797.79	8,29098.41	0,63367.21	98
49	0,31683.61	8,46187.03	8,28904.46	0,64013.82	99
50	0,32330.21	8,45593.57	8,28714.24	0,64660.41	100
			8 17600-12		Perp.

 $1rac{1}{2}$  Per Cent.

(271)

Years	Log. <del>.</del>	Log. a ⁿ .	Log. a ⁿ .	Log. r.	Years
1	0,00700.06	0,00700.06	8,46228.76	0,35702.85	51
2	0,01400.11	9,70945.67	8,45687.59	0,36402.90	52
3	0,02100.17	9,53684.22	8,45161.58	0,37102.96	53
4	0,02800-22	9,41537.09	8,44650.12	0,37803.02	54
5	0,03500.28	9,32191.89	8,44152.64	0,38503.07	55
6	0,04200.34	9,24618.62	8,43668.64	0,39203.13	56
7	0,04900.39	9,18267.86	8,43197.57	0,39903.18	57
8	0,05600.45	9,12811.63	8,42738.97	0,40603.24	58
9	0,06300.50	9,08038.42	8,42292.39	0,41303.30	59
10	0,07000.56	9,03803.76	8,41857.38	0,42003.35	60
п	0,07700.61	9,00004.66	8,41433.55	0,42703.41	61
12	0,08400.67	8,96565.02	8,41020.47	0,43403*46	62
13	0,6)100.73	8,93427.09	8,40617.81	0,44103.52	63
14	<b>0,09800</b> .78	8,90545.97	8,40225.20	0,44803.58	64
15	0,10500.84	8,87886.05	8,39842.30	0,45503.63	65
10	0,11200.89	8,85418.64	8,39468.79	0,46203.69	66
17	0,11900.95	8,83120.29	8,39104.37	0,46903.74	67
18	0,12601.01	8,80971.52	8,38748.73	0,47603.80	68
- 19	0,13301.06	8,78956.07	8,38401.59	0,48303*85	69
20	0,14001*12	8,77060-16	8,38062.69	0,49003.91	7 <b></b> ?
21	0,14701-17	8,75272.00	8,37731.79	0,49703.97	71
22	0,15401.23	8,73581.51	8,37408.61	0,50404.02	72
23	0,16101.28	8,71979.91	8,37092.93	0,51104.08	73
24	0,16801.34	8,70459.55	8,36784.51	0,51804.13	74
25	0,17501-40	8,69013.73	8,36483 15	0,52504.19	75
20	0,18201.45	8,67636.51	8,30188.64	0,53204.25	70
27	0,18901.21	8,66322.65	8,35900.78	0,53904.30	77
28	0,19601.56	8,65067.47	8,35019.30	0,54604.36	78
29	0,20301.62	8,63866.80	8,35344.23	0,55304.41	79
30	0,21001.68	8,62716-86	8,35075.18	0,56004-47	80
31	0,21701.73	8,61614.29	8,34812.05	0,56704.52	81
32	0,22401.79	8,60555.99	8,34554.67	0,57404.58	82
33	0,23101.84	8,59539.20	8,34302.89	0,58104.64	83
34	0,23801.90	8,58561.38	8,34056.55	0,58804.69	84
35	0,24501.96	8,57620.21	8,33815.50	0,59504° <u>7</u> 5	85
- 36	0,25202.01	8,56713.59	8,33579.60	0,60204.80	86
37	0,25902.07	8,55839.57	8,33348.74	0,60904.86	87
-38	0,26602.12	8,54996.37	8,33122.74	0,61604.92	88
39	0,27302.18	8,54182.32	8,32901.50	0,62304.97	89
40	0,28002.23	8,53395.91	8,32648.89	0,63005.03	90
40	0,28702.29	8,52635.74	8,32472.80	0,63705.08	91
42	0,29402.35	8,51900'48	8,32265.12	0,64405.14	92
43	0,30102.40	8,51188.94	8,32001.72	0,65105.10	93
44	0,30802.46	8,50499.97	8,31862.48	0,65805-25	94
45	0,31502.51	8,49832.51	8,31667*34	0,66505-31	95
40	0,32202.57	8.49185.59	8,31476.15	0,67205.36	96
47	0,32902.63	8,48558.30	8,31288.83	0,67905.42	97
48	0,33602.68	8,47949.75	8,31105.32	0,68605.47	98
49	0,34302.74	8,47359.15	8,30925.47	0,69305.53	99
<u></u> 90	0,35002.79	8,46785.72	8,30749.23	0,70005.59	100
1			8,21085*34		Perp.

 $1\frac{\delta}{8}$  Per Cent.

			г. —	-	
Years	Log. r ^a .	Log. a ⁿ .	Log. a ⁿ .	Log. r.	Years
1 2 3 4 50 78 9 0	0,00753.44 0,01506.88 0,02260.33 0,03013.77 0,03767.21 0,04520.65 0,05274.09 0,06027.53 0,06780.98 0,07534.42	0,00753'44 9,71025'53 9,53790'40 9,41669'43 9,32350'26 9,24802'86 9,18477'83 9,13047'18 9,08299'40 9,04090'03	8,47,425'55 8,46396'54 8,45306'54 8,45425'46 8,44960'11 8,44507'55 8,444507'55 8,444507'55 8,444507'35 8,43639'01 8,43222'12	0,38425:53 0,39178'97 0,39932'41 0,40685'86 0,44149'30'30 0,42192'74 0,42946'18 0,43699'62 0,44453'07 0,44453'07	51 52 53 54 55 56 57 58 59 60
11 12 13 14 15 16 17 18 19 20	0,08287.86 0,09041.30 0,10548.10 0,11301.63 0,12055.07 0,12808.51 0,13561.95 0,14315.39 0,15068.84	9,00316'04 8,96'901'39 8,90931'86' 8,88296'48 8,85853'47 8,83579'35 8,81454'67 8,79463'17 8,77591'04	8,42816*25 8,42421*04 8,42036*10 8,41661*07 4,41295*62 8,40939*42 8,40592*18 8,40253*58 8,30923*37 8,39601*25	0,45959'95 0,40713'39 0,4740'83 0,48220'27 0,48973'72 0,49727'16 0,50480'60 0,51234'04 0,51987'48 0,52740'93	61 62 63 64 65 66 67 68 69 70
21 22 23 24 25 20 27 28 29 30	0,15822.28 0,10575.72 0,17329.16 0,18882.00 0,18836.04 0,19589.49 0,20342.93 0,21096.37 0,21849.81 0,22003.25	8,75826'56 8,74159'57 8,72581'33 8,71084'18 8,66307'13 8,67016'03 8,65783'49 8,64605'30 8,63477'7c	8,39287 02 8,36980 37 8,38681 08 8,38388 95 8,38103 74 8,37815 25 8,37553 26 8,37287 63 8,37028 14 8,36774 59	$\begin{array}{c} 0, 53494\cdot 37\\ 0, 54247\cdot 81\\ 0, 55001\cdot 25\\ 0, 55754\cdot 69\\ 0, 50538\cdot 13\\ 0, 57261\cdot 58\\ 0, 58015\cdot 02\\ 0, 58768\cdot 46\\ 0, 59521\cdot 90\\ 0, 500275\cdot 34 \end{array}$	71 72 73 74 75 76 77 78 79 80
31 32 33 34 35 36 37 38 39 40	0,23356'70 0,24110'14 0,24863'58 0,25617'02 0,26370'46 0,27123'90 0,27877'35 0,28630'79 0,2984'23 0,30137'67	8,62397'31 8,61361'06 8,60366'17 8,59410'10 8,58490'54 8,57605'41 8,56752'71 8,55930'68 8,55137'67 8,54372'16	8,36526·83 8,36284·73 8,36284·73 8,35816·78 8,35550-63 8,35550-63 8,35553·28 8,34941·82 8,34941·82 8,34734·99 8,34532·67	0,61028.78 0,61782.23 0,62535.67 0,63289.11 0,64042.55 0,64795.99 0,65549.44 0,66302.88 0,67056.32 0,67809.76	81 82 83 84 85 80 87 88 89 90
41 42 43 44 45 46 47 48 9 50	0,30891.11 0,31644.56 0,32398.00 0,33151.44 0,33004.88 0,34658.32 0,35411.76 0,36165.21 0,36018.65 0,37672.09	8,53632-73 8,52918-09 8,52227'03 8,51558'38 8,50911'12 8,50284'25 8,49076'86 8,49088-08 8,48517'10 8,47963'16	8,34334'75 8,34141'12 8,33951'65 8,33766'23 8,33584'77 8,33497'18 8,333053'19 8,32896'56 8,32733'42 8,24393'80	0,68563:20 0,69316:64 0,70070:09 0,70823:53 0,71570:97 0,72330:41 0,73083:85 0,7383:730 0,74590:74 0,75344:18	91 92 93 94 95 95 95 97 98 97 98 99 100 Perp

13 Per Cent.

Years	Lag. r.	Log. a".	Log. a".	Log. r".	Years
1	0,00806.76	0,00806.76	8,48607.21	0,41144.87	51
3	0.02420.20	9,71105-27	8,46103.92	0,41951.03	52
4	0.03227 05	0.41801.40	8 471 41.25	0,42758.40	53
5	0.04033.81	0.22508.21	8 46680.00	0,43505 10	34
Ğ	0.04840.57	0.24086.60	8 46222.64	0,443/1 92	22
7	0.05647 34	0.18687.27	8.45700.04	0,451/0.00	67
8	0,06454 10	0.13282.10	8.45376.62	0 46702.21	28
9	0,07260 86	9.08550.62	8.44065.04	0.47508.07	50
10	0,08067.62	9,04375.38	8,44566.57	0,48405.73	66
11	0,08874.38	9,00626.40	8,44178.08	0,49212.49	61
12	0,0008115	8,97230.58	8,43800.08	0,50019.25	02
14	0,10407.01	8,9414814	0,43432.22	0,50820.02	23
17	0 12101.42	8 99 97 97 10 21	0,43074-13	0,51032.78	04
16	0.12008.10	8 86286-26	8 42725 47	0,52439.54	65
17	0.12714.06	8 84026-28	8 4205 5 95	0,53240-30	67
18	0.14621.72	8.81025.40	8 41722002	0,54053.07	68
19	0.15328.48	8.70067.60	8 41410.08	0,54059.03	60
20	0,16135.24	8,78110.14	8,4111308	0.56473.35	70
21	0,16042.01	8.76378.05	8.40814.80	0.57280'11	71
22	0,17748.77	8,74734.31	8.40524.00	0.68086.88	72
23	0,18555 53	8,73179.16	8,40240.42	0.58803.64	73
24	0,19362.29	8,71704.94	8,39963.85	0,50700.40	74
25	0,20169.05	8,70304.95	8,39694.07	0,60507.16	75
26	0,20975.82	8,68973 27	8,39430.88	0,61313 02	76
27	0,21782.58	8,67704 65	8,39174.08	0,62120.69	77
28	0,22589.34	8,66494.41	8,38923.47	0,62927.45	78
29	0,23390.10	8,65338.36	8,38678.87	0,63734-21	29
30	0,24202.87	8,64232.76	8,38440.11	0,64540.97	80
31	0,25009.03	8,63174.21	8,38207 02	0,65347.74	81
32	0,25810.39	8,02159.05	8,37979.41	0,66154.50	82
33	0,20023.15	8,01180.28	8,37757.10	0,00901.20	83
34	0,27429 91	8,00251.00	8,37540.00	0,07708 02	84
20	0,20230 00	8 58480 10	8 271 20:00	0,08574.78	25
27	0,208:0.20	8 57657.41	8 26 27 8 60	0,00381.55	00
38	0.30656.06	8.568:6.14	8 26720.80	0,70100-31	80
30	0.31463.72	8.56083.74	8.26527.70	0,70005.07	80
40	0,32270.49	8,55338.71	8,36338.88	0,72608.60	90
41	0,33077*25	8,54619.59	8,36154.34	0,73415.36	91
42	0,33884.01	8,53925.09	8,35973.95	0,74222.12	92
43	0,34690.77	8,53254 01	8,35797.61	0,75028.88	93
44	0,35497.54	8,52005.23	8,35625.21	0,75835.64	94
45	0,30304.30	8,51977.69	8,35456.66	0,76642.41	95
40	0,37111.00	0,51370.37	8,35291.82	<b>0,</b> 77449'17	96
47	0,37917.82	0,50702.39	0,35130.03	0,78255.93	97
40	0,30/24 50	8 4066010	0,34972.98	0,79062.69	98
49	0 4022811	8 40126101	8 2466710.00	0,79809.45	99
, <b>~</b>	-,40330 11	0,49120 01	8.2730013	0,000/0-22	Perp.

1 7 Per Cent.
Years	Log. ".	Log. $a^n$ .	Log. $a^*$ .	Log. r".	Years
1	0,00860.02	0,00860.02	8,49773.88	0,43860.88	51
2	0,01720-03	9,71184.90	8,49288.73	0,44720.89	52
3	0,02580.05	9,54002.23	8.48818.28	0,45580.91	53
4	0,03440.07	9,41933.40	8,48301.00	0,40440.93	54
2	0,04300 00	9,32000 02	8 47480-44	0,47300.94	52
7	0.06020.12	0.18806.21	8.47072.20	0,40020.08	50
8	0.06880.14	0.13516.38	8.46667.00	0.40881.00	26
9	0.07740.15	0.08810.08	8.46273.38	0.50741.01	50
ιó	0,08600.17	9,04659.87	8,45890.93	0,51601.03	66
I I	0,09460*19	9,00935.71	8,45519.19	0,52461.05	61
[2	0,10320.21	8,97570.56	8,45157.82	0,53321.07	62
13	0,11180.55	8,94506.63	8,44806.42	0,54181.08	63
14	0,12040'24	8,91099.05	8,44404.00	0,55041.10	04
12	0,12000.20	8,89112'17	0,4413210	0,55901.12	62
17	0,13700-27	88401.35	8 43402987	0,50701-13	67
18	0,14020 29	8 82412.05	8 42187-28	0,5/02115	68
10	0,16340.32	8.80460.66	8.42880.01	0,5034110	60
20	0,17200.34	8,78644.42	8,42598.47	0,00201 20	70
21	0,18060.36	8,76926.48	8,42315.50	0,61061.22	71
22	0,18920.38	8,75305.73	8,42039.86	0,61921-24	72
23	0,19780.40	8,73773.40	8,41771.31	0,62781.25	73
24	0,20640.41	8,72321.83	8,41509.63	0,63641.27	74
25	0,21500.43	8,70944.33	8,41254.59	0,64501.29	75
20	0,22300.45	0,00034.97	8,41000.01	0,05301.31	70
28	0,23220 40	8 67200-24	8,40703.07	0,00221 32	14
20	0,24040.50	8 66066:02	8 40206:00	0.67041.26	70
30	0,25800.52	8,64982.07	8,40072.20	0,68801.37	80
31	0,26660.53	8,63945.01	8,39853.11	0,69661.39	81
32	0,27520.55	8,62951.77	8,39639.29	0,70521.41	82
33	0,28380.57	8,61999.58	8,39430.69	0,71381.43	83
34	0,29240.58	8,61085.89	8,39227-14	0,72241.44	84
35	0,30100.00	8,60208.40	8,39028.51	0,73101.40	85
30	0,30000.02	8,59304.99	8,38834.05	0,73901.48	00
37	0,31020.04	0,50553.72	0,30045.44	0,74821.49	1 82
20	0,32080.05	8 57020:50	8 18 280 - 28	0,75001 51	80
40	0,34400.60	8,56295.56	8,38104.31	0,77401 55	90
41	0.35260.70	8.55596.32	8,37932.39	0,78261.56	91
42	0,36120'72	8,54921.53	8,37764 48	0,79121.58	92
43	0,36980.74	8,54270.02	8,37600.50	0,79981.60	93
44	0,37840.76	8,53640.61	8,37440.34	0,80841.61	94
45	0,38700.77	8,53032.30	8,37283.88	0,81701.63	95
40	0,39500.79	8,52444.00	8,37131.04	0,82501 65	90
47	0,40420'81	0,51074.97	0,30081.72	0,83421.07	97
40	0,41200'82	8,51324.20	8 26602-22	0,04201.08	90
49	0,42000.86	8 50274.40	8 26542 02	0,05141 70	99
~	0,43000 00	0,000/4 40	8,30103.00	0,00001 /2	Perp.

2 Per Cent.

21 Per Cent.

-810,000							
Years	Log. r.	Log. a*.	Log. a".	Log. r.	Years		
1 2 3 4 56	0,00913.21 0,01826.41 0,02739.62 0,03652.83 0,04566.03	0,00913'21 9,71264'41 9,54107'89 9,42005'01 9,32823'42	8,50925.70 8,50458.14 8,50005.14 8,49566.10 8,49140.45 8,49140.45	0,46573.55 0,47486.76 0,48399.97 0,49313.18 0,50226.38	51 52 53 54 55		
7 8 9 10	0,05479-24 0,06392-45 0,07305-66 0,08218-86 0,09132-07	9,2535318 9,19104.63 9,13750.04 9,09077.79 9,04943.46	8,48727'00 8,48327'23 8,47938'67 8,47561'55 8,47195'41	0,51139 59 0,52052 80 0,52966 00 0,53870 21 0,54792 42	50 57 58 59 60		
11 12 13 14 15 16 17 18 19 20	0,10745.28 0,10958.48 0,11871.69 0,12784.90 0,13698.10 0,14611.31 0,15524.52 0,17437.73 0,17350.93 0,18204.14	9,01244'01 8,97903'37 8,04863'78 8,92080'35 8,89517'40 8,87146'43 8,84943'79 8,82890'09 8,82990'09 8,80969'06 8,79166'90	8,468,39.85 8,4614,50 8,4614,898 8,4551600 8,4520790 8,4490833 8,4401696 8,4433355 8,4405781	0,55705.62 0,50618.83 0,57532.04 0,58445.24 0,59358.45 0,60271.66 0,61184.87 0,62098.07 0,63921.28 0,63924.49	61 62 63 64 65 66 67 68 69 70		
21 22 23 24 25 26 27 28 29 30	n, 19177.35 o, 20090.55 o, 21003.76 o, 21916.97 o, 22830.17 o, 23743.38 o, 24656.59 o, 25509.79 o, 26483.00 o, 27396.21	8,77471.88 8,75873.85 8,74364.08 8,72934.89 8,71579.57 8,70292.24 8,60967.61 8,67901.02 8,66788.30 8,65725.67	8,43789:50 8,43528:36 8,43274:17 8,43026:70 8,42785:75 8,42551:09 8,42322:54 8,4209991 8,41883:00 8,41671:66	0,64837.69 0,65750.90 0,66664.11 0,67577.31 0,68490.52 0,69403.73 0,70316.94 0,71230.14 0,72143.35 0,73050.56	71 72 73 74 75 76 77 78 79 80		
31 32 33 34 35 36 37 38 39 40	0,28309.42 0,29222.62 0,30135.83 0,31049.04 0,31962.24 0,32875.45 0,33788.66 0,34701.86 0,35615.07 0,36528.28	8,64709'75 8,63737'48 8,62866'09 8,61913'02 8,61056'00 8,60232'86 8,59441'70 8,58680'73 8,57948'28 8,57242'85	8,41465*70 8,41264*97 8,41264*97 8,40878*59 8,40592*63 8,40511*31 8,40334*50 8,40162*05 8,40162*05 8,30903*86 8,39829*79	0,73969'76 0,74882'97 0,75796'18 0,7670'38 0,7670'38 0,7622'59 0,78535'80 0,79449'00 0,80362'21 0,81275'42 0,82188'63	81 82 83 84 85 86 87 88 89 90		
41 42 43 44 45 40 47 48 49 50	0,37441.48 0,38354.69 0,39267.90 0,40181.11 0,41094.31 0,42007.52 0,42920.73 0,43833.93 0,44747.14 0,45660.35	8,56563 °03 8,55907 '50 8,55275 °08 8,554075 °03 8,55305 '38 8,55305 '38 8,55305 '38 8,552054 '74 8,554222 '22 8,51907 °05 8,51408 '44	8,39669.74 8,39513.59 8,3951.23 8,3921.254 8,38925.85 8,3876.63 8,38652.73 8,38521.04 8,38321.04 8,38321.04 8,38321.04 8,38321.04 8,3832.40	0,83101.83 0,8401504 0,84928.25 0,85841.45 0,8754.06 0,8767.87 0,88581.07 0,89494.28 0,90407.49 0,91320.70	91 92 93 94 95 96 97 98 99 100 Perp.		

Years	Log. r*.	Log. a ⁿ .	Log. a".	Log. 7ª.	Years
1	0,00966*33	0,00966*33	8,52062.79	0,49282.92	51
2	0,01932.66	9,71343.81	8,51612.32	0,50249.25	52
3	0,02899.00	9,54213.37	8,51176.23	0,51215.58	53
4	0,03865.33	9,42196.39	8,50753.94	0,52181.01	54
5	0,04831.66	9,32980.50	8,50344.87	0.53148.24	1 55
Ğ	0,05707.00	9.25535.68	8.40048.50	0.54114.57	1.6
7	0.06764.32	9.19312.53	8.40-64.32	0.55080.01	57
8	0.07730.65	0.13083.07	8.40101.85	0.56047.24	1 28
ò	0.08606.00	0.00335.76	8 48820.64	0 57012:57	1.00
ιó	0,09663.32	9,05226.17	8,48480.26	0,57979.90	66
- 11	0,10629.65	9,01551.27	8,48140.31	0.58046*23	61
12	0.11505.08	8.08235.00	8.47810 38	0.50012.56	62
13	0,12562.31	8,95219.58	8.47400.13	0.60878.00	62
14	0.13528.64	8.02460.13	8.47170.18	0.61845.22	64
15	0.14404.08	8,80021.03	8 46877.22	0.62811.6	67
16	0.15/61 21	8.87572.61	8 46=82:02	0.62777.80	1 66
17	0 16427.64	8 8 20 1.28	8 46208:00	0,0377709	67
18	0,10427 04	8 8 2 26 2 0 2	8 4602200 99	0.04/44 22	66
10	0,17,39,5 97	8 81 (65:02	0,40022 11	0,05/10 55	00
19	0,10300 30	9 -0696.6	0,45753 02	0,00070.89	09
20	0,19320-03	0,79000.01	0,45491.40	0,07043-22	70
21	0,20292.97	8,78014.23	8,45237.16	0,68609.55	171
22	0,21259.30	8,76438.69	8,44989.91	0,69575.88	72
23	0,22225.63	8,74951.19	8,44749.44	0,70542.21	73
24	0,23191.96	8,73544.10	8,44515 54	0,71508.54	74
25	0,24158.29	8,72210.71	8,44288.00	0,72474.88	75
26	0,25124.62	8,70045.00	8,44066 62	0.73441 21	76
27	0,26000.06	8,69742.01	8,43851 20	0.74407 54	77
28	0,27057.20	8,68596 79	8.43641.53	0.75373.87	78
20	0.28023.62	8.67505.22	8.43437.47	0.76340-20	70
30	0,28989.95	8,66463.57	8,43238.82	0,77306.53	86
31	0.20056-28	8.65468.47	8.43045.41	0.78272.87	81
32	0.30022.61	8.64516.82	8.42857.08	0.70220.20	82
22	0.21888.05	8.62605.86	8.42672.60	0 80205-52	82
30	0.22855-28	8.62722.05	8 42405:08	0.81171.86	Š.
25	0 22821.61	8 61806.08	8 42221.10	0.82128.10	187
20	0,3302101	8 61002.85	8 42151.62	0,021,30 19	182
27	0,34707 94	8 60221:40	8 41086-22	0,0,104,72	187
36	0,357,34 27	8 10120.06	8 4 8 2 - 66	0,04070 00	66
.30	0,30720 00	8,59579.90	8,41025 00	0,8,0,37 19	80
.19 40	0.38653.27	8,58180.61	8.41516.13	0.86060.85	09
	e, 3061016e	8 1710170	8 41 26 7 126	e 9#0069	1
41	0,39019.00	0,57519.79	0,41307.20	0,87930.18	191
42	0,40505-93	8,50883.09	0,41222.14	0,0002.21	92
43	0,41552.20	8,50209.29	8,41080.00	0,89868.85	93
44	0,42518.59	8,55677.28	8,40942.79	0,90835.18	94
45	0,43484.93	8,55100.01	8,40808.36	0,91801.21	95
46	0,44451.26	8,54554.47	8,40677.28	0,92767.84	96
47	0,45417.59	8,54021.77	8,40549.46	0,93734.17	97
-48	0,40383 92	8,53507 03	8,40424.83	0,94700.50	98
49	0,47350.25	8,53009.45	8,40303.28	0,95666 84	1 99
50	0,48316.58	8,52528.28	8,40184.73	0,00633.17	100
· ·			8,35218-25		Perp
					1- 0-

 $2rac{1}{4}$  Per Cent.

 $2rac{3}{8}$  Per Cent.

Years	Log. r.	Log. a*.	Log. a ⁿ .	Log. $r^{n}$ .	Years
1	0,01019.39	0,01019.39	8,53185.29	0,51988.97	51
2	0.02038.78	9,71423.09	8,52751.40	0,53008.30	52
3	0,03058.17	9,54318.69	8,52331.72	0,54027.75	53
4	0.04077.57	9,42327.52	8,51925.65	0,55047.14	54
5	0.05006.06	9,33137.25	8,51532.64	0,56066.53	55
6	0.00116.32	9,25717.86	8,51152-15	0,57085.92	56
7	0.07135.74	0.10510.01	8.50783.67	0,58105.31	57
8	0.08155.13	0.14215.48	8,50420.73	0,59124.71	58
ā	0.00174 52	0.00502.07	8,50080-80	0,60144-10	59
ió	0,10193.91	9,05508.01	8,49745.71	0,61163 <b>·49</b>	60
11	0,11213.31	9,01857.51	8,49420'78	0,62182.88	61
12	0,12232.70	8,98565.46	8,49105.72	0,63202.27	62
13	0,13252.00	8,95574.04	8,48800.16	0,64221.60	63
14	0,14271.48	8,92838.40	8,48503.75	0,65241.05	64
15	0,15200.87	8,90322.91	8,48216.16	0,66260.45	05
ığ	0,10310.20	8,87998.90	8,47937.06	0,67279.84	66
17	0.17320.66	8,85842.88	8,47666.16	0,68299.23	67
18	0.18340.05	8,83835.42	8,47403.17	0,69318.62	68
10	0.10368:44	8,81960 24	8,47147.80	0,70338.01	69
20	0,20387.83	8,80203.55	8,46899-81	0,71357.40	70
21	0,21407.22	8,78553.60	8,46658.92	0,72376.80	71
22	0,22420.01	8,77000.26	8,46424 91	0,73390'19	72
23	0,23446.00	8,75534.79	8,46197*53	0,74415.58	73
24	0,24465.40	8,74149.52	8,45976.59	0,75434 97	74
25	0.25484 70	8,72837.75	8,45761.83	0,76454.36	75
26	0.26504 18	8,71593.57	8,45553 08	0,77473.75	76
27	0.27523.57	8,70411.73	8,45350.14	0,78493.14	77
28	0.28542.00	8,69287.54	8,45152.83	0,79512.54	78
20	0.20502.35	8,68216 82	8,44960.94	0,80531.93	79
30	0,30581.74	8,67195.84	8,44774 3	0,81551.32	80
31	0,31601.14	8,66221.19	8,44592.81	0,82570.71	81
32	0.32620.53	8,65289.81	8,44416.24	0,83590.10	82
33	0.33630.02	8,64398.93	8,44244.45	0,84609*49	83
34	0.34650.31	8.63546.00	8,44077.30	0,85628.88	84
35	0.35678.70	8,62728.74	8,43914.65	0,86648.28	85
36	0.36608.00	8.61045 00	8,43750.35	0,87667.67	86
37	0.37717.48	8.61192.87	8,43602.29	0,88687.06	87
38	0.38736.88	8.60470.55	8,43452.32	0,89706.45	88
30	0.30756.27	8,59776.41	8,43306.33	0,90725.84	89
40	0,40775.66	8,59108.91	8,43164.21	0,91745.23	90
41	0.41795.05	8,58466.66	8,43025.82	0,92764.62	91
42	0.42814 44	8,57848.34	8,42891.07	0,93784.02	92
43	0.43833.82	8,57252.74	8,42759.85	0,94803.41	93
44	0,44853.23	8,56678.76	8,42632.05	0,95822.80	94
45	0.45872.62	8,56125 31	8,42507.58	0,96842 19	95
- 78	0.46802.01	8,55501 44	8,42386.35	0,97861.58	96
47	0.47011.40	8,55076.10	8,42268 24	0,98880.97	97
18	0.48030.70	8,54578 74	8,421 53 20	0,99900-37	98
40	0.40050 18	8,54008 27	8,42041.11	1,00919.76	99
-17	0.50000 57	8,53634 03	8,41931.90	1,01939.15	100
30	1 30- 7- 5 51		8,37566.36		Perp

Years	Log. r.	Log. a".	Log. a".	Log. r.	Years
1	0,01072*30	0,01072.39	8,54293.36	0.54691.71	51
2	0,02144.77	9,71502.27	8,53875.55	0,55764.10	52
3	0,03217.16	9,54423.83	8,53471.76	0,56836.49	53
4	0,04289.55	9,42458.42	8,53081.40	0,57908.87	54
5	0,05361.93	9,33293.68	8,52703.92	0,58981.26	55
6	0,06434.32	9,25899.62	8,52338.78	0,60053.65	56
7	0,07506.71	9,19726.80	8,51985-48	0,61126.03	57
8	0,08579.09	9,14447*26	8,51643.54	0,62198.42	58
9	0,09651-48	9,09849.45	8,51312-52	0,63270.81	59
10	0,10723.87	9,05788.95	8,50991.99	0,64343.19	60
II	0,11796.25	9,02162.73	8,50681.53	0,65415.58	61
12	0,12868.64	8,98894.73	8,50380.78	0,66487.97	62
13	0,13941.03	8,95927.17	8,50089.34	0,67560.35	63
14	0,15013.41	8,93215.10	8,49806.90	0,68632.74	64
15	0,10085.80	8,90723.11	8,49533.10	0,69705.13	05
10	0,17158.18	8.88422.30	8,49267.63	0,70777.51	00
17	0,18230.57	8,80289.29	8,40010.50	0,71849.90	97
18	0,19302.90	8,84304.03	8,48700.50	0,72922.28	68
19	0,20375.34	8,82452.04	8,48518.27	0,73994.07	09
20	0,21447.73	0,00717.72	0,40203*24	0,75007.00	70
21	0,22520.12	8,79089.94	8,48055.17	0,76139.44	71
22	0,23592.20	8,77558.57	8,47833.80	0,77211.83	72
23	0,24664.89	8,76114.85	8,47618.91	0,78284.22	73
24	0,25737.28	8,74751.14	8,47410.29	0,79356.60	74
25	0,26809.66	8,73400.72	8,47207.72	0,80428.90	75
20	0,27882.05	8,72237.08	8,47010.09	0,81501.38	70
27	0,28954.44	8,71070.77	8,46819.91	0,82573.70	77
28	0,30020.82	8,09973.31	8,40034.31	0,83040.12	78
29	0,31099.21	8,08923.13	8,40453.99	0,84718.54	72
30	0,32171.00	8,07922-47	8,40278.79	0,85790.92	80
31	0,33243.98	8,66967.94	8,46108.53	0,86863.31	81
32	0,34316.37	8,66056.49	8,45943.08	0,87935.70	82
33	0,35388.76	8,65185.33	8,45782.26	0,89008.08	83
34	0,36461.14	8,64351.93	8,45025-94	0,90080.47	84
35	0,37533'53	8,03553.99	8,45473.97	0,91152.80	85
36	0,38605.92	8,02789.39	8,45320.23	0,92225.24	80
37	0,39678.30	8,02050.18	8,45182.50	0,93297.03	87
38	0,40750.69	8,01352.59	8,45042.85	0,94370.02	88
39	0,41823.08	8,00070.08	8,44900.99	0,95442.40	89
40	0,42895.40	8,00027.83	8,44774.84	0,90514.79	90
41	0,43967.85	8,59403.72	8,44646.31	0,97587.18	91
42	0,45040.23	8,58803.36	8,44521.27	0,98659.56	92
43	0,46112.62	8,58225.53	8,44399 64	0,99731.95	93
44	0,47185.01	8,57669.11	8,44281.29	1,00804.33	94
45	0,48257.39	8,57133.06	8,44166.15	1,01876.72	95
46	0,49329.78	8,56616.35	8,44054.10	1,02949.11	96
47	0,50402.17	8,56118.12	8,43945.07	1,04021.40	97
48	0,51474.55	8,55637.48	8,43838.95	1,05093.88	98
49	0,52546.94	8,55173.64	8,43735.68	1,06166.27	99
50	0,53619.33	8,54725.84	8,43035.10	1,07238.65	100
		1	8,397 <b>94.00</b>	J	perp.

 $2rac{1}{2}$  Per Cent.

 $2rac{5}{8}$  Per Cent.

Years	Log. r [*] .	Log. a".	Log. a*.	Log. <b>**</b> .	Year
- !	0,01125-32	0,01125.32	8,55387.14	0,57391.17	51
2	0,02250.03	9,71581.33	8,54984.90	0,58510.48	52
3	0,03375.95	9,54528.79	8,54596.51	0,59041.80	53
4	0,04501.27	9,42589.07	8,54221 30	0,60767.12	54
- 5 I	0,05020.20	9,33449.80	8,53858.90	0,01892.44	55
0	0,00751.90	9,20080.97	8,53508.01	0,03017.75	50
7	0.07877-22	9,19933.10	8,53169.96	0,64143.07	57
8	0,09002.54	9,14678.41	8,52842.49	0,65268.39	58
9	0,10127.85	9,10105.19	8,52525.77	0,66393 70	59
10	0,11253.17	9,06069.03	8,52219.35	0,67519.02	60
п	0,12378.49	9,02466.94	8,51922.83	0,68644.34	61
12	0,13503.80	8,99222.85	8,51635.83	0,69769.65	62
13	0,14629.12	8,96278.97	8,51357.98	0,70894.97	63
14	0,15754.44	8,93590.42	8,51088.94	0,72020.20	64
15	0,16879.76	8,01121.61	8,50828.38	0,73145.61	65
16	0,18005.07	8,88843 83	8,50575.97	0,74270.92	66
17	0,19130.39	8,867,33.61	8,50331.43	0,75396-24	67
18	0,20255.71	8,84771-55	8,50094.45	0,76521-56	68
19	0,21381.02	8,82941-31	8,49864.78	0,77646.87	69
20	0,22506.34	8,81229.15	8,49642.15	0,78772.19	70
21	0,23631.66	8,79623.30	8,49426.29	0,79897.51	71
22	0,24756.97	8,78113.65	8,49217.00	0,81022.82	72
23	0,25882.29	8,76691.42	8,49014.01	0,82148.14	73
24	0,27007.61	8,75348.99	8,48817.13	0,83273.46	74
25	0,28132.93	8,74079 64	8,48626.14	0,84398.78	75
26	0,29258.24	8,72877.45	8,48440.84	0,85524.00	76
27	0,30383.56	8,71737.17	8,48261 04	0,86640.41	77
28	0,31508.88	8,70654.14	8,48086.55	0.87774.73	78
29	0,32634.19	8,69624.17	8,47917.20	0,88000.04	79
30	0,33759.51	8,68643.52	8,47752.80	0,90025.36	86
31	0,34884.83	8,67708.78	8,47593.21	0,01150.68	81
32	0,36010-14	8,66816.00	8.47438.26	0.02275.00	82
33	0,37135.46	8,65965 11	8.47287 81	0.03401.31	83
34	0,38260 78	8,65150 88	8.47141.70	0.04526.63	84
35	0,39386.10	8,64371 80	8.40000.80	0.05651.05	85
36	0.40511.41	8.63626.03	8.46861.08	0.06777.26	86
37	0,41636.73	8,62011.38	8.46728.10	0.07002.58	87
38	0.42762.05	8.62226.13	8.46508.05	0.00027.00	88
30	0.43887.36	8,61568.65	8.46471 60	1.00153.21	80
40	0,45012.68	8,60937.42	8,46348.91	1,01278.53	90
41	0.46138.00	8,60331.05	8.46220.62	1.02403.85	01
42	0.47263.31	8.50748.22	8.46113.68	1.03520.10	1 02
43	0.48388.63	8.50187.72	8.46001.01	1.04654.48	03
44	0,40513.05	8,58648 42	8.45801.50	1.05770.80	04
45	0,50030 27	8,58129.20	8.45785.06	1.06005.12	1 95
16	0,51764.58	8,57620 26	8.45681 50	1.08030.43	60
47	0.52880.00	8.57147.65	8.45581.00	1.00155-75	07
48	0,54015.22	8,50683.30	8.45483.22	1.10281.07	68
40	0.55140.63	8,56235 68	8.45388.12	1.11406.28	00
50	0.56265.85	8.55803.84	8.45205.00	1.12531.70	100
0-	100-0	1000.04	1	->=-00-70	In

Log, a". Years Log. r. Log. a". Log. r. Years 0,01178.18 0.01178.18 8,56466.78 0,60087.34 ł 51 0,61265.52 9,71660.28 8,56079.64 52 2 0,02356.37 0,03534.55 9,54633.59 8,55706.15 0,62443.70 53 3 0,63621.88 8,55345.71 4 0,04712.73 0,05890.92 9,42719.49 54 9,33605.59 8,54997.78 0,64800 07 56 55 56 8,54661.81 0,07069.10 0,65978.25 9,26261.92 0,08247.28 8,54337.31 0,67156.43 78 9,20139'02 57 58 0,09425.46 9,14908.96 8,54023.81 9,10360.17 8,53720.85 0,69512.80 59 9 ιó 0,11781.82 9,06348.24 8,53428.02 0,70000.08 őó 0,12060.01 8,53144.91 0,71869.17 I I 9,02770.14 61 0,73047.35 0,74225.53 0,75403.72 0,14138.20 8,99549.79 8,52871.14 62 I 2 8,96629.44 8,52606.34 63 13 0,15316-38 8,93964·19 8,91518·44 64 0,16494.56 8,52350.17 14 0,17672.75 65 66 15 16 8,52102.30 0,76581.90 0,77760.08 0,78938.26 0,80116.45 8,89263.51 8,87175.89 8,51862.41 0,18850.03 17 0,20029.11 8,51630.21 67 68 8,85236.18 8,51405.41 0,21207.29 8,51187.74 8,50976.93 0,22385.48 8,83428.09 0,81294.63 60 19 0,82472.81 20 8,81737.85 70 0,24741 84 8,50772.75 0,83651.00 21 8,80153.69 71 0,25920.03 8,78665.49 8,50574.95 8,50383.30 0,84820.18 22 72 0,27098.21 0,86007.36 8,77264.51 23 73 8,50197.59 8,50017.61 0,87185.55 24 0,28276.39 8,75943.09 74 0,29454.58 0,30632.76 8,74694.52 8,73512.89 25 75 8,49843.16 0,89541.91 26 0,90720.09 0,91898.28 8,49674.05 . 77 78 8,72392.96 27 28 0,31810.94 0,32989.13 8,71330.05 8,70319.98 8,49510.10 0,93076.46 20 0,34167.31 8,49351.12 79 80 8,60350.00 8,49196.96 0,94254 64 30 0,35345.49 8,68443.72 8,67571.08 8,66738.32 8,65942.89 8,65182.48 81 8,49047.45 8,48902.44 0,95432.83 31 0,36523.67 0,37701.86 0,38880.04 82 32 83 0,97789-19 8,48701.76 33 8,48625.28 84 0,40058.22 34 85 8,48492.87 1,00145.56 0,41236.41 35 36 8,64455 00 8,63758 51 8,48364 40 1,01323.74 86 0,42414'59 37 38 0,43592.77 8,48239.72 8,48118.72 1,02501 93 87 88 1,03680.11 0,44770'96 8,63091.21 8,62451.47 8,61837.77 1,04858.29 8,48001.29 80 39 0,45949'14 8,47887.30 1,06036.47 0,47127.32 90 40 8,61248.72 8,47776.64 8,47669.23 1,07214.66 1,08392.84 0,48305.51 0,49483.69 **9**1 4I 8,60682.99 92 42 0,50661.87 8,601,39.40 8,47564.94 8,47463.68 1,09571.02 03 43 8,59616.81 0,51840.05 1,10749*21 94 44 0,53018.24 8,59114.17 8,47365.35 1,11927.39 45 95 8,58630.51 8,47269.87 1,13105.57 <u>96</u> 0,54196.42 46 8,47177.15 8,47087.10 0,55374.60 8,58164.91 97 98 47 48

2 3 Per Cent.

8,46999.64

8,46914.69

8,43933.27

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8,57716.51

8,57284.52 8,56868.18

0,56552.79 0,57730.97

0,58909.15

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Years	Log. r ^a .	Log. a".	Log. a".	Log. r ^a .	Years
I	0,01230.98	0,01230.98	8,57532.41	0,62780.23	51
2	0,02461.97	9,71739.12	8,57159.90	0,64011.21	52
3	0,03692.95	9,54738.21	8,56800.85	0.65242.20	53
4	0,04923.94	9,42849.66	8,56454 64	0,66473'18	54
5	0,06154.92	9,33761 07	8,56120.75	0.67704.17	55
ŏ	0,07385 91	0.26442.45	8,55798.62	0.68035.15	56
7	0,08616.80	0.20344.38	8.55487.76	0.70166.13	57
8	0,09847.88	0.15138.80	8,55187.72	0.71307.12	≼8
0	0,11078.86	0.10614.43	8.54808.03	0.72628 10	50
ιó	0,12309.85	9,06626.59	8,54618.27	0,73859.09	66
11	0,13540.83	9,03072.33	8,54348.06	0.75000.07	61
12	0,14771 82	8.99875.58	8,54086.00	0.76321.06	62
13	0,16002.80	8,96978 60	8,53834 72	0.77552.04	63
14	0,17233.70	8.04336.46	8,53500.80	0.78783 03	64
15	0,18464.77	8.01013.50	8.53355.18	0.80014.01	65
16	0,19695.76	8.80681.20	8.53127.28	0.81245.00	66
17	0.20026.74	8.87616.00	8.52006.80	0.82475.08	67
18	0.22157.73	8.85608.54	8.52603.72	0.83700.07	68
10	0.23388.71	8.83012.38	8.52487.51	0.84027.05	60
20	0,24619'70	8,82243.82	8,52288.00	0,86168.94	70
21	0.25850.68	8.80681.12	8.52004.04	0.87300.02	71
22	0.27081.67	8.70214.13	8.51008.00	0.88630.01	72
23	0.28312 65	8.77834.13	8.51727-23	0.80861.80	73
24	0.20543.64	8.76533.45	8.51552.14	0.01002.88	74
25	0.30774.62	8.75305.30	8.51382.63	0.02222.86	1 75
26	0.32005 61	8.74144.05	8.51218.47	0.02554.85	56
27	0.33230.00	8.72044.16	8.51050.50	0.04785-82	77
28	0.34407.57	8.72001.06	8,50005-53	0.00016-82	1 78
20	0.35608.50	8,71010.58	8.50750.38	0.07247-80	70
30	0,30929.54	8,70068.95	8,50611.90	0,98478.79	80
31	0.38160.53	8.60172.80	8.50471.00	0.00700*77	81
32	0.30301.61	8.68310.07	8.50336.25	1.00040.76	82
33	0.40622.50	8.67504.08	8.50204.80	1.02171.74	83
34	0.41853.48	8.66728.00	8.50077.41	1.02402.72	84
25	0.43084.47	8.65085.82	8,40053.02	1 04622.71	86
26	0.44315'45	8.65276.26	8.40824.22	1,0403371	86
27	0.45540.44	8.64507.66	8,40718.10	1.07005-68	87
28	0.46777.42	8.62047.02	8.40605.60	1.08226.66	88
20	0.48008.41	8.62225.52	8,40406.62	1,00,10,00	80
40	0,49239.39	8,62728.96	8,49390.86	1,10788.63	00
1	0.50470.38	8.621 :6.81	8.40288:20	1 12010:62	Í ái
12	0.51701.26	8 61607:70	8,40188.82	1 12250-60	02
42	0 \$2022.25	8 61080.60	8 40002.26	1,13250 00	0.2
40	-,5~95~ 55	8 60574-26	8 48008.80	1 15712.59	95
12	0.55204.32	8 60087.70	8,48008.04	1 10042-26	0.5
- 12	-, 555394 5ª	8 10000 19	8 48820.00	1 18174.74	22
40	0.57856.20	8 50170102	8 48724 60	1,101/4 54	90
-16	0,5/050 29	8 18727-06	8 486/134 59	1,19405-53	1 %
40	0,59007 27	8 58220-21	8 48671-24	1,20030-51	90
19	0,00,10 20	8 57018:00	8 18 102:22	1,21007 50	199
30	0,01349 44	999999999	8 45862.72	1,23090 40	Parm
			i 0,43003 /0		1 × 01 h

 $2\frac{7}{8}$  Per Cent.

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J	Per	Cent.

Years	Log. 7".	Log. a ⁿ .	Log. a*.	Log. r.	Years
1	.0,01283.72	0,01283.72	8,58584'21	0,65469.85	51
2	0,02567.44	9,71817.84	8,58225 86	0.66753.57	52
3	0,03851.17	9,54842 67	8,57880.78	0.68037-20	53
4	0,05134.80	9.42070 50	8.57548.32	0.60321.01	54
5	0.06418 61	0.33016.23	8.57227:08	0.70604.74	1 22
ŏ	0.07702.22	0.26622.58	8 56010-22	0.71888.46	1 22
7	0.08086.06	9,20540.22	8 56621.52	0,71000 40	27
Ś.	0 10260.78	0 15268 10	8 56224 42	0,73172 10	26
ň	0 11552:50	9,13,00 19	0,50334 42	0,74455.90	50
10	0,12837.22	9,06904.07	8,55790.35	0,75739 03	60
11	0,14120'95	9,03373.51	8,55532.53	0,78307.07	61
12	0,15404.67	0,00200.22	8.55283.67	0.70500.70	62
13	0,16688.30	8.07326.43	8.55043.41	0.80874 52	62
14	0.17072.11	8.04707.25	8.54811.42	0.82158.24	64
15	0.10255.84	8.02307.08	8.54587.26	0.82441.06	67
16	0.20520.56	8.00007.22	8 54270:02	0.84725.68	66
17	0.21823.28	8.88054.22	8 \$1161.82	3 86000:41	67
78	0 22107:00	8 86(18.64	8 52050-78	0.87202122	66
10	0 24200-22	8 84204118	8 52564.57	0,0729313	60
20	0.25674.45	8 82747:08	8 53704 31	0,005/005	1 20
20	0,25074 45	8 8 1 2 2 1 4 / 00	0,535/5 70	0,0000 57	
21	0,20950 17	0,01205.50	0,53393.29	0,91144-30	71
44	0,20241 ay	8,79759.57	0,53210.00	0,92420.02	72
43	0,29525.02	0,76400-20	0,53040.27	0,93711.74	73
- 44	0,30809.34	0,77120.09	0,52001.27	0,94995.40	74
25	0,32093.00	0,75912.27	8,52721.08	0,9027919	75
20	0,33370.78	8,74770.92	8,52507.30	0,97502.91	70
27	0,34000.51	8,73090.79	8,52417.94	0,98840.03	77
28	0,35944 23	8,72007.20	8,52273.41	1,00130.32	78
29	0,37227.95	8,71090.00	8,52133.50	1,01414.08	79
30	0,38511.67	8,70773.41	8,51998.21	1,02097.80	80
31	0,39795.40	8,69896.07	8,51867.20	1,03981.52	81
32	0,41079.12	8,69060.01	8,51740.38	1,05265.24	82
33	0,42362.84	8,68265.15	8,51617.61	1,06548'97	83
34	0,43646.56	8,67506.27	8,51498.76	1,07832.69	84
35	0,44930'29	8,66781.98	8,51383.67	1,09116.41	85
36	0,46214.01	8,66090.12	8,51272.22	1,10400.13	86
37	o,47497 73	8,65428 85	8,51164.30	1,11683.85	87
38	0,48781.45	8,64796.30	8,51059.77	1,12967.58	88
39	0,50065.18	8,64190.86	8,50958.53	1,14251.30	8g
40	0,51348.90	8,63611.04	8,50860.46	1,15535.02	90
41	0,52632.62	8,63055.41	8,50765.46	1,16818.74	91
42	0,53916.34	8,62522.68	8,50673.42	1,18102.47	92
43	0,55200.07	8,62011.63	8,50584.25	1,19386.19	93
44	0,56483.79	8,61521-17	8,50497.85	1,20669.91	94
45	0,57767.51	8,61050.23	8,50414.14	1,21953.63	95
46	0,59051.23	8,60597.85	8,50333.02	1,23237'36	96
47	0,60334.96	8,60163.10	8,50254.40	1,24521.08	<b>9</b> 7
48	0,61618.68	8,59745.14	8,50178.22	1,25804.80	98
49	0,62902.40	8,59343.16	8,50104.37	1,27088.52	99
50	0,64186.12	8,58956.42	8,50032.80	1,28372.25	100
~			8,47712.13		Perp
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 $3\frac{1}{8}$  Per Cent.

Years	Log. r.	Log. a ⁿ .	Log. a ⁿ .	Log. 7 ^{**} .	Yea
1	0,01336.40	0,01336.40	8, 59622.33	0,68156.20	51
2	0,02672.79	9,71896.45	8,59277.69	0,69492.60	52
3	0,04009.19	9,54946.96	8,58946.09	0,70829.00	53
4	0,05345.58	9,43109.29	8,58626.95	0,72165.39	54
5	0,06681.08	9,34071.08	8,58319.69	0,73501.79	55
ŏ	0,08018.38	9,26802.30	8,58023 81	0,74838.18	56
7	0,09354.77	9,20753.57	8,57738.81	0,76174.58	57
8	0.10001.17	0,15506.80	8,57464.21	0,77510.98	58
0	0.12027.57	0.11120.74	8.57100.50	0.78847.37	59
ió	0,13363.96	9,07180.68	8,56944.52	0,80183.77	60
11	0,14700.36	9,03673.69	8,56698.59	0,81520.17	61
12	0,16036.75	9,00523.70	8,56461 45	0,82856*56	62
13	0.17373.15	8.07672.06	8,56232.71	0,84192.96	63
ĭĂ	0.18700.55	8.05076.56	8,56012.06	0.85520.35	64
16	0.20045.04	8.02608.01	8.55700.15	0.86865.75	65
16	0.21382.34	8.00511.32	8.55503.60	0.88202.15	66
17	0.22718.72	8.88400.32	8,55305:30	0.80538.54	67
18	0.24055113	8.86616-47	8.55203.05	0.00874 04	68
in l	0 25201.52	8.84872.51	8,55010.12	0.02211'34	60
20	0,26727.92	8,83247.65	8,54840.62	0,93547.73	70
21	0.28064.22	8.81727.12	8.54668.24	0.04884.13	71
22	0,20004 32	8 80201-82	8 64601.74	0.06220.52	1 72
22	0,29400 72	8 78062.02	8 54240.80	0.07556.02	1 72
23	0,3073711	8 77702:02	8 64186.47	0,97550 92	13
24	0,52075 51	8 7651518	8 54025.20	1,00220.71	1.52
21	0,33409 90	8 75202.54	8 51800.17	1,00229 /1	142
20	0,34/40 30	8 74222187	8 57740.01	1,0130011	1 45
26	0,30002 70	8 72228.51	8 535149 91	1,01902 30	1 48
20	0,37419.09	8,73320 51	8 53 (82) 25	1,04230 90	10
29	0,30755 40	8 71 47 0 27	8 53256.52	1,05575 30	162
30	0,40091.98	0,71472-42	0,53350 52	1,00911-09	00
31	0,41428.28	8,70613.55	8,53233.99	1,08248.09	181
32	0,42764.68	8,69796.63	8,53115.50	1,09584.40	82
33	0,44101.07	8,69018.87	8,53000.00	1,10920.88	83
34	0,45437'47	8,68277.75	8,52890.07	1,12257.28	84
35	0,46773.87	8,67570.97	8,52782.86	1,13593.67	1 85
36	0,48110.20	8,66896.42	8,52079.10	1,14930.07	80
37	0,49446.66	8,66252.10	8,52578.84	1,16266.47	87
38	0,50783.05	8,65636.44	8,52481.77	1,17602 86	88
39	0,52119.45	8,65047.58	8,52387.86	1,18939.26	89
40	0,53455.85	8,64484.10	8,52296.98	1,20275.65	90
41	0,54792.24	8,63944.58	8,52209.04	1,21612.05	91
42	0,56128.64	8,63427.75	8,52123.93	1,22948.45	92
43 I	0,57465.03	8,62932.37	8,52041.56	1,24284 84	93
44	0,58801.43	8,62457.34	8,51961.84	1,25621.24	94
45	0,60137.83	8,62001.62	8,51884.67	1,26957 64	1 95
46	0,61474.22	8,61564.23	8,51809.97	1,28294.03	96
47	0.62810.62	8,61144.26	8,51737 66	1,20630 43	97
<b>48</b>	0.64147.02	8,60740.86	8,51667.65	1,30066.82	68
40	0.65483.41	8.60353.23	8,51500.87	1,32303'22	60
22	0.66810.81	8,50080.62	8.61534.25	1.33630.62	100
	-,	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	8.40486.00	-100-07 00	Peru
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I	0,01380.01	0.01380101	0444		_
-		0,01309.01	8,00040.02	0,70839*31	51
2	0,02778.01	9,71974.96	8,60315.55	0,72228.31	52
3	0,04167.02	9,55051.08	8,50007.00	0,73617.32	53
4	0.05556 02	0.43238.76	8,50000.00	0.75006.33	54
Ś.	0.00045.03	0.34225.00	8.50206.07	0.76305.33	55
6	0.08334.04	0.26081.62	8 50112.62	0 77784.24	- 56
7	0.00722.04	0 20057.41	8 5820.84	0 701 72.24	57
Ś –	0.11112.05	0.15824:08	8 -8-77-28	0.80(62.25	26
ŏ	0.12501.05	0 11272.80	8 58224.47	0 81051.20	50
- 1 <u>0</u>	0.12800.06	0.07456.42	8 58081:02	0.82240.26	60
		9,01430 43	00.	- 0. hereinen	<u> </u>
	0,15270-07	9,03972.87	0,57040.52	0,04720-37	62
14	0,10000007	9,00040 04	0,57020 02	0,00110 3/	62
13	0,1005/08	8,90010 10	0,57402.93	0,07507 30	6.
14	0,19440.08	0,95444 39	0,57193.13	0,00000.39	64
15	0,20035-00	0,93089.00	8,50990.90	0,90285.39	22
10	0,22224.10	0,00923.57	0,50/95 93	0,91074.40	6-
- 12	0,23013.10	0,00924'38	0,50007.02	0,93003.40	07
10	0,25002.11	<b>0,</b> 87072 <b>.</b> 07	8,50420.01	0,94452.41	08
19	0,20301-11	0,05350.37	0,50251.72	0,95841 42	09
20	0,27780'12	0,03745.51	8,50083.01	0,97230.42	⁷⁰
21	0,29169.13	8,82245.73	8,55920.23	0,98619.43	71
22	0,30558.13	8,80840.92	8,55763.15	1,00008.43	72
23	0,31947.14	8,79522.32	8,55611.56	1,01397.44	73
24	0,33336.14	8,78282.30	8,55465.23	1,02780.45	74
25	0,34725.15	8,77114.14	8,55323.98	1,04175.45	75
26	0,36114.10	8,70011.94	8,55187.62	1,05564.40	70
27	0,37503-16	8,74970.45	8,55055.96	1,00953.40	177
28	0,38892.17	8,73985.00	8,54928.82	1,08342.47	178
29	0,40281.17	8,73051.44	8,54800.03	1,09731.48	1 79
30	0,41070-18	8,72105.99	8,54087.40	1,11120-48	80
31	0,43059.19	8,71325.20	8,54572.89	1,12509.49	81
32	0,44448.19	8,70526.28	8,54402.24	1,13898.49	82
33	0,45837.20	8,69766.18	8,54355.34	1,15287.50	83
34	0,47226.21	0,00042.48	8,54252.05	1,16676•51	84
35	0,48615.21	×,68352.80	8,54152.24	1,18005-51	85
36	0,50004.22	8,67695-24	8,54055.79	1,19454*52	80
37	0,51393.22	8,67067.67	8,53962.59	1,20843*52	87
38	0,52782*23	8,66468.37	8,53872.51	1,22232.53	88
39	0,54171*24	8,65895.73	8,53785.45	1,23021*54	89
40	0,55560.24	8,65348.21	8,53701.28	1,25010.54	90
41	0,56949.25	8,64824.42	8,53619'93	1,26399.55	91
42	0,58338.25	8,64,323.07	8,53541.28	1,27788*55	92
43	0,59727.26	8,63842.97	8,53465.23	1,29177.56	93
44	0,61116-27	8,63382.97	8,53391.71	1,30566.57	94
45	0,62505.27	8,62942.06	8,53320.63	1,31955.57	95
46	0,63894*28	8,62519.25	8,53251.89	1,33344.58	96
47	0,65283.28	8,62113.63	8,53185.41	1,34733.58	97
48	0,66672.29	8,61724.36	8,53121.14	1,36122.59	98
49	0,68061.30	8,61350.65	8,53058.96	1,37511.60	99
50	0,69450.30	8,60991.73	8,52998.83	1,38900.60	100
- 1			8.51188.34		Perp.

3 B For Cent.

Years	Log. ".	Log. a".	Log. an.	Log. 1".	Years
1	0,01441.55	0,01441.55	8,61658.14	0,73519.17	51
2	0,02883.10	9,72053.35	8,61339.61	0,74960.72	52
3	0,04324.00	9,55155.02	8,61033.67	0,76402*27	53
4	0,05766.21	9,43367 98	8,60739.76	0,77843.82	54
5	0,07207.70	9,34379 82	8,60457.33	0,79285.37	55
6	0,08649.31	9,27160.56	8,60185.85	0,80726.93	50
7	0,10090.87	9,21160.74	8,59924.85	0,82168.48	57
8	0,11532.42	9,16052.46	8,59673.85	0,83610.03	58
9	0,12973.97	9,11624.14	8,59432.41	0,85051.58	59
10	0,14415.52	9,07731.34	8,59200.13	0,86493*14	60
11	0,15857.07	9,04271.06	8,58976.61	<b>0,8</b> 7934 [.] 69	61
12	0,17298.03	9,01167'24	8,58761.47	0,89376-24	62
13	0,18740.18	8,98362.11	8,58554.37	0,90817.79	63
14	0,20181.73	8,95810.76	8,58354.97	0,92259*34	64
15	0,21023.28	8,93477.62	8,58162.94	0,93700.90	05
10	0,23004.84	8,91333.99	8,57977.98	0,95142.42	66
17	0,24500.39	8,89356.40	8,57799.81	0,96584.00	67
18	0,25947.94	8,87525.43	8,57628.15	0,98025.55	68
- 19	0,27389.49	8,85824.80	8,57462.75	0,99467*11	69
20	0,28831.05	8,84240.71	8,57303.32	1,00908.00	70
21	0,30272.60	8,82761.44	8,57149.67	1,02350.21	71
22	0,31714.12	8,81376.87	8,57001.56	1,03791.76	72
23	0,33155.70	8,80078.24	8,56858.74	1,05233-31	73
24	0,34597.25	8,78857.90	8,56721.04	1,06674.87	74
25	0,36038.81	8,77709.16	8,56588.25	1,08116.42	75
26	0,37480.36	8,76626.12	8,56460.18	1,09557'97	76
27	0,38921.91	8,75603.53	8,56336.65	1,10999.52	77
28	0,40363.46	8,74636.72	8,56217.50	1,12441.08	78
29	0,41805.02	8,73721.51	8,56102.52	1,13882.63	79
30	0,43246.57	8,72854.17	8,55991.60	1,15324.18	80
31	0,44688.12	8,72031.32	8,55884.57	1,16765.73	81
32	0,46129.67	8,71249.89	8,55781.29	1,18207.29	82
33	0,47571.22	8,70507.13	8,55681.61	1,19648.84	83
34	0,49012.78	8,69800.50	8,55585.40	1,21090.39	84
35	0,50454.33	8,69127.71	8,55492.53	1,22531.94	85
36	0,51895.88	8,68486.66	8,55402.88	1,23973.49	86
37	0,53337.43	8,67875.41	8,55316.34	1,25415.05	87
38	0,54778.99	8,67292.19	8,55232.79	1,26856.60	88
39	0,56220.54	8,66735.37	8,55152.12	1,28298.15	89
40	0,57662.09	8,66203.45	8,55074.23	1,29739.70	90
41	0,59103.64	8,65695.01	8,54999.00	1,31181.26	91
42	0,60545.19	8,65208.77	8,54926.35	1,32622.81	92
43	0,61986.75	8,64743 53	8,54856.21	1,34064.36	93
44 1	0,63428.30	8,64298.18	8,54788.44	1,35505.91	94
45	0,64869.85	8,63871.66	8,54723.01	1,36947.46	95
46	0,66311.40	8,63463.02	8,54659.79	1,38389.02	96
47	0,67752.96	8,63071.35	8,54598.73	1,39830.57	97
48	0,69194.51	8,62695.79	8,54539.76	1,41272.12	98
49	0,70636.06	8,62335.56	8,54482.77	1,42713.67	99
50	0,72077.61	8,61989.91	8,54427.70	1,44155.23	100
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 $3rac{1}{2}$  Per Cent.

Years	Log. 7".	Log. an.	Log. a".	Log. r.	Years
1	0,01494.03	0,01494.03	8,62656.17	0,76195.78	51
2	0,02988.07	9,72131.63	8,02350 03	0,77089.82	52
3	0,04482.10	9,55258.81	8,02050.28	0,79183.85	53
4	0,05976.14	9,43496.97	8,01774-35	0,80077.89	54
5	0,07470.17	9.34533.72	8,01503.00	0,82171 92	55
6	0,08964.21	9,27339.07	8,61243.73	0,83005.90	50
7	0,10458.24	9,21363.59	8,00994.00	0,85159.99	57
8	0,11952.28	9,16279.32	8,00754.10	0,80054.03	50
.9	0,13440.31	9,11874.74	8,00523.07	0,88148.00	1 59
10	0,14940.35	9,08005.39	8,00302-11	0,89042.10	00
II	0,16434.38	9,04568.27	8,60089.11	0,91130-13	01
12	0,17928.42	9,01487.30	0,59884.30	0,92030-17	62
13	0,19422.45	8,98704.74	8,59087.33	0,04124-20	123
14	0,20910.49	8,90175.07	0,59497.07	0,95018-24	64
15	0,22410.52	8,93804.51	0,59315.00	0,9/112 27	68
10	0,23904.50	8,01742.58	8,50140-20	0,98000.31	67
17	0,25398.59	8,89780.42	0,509/1.42	1,00100 34	68
10	0,20802.03	0,07970.57	0,50000 95	1,01504 30	60
19	0,28380.00	8,80290.78	8 58602.01	1,03080 41	70
20	0,29880 70	0,04/33 25	0,50502 01		
21	0,31374.73	8,83274.20	0,50357 02	1,00070-40	1 /1
22	0,32808.77	8,81909.07	0,50217.40	1,07570.52	12
23	0,34302.80	8,80030.70	8,50002.92	1,00004-55	13
24	0,35850.84	8,79429.80	0,57953 39	1,10550'59	174
25	0,37350.87	8,78300.29	8 57020 00	1,12052.02	12
20	0,38844.91	8,77230-13	8 57700 30	1,13540.00	1 77
27	0,40330.04	0,7023215	8 57 592 53	1 16524.72	1 48
20	0,41032.90	8 7 1 2 6 7 1	8 57272-21	1.18028.76	70
30	0,43327 01	8.73536.00	8,57269.61	1,19522-80	80
3-	o, 4607.008	8 00001-60	8 57760.65	1.21016:82	81
31	0,40315.00	8 71067.52	8,57072.20	1.22510.87	82
34	0,47009 12	8 71241.75	8, \$6080.30	1.24004.00	83
33	0,49303 15	8 70551.87	8, (800.83	1.25408.04	84
25	0,50/9/ 19	8 60805.57	8.56804.46	1.26002.07	85
26	0.52785.26	8.60270.74	8.56721.18	1,28487-01	86
30	0.55270.20	8.68675.46	8,56640.87	1,29981.04	87
38	0.56773-33	8.68107.06	8,56563 41	1,31475.08	88
20	0,58267.26	8.67566.61	8,56488.71	1,32069.11	89
40	0,59761.40	8,67049.89	8,56416.65	1,34463.15	90
	0.61255.43	8.66556.43	8,56347.14	1,35957.18	91
42	0.62740.47	8.66084.02	8,56280.00	1,37451-22	92
42	0.64243.50	8.65634.16	8,56215 41	1,38945.25	93
44	0.65737.54	8.65203.04	8,56153.00	1,40439.29	94
45	0.67231.67	8.64700.53	8,56092.70	1,41933-32	95
46	0.68725 61	8,64395.66	8,56034.60	1,43427.36	96
47	0.70210 64	8,64017.52	8,55978.64	1,44921.39	97
48	0.71713.68	8,63655.27	8,55924.54	1,46415.43	98
40	0.73207.71	8,63308.11	8,55872.35	1,47909.46	99
50	0,74701 75	8,62975.31	8,55821.96	1,49403.50	100
			8,54406.80		Perp

3 5 Per Cent.

Vears	Log. r.	Log. a.	Log. an.	Log. r.	Vests
	0.01546:45	0.01546:45	8 62641-15	0 58860:17	
	0,02002.01	0.72200.80	8 62247:00	0.80415:62	1 54
2	0,0,0092 91	0,55262.44	8 62065:02	0,00419 03	22
3	0,04039 30	9.35302 44	8 6220 462	0,01902.08	53
4	0,00105 02	9,43025 72	8 62525/94 02	0,0,5500 54	54
Ź	0,07732 27	9.3400, 31	0,02535 20	0,05054.99	55
	0,09278.73	9,2751719	0,02200-45	0,00001-44	50
7	0,10025-10	9,21505.94	8,02047'09	0,88147'90	57
ð	0,12371.03	9,10505.00	0,01010-52	0,89094.35	58
9	0,13918.09	9,12124.02	8,01598.50	0,91240.81	59
10	0,15404.54	9,08278.59	8,01387.22	0,92787*20	60
п	0,17011.00	9,04864.47	8,61184.31	0,94333.72	61
12	0,18557.45	9,01800.33	8,00089.39	0,95880.17	62
13	0,20103.01	8,99040.07	8,60802.13	0,97426*62	63
- 14	0,21650.36	8,96539.11	8,60622.17	0,98973*08	64
15	0,23196.82	8,94249.77	8,60449.21	1,00519.53	65
16	0,24743.27	8,92149.36	8,60282.94	1,02065*99	66
17	0,26289.72	8,90214.42	8,60123.11	1,03612.44	67
18	0,27836.18	8,88425.49	8,59969.41	1,05158.90	68
19	0,29382.63	8,86766-32	8,59821.61	1,06705.35	60
2Ó	0,30929.09	8,85223.13	8,59679•46	1,08251.81	70
21	0,32475.54	8,83784.18	8,59542.71	1,09798.26	71
22	0,34022.00	8,82439.36	8,59411.16	1,11344.71	72
23	0,35568.45	8,81179.91	8,59284 57	1,12891.17	73
24	0,37114.90	8,79998-20	8,59162.77	1,14437 62	74
25	0,38661.36	8,78887-52	8,50045 57	1,15984.08	75
26	0,40207.81	8,77841.97	8.58932.74	1.17530.53	176
27	0,41754 27	8,76856-32	8.58824.15	1.10076.00	77
28	0,43300 72	8,75925 90	8.58710.61	1.20623.44	78
20	0,44847.18	8.75046.55	8.58618.07	1.22160.80	70
30	0,46393 63	8,74214.50	8,58522.07	1,23716.35	80
31	0,47940.09	8,73426.39	8,58428.77	1,25262.80	81
32	0,49486 54	8,72679.19	8.58338 01	1,26800.26	82
33	0,51032.00	8,71970.10	8,58252-38	1.28355.71	83
34	0,52579.45	8,71296.62	8.58160.04	1.20002.17	84
35	0,54125.00	8,70656-48	8.58088.76	1.31448.62	85
36	0,55672.36	8,70047.54	8.58011.44	1.32005.07	86
37	0,57218-81	8,60467 80	8.57036.05	1.34541.53	87
38	0.58765.27	8.68015-74	8.57865-18	1.20087-08	88
30	0.60311.72	8.68380.40	8.57700.02	1.27624.44	80
40	0,61858.17	8,67887.63	8,57729.41	1,39180.89	90
41	0,63404.63	8,67408.76	8.57665.23	1.40727.25	01
42	0,64951 08	8,66051 50	8.57603.27	1.42273.80	02
43	0.66407.54	8,66514.04	8.57543.75	1.43820.26	02
44	0,68043.00	8,66007.60	8.57486.30	1.45366.71	04
45	0.60500.45	8.6:698.70	8.57430.04	1.46012.16	1 67
46	0.71130.00	8.65317.20	8.57277.57	1.48450.62	1 28
47	0.72683.25	8.64052.28	8 57226:15	1 :0006:07	07
78	0.74220 81	8.64692.02	8 57276.57	1,5000007	1 %
40	0.75776.26	8.64268.44	8 57228.79	1,51,552 53	1 90
50	0.77322.72	8.63048.08	8 67182.77	1 5 4645 44	1.29
50	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0,0,0,0,00	8.55030-80	-,54045 44	Perp.

Years	Log. r.	Log. a*.	Log. a*.	Log. r*.	Years
r	0,01598.81	0,01598.81	8,64613.25	0,81539.34	51
2	0,03197.62	9,72287.86	8,64330.60	0,83138-15	52
3	0,04796.43	9,55465.88	8,64060.06	0,84736.96	53
4	0,06305.24	9,43754.25	8.63800 81	0,86335.77	54
5	0,07004.05	9,34840.59	8.63552.38	0.87034 58	1 55
ŏ	0.00502.86	0.27604.02	8.63314.26	0.80533.30	1 26
7	0.11101.67	0.21767.70	8.63085.00	0.01132'20	57
- 8	0.12700.48	0.16731.26	8 62867.00	0.02721.01	126
ă	0 14280.20	0.12272.70	8 62657.14	0.04220.82	20
	0 1 5088.11	0.08550.04	8 62455-24	0.05028.62	122
	0,15900 11	9,00330 94	0,02455 /4	0,95,920 03	00
	0,17580.92	9,05159.71	8,02202.50	0,97527.44	01
12	0,19185.73	0,02124.02	8,02077.05	0,99120-25	02
13	0,20784.54	8,99380.12	8,01899.00	1,00725'00	03
· 14	0,22383.35	8,90901.11	8,01728.18	1,02323.87	64
15	0,23982.10	8,94033.40	8,61564.11	1,03922.09	65
16	0,25580.97	8,92554.32	8,61406.50	1,05521.20	66
17	0,27179.78	8,90640.40	8,61255.26	1,07120.31	67
18	0,28778.59	8,88872.20	8,61109.89	1,08719.12	68
10	0,30377.40	8,87233.45	8,60070.26	1,10317.93	60
20	0,31976.21	8,85710.38	8,60836.09	1,11916.74	70
21	0,33575.02	8,84291.25	8,60707.15	1,13515.55	71
22	0,35173.83	8,82965.95	8,60583.25	1,15114.36	73
23	0,36772.64	8,81725.72	8,60464.16	1,16713.17	73
24	0.38371.45	8,80562.03	8.60340 67	1,18311.98	74
25	0.30070.26	8.79470.80	8.60230.62	1.10010.20	75
26	0.41500.07	8.78443.60	8.60133.80	1.21500.00	1 56
27	0.43167.88	8.77476.00	8,60022.05	1.23108.41	1 77
- 28	0.44766.70	8.76562.42	8,50024.21	1.24707.22	1 48
20	0 46265.51	8 75701.55	8 50840.11	1.26206:02	1 70
30	0.47064.32	8,74886.70	8,59749.60	1,27904.84	80
21	0 40562.12	8 74115-52	8 50662.54	1 20502.65	81
31	0,49505 15	8 7228 4.05	8 505 58:50	1,2,102.46	1 82
32	0,51101 94	8 72602.22	8 10408-22	1,31102.40	182
33	0,52/00 /5	8 72034 87	8 59490 22	1,32/01 2/	83
34	0,54359 50	8 77 41 01 50	8,59420 /1	1,34300 09	04
35	0,55950 37	0,71410 50	0,5934013	1,33090 90	1 82
30	0,5755710	8,7001710	0,59274 37	1,3/49/ /1	
37	0,59155.99	0,70252-72	0,59205.31	1,39090.52	07
38	0,00754.90	8,09715.00	8,59138.85	1,40095-33	00
39	0,02353.01	8,00204.10	0,59074.89	1,42204.14	89
40	0,03952.42	8,08710.73	8,59013.33	1,43892.95	90
<b>4</b> I	0,65551.23	8,68252.09	8,58954.08	1,45491.76	91
42	0,07150.04	8,07808.90	8,58897.05	1,47090.57	92
43	0,68748.85	8,67385.97	8,58842.14	1,48689.38	93
44	0,70347.66	8,66982'19	8,58789.29	1,50288.19	94
45	0,71946.47	8,66596.52	8,58738.41	1,51887.00	95
4ŏ	0,73545.28	8,66228 01	8,58689.42	1,53485.81	60
47	0,75144.10	8,65875.75	8,58642.20	1,55084.62	97
48	0.76742.01	8,65538 91	8,58506.86	1,56683.43	<u> 98</u>
40	0.78341 2	8,65216.60	8,58553.13	1,58282.24	60
			0.0	<b>1</b> 00	1 11
50	0.70040.23	8.04008.37	8.58511.03	1,50881.02	100

 $3\frac{3}{4}$  Per Cent.

Years	Log. 7ª.	Log. a.,	Log. a".	Log. r*.	Years
I	0,01651.10	0,01651.10	8,65572.64	0,84206.29	51
2	0,03302.51	9,72365.81	8,65301.26	0,85857.39	52
3	0,04953 31	9,55569.16	8,65041.60	0,87508.50	53
4	0,06604.41	9,43882.53	8,64793.08	0,89159.60	54
5	0,08255.52	9,34993.50	8,04555.17	0,90810-70	55
6	0,09900 02	9,27872.24	8,64327.35	0,92401 81	56
7	0,11557.73	9,21909.15	8,64109.10	0,94112.91	57
8	0,13208.83	9,10950.32	8,03900.14	0,95704.01	58
9	0,14859.93	9,12022.23	8,03099.80	0,97415.12	59
10	0,10511.04	9,08822.45	8,03507.92	0,99000-22	60
11	0,18162.14	9,05453.96	8,63323.94	1,00717.32	61
12	0,19813.24	9,02440.60	8,63147.56	1,02368.43	62
13	0,21464•35	8,99724.88	8,62978.43	1,04019.53	63
14	0,23115.45	8,97261.65	8,02810.23	1,05070.64	64
15	0,24700.50	8,95015.42	8,02000.05	1,07321.74	65
16	0,20417.66	8,92957.49	8,02511.40	1,08972.84	66
17	0,28068.70	8,91064.39	8,02368.20	1,10623.95	67
18	0,29719.87	8,89310'72	8,02230.79	1,12275.05	68
19	0,31370.97	8,87098.17	8,02098.91	1,13920.15	69
20	0,33022.07	8,80195.01	8,01972.33	1,15577-20	70
21	<b>9</b> ,34673·18	8,84795.47	8,61850.82	1,17228.36	71
22	0,36324.28	8,83489.44	8,61734.17	1,18879.46	72
23	0,37975.38	8,82268.10	8,61622.15	1,20530.57	73
24	0,39626.49	8,81124.08	8,61514.59	1,22181.67	74
25	0,41277.59	8,80050.41	8,61411.30	1,23832.78	75
26	0,42928.70	8,79041.29	8,61312 <b>.0</b> 8	1,25483.88	76
27	0,44579.80	8,78091.47	8,61216.79	1,27134.98	77
28	0,40230.90	8,77190.29	8,61125.24	1,28786.09	78
29	0,47882.01	8,76351.60	8,61037.30	1,30437.19	79
30	0,49533.11	8,75553.00	8,60952.79	1,32088.29	80
31	0,51184.21	8,74799.08	8,60871.60	1,33739.40	81
32	0,52835.32	8,74084 85	8,60730.58	1,35390.50	82
33	0,54486.42	8,73408.17	8,60718.60	1,37041.61	83
34	0,56137.53	8,72766.54	8,60646.54	1,38692.71	84
35	0,577 <b>8</b> 8.63	8,72157.69	8,60577.28	1,40343.81	85
- 36	0,59439'73	8,71579.50	8,60510.72	1,41994.92	86
37	0,01090.84	8,71030.00	8,60446.73	1,43646.02	87
- 38	0,02741.94	8,70507.00	8,00385-22	1,45297.12	88
39	0,04393.04	8,70010.51	8,60320.08	1,46948.23	89
40	0,00044.15	8,09537-20	8,60269.23	1,48599.33	90
4I	0,67695.25	8,69086.51	8,60214.55	1,50250.43	91
42	0,69346.35	8,68656.93	8,60162.00	1,51901.54	92
43	0,70997.40	8,68247.36	8,60111.46	1,53552.64	93
- 44	0,72048.50	8,07850.68	8,00062.86	1,55203.75	94
45	0,74299'07	0,07483.87	8,00010.13	1,50854.85	95
40	0,75950.77	0,07127.97	a, 59971°18	1,58505.95	96
47	0,77001.87	0,00700'07	a,59927 <b>.</b> 96	1,00157.00	97
48	0,79252.98	0,00403.35	0,59880.40	1,01808.10	98
49	0,00004.08	8 6:8:6:2	0,59040-42	1,03459.20	99
50	0,02555.10	0,05010.35	8,50007.00	1,05110.37	100
		1	0,50027.17		prerp.

3 f Per Cent.

		1 1		Tom	1
Years	Log. r.	Log. a.	Log. a".	Log. r.	
I	0,01703.33	0,01703.33	8,66519.48	0,86870.03	51
2	0,03406.67	9,72443 65	8,66258.90	o,88573°36	52
3	0,05110.00	9.55672.28	8,66009.81	0,90276.70	53
4	0,06813.34	9.44010.59	8,65771.64	0,91980.03	54
5	0,08516.67	9,35146.22	8,65543.85	0,93683.37	55
6	0,10220'00	9,28049.16	8,65325.96	0,95386.70	50
7	0,11923.34	9,22170.01	8,65117.45	0,97090.03	57
8	0,13626.67	9,17180.78	8,64917'91	0,98793.37	58
9	0,15330.01	9,12869.97	8,64726.91	1,00496.70	59
òı	0,17033.34	9,09093.12	8,64544.04	1,02200.04	60
11	0, 18736.67	9,05747.23	8,64368.93	1,03903.37	61
12	0,20440.01	9,02756.23	8,64201.22	1,05606.70	02
13	0,22143.34	9,00062.38	8,64040.56	1,07310.04	03
14	0,23846.68	8,97620.77	8,63886 64	1,09013.32	04
15	0,25550.01	8,95395 82	8.63739.16	1,10716.71	95
īĞ	0,27253.34	8,93358.85	8,63597 82	1,12420.04	60
17	0,28956.68	8,91486.40	8,63462.35	1,14123.37	07
18	0,30660.01	8,89759.04	8,63332.48	1,15826.71	68
19	0,32363.34	8,88160.50	8,63207.97	1,17530.04	69
2ó	0,34066.68	8,86677.02	8,63088.59	1,19233.38	70
21	0,35770'01	8,85296.84	8,62974-11	1,20936.71	71
22	0,37473*35	8,84009.86	8,62864.32	1,22640.04	72
23	0,39176.68	8,82807.35	8,62759.01	1,24343.38	73
24	0,40880.01	8,81681.66	8,62657.99	1,26046.71	74
25	0,42583.35	8,80626-12	8,62561.08	1,27750.04	75
26	0,44286.68	8.79634.80	8,62468.09	1,29453.38	70
27	0,45990 02	8,78702.48	8,62378.89	1,31156.71	77
38	0,47693.35	8,77824.52	8,62293.26	1,32860.05	78
20	0.40306.68	8,76996.73	8,62211.11	1,34563.38	79
30	0,51100.02	8,76215.40	8,62132.25	1,36266.71	80
31	0,52803.35	8,75477.14	8,62056.56	1,37970.05	81
32	0,54506.60	8,74778.92	8,61983.91	1,39673.38	82
33	0,56210.02	8,74117.97	8,61914.16	1,41376.72	83
34	0.57913.35	8,73491.80	8,61847.21	1,43080.05	84
35	0.50616.60	8,72898.10	8,61782.92	1,44783.38	85
36	0.01320.03	8,72334.80	8,61721.20	1,46486.72	86
37	0.63023.36	8,71799.95	8,61661.94	1,48190.05	87
38	0.64726.60	8,71201.83	8,61605.03	1,49893.39	88
30	0.66430.02	8,70808.79	8,61550.38	1,51596.72	89
40	0,68133.36	8,70349.33	8,61497.89	1,53300.05	90
41	0,60836.60	8,69912.09	8,61447.48	1,55003.39	91
42	0,71540.03	8,69495.78	8,61399.08	1,56706.72	92
43	0.73243.36	8,69099.20	8,61352.58	1,58410.06	93
44	0.74046 60	8,68721.27	8,61307.01	1,60113.39	94
45	0.76650.02	8,68360.94	8,61265.01	1,61816.72	95
- <u>7</u> 6	0.78353.36	8,68017.27	8,61223.80	1,63520.06	96
47	0.80056.60	8,67689.37	8,61184.21	1,65223.39	97
78	0.81760.02	8.67376.30	8,61146.18	1,66926.73	98
40	0.83463.36	8.67077.56	8,61109.64	1,68630.06	99
50	0.85166.70	8,66702.16	8,61074 53	1,70333.39	100
	.,.,.	,,	8,60206.00	1	Perp.

4 Per Cent.

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 $4\frac{1}{8}$  Per Cent.

Years	Log. r ^a .	Log. an.	Log. a ⁿ .	Log. r*.	Years
τ	0,01755.50	0,01755.50	8,67453.95	0,89530.57	51
2	0,03511.00	9,72521.38	8,67203.78	0,91286.07	52
3	0,05200.50	9.55775-22	8,66964.88	0,93041.58	53
- 4 i	0,07022.01	9.44138.41	8,66736.68	0,94797.08	54
5	0,08777.51	9,35298.50	8,66518.65	0,96552.58	55
0	0,10533.01	9,28225.70	8,66310.27	0,98308.08	56
7	0,12288.51	9,22370.38	8,66111.00	1,00063.58	57
ð	0,14044.01	9,17404.65	8,65920.66	1,01819.08	58
_ 9	0,15799.51	9,13110.98	8,65738.54	1,03574.58	59
10	0,17555.01	9,09362.95	8,65564.36	1,05,330.00	60
п	0,19310.52	9,06039.52	8,65397.73	1,07085.59	61
12	0,21000.02	9,03070.60	8,65238.31	1,08841.09	62
13	0,22821.52	9,00398.60	8,65085.75	1,10596.59	63
14	0,24577.02	8,97978.44	8,64939.74	1,12352.09	64
-15	0,26332.52	8,95774.61	8,64799.98	1,14107.59	65
10	0,28088.02	8,93758.43	8,64666'16	1,15863.10	66
17	0,29843.52	8,91906.43	8,64538.04	1,17618.60	67
18	0,31599.03	8,90199.19	8,64415.35	1,19374.10	68
19	<b>0</b> ,33354•53	8,88620.44	8,64297 84	1,21129.60	69
20	0,35110.03	8,87156.42	8,64185.29	1,22885.10	70
21	<b>0,368</b> 65.53	8,85795.38	8,64077.48	1,24640.60	71
22	0,38621.03	8,84527.23	8,63974.18	1,26306.10	72
23	<b>0,40</b> 376 <b>·</b> 53	8,83343.21	8,63875 20	1,28151 61	73
24	0,42132.03	8,82235.70	8,63780.36	1,29907.11	74
25	0,43887.54	8,81198.01	8,63689.47	1,31662.61	75
26	0,45643.04	8,80224.25	8,63602.38	1,33418.11	1 76
27	<b>0</b> ,47398.54	8,79309.17	8,63518.88	1,35173.61	77
28	0,49154.04	8,78448 13	8,63438.84	1,30929.11	78
29	0,50909.54	8,77636.97	8.63362.11	1,38684.61	70
30	<b>0,52665.0</b> 4	8,76871.95	8,63288.56	1,40440.12	86
31	0,54420.54	8,76149.70	8,63218.03	1,42105.62	81
32	0,56176.05	8,75467.20	8.63150.40	1,43051.12	82
33	0,57931.55	8,74821.68	8.63085 55	1.45706.62	82
34	0,59687.05	8.74210.64	8,63023.37	1.47462.12	84
35	0,61442.55	8,73631.76	8,62963.73	1,49217.62	85
36	0,63198.05	8,73083.04	8,62906.52	1,5097312	86
37	<b>0</b> ,64953.55	8.72562.48	8,62851.67	1,52728.63	87
38	0,66709.05	8,72068.34	8,62799.04	1,54484.13	88
39	0,68464.56	8,71599.02	8,62748 56	1.56230 63	80
40	0,70220.06	8,71153.00	8,62700 13	1,57995.13	90
41	0,71975.56	8,70728.94	8.62653.67	1.50750.63	OT I
42	0,73731.06	8,70325.53	8,62600.10	1.61506.13	02
4.3	0,75486.56	8,69941.61	8,62566.34	1.63261.63	03
44	0,77242.06	8,69576.03	8,62525.32	1.6:017.14	04
45	0,78997.56	8,69227 85	8,62485.95	1.66772.64	05
46	0,80753.07	8.68896 05	8,62448.18	1.68528.14	66
47	0,82508.57	8,68579.77	8,62411.92	1.70283.64	07
48	0,84264.07	8,68278.17	8,62377.15	1,72030'14	68
49	0,86019.57	8.67990-48	8,62343.77	1.73704.6	00
50	0,87775.07	8,67715.96	8,62311.74	1,75550.14	100
			8 61 6 42 40	-10004	Dama

Years	Log. r".	Log. a ⁿ .	Log. a ⁿ .	Log. r ⁿ .	Years
	0.01807.61	0,01807.61	8,68376.10	0.92187.92	51
2	0,03615.21	9,72599.01	8,68136 08	0,93995.53	52
3	0,05422.82	9,55878.01	8,67907 02	0,95803.14	53
4	0,07230.43	9,44266.01	8,67688.42	0,97610.74	54
5	0,09038.03	9,35450.62	8,67479.75	0,99418-35	55
6	0,10845.64	9,28401.84	8,67280 54	1.01225.90	50
7 1	0,12653.24	9,22570.20	8,67090.29	1,03033.50	57
. 8	0,14400'85	9,17027.92	8,00908.58	1,04841.17	58
9	0,10208.40	9,13303.29	8,00735.01	1,00048.78	59
10	0,18070.00	9,09031.94	8,00509-14	1,00450 30	4.
11	0,19883.07	9,00330.85	8,00410.04	1,10203.99	60
12	0,21091-26	9,03303.97	8 6611 4:22	1,120/1 59	62
13	0,23490.00	0,00733-55	8 6 5075 84	1,15686.81	64
14	0,25300 49	8 061 1180	8 6:842.42	1,17404.41	6
18	0.28021.70	8.04156.22	8.65716.70	1,10302.02	66
17	0.20720.21	8.02224.48	8.65505.66	1.21100.63	67
18	0.32536.01	8.00637.17	8.65470.78	1,22017.23	68
ta	0.34344.52	8,80078.01	8,65368 92	1,24724.84	69
20	0,36152-13	8,87633-24	8,65262.84	1,26532.45	70
21	<b>0,</b> 37959'73	8,86291-12	8,65161.33	1,28340.05	71
22	0,39767.34	8,85041.55	8,05004.18	1,30147.00	72
23	0,41574.95	8,83875 80	8,04071-21	1,31955-20	73
24	0,43382.55	8,82780.22	8,04882-20	1,33702.07	174
25	0,45190-10	8,81700-13	8 64715:40	1 27278:08	1 42
20	0,40007-77	8,00009.05	8 64627:20	1,3/3/0 00	1 47
28	0,40003 37	8 70067116	8 64562.51	1,40002'20	- 28
20	0,52420.58	8.78272.24	8.64400.80	1.42800.00	79
30	0,54228.19	8,77523.36	8,64422.30	1,44608.51	86
31	0,56035-80	8,76816-83	8,64356.61	1,46416.12	81
32	0,57843.40	8,76149.75	8,64293.68	1,48223.72	82
.3,3	0,59651.01	8,75519.36	8,64233.41	1,50031.33	83
34	0,01458.02	8,74923.13	8,04175'09	1,51838.93	12
35	0,03200.22	8,74358.80	8,04120-37	1,53040.54	86
30	0,05073.03	0,73024 30	8 64016:61	1 57261-75	87
37	0,00001 44	8 7 8 2 7 00	8 62067:07	1,50060.36	88
30	0,00000004	8 72281.26	8.62021.26	1.60876.07	80
39 40	0,72304.25	8,71948.36	8,63876.70	1,62684.57	90
41	0,74111.86	8,71537.12	8,63833.91	1,64492.18	91
42	0,75919.47	8,71146.29	8,63792.89	1,66299.79	92
43	0,77727.07	8,70774.66	8,63753.58	1,68107.39	93
44	0,79534.68	8,70421.13	8,03715.92	1,09915.00	94
45	0,81,342.29	8,70084.71	0,03079.81	1,71722.00	1 95
40	0,83149.89	8,09704.42	8 63613.04	1,73530-21	107
47	0,84957.50	0,09459.41	8 62580-26	1,77145.42	1 38
40	0.80705.11	8 68801-80	8 625 40.78	1.78053.02	00
49	0,005/2 /1	8 68627.01	8.63520 58	1.80760.64	100
50	0,90300 32	0,0002791	8,62838.89	,,	Perp.

4 1/4 Per Cent.

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4 3 Per Cent.

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Years	Log. 7 [*] .	Log. a.	Log. $a^*$	Log. r.	Years
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	I	0,01859.65	0,01859.65	8,69286.38	0,94842.09	51
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2	0,03719.30	9,72676.52	8,69055.98	0,96701.74	52
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3	0,05578.95	9,55980.63	8,68836.38	0,98561.39	53
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	4	0,07438-60	9,44393.37	8,68627.02	1,00421.04	54
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	5	0,09298.24	9,35602.35	8,68427.38	1,02280.69	55
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6	0,11157.89	9,28577.58	8.68236.96	1,04140.34	56
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7	0,13017.54	9,22769.65	8,68055.30	1,05999.98	57
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8	0,14877.19	9,17850.60	8,67881 98	1,07859.63	58
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	9	0,16736.84	9,13608.89	8,67716.57	1,09719.28	59
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10	0,18596-49	9,09900.10	8,67558.67	1,11578.93	60
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	11	0,20456114	9,06621.22	8,67407.93	1,13438.58	61
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12	0,22315.79	9,03696.18	8,67263.99	1,15208.23	62
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	13	0,24175.44	9,01067.23	8,67126.54	1,17157.88	63
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	14	0,26035.08	8.98689.51	8,66995.25	1,19017.53	64
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	15	0,27894.73	8,96527.40	8,66869.85	1,20877-18	65
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	16	0,29754.38	8,94552.24	8,66750.03	1,22736.82	66
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	17	0,31614.03	8,92740.58	8,66635.55	1,24596.47	67
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	18	o,33473 68	8,91073.00	8,66526.14	1,26456.12	68
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	19	0,35333.33	8,89533.21	8,66421 58	1,28315.78	60
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	0,37192.98	8,88107.48	8,66321.63	1,30175.42	70
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	21	0,39052.63	8,86784.06	8,66226.11	1.32035.07	71
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22	0,40912.27	8,85552.85	8,66134 77	1.33804.72	72
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23	0,42771 .92	8,84405.12	8,66047 44	1.35754.37	73
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	24	0,44631 57	8.83333.23	8,65963.04	1.37614.01	74
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	25	0,46491 22	8.82330.50	8.65884.00	1.30473.66	1 72
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	26	0,48350.87	8,81301.05	8.65807 72	1.41333.21	1 26
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	27	0,50210 52	8.80.00.64	8.65734 67	1.43102.06	77
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	28	0.52070.17	8.70681.64	8.65664.81	1.45052.61	1 78
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	0.53020.82	8.78002.88	8.65507.08	1.46012.26	1 70
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	30	0,55789.47	8.78169.64	8,65534.05	1,48771.01	80
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	31	0.57640-11	8.77478.56	8.65472.80	1.50621-56	81
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	32	0.50508.76	8.76826.60	8.65414.26	1,50031 50	82
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	32	0.61368.41	8.76211.02	8.65258.26	1,52491 21	82
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	34	0.63228.06	8 75620.21	8.65204-78	1,54,50 05	84
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	37	0.65087.71	8,75070.21	8.65252.52	1,50210 50	8
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	36	0.66047.36	8.74558.62	8.65204.46	1,50070.80	86
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	37	0.68807.01	8.74065-64	8.65157:50	1,59929 00	87
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	28	0. :0666.66	8 72508.50	8 65112.55	1,01/09 45	86
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	0.72526.21	8 72155.62	8 65060.54	1,0,040 10	80
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	39	0.74285.05	8 72725.50	8 65028-27	1,05508.40	09
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			0,12/35 50	0,0,000 3/	1,0/300 40	.90
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	41	0,70245 00	8,72330.70	8,04988.95	1,09228.05	91
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	44	0,70105 25	0,71950-14	0,04951.24	1,71087.09	92
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	43	0,79904.90	0,71590.45	8649901513	1,72947.34	93
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	44	0,01024 55	0,71250.02	0,04000.50	1,74800.99	94
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	45	0,03004-20	0,70931.03	0,04047 40	1,70000.64	95
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	40	0,05543.05	0,70022.51	0,04815.78	1,78520.29	90
40 0,0120;714 8,0026;49 0,047;50;40 1,82245;59 98 49 0,91122*79 8,60781*08 8,64728;59 1,84105*24 99 50 0,92982*44 8,69528*17 8,64701*96 1,85964*88 100	47	0,07403.50	0,70320.41	0,04785.44	1,80385.94	97
49 0,9112279 8,0978198 8,0472859 1,8410524 99 50 0,9298244 8,6952817 8,6470196 1,8596488 100	48	0,09203-14	0,70048.40	0,04750.40	1,82245.59	98
50 0,92902.44 0,09528.17 0,04701.90 1,85964.88 100	49	0,91122.79	0,09781.98	0,04720.59	1,84105.24	99
	50	0,92982.44	0,09528'17	0,04701.00	1,85964.88	100

	Log et	Log g*	Log at	Log m	
I CALL	Log. #	Log. a.	Lug. a.		Year:
1	0,01011.03	0,01911.63	8,70184.69	0,97493.08	51
2	0,03823.20	9,72753.93	8,09903.05	0,99404.71	52
3	0,05734.89	9,50083.09	8,09753.17	1,01310.34	53
4	0,07040.52	9,44520.50	8,09552.71	1,03227.97	54
5	0,00558.15	9,35753.70	8,09301.74	1,05139.00	55
0	0,11409.77	9,28752.94	8,09179-78	1,0/051-23	50
6	0,13301 40	9,22900 50	8,698,1106	1,00002.00	5%
0	0,15293 03	9,100/2 00	8 68682.47	1,100/4 40	50
	0,17204 00	9,13053 /9	8 68522110	1,12/00/11	29
10	0,19110 29	9,1010/45	0,00555,19	1,1409/ /4	60
11	0,21027.92	9,00910.01	0,00309.07	1,10009.37	101
12	0,22039.55	9,04007.27	8,08253.10	1,18521.00	02
13	0,24051-10	9,01399.07	0,00122.74	1,20432-03	63
14	0,20/02 01	8,99042.91	8 6797040 31	1,22344 20	64
15	0,20074.44	8,90901 41	8 67766.04	1,24255 09	1 22
10	0,30300 00	8,94940 50	8 67658:07	1,2010/ 52	67
	0,32497 09	8.01.00.67	8 67554 80	1,200/915	68
10	0,34409 32	8 80086.07	8 67456-22	1,29990 70	60
19	0,30320 95	8 88570.16	8 67262:00	1,31902 40	1 70
	0,30232 30	0,003/9 10	0,07302 09	1,55014 05	10
21	0,40144.21	8,87274.21	8,07272.20	1,35725.00	71
22	0,42055.84	8,80001.13	8,07180.30	1,37037.29	1 72
23	0,43907.47	8,84931 18	8,07104.37	1,39548.92	73
24	0,45879.10	0,0307074	8,07020.00	1,41400.55	74
25	0,47790.73	0,0209113	8,00051-25	1,43372 10	1 72
20	0,49702 30	8 81 1021 40	8 66811.51	1,45203 01	70
26	0,51013 08	8,80201.60	8 66746-27	1,4/195 44	14
20	0,55525 01	8 70528.62	8 66682.02	1,4910707	70
20	0,57348.87	8,78810.85	8.66624.36	1,52030.32	8c
50	•, 57, 540 • 7	0,7001103	9 66 46 71 40		0.
31	0,59200.50	0,70134.92	8,00507.43	1,54041.95	80
32	0,01172.13	0,77497 01	8 66 61 102	1,50753 50	82
33	0,03083.70	8 76220-74	8 66411.22	1,50005 21	84
34	0,04995 39	8 75702:06	8 66262 81	1,005/0 04	84
35	0.68818.65	8 75786:08	8.66218.40	1,64400.10	86
27	0,70720.27	8 74806:41	8.66274.08	1.66211.72	87
28	0.72641.00	8,74352'30	8.66233.48	1.68223.36	88
20	0.74552.53	8.73022.14	8.66103.80	1.70134.08	80
40	0,76465.16	8,73514.48	8,66155.86	1,72040.61	90
	0.78276.70	8.73127.01	8.66110.50	1.73058.24	01
41	0.80288.42	8,72761.18	8.66084.01	1.75860.87	02
43	0.82200.05	8,72413.12	8,66051.74	1,77781.50	93
44	0.84111.68	8,72082.64	8,66020.04	1,79693.13	94
45	0,86023.31	8,71768.73	8,65989.71	1,81604.76	95
46	0,87934.94	8,71470.45	8,65960.71	1,83516.39	96
47	0,89846.57	8,71186.91	8,65932.98	1,85428.02	97
48	0,91758.19	8,70917.31	8,65906.46	1,87339.65	98
49	0,93669.82	8,70660.87	8,65881.10	1,89251.28	99
50	0,95581.45	8,70416.90	8,65856.85	1,91162.90	100
-			8,65321.25		r.erb

4 1 Per Cent.

(295)

 $4\frac{5}{8}$  Per Cent.

'ears	Log. r.	Log. a [*] .	Log. a.	Log. r ⁿ .	Year
1	0,01963.55	0,01963.55	8,71071.30	1,00140'90	51
2	0,03927.09	9,72831.23	8,70859 26	1,02104.45	52
3	0,05890.64	9,56185.38	8,70657.58	1,04068.00	53
4	0,07854.19	9,44647.40	8,70465.67	1,06031.24	54
5	0,09817.74	9,35904.90	8,70283.03	1,07995.09	55
6	0,11781.28	9,28927.90	8,70109.20	1,09958.64	56
7	0,13744.83	9,23166.98	8,69943.69	1,11922.18	57
8	0,15708.38	9,18294 19	8,69786.08	1,13885.73	58
- 0 {	0,17671.92	9,14097.98	8,69635.97	1,15840.28	59
ιó	0, 19635 47	9,10433.93	8,69492 98	1,17812.83	60
11	0,21599.02	9,07199.05	8,69356.76	1,19776.37	61
12	0.23562.57	9,04317.27	8,69226.94	1,21739.92	62
13	0,25526.11	9,01730.84	8,69103.24	1,23703.47	63
14	0,27489.66	8,99394.89	8,68985.32	1,25667.01	64
15	0,29453.21	8,97273.83	8,68872.92	1,27630.56	65
ıŏ	0,31416.75	8,05338.00	8.68765 77	1.20504.11	66
17	0,33380.30	8,93566.93	8,68663.58	1,31557.66	67
18	0,35343.85	8,91938.21	8,68566 15	1.33521.20	68
10	0,37307 30	8,00436.58	8.68473.23	1.35484.75	60
20	0,39270.94	8,89048 29	8,68384.59	1,37448-30	70
21	0,412,34.40	8.87761.60	8,68300.05	1.30411.84	71
22	0,43198 04	8,86566.43	8,68210.30	1.41375.30	72
23	0.45161 58	8.85454 04	8.68142.44	1.43338.04	73
24	0.47125 12	8.84416 70	8.68060.03	1.45302.40	74
25	0.49088.68	8.83448 05	8.67008 05	1.47266:03	75
26	0.51052.22	8.82541.88	8.67032.11	1.40220-18	76
27	0.53015.77	8.81603.11	8.67868 20	1,51102'12	1 77
281	0.54070.32	8.80807.07	8.67807.40	1,521,56.67	68
20	0.50042 87	8.80140.62	8.67740.28	1.55120.22	70
30	0,58906.41	8,79447.03	8,67693.79	1,57083.77	80
31	0,60860.06	8.78785.06	8.67640.83	1.50047.32	81
32	0.62833.51	8.78163.38	8.67.00 27	1.61010.86	82
32	0.64707.05	8.77576.56	8.67542.00	1.62074.41	83
34	0.66760.60	8.77022.00	8.67405.00	1.64037.06	84
27	0.68724-15	8.70500.40	8.67451.00	1.66001.00	85
26	0.70687.70	8.70006.72	8.67400.80	1.68865.05	86
37	0.72051.24	8.75540.00	8.67260 77	1.70828.60	87
28	0.74614 70	8,75008.67	8 67221.45	1.72702.14	88
20	0 76578.24	8.74680.04	8 67204.85	1 74755-60	80
40	0,78541.88	8,74285.39	8,67259.91	1,76719.24	90
41	0.80505.43	8,73010.67	8.67226.54	1.78682.70	01
42	0.82468 08	8.73555.52	8.67104 66	1.80646.22	02
43	0.84432.53	8.73218 74	8.67164.22	1.82000.88	02
44	0.86306.07	8.72800.20	8.67135.14	1.84573.42	04
431	0.88350.62	8.72506.12	8.67107.38	1.86536.07	
78 I	0.00322*17	8.72308-25	8.67080.84	1.88:00.53	66
77	0.02286.71	8,72025.04	8.67055151	1.00464:07	1 07
76 I	0.04250-26	8 71 775.42	8 67021-20	1.02422-62	1%
40	0.06212.81	8 71 5 28 7 2	8 67008117	1 04201-16	90
49 I	0,00213 01	8 5130134	8 6608610	1,94391 10	199
20	0,90177.30	0,71494.24	8 66 1111	1,90354.71	Lam

 $4 \frac{3}{4}$  Per Cent.

ears	Log. r.	Log. a".	Log. a".	Log. r.	Yea
I	0,02015-40	0,02015.40	8,71946.35	1,02785.56	51
2	0,04030'81	9,72908.42	8,71743.01	1,04800.96	52
3	0,06046121	9,56287.51	8,71549.78	1,06816.37	53
4	0,08061.61	9,44774.06	8,71366.10	1,08831.77	54
5	0,10077'02	9,36055'72	8,71191.48	1,10847.17	55
6	0,12092.42	9,29102-49	8,71025 44	1,12862.58	56
7	0,14107.82	9,23364.92	8,70867.50	1,14877.98	57
8	0,16123.23	9,18515.00	8.70717 27	1,16803.38	58
9	0,18138.63	9,14341.46	8,70574.32	1,18068.70	1 50
ió	0,20154.03	9,10699.61	8,70438.30	1,20924.19	60
11	0.22160.43	9.07486.53	8,70308.84	1.22030.50	61
12	0.24184 81	0.04626.17	8.7018: 62	1.24055'00	62
12	0.20200.24	0.02000.78	8.70068.30	1.20070.40	62
14	0.28215.6	8.00745.47	8.60056.60	1.28085-80	64
171	0.20221.05	8.07644.60	8.60850.24	1,21001.21	67
18 1	0 22246:45	8 05720.72	8 60748 04	1 22016:61	66
17	0.24261-8	8.0207710	860652:44	1.25022:01	67
:6	0,26222.01	8 02267-61	860500-54	1,33032.01	66
10	0,30277 20	8 0088 1.70	8 60472:07	1,3/04/41	60
20	0.40308.00	8.80514.88	8.60380.54	1,39002 82	70
	0,40000145	8 990 (6100	8 001000	1,400,000	1/2
21	0,42323 47	0,00240 23	8,09310 05	1,43093 02	12
22	0,44330.07	0,07000 74	9,69234-29	1,45109.03	72
23	0,40354 27	0,05973.07	a,09102-10	1,47124.43	73
24	0,48309.08	0,04953 41	0,09093.20	1,49139.83	74
25	0,50,385.08	8,84001.27	8,09027.09	1,51155.24	75
20	0,52400.48	8,83111.39	8,08905.17	1,53170.04	1 70
27	0,54415.89	8,82278.54	8,08905.50	1,55180.04	77
28	0,56431.29	8,81498.08	8,08848.74	1,57201.45	78
29	0,58446.69	8,80765.87	8,08794.50	1,59216.85	79
30	0,60462.09	8,80078.20	8,68742.90	1,61232.25	80
31	0,62477.50	8,79431.72	8,68693*64	1,63247.66	81
32	0,64492.90	8,78823.40	8,68646.64	1,65263.06	82
33	0,66508 30	8,78250.53	8,68601.87	1,67278.46	83
34	0,68523.71	8,77710.58	8,68559.15	1,69293.87	84
35	0,70539.11	8,77201.31	8,68518.40	1,71309.27	85
36 I	0,72554.51	8,76720.63	8,68479.55	1,73324.67	86
37 1	0,74560 92	8,76266.67	8,68442.47	1,75340.07	87
81	0,76585.32	8,75837.68	8,68407.12	1,77355.48	88
io I	0.78600.72	8.75432.06	8,68373.30	1.79370 88	80
í	0,80616.13	8,75048.34	8,68341 22	1,81386.28	<u>9</u> ó
	0.82631.52	8,74685.14	8,68310.52	1.83401.60	01
	0.8/6/6 02	8.74241 22	8.68281.24	1.85417:00	02
17 1	0.86662.24	8.74015.42	8.68253.31	1.87432.40	07
13	0.88677.74	8 72706 68	8.68226.66	1.80447.00	04
4	0,000/7 74	8 72412.02	8 68201.22	1.01462.20	94
2	0,90093 14	8 731 26 23	8 68126.02	1.02478-70	1 25
0	0,92708.55	8 738 730 33	8 681 10 97	1,9,3470 70	90
7	0,94723.95	0,72072.94	6,00153.03	,95494 11	1 %
ø	0,90739.35	0,72022.99	0,00131.74	1,97509.51	90
19	0,98754.70	0.72305.71	0,08110.07	1,99524.91	.99
;o	1,00770.10	8,72100.37	8,08000.50	2,015.40.32	100
			5 h7hhh1*2h		ur ern

4 7 Per Cent.

Years	Log. r.	Log. an.	Log. a".	Log. r.	Years
	0,02067.20	0,02067.20	8,72810.03	1,05427.07	51
2	0.04134.30	0.72085.50	8.72615.06	1, 37494.26	52
3	0.06201.50	9.56389.48	8.72420.07	1,00561.46	53
4	0.08268.70	0.44000.52	8.72254.20	1.11628 66	54
- 2	0.10225.00	0.30206'24	8.72087.27	1.13605.86	66
2	0 12/02:18	0 20276-63	8 71028 60	1.15762.05	20
~	0 14470:28	0.22562:28	8 71778.02	1 17820.25	67
6	0,14470 30	9,23502 30	8 7 62 4 87	1 10807.45	26
	0,10537 50	9,10/35 44	8 71 408 77	1,1909/45	50
	0,10004 70	9,14504 20	8,71490 77	1,21904 05	22
	0,20071 97	9,10904-48	8,71309'41	1,24031 04	
11	0,22739.17	9,07773.07	8,71240.42	1,20000.04	01
12	0,24800.37	9,04933.97	8,71120.47	1,20100-24	02
13	0,20873.57	9,02389.47	8,71018.25	1,30233.44	03
14	0,28940.70	9,00094.00	8,70912.40	1,32300.03	04
15	0,31007.90	8,98013.97	8,70811.83	1,34307.83	05
10	0,33075.10	8,90118.75	8,70710.10	1,30435.03	00
12	0,35142.30	8,94385.53	8,70625.00	1,38502.22	07
18	0,37209.55	8,92794.91	8,70538.33	1,40509.42	68
- 19	0,39276.75	8,91330.63	8,70455.84	1,42030.02	69
20	0,41343.95	8,89978.94	8,70377.33	1,44703.82	70
21	0,43411.15	8,88728.13	8,70302.61	1,46771.01	71
22	0,45478.34	8,87568.10	8,70231.47	1,48838-21	72
23	0,47545.54	8,86490.12	8,70163.75	1,50905*41	73
24	0,49612.74	8,85486.50	8,70000.20	1,52972.61	74
25	0,51679.93	8,84550.83	8,70037.00	1,55039.80	75
26	0.53747.13	8.83676.06	8.60070.44	1.57107.00	76
27	0.55814.33	8.82850.78	8.60023.78	1.50174.20	77
28	0.57881.53	8.82004.66	8.60870.77	1.61241.40	78
20	0.50048.72	8.81 377.44	8.60820.20	1.62308.50	70
30	0,62015.92	8,80704-41	8,69772.21	1,65375.79	80
31	0.64083.12	8.80072.24	8.60726.41	1.67442.00	81
32	0.661 50.32	8.70477.01	8.60682.78	1.60510.10	82
32	0.68217.51	8.78018.68	8.60641.22	1.71577.38	82
24	0.70284.71	8.78202.07	8.60601.64	1.72644.68	84
25	0.72251.01	8.77805-82	8 60562 02	1.75711.78	8-
26	0.74410.11	8.77427.86	8.60528.00	1.77778.07	86
27	0.76486.20	8 76086.20	8 60402.77	1 708/6.17	87
28	0 78552.50	8 76560:40	8 60461.16	1 81012.27	88
30	0,70,555,50	8 76175.00	8 60420:07	1,82080.67	80
39	0,82687:00	8 75802:27	8 60 400 47	1,03900 57	
40	0,02007 90	0,75003 37	0,09400 47	1,0004/ /0	90
41	0,04755'00	0,75451.40	0,09372.25	1,00114.90	91
42	0,00022.20	0,75110.42	0,09345.30	1,90102.10	92
43	0,00009.40	0,74003.20	0,09319.74	1,92249.30	93
44	0,90950.08	0,74504.91	0,09295.32	1,94310.55	94
45	0,93023.08	0,74222.31	0,00272.05	1,90303.75	95
40	0,95091.08	0,73954.54	0,09249'88	1,98450.95	90
47	0,97158.28	0,73700.75	0,09228.74	2,00518.12	97
48	0,99225.47	8,73400.12	8,09208.00	2,02585.34	98
49	1,01292.07	0,73231.93	8,09189.40	2,04052.54	99
50	1,03359.87	8,73015.45	8,60171.11	2,00719.74	100
,		i i	<b>8,68</b> 797.46		(rerp.

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	543 51 5328 55 5328 55 5328 55 53221 55 545 55 577 56 59900 57 577 56 59900 57 577 61 3765 62 5772 61 3765 63 5772 61 3765 63 5772 63 5772 63 5772 63 5772 63 5772 63 5772 64 5772 65 5772 66 5772 66 577 67 577 77 577 77 57
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12'21   54     11'14   55     00'07   50     9'00   57     9'7'93   58     6'86   59     5'79   60     4'72   61     3'6'5   62     2'258   63     1'51   64
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1.14 55   0.07 50   9.00 57   7.793 58   5.79 58   4.72 61   3.65 62   12.58 63   1.51 64
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	867   50     9:00   57     77:93   58     6:86   59     5:79   66     4:72   61     3:65   62     12:58   63     1:51   64
7 0,14832'51 0,23750'30 8,72075'52 1,2207 8 0,10951'44 9,18955'15 8,72539'10 1,2280 9 0,10970'37 9,14826'35 8,72409'57 1,2501 10 0,21189'30 9,11228'51 8,72286'57 1,2713 11 0,23308'23 9,08058'65 8,72169'75 1,2925 12 0,25427'16 9,05240'70 8,72058'78 1,3137 13 0,27546'09 9,02716'92 8,71953'37 1,3349 14 0,2065'52 0,000442'44 8,71853'22 1,3501	900   57     97.93   58     6.86   59     5.79   60     4.72   61     3.65   62     12.58   63     1.51   64
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	6'86   59     5:79   69     4'72   61     3'65   62     12'58   63     1.51   64
9 0,10070°37 0,14320°35 8,72400°57 1,2501 10 0,21189°30 9,11228°51 8,72280°57 1,2713 11 0,23308°23 9,08058°65 8,72169°75 1,2945 12 0,25427°16 9,05240°70 8,72058°78 1,3137 13 0,27546°09 9,02716°97 8,77053°37 1,3349 14 0,20665°02 9,00442°44 8,71853°32 1,3501	5.79   69     4.72   61     3.65   62     2.58   63     1.51   64
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4.72 61 3.65 62 2.58 63 1.51 64
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2·58 63 1·51 64
13 0,27540.00 0,02710.02 0,71953.37 1,5349 14 0,20665.02 0,00442.44 8,71853.20 1,3501	1.51 64
14 0.20005.02 0.00442.44 0.071054.20 1.550	
TT 0 070000 0 000000 0 0 0705800 1 2072	0.44 1.06
15 0,31703.05 0,00301.70 0 0,71750.02 1,5775	0.37 66
10 0,33002.00 0,00500 01 0,7100, 50 1,3904	8 20 67
18 0 28 10:04 8 02220:08 8 71468:88 1.4408	7.23 68
10 0,40250.67 8 01774.18 8,71422.21 1,4020	6.16 69
20 0,42378.60 8,90440.49 8,71348.34 1,4832	5.09 70
21 0,44497 53 8,89207 30 8,71278 11 1,5044	4.02 71
22 0,46616.46 8,88064.50 8,71211.34 1,5256	2.95 72
23 0,48735.39 8,87003.40 8,71147.85 1,5468	1.88 73
24 0,50854.32 8,86016.37 8,71087.46 1,5680	0.81 74
25 0,52973.25 8,85096.74 8,71030.03 1,5891	2.14 1.15
26 0,55092.18 8,84238.66 8,70975.40 1,0103	3.07 70
27 0,57211.11 8,83430.89 8,70923.43 1,0315	7.00 77
28 0,59330 04 8,82080 83 8,70874 00 1,6527	0.53 70
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1.20 80
	4 39
31 0,05080.83 8,80707.50 0,70739.07 1,7103	3 32 82
32 0,07005.70 0,00120.94 0,7009917 1,7575	1.18 82
33 0,00024.00 0,70501.00 0 0,70000.03 1,7507	84
34 0,72043.02 0,70007.52 0,70025.97 1,7799	0.04 85
26 0,74102 55 0,70504 01 0,70509 07 1,8222	7.07 80
27 0 78400:41 8.77600:01 8.70524.26 1.8434	6.00 87
38 0.80510.24 8.77203.02 8.70404.18 1.8640	5.83 88
30 0.82628.27 8.76011.60 8.70465.56 1.8858	4.76 89
40 0,84757.20 8,76550.58 8,70438.32 1,9070	3.69 90
41 0,86876.13 8,76209.53 8,70412.39 1,9282	2.62 91
42 0,88995.06 8,75887.19 8,70387.70 1,9494	1.22 35
43 0,91113 99 8,75582 41 8,70364 21 1,970	0.48 93
44 0,93232 92 8,75294 11 8,70341 85 1,991	9.41 94
45 0,95351.85 8,75021.31 8,70320.56 2,0120	10.34 95
46 0,97470.78 8,74763.09 8,70300.30 2,034	90
47 0,99589.71 8,74518.58 8,70281.01 2,055	10 ⁻²⁰ 97
48 1,01708.64 8,74286.98 8,70202.04 2,070	3 13 90
49 1,03827.57 8,74067.57 0,70245.10 2,007	2:00 100
50 1,05940.50 8,73859.01 8,60807.00	Perp

5 Per Cent.

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<b>5</b>	<u>1</u> 8	Per	Cent
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Years	Log. rn.	Log. a ⁿ .	Log. an.	Log. r ⁿ .	Years
1	0,02170.60	0,02170.60	8,74503 '90	1,10700'64	5İ
2	0,04341 20	9,73139 34	8,74324 76	1,12871 25	52
3	0.06511.80	9,56592 92	8,74155.02	1,15041.85	53
_ ĭ₄	0,08682.40	9,45152.72	8,73994.18	1,17212.45	54
2	0.10843.00	9,36506.37	8,73841.73	1,19383.05	55
6	0.13023.01	9,29623.89	8,73697.20	1,21553.65	56
7	0.15104.21	9,23955.85	8,73560.17	1,23724.25	57
Ŕ	0.17364.81	9,19174'31	8,73430.22	1,25894.85	58
Ő.	0.10535.41	0,15067.75	8,73306.96	1,28065.45	59
10	0,21706.01	9,11491.73	8,73190.03	1,30236.05	60
11	0,23876.61	9,08343'27	8,73079.10	1,32406.65	61
12	0,26047.21	9,05546.32	8,72973.84	1,34577.25	62
13	0,28217.81	9,03043'14	8,72873.94	1,36747.86	03
14	0,30388.41	9,00788.84	8,72779.13	1,38918.46	64
15	0,32559.01	8,98747.86	8,72689.12	1,41089.06	65
ığ	0.34720.61	8,96891.55	8,72603.69	1,43259.66	66
17	0.36000.21	8,05196.44	8,72522.58	1,45430.26	67
18	0.30070.82	8.03643 16	8,72445.55	1,47600.86	68
10	0.41241'42	8.02215.44	8,72372.41	1,49771.46	69
20	0,43412.02	8,90899.55	8,72302.95	1,51942.06	70
21	0,45582.62	8,89683.75	8,72236.98	1,54112.66	71
22	0.47753.22	8,88557'98	8,72174-32	1,56283.26	72
23	9,49923.82	8,87513.51	8,72114.79	1,58453.86	73
24	0.52004.42	8.86542.75	8,72058.25	1,60624'47	74
25	0.54265 02	8,85539.03	8,72004.53	1,62795.07	75
20	0.56435 62	8,84796.48	8,71953.49	1,64965.67	76
27	0.58606.22	8,84000 88	8,71904.99	1,67136.27	77
28	0.00776-82	8.81274.64	8,71858.91	1,69306.87	78
20	0.63047.43	8,82,86.60	8,71815.11	1,71477.47	79
30	0,65118.03	8,81942.08	8,71773.50	1,73648.07	80
31	0,67288.63	8,81337.71	8,71733.95	1,75818.67	81
32	0,69459.23	8,80770.53	8,71696.36	1,77989.27	82
33	0.71620.83	8,80237.78	8,71660-65	1,80159.87	83
34	0.73800 43	8,797.36.98	8,71626.69	1,82330.47	84
35	0.75071.03	8,79265 92	8,71594.41	1,84501.07	85
36	0.78141.63	8,78822.51	8,71563.73	1,86671.68	86
37	0.80312.23	8.78404.87	8,71534.56	1,88842.28	87
38	0.82482.83	8,78011-28	8,71506.83	1,91012.88	88
30	0.84653.43	8.77640.17	8,71480.48	1,93183.48	89
40	0,86824.04	8,77290.08	8,71455.43	1,95354.08	90
41	0,88994.64	8,76959.63	8,71431.60	1,97524.68	91
42	0,01165 24	8,76647.63	8,71408.96	1,99695*28	92
43	0,93335.84	8,76352.90	8,71387.43	2,01865.88	93
44	0,05500 44	8,76074.38	8,71366.95	2,04036.48	94
45	0,07677.04	8,75811.08	8,71347.48	2,06207.08	95
46	0.00847 64	8,75562.10	8,71328.97	2,08377.68	96
47	1,02018.24	8,75326.57	8,71311.37	2,10548.29	97
48	1.04188.84	8,75103.70	8,71294.64	2,12718.89	98
40	1.06359.44	8,74892.76	8,71278.73	2,14889.49	99
só -	1,08530.04	8,74693.04	8,71263.60	2,17060.09	100
-			8,70969.39		Perp

Years	Log. r".	Log. an.	Log. a'.	Log. #.	Years
1	0,02222.21	0.02222.21	8.75334.45	1,13332.73	51
2	0,04444.42	0.73216.10	8.75162.77	1,15554.94	52
- 3	0.06666.63	0.56604.40	8,75000-28	1.17777.15	63
Ă	0.08888.84	0.45278.48	8.74846.45	1,10000.30	54
- 71	0.11111.05	0 20655.00	8 74700.80	1 22221.57	1 22
- 6	0 12222.20	9,3003599	8 74562.87	1 24442.70	22
	0 15555.47	0.24151.85	8 74422222	1 26666.00	1 27
6	0 10000 41	9,2415107	8 7 4 9 2 4 3	1,20000.00	1 26
	0,1777700	9,19392.09	0,74,00 40	1,20000 21	50
	0,19999 89	9,15308.45	0,7419119	1,31110 42	22
10	0,2222210	9,11754-15	8,74000 07	1,33332 03	
п	0,24444.31	9,08020.97	8,73974.74	1,35554.84	DI
12	0,20000.53	9,05850.87	8,73874.92	1,37777*•5	22
13	0,28888.74	9,03308.13	8,73780.28	1,39999'20	03
14	0,31110.92	9,01133.85	8,73690.55	1,42221.47	0.4
15	0,33333.10	8,99112.48	8,73605.47	1,44443.68	65
16	0,35555.37	8,97275.36	8,73524.79	1,46665.89	66
17	0.37777.58	8,95599.05	8,73448.27	1,48888'''	67
18	0,39999.79	8,94064.15	8,73375.69	1,51110.31	68
IQ	0,42222.00	8,02654.41	8,73306.85	1,53332.53	60
20	0,44444 21	8,91356-11	8,73241.53	1,55554.73	70
21	0,46666.42	8,90157.50	8,73179.58	1,57776.94	71
22	0,48888.63	8,89048.55	8,73120.78	1,59999.15	72
23	0.51110.84	8.88020 51	8,73065.00	1,62221.30	73
24	0.5333305	8.87065.78	8.73012.07	1.64443.57	74
25	0.55555.20	8.86177.73	8.72061.84	1.66665.78	75
26	0.57777.47	8.85350.45	8.72014.16	1.68887.00	1.6
27	0.50000.68	8 84578.80	8.72868.01	1.71110.20	77
28	0.62221.80	8 8 28 58 11	8.72825.07	1.72322.42	-8
20	0.64444.10	8 82184.28	8 72785.20	1.75554.62	70
30	0.66666.31	8.82553.61	8,72746.50	1,77776 84	80
21	0.68888.52	881062.75	8.72700.77	1.70000'05	81
22	0,71110.72	8 81408.72	8.72674:00	1.82221.20	82
22	0 7222204	8 80888.80	8 72641.20	T 84442.47	82
22	0,75552 94	8 80400.41	8 72610-26	1 86665-68	84
34	\$75555 10	8,00400 51	8 70580:51	1,00000300	87
32	9,77777 31	8,79941 01	8 5055017	1,00007.09	82
30	0,79999 50	8,79510 05	0,72552 17	1,9111010	87
37	0,02221.79	8,79103.94	0,72525 27	1,93332 31	66
30	0,84444.00	0,70721.50	0,72499.72	1,95554 52	00
39	0,80000.21	8,78301.39	8,72475.40	1,97770.73	09
40	0,88888.42	8,78021.01	8,72452'42	1,99998'94	90
41	0,91110.63	8,77701.81	8,72430.55	2,02221.15	91
42	0,93332.84	8,77399.84	8,72409.77	2,04443.30	92
43	0,95555.05	8,77114.85	8,72,390.04	2,06605.57	93
44	0,97777.26	8,76845 82	8,72371.31	2,08887.78	94
45	0,99999.47	8,76591.74	8,72353.51	2,11109'99	95
46	1,02221.68	8,76351 69	8,72336'61	2,13332.20	96
47	1,04443.80	8,76124.86	8,72320.55	2,15554.41	97
<b>∡</b> 8	1.06666.10	8.75010.41	8,72305.31	2,17776.62	98
.40	1.08888.21	8.75707.65	8.72200.84	2,10008.83	99
	1.11110.52	8.75515.88	8,72277.07	2,22221.05	100
J <b>-</b>		100-0 00	8,72015.03		Perp
-		1	1 8,72015.93	1	rer

5 1/4 Per Cent.

 $5\frac{3}{8}$  Per Cent.

Years	Log. r*.	Log. a ⁿ .	Log. a ⁿ .	Log. r ⁿ .	Years
I	0,02273.76	0,02273.76	8,76154.27	1,15961.70	51
2	0,04547.52	9,73292 75	8,75989.78	1,18235.46	52
3	0,06821.28	9,56795 73	8,75834.25	1,20509'21	53
4	0,09095.04	9,45404 02	8,75687'16	1,22782.97	54
5	0,11368.79	9,36805 31	8,75548.05	1,25056.73	55
6	0,13642.55	9,29969.57	8,75416 42	1,27330'49	56
7	0,15916.31	9,24347 41	8,75291 90	1,20604.25	57
8	0,18100.07	9,10610.80	8,75174 04	1.31878.01	58
9	0,20463 83	9.15548.48	8,75062 50	1.34151'77	50
10	0,22737 59	9,12015.75	8,74956 91	1,36425.53	60
11	0,25011.35	9,08909'72	8,74856'94	1,38699'28	61
12	0,27285'11	9,06154.34	8,74762.28	1,40073'04	62
13	0,29558.86	9,03691 80	8,74672.65	1,43246.80	63
14	0,31832 62	9.01477 48	8,74587 75	1,45520.56	64
15	0.34106.38	8.00475.54	8.74507.24	I.47704'22	65
ıĞ	0.36380 14	8.07657'46	8.74421'17	1.50068:08	66
17	0.28652.00	8 05000'76	8 74250'01	T 52241'84	67
<b>T</b> 8	0 40027 66	8 04482'07	8 74200 62	1 54675.60	68
TO	0,40927 00	8 02001 '10	8 74290 03	1,54015.00	60
20	0,45475'18	8,01810'20	8,74164.46	1,50163'11	70
21	0.47748.02	8 00628157	8 74106'97	т. бт.426.8д	7
22	0 50022.60	8 80526 37	8 74051'12	1,01430 07	1 72
22	0,50022.00	8 88 504 21	8 70008:97	1,03/10 03	1/2
23	0,52290 45	8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	8,73998.87	1,05904 39	73
24	0,545/0 21	0,07505 47	0,73949 34	1,00250 15	74
25	0,50043.97	0,00/12 04	0,73902 30	1,70531.91	75
20	0,59117 73	0,05900.02	0,73057 07	1,72005.07	70
2/	0,0139149	0,05143 04	0,73015.00	1,75079.42	77
20	0,03005.25	0,84437.27	0,73775.04	1,77353.18	78
29	0,05939.00	8,83777 40	o,73737'70	1,79020.94	79
30	0,08212'75	8,83160.32	8,73701.73	1,81900.70	80
31	0,70486.52	8,82582.71	8,73667.62	1,84174'46	81
32	0,72760*28	8,82041.28	8,73635 28	1,86448 22	82
33	0,75034.04	8,81534 22	8,73604 60	1,88721 98	83
34	0,77307.80	8,81058.12	^{8,73575} 51	1,90995'74	84
35	0,79581.56	8,80611'14	8,73547.92	1,93269'49	85
36	0,81855'32	8,80191.12	8,73521.76	1,95543'25	86
37	0,84129'07	8,79796'30	8,73496.95	1,97817 01	87
38	0,86402.83	8,79424*89	8,73473.40	2,00000'77	88
39	0,88676*59	8,79075.33	8,73451'08	2,02364.53	80
40	0,90950.35	8,78746.19	8,73429.91	2,04638.29	90
41	0,93224'11	8,78436.12	8,73409 83	2,06912.02	or
42	0,95497.87	8,78143.91	8,73390'77	2,00185.81	02
43	0,97771.63	8,77868.41	8,73372 71	2,11450.56	63
44	1,00045'39	8,77608.56	8,73355.57	2,13733.22	04
45	1,02319'14	8,77363 39	8,73339'30	2,16007.08	05
46	1,04592 90	8,77132.01	8,73323.87	2.18280.84	06
47	1,06866.66	8,76913'57	8,73300.24	2.20554 60	07
48	1,09140'42	8,76707.27	8,73205'36	2.22828.26	08
49	1,11414 18	8,76512.41	8.73282'10	2.25102.12	90
	T T2687'04	8 76228.28	8 72260.60	-,	99
50 1	-,1,00/ gu			2.27271.00	1 100

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THEFT	Log. <del>.</del>	Log. an.	Log. an.	Log. r.	Years
1	0,02325.25	0,02325.25	8,76963.55	1,18587.54	51
2	0,04050.49	9,73369.31	8,76805.96	1,20913.79	52
3	0,06975.74	9,56896.88	8,76657.12	1,23238 04	53
4	0,09300.08	9,45529.33	8,76516.51	1,25563.28	54
5	0,11020.23	9,30954.32	8,76383.64	1,27888.53	55
0	0,13951.40	9,30141.85	8,70258.08	1,30213.77	50
7	0,10270 72	9,24542.48	0,70139.40	1,32539.02	1 57
0	0,10001.97	9,19028-31	8,70027.21	1,34804.27	58
10	0,23252.46	9,15707'01	8,75820.82	1,37189.51	59
п	0.75577.71	0.00101.23	8.75725.04	1.41840'00	61
12	S.27002.05	0.06456.75	8.75636.22	1.44165.25	62
13	0,30228.20	0.04014.42	8.75551.34	1.46400.50	63
14	0,32553.44	0,01810 72	8.75471 04	1.48815.74	64
15	0,34878.69	8,99837.09	8,75395.06	1,51140.00	65
ıŏ	0,37203.94	8,98037.86	8,75323.16	1,53466.23	66
17	0,39529.18	8,96398.59	8,75255.12	1,55791.48	67
18	0,41854.43	8,94899.91	8,75190.72	1,58116.73	68
19	0,44179.67	8,93525.55	8,75129.77	1,60441.97	69
20	0,45504.92	8,92261.82	8,75072.08	1,62767-22	70
21	0,488,30.17	8,91096.99	8,75017.47	1,65092.46	71
22	0,51155.41	8,00021.00	8,74905.70	1,67417.71	72
23	0,53480.00	0,8002513	8,74910.81	1,09742.90	73
24	0,55805.00	0,00101.92	8,74870.40	1,72008.20	74
25	0,58131.15	8 86446:00	8,74820.57	1,74393 45	1 75
20	0,00450.40	88670440 99	0,74705.02	1,70718.09	70
27	0,02781 04	8 8:012:16	6,74745'00	1,79043.94	177
20	0,051011-89	8 84265-08	8 74700 39	1,01309 10	10
30	0,60757:36	8,83762.25	8,74639.67	1,86019.68	80
11	0.72082.62	8.82107.62	8.74608.00	1.88344.02	81
12	0.74407.87	8.82660.14	8.74578.00	1.00670.17	82
22	0.76722.12	8.82174'07	8.74 540.60	1.02005.41	82
24	0 70058.26	8,81700.06	8 74 522.68	1.05220.66	84
25	0 81 98 9 61	8.81274.58	8 74407'18	1.0764501	8.
26	0.81708.85	8 8086	8 74472'04	10007115	86
27	0.86024*10	8 80482.02	8 74450.16	2 02206.40	87
- 26	0,0003410	8 8012 1.27	8 74438.40	2,04623.64	88
30	0,0033933	8 70782:07	8 74420 49	2,0402104	80
4.0	0,02000-84	8,70462.00	8.74188.49	2,00940 09	00
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	8 70162168	8 = 1 = = = = = =	11 77 10 110 R	
41	0,95335.00	8 788 70'00	8 74 970.00	4,11597 30	91
44	0,9700033	8 7867 2 62	8 4 4 4 5 4 5 9	2,13922 03	92
43	0,99905-50	8 #8062.62	874330-05	2,10247 07	93
44	1,02310.02	8 78 76 70 -	8 74320 30	2,10573 12	94
45	1,04030-07	8	0,74305.52	2,20090-37	95
40	1,00901.31	0,77903.10	0,74291.44	2,23223.01	90
47	1,09280.50	0,77092.03	0,74270'10	2,25548.80	97
48	1,11011.91	0,77494.41	0,74205.45	2,27874.10	98
49	1,13937.05	8,77307'16	8,74253.48	2,30199.35	99
50	1,16262.30	8,7713041	8,74242.13	2,32524.60	100
			8,740;6*27		Perm

5 S Per Cent.

Years	Log. r.	Log. a".	Log. a".	Log. r.	Years
1	0,02376.67	0,02376.67	8.77762.42	1,21210.28	51
2	0,04753.34	9,73445.70	8,77611.49	1,23580.95	52
3	0,07130.02	9,50997.88	8,77409.07	1,25903.03	53
4	0,09500.00	9,45054'42	8,77334.07	1,28340.30	54
2	0,11003-30	9,37103.04	0,77207.01	1,30710.97	1 55
2	0,14200-03	9,30313.73	8,77088.05	1,33093.04	50
ģ	0,10030 /1	9,24/3/08	8 76868 10	1,354/0 32	1 26
ő	0,19013 30	9,20045 10	8 76767-22	1,37040 99	50
	0.22766.72	0.12526.52	8 76672.05	1,40223 00	125
	0.061.42120	9,9,50 9,5	8 #6#80004	1,4057.00	6.
12	0,20143 39	9,09472 42	8 76407:00	1,4497700	62
12	0.20320 07	0.04225.76	8 76 116 62	1,4/353 00	62
14	0.22272.41	0.02160.62	8 76240.60	1,49/30 35	62
- 77	0.35650.08	0.00107.10	8 76268.01	1.54482.60	67
16	0.38026.76	8.08416.55	8.76201.00	1,50860.37	66
17	0.40403.43	8.06705.54	8.76136.02	1.50237.04	67
18	0,42780.10	8.05314.68	8,76076.20	1.61613.71	68
10	0,45156.77	8.93957.74	8.76018.07	1.63000.38	60
20	0,47533.44	8,92711.00	8,75964.76	1,66367.05	70
21	0,49910.12	8,91562.74	8,75913.51	1,68743.73	71
22	0,52286.79	8,90502.91	8,75865.03	1,71120.40	72
23	0,54663.46	8,89522.82	8,75819.18	1,73497 07	73
24	0,57040.13	8,88614.87	8,75775.84	1,75873.74	74
25	0,59416.80	8,87772.41	8,75734.84	1,78250.41	75
26	0,61793.48	8,86989.61	8,75696.05	1,80627.00	76
27	0,04170.12	8,80201.20	8,75659.36	1,83003.76	77
28	0,00540.82	8,85582.80	8,75024.00	1,85380.43	78
29	0,08923.49	8,84950.08	8,75591.83	1,87757.10	1 29
30	0,71300-17	0,04359'43	0,75500.77	1,90133.78	00
31	0,73676 84	8,83807.55	8,75531.38	1,92510.45	81
32	0,70053.51	8,83291.44	8,75503.57	1,94887.12	82
33	0,78430.18	8,82808.40	8,75477.27	1,97263.79	83
34	0,80800.85	8,82350.00	8,75452.38	1,99040.40	84
35	0,03103.53	0,81931.97	8,75428.84	2,0201714	1 85
30	0,05500 20	8 8 1 6 1 1 7	8 75400.54	2,04393.81	100
36	0,07930 07	8 80810115	8 75305 40	2,007/0-40	86
30	0,90313 54	8 80481.60	8 75305 50	2,0914/15	80
39	0.05066.80	8.80172.28	8 75228.74	2,11523 03	09
		0 006	0,73320 74	2,13900 30	90
41	0,97443.50	0,79881.50	0,75311.84	2,10277.17	91
42	0,99820-23	8 70000.02	0,75295.82	2,18053.84	92
43	1,02190 90	8 70108:22	8 5566 5	2,21030.51	93
44	1,045/3 50	8 78880.18	8 75200-34	2,23407.10	94
42	1.00226.02	8.78665-27	8.75220.02	2,28160.52	1 22
47	1.11703.50	8.78462.70	8,75227.77	2.20525-20	07
_ <u>7</u> 8	1.14080.27	8.78271.06	8.75216.27	2.32013.88	1 68
49	1,16456.94	8,78092.06	8,75205.38	2.35200.25	00
50	1,18833.61	8,77922.42	8,75195.07	2,37667.22	100
° I			8,75012.25		Perp.

 $5\frac{3}{4}$  Per Cent.

Years	Log. <b>**.</b>	Log. a"	Log. a*.	Log. 7  .	Years
I	0,02428.04	0,02428.04	8,78551 08	1,23829.92	51
2	0,04856.08	9,73522.09	8,78406.54	1,26257.90	52
3	0,07284.11	9,57098.71	8,78270.30	1,28685'99	53
4	0,09712.15	9,45779'29	8,78141.86	1,31114.03	54
5	0,12140.19	9,37251.46	8,78020.75	1,33542.07	55
6	0,14568.23	9,30485.23	8,77900.53	1,35970-11	50
7	0,16996.26	9,24931.21	8,77798.80	1,38398'14	57
8	0,19424.30	9,20261.44	8,77697.18	1,40820.18	58
9	0,21852.34	9,16264.41	8,77001.30	1,43254.22	59
IO	0,24280.38	9,12795.72	8,77510.83	1,45082.20	00
11	0,26708.41	9,09752.37	8,77425.45	1,48110.29	61
12	0,20130.45	9,07058.33	8,77344.86	1,50538.33	62
13	0.31564.40	9,04655 88	8,77268.80	1,52966*37	63
14	0,33092.53	9,02500.15	8,77196'99	1,55394.41	64
15	0,36420.56	9,00555.60	8,77129.19	1,57822.44	05
ıŏ	0,38848 60	8,98793.56	8,77065.18	1,60250.48	66
17	0.41276 64	8,97190.62	8,77004.74	1,62678.52	67
18	0,43704 68	8,95727.42	8,76947.66	1,65106.56	68
19	0.46132.71	8,04387.69	8,76893.75	1,67534.59	69
20	0,48560.75	8,93157.74	8,76842.84	1,69962.63	70
21	0. 50088.70	8.02025.85	8,76794.75	1,72300.67	71
22	0 52416-82	8.00081.08	8.76740.32	1,74818 71	72
23	0,5544.86	8.00017.44	8,76706 41	1,77246.74	1 73
24	0.58272.00	8.80124.64	8,76665 86	1,79674.78	74
25	0,00700.04	8.88206.03	8.76627.57	1,82102.82	75
26	0.62128.08	8.87528.47	8.76501.37	1,84530.86	76
27	0.65557.02	8 86814.10	8.76557 18	1.86058.00	77
- 28	0,03357 02	8 86140.22	8.76524.86	1.80386.03	1 78
20	0 7041 2:00	8 84420.71	8.76404.34	1.01814.07	70
30	0.72841.13	8.84051.02	8,76465.49	1,04243 01	80
	-,,	0.04170-7-	8 #6428:22	1.06671.05	81
31	0,75209-17	0,04412.52	8 76430 23	1,0000108	82
32	0,77097.20	0,03900.53	8 76288.11	2 01:27:12	82
33	0,80125.24	0,03437 20	8,70,500 11	2 02055-16	84
34	0,82553.28	8 80180.30	8 76242.25	2,0595510	84
32	0,84981.32	9 80106.48	8 76222.70	2 08811.22	86
30	0,07409.35	9 81822190 40	8 76202.26	2,11220.27	87
3/	0,09037.39	8 81402164	8 76284 08	2.12667.21	88
.30	0,92205 43	9 9117493 54	8 76267.62	2.10005.35	80
39	0,04093.47	8 80874.47	8.76251.21	2,18523.38	00
40	5,9/121 50	0,000/4 4/	9 =602415-	a app d 1 4 2	Í
41	9,99549.54	8,80592.87	0,70235'70	2,20951.42	1 22
42	1,01977.58	8,80328'20	0,70221.04	2,23379 40	1 22
43	1,04405.02	8,80079.50	8 610409	2,2,00/ 50	93
44	1,06833.65	8,79845.58	0,70104.08	2,20235 53	194
45	1,09201.09	8,79025.54	8 -6160:05	0,30003 57	1 22
40	1,11689.73	8,79418.47	8 561 58.80	2,3309101	1 07
47	1,14117.77	8,79223.57	8,70150.09	2,35519 05	1 %
48	1,16545.81	8,70040.07	8 561 28:52	2,37947 00	100
49	1,18973.84	8,78807.25	0,70130 53	2,4037572	1.22
50	1,21401.88	8,78704.40	8 7 1066.78	0,42005 70	Pern
	1	1	L 03/3900 /0		

5 7/8 Per Cent.

Years	Log. r [.] .	Log. a".	Log. a".	Log. <b>r</b> [*] .	Year
1	0,02479.34	0,02479.34	8,79329.68	1,26446.46	51
2	0,04958 68	9,73598.32	8,79191.28	1,28925.80	52
3	0,07438.03	9,57199.39	8,79060.96	1,31405.14	53
4	0,09917.37	9,45903.94	8,78938.24	1,33884.49	54
5	0,12396.71	9,37399.29	8,78822.64	1,36363.83	55
6	0,14876.05	9,30656.36	8,78713.74	1,38843.17	56
7	0,17355.40	9,25124.87	8,78611-13	1,41322.51	1 57
8	0,19834.74	9,20477.14	8,78514.44	1,43801.86	58
9	0,22314.08	9,16501.70	8,78423.30	1,46281.20	59
10	0,24793.42	9,13054.11	8,78337.41	1,48760.54	60
11	0,27272.77	9,10031.41	8,78256.43	1,51239.88	61
12	0.20752 11	9,07357 53	8,78180.00	1,53719.22	62
12	0. 12231 45	0.04074.70	8.78108.10	1,56198.57	63
14	0.34710.70	0.02838.32	8.78040.22	1.58677.01	64
- 77	0.37100'13	0.00012.55	8.77076.21	1.61157.25	65
- 78	0.20660.48	8.00168.88	8.77015.82	1.63636.40	60
17	0 42148.82	8.07583.85	8.77858.88	1.66115.04	67
- 76	0.44628'16	8.06138.11	8.77805.15	1.68505.28	68
10	0 47107.50	8.04815.41	8.77754.48	1.71074.62	60
20	0.40586.85	8,03602.05	8.77706.67	1,73553.96	70
	0 12066-10	8 02486:24	8 77661.00	1.76022.21	71
21	0,52000 19	8 01458-22	8 ##618:08	1 78412.64	1 42
22	0,54545 55	8,00700:02	8 44448.81	1,80001:00	172
23	0,57024 07	8 80621-12	8 77570 01	1 82471-22	13
24	0,59504 22	8 88817.05	8 77540 91	1 85050.67	14
- 22	0,01903 50	8 88-62-62	8 77 471 40	1,88420.02	48
20	0,04402 90	8 87262:00	8 ## 420172	1,000,00.26	77
- *	0,00942 24	8 86711.46	8 77439 33	1,90909 30	1 48
20	0,09421 59	8 86104.02	8 77281.08	1,95,500 70	20
29	0,71900 93	8 8 5 5 20.72	8 77254-20	1.082/7.20	80
30	0,74300 27	0,0555975	0,77354 29	-,90347 39	0.
31	0,76859.61	8,85012.57	8,77328.99	2,00820.73	81
32	0,79338.95	8,84520.40	8,77305.13	2,03300.07	02
33	0,81818.30	8,84000.73	8,77282.59	2,05785.41	83
34	0,84297.64	8,83030.03	8,77201.31	2,08204.70	04
35	0,80770.98	8,83228.85	8,77241.23	2,10744.10	1 85
- 36	0,89256.32	8,82852.47	8,77222.27	2,13223.44	00
37	0,91735.67	8,82499.95	8,77204.30	2,15702.78	37
38	0,94215.01	8,82169.59	8,77187.47	2,18182.13	88
39	0,96694.35	8,81859.85	8,77171.51	2,20001.47	89
40	0,99173.69	8,81569.33	8,77156.43	2,23140.81	90
41	1,01653.04	8,81296.69	8,77142.22	2,25620.15	91
42	1,04132.38	8,81040.74	8,77128.79	2,28099.49	92
43	1,06611.72	8,80800.37	8,77116.11	2,30578.84	93
44	1,09091.06	8,80574.57	8,77104.12	2,3305818	94
45	1,11570.40	8,80362.35	8,77092.81	2,35537.52	95
46	1,14049.75	8,80162.87	8,77082.14	2,38016.86	96
47	1,16529.09	8,79975-29	8,77072.06	2,40496.21	97
48	1,19008.43	8,79798.87	8,77062.54	2,42975.55	98
49	1,21487.77	8,79632.87	8,77053.55	2,45454 89	99
50	1,23967.12	8,79476.69	8,77045.05	2,47934.23	100
~ 1			8 76000.70		Pern

Log. r. Log. a". Log. a*. Log. r. Years Years 8,80098.36 I 0,02530.59 0,02530.59 1,29059'91 51 8,79965.87 8,79841.25 0,05001.17 9,73674.45 1,31590.50 52 2 1,34121.09 1,36651.67 1,39182.26 0,07591.76 9,57299.90 3 53 8,79723.99 8,79613.68 4 0,10122.35 54 9,37547.41 9,30827.11 0,12652.93 55 50 56 0,15183.52 8,79509.86 1,41712.85 9,25318.05 9,20692.28 8,79412.15 8,79320.16 8,79233.56 2 0,17714.11 1,44243.43 57 58 1,46774.02 0,20244.69 1,49304.61 0,22775.28 9,16738.30 Q **5**9 0,25305.87 9,13311.71 8,79152.02 60 ÍÓ 1,54365.78 1,56896.36 8,79075-24 11 0,27836.45 9,10309.50 9,07655.68 61 8,79002.93 8,78934.82 12 0,30367.04 62 1,59426.95 0,32897.62 0,35428.21 9,05292.52 63 13 8,78870.67 8,78810.23 8,78753.29 8,78699.65 9,03175.13 9,01268.01 64 1,61957.54 1,64488.12 14 15 16 0,37958.80 0,40489.38 65 66 1,67018.71 8,99542.52 8,97975-23 1,69549.30 67 68 17 18 0,43019.97 0,45550 56 8,96546 77 8,78649.09 1,72079.88 8,95240.91 8,78601.46 1,74610.47 60 10 1,77141.06 20 0,50611.73 8,94043.96 8,78556.56 70 8,78514·26 8,78474·38 8,78436·80 1,79671.64 0,53142.32 21 8,92944.22 71 0,55672.90 0,58203.40 0,60734.08 8,91931.64 22 72 1,84732.82 73 8,90997.56 23 8,00134.39 8,78401.37 1,87263.40 24 74 0,63264 66 8,89335.51 8,78367.97 1,89793.99 1,92324.58 25 26 75 76 8,78336.49 8,78306.81 8,78278.83 0,65795·25 0,68325·84 8,88595.09 8,87907.97 8,87269.55 8,86675.75 27 28 1,94855.16 77 78 1,97385.75 1,99916.34 0,70856.42 0,73387.01 8,78252.45 . 79 80 29 8.86122.91 8,78227.58 2,02446.92 30 0,75917.60 2,04977.51 2,07508.10 0,78448.18 8,85607.74 8,78204.13 81 31 8,85127-26 8,84678-81 82 32 0,80978.77 8,78182.01 8,78161·17 8,78141·51 33 0,83509.36 0,86039.94 2,10038.68 83 8,84259.95 8,83868.45 84 2,12569.27 34 2,15099.86 8,78122.97 8,78105.48 8,78088.99 85 86 0,88570.53 35 36 0,91101.12 8,83502.33 2,17630.44 0,93631.70 0,96162.29 2,20101.03 87 88 8,83159.74 37 38 8,78073.45 8,78058.78 8,82839.00 2,22691.61 0,98692.87 <u>3</u>9 8,82538.58 2,25222.20 80 8,78044.95 8,82257.04 40 1,01223.46 2,27752.79 GΟ 8,78031 91 2,30283.37 8,81993.11 1,03754.05 91 41 8,78019.62 8,78008.01 2,32813.96 42 8,81745.57 **ģ2** 8,81513·34 8,81295·38 2,35344.55 2,37875.13 1,08815.22 **9**3 **4**3 1,11345-81 1,13876-39 8,77997.08 8,77986.75 **9**4 44 2,40405.72 2,42936.31 8,81090.77 95 45 46 1,16406.98 8,77977.02 ġ0 2,45466.89 8,80718.09 8,77967.84 97 98 1,18937.57 1,21468.15 47 48 8,77959.18 2,47997 48 2,50528 07 8,80548.49 8,80389.09 1,23998·74 1,26529·33 8,77951.01 ģ9 49 8,77943.31 8,77815.13 2,53058.65 8,80239.25 100 50 Perp.

6 Per Cent.

 $6\frac{1}{4}$  Per Cent.

Years	Log. r.	Log. a".	Log. a".	Log	Years
1	0,02632.89	0,02632.89	8,81606.66	1,34277.59	51
2	0,05265.79	9,73826.39	8,81485.28	1,36910.48	52
3	0,07898.68	9,57500.48	8,81371.35	1,39543.38	53
4	0,10531.58	9,46276.53	8,81264.40	1,42176.27	54
5	0,13164.47	9,37842.19	8,81163.97	1,44809.16	55
6	0,15707 36	9,31167.48	8,81069.66	1,47442.06	56
7	0,18430.26	9,25703.02	8,80981.10	1,50074.95	57
8	0,21063.15	9,21120.86	8,80897.90	1,52707.84	58
a	0.23606.04	9,17200'40	8,80819.75	1,55340.74	59
ΙÓ	0,26328.94	9,13824.52	8,80746.32	1,57973.63	66
11	0,28961.83	9,10862.97	8,80677.32	1,60606.53	61
12	0,31594.73	9,08248.81	8,80612.48	1,63239'42	62
13	0,34227.62	9,05924.36	8,80551.55	1,65872.31	63
14	0,36860.51	9,03844.73	8,80494.27	1,68505.21	64
15	0,39493.41	9,01974.43	8,80440.43	1,71138.10	65
16	0,42126.30	9,00284.80	8,80389.82	1,73771.00	66
17	0,44759.20	8,98752 47	8,80342.25	1,76403.80	67
18	0,47392.09	8,97358.03	8,80297.51	1,7 <b>90</b> 36.78	68
19	0,50024.98	8,96085.31	8,80255.45	1,81669.68	69
20	0,52657.88	8,94920.58	8,80215.91	1,84302.57	70
21	0,55290.77	8,93852.19	8,80178.72	1,86935.46	71
22	0,57923.67	8,92870.11	8,80143.75	1,89568-36	72
23	0,60556.56	8,91965.64	8,80110.86	1,92201-25	73
24	0,63189.45	8,91131.26	8,80079.93	1,94834*15	74
25	0,65822.35	8,90360.33	8,80050.84	1,97467*04	75
26	0,68455*24	8,89647.05	8,80023.47	2,00099.93	76
27	0,71088.13	8,88986.25	8,79997.74	2,02732.83	77
28	0,73721.03	8,88373.38	8,79973.53	2,05365.72	78
29	0,76353.92	8,87804.36	8,79950.76	2,07998.62	79
30	0,78986.82	8,87275.53	8,79929.33	2,10631.51	80
31	0,81619.71	8,86783.63	8,79909.18	2,13264.40	81
32	0,84252.60	8,86325.70	8,79890.22	2,15897.30	82
33	0,86885.20	8,85899.07	8,79872-38	2,18530.10	1 83
34	0,89518.39	8,85501.33	8,79855.01	2,21103.00	84
35	0,92151.50	8,85130.30	8,79839.82	2,23795.98	85
36	0,94784 18	8,84783.92	8,79824.97	2,20428.87	80
37	0,97417.07	8,84400.40	8,79810.99	2,29001.77	87
38	1,00049.97	8,84158.20	8,79797.84	2,31094.00	88
39	1,02682.86	8,83875.03	8,79785.47	2,34327.55	89
40	1,05315.75	8,83011.35	8,79773.83	2,30900.45	90
4I	1,07948.65	8,83364.09	8,79762.88	2,39593.34	91
42	1,10581.54	8,83132.03	8,79752.57	2,42220.24	92
43	1,13214.44	8,82915.93	8,79742.87	2,44859.13	93
44	1,15847.33	8,82712.95	0,79733.75	2,47492.02	94
45	1,18480.22	8,82522.77	8,79725.10	2,50124.92	95
46	1,21113.15	8,82344.54	8,79717.08	2,52757.81	90
47	1,23746.01	8,82177.45	8,79709.48	2,55390.71	97
48	1,26378.91	8,82020.77	8,79702.32	2,58023.00	98
49	1,29011.80	8,81873-84	8,79095.59	2,00050.49	99
50	1,31644.69	8,81730.00	8,79089.25	2,03289.39	100
	1	1	1 2,79522.00	1	Perp.

Years	Log. r.	Log. a".	Log. a.	Log. r.	Years
τ.	0.02734.06	0.02734.00	8.83077.22	1,30483.00	51
2	0.05460'02	0.73077.02	8.82066.00	1,42217 96	52
3	0.08204.88	0.57700.41	8.82862.00	1.44052.02	53
Ă	0.10030 84	0.46523.82	8.82764.50	1.47687 88	54
- 7	0.12674.80	0.28125.80	8.82672.15	1.50422.84	55
6	0 16400.76	9,30133.00	8 82587.52	1.53157.80	56
7	0 10144.72	9,31500 57	8 82507.21	1.55802.76	57
- 6	0,19144 /5	9,20000 14	8 82422.11	1 28627.72	1 28
	0,210/9 09	9,2154710	8 80261.60	1,5000,75	50
	0,24014 05	9,1707799	0,02301 02 9 90001 02	1,61302.09	182
10	0,27349-01	9,14334 10	0,02295 53	1,0409/05	
11	0,30084.57	9,11412.77	8,82233.58	1,66832.61	61
12	0.32810.53	0.08837.77	8.82175.48	1,69567.57	62
13	0.35554.40	0.06551.46	8.82121.00	1,72302.53	63
14	0.38280.45	0.04600.01	8.82060.00	1.75037.40	64
15	0.41024.41	0.02674.88	8.82021.00	1.77772.45	65
- 16	0.42750.27	0.01020:48	8.81077.04	1.80507.41	66
17	0 46404.22	8 005 22:41	8 81024.88	1 82242.37	67
- 16	0,40494 33	8 08 161.20	8 81805-22	1.85077.22	68
10	0,49229 29	8,90101-30	0,01095 33	1,88712-20	60
- 19	0,51004-25	8,90920.90	0,51050 22	1,00/12 29	129
20	0,54099.22	0,95707.72	0,01023-41	1,91447 25	170
21	0.57434.18	8,94749.91	8,81790.75	1,94182.22	71
22	0.60160.14	8.03707.50	8.81760.10	1,06017.18	72
22	0.62004'10	8.02021-8:	8.81731.35	1.00652.14	73
24	0.6:620:06	8.02115.41	8.81704.30	2.02387.10	74
25	0.68274.02	8.01271.58	8.81670.04	2.05122.00	75
26	0.71108:08	8.00684.46	8.81655.27	2.07857.02	76
27	0 72842.04	8,000/0.21	8.81622.08	2.10501.08	77
- 28	0.76578.00	8 80460:00	8 8 161 2 01	2,12226.04	78
20	0,70570.00	8 8801 5-82	8 81 602.41	2,10061.00	20
29	0,79313 80	8 88 110 100	8 81 172 07	2 18:06:86	80
30	0,02040.02	0,00410.09	0,015/3 9/	2,10,90.00	0.0
31	0.84783.78	8,87940 52	8,81556.67	2,21531.82	81
32	0.87518 74	8.87504.10	8,81540.43	2,24266.78	82
33	0.00253.71	8.87008 44	8,81525.10	2,27001.74	83
34	0.02088.67	8.86720.87	8.81510-88	2,20736.71	84
25	0.05723.62	8.86360.31	8.81407-44	2,32471.67	85
26	0.08458.50	8.86041.78	8.81484.84	2,35206.63	86
27	1 01102.44	8.85726.47	8.81473.01	2.37041.50	87
28	1 02028-51	8 85451.74	8.81461.80	2.40676.55	38
30	1,03920 51	8 8 186.07	8 81451-47	2.42411.61	30
39	1,0000347	8 84028.00	8 81441-67	2.461.46.47	100
40	1,09390 43	3,04930 09	0,01441 07		1 30
41	1,12133.39	8,84706.52	8,81432.48	2,48881.43	91
42	1,14868.35	8,84490.21	8,81423.86	2,51616.39	92
43	1,17603.31	8,84288.08	8,81415.75	2,54351.35	93
44	1.20328.27	8,84000.13	8,81408 16	2,57086.31	94
46	1.23072.24	8,83022*46	8,81401.02	2,59821.27	95
76	1.25808.20	8.83757.22	8.81304.32	2,62556-23	60
47	1 28=42-16	8.82602.65	8.81388.02	2.65201.20	07
*6	1 21278 10	8 82468.00	8.81382.12	2.68026.16	68
40	1.314/012	8 82222.62	8.81276-17	2.70761.12	1 00
49	1,34013.00	8 82105-80	8 81271-26	2 72406:08	100
50	1,30/40.04	0,03195 09	8 81201-24	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Perm
	1	1	11 0.01291 34	1	I T OF BU

 $6\frac{1}{2}$  Per Cent.

(309)

 $6\frac{3}{4}$  Per Cent.

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Years	Log. r.	Log. a ⁿ .	Log. a".	Log. 7".	Years
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1	0,02836.79	0,02836.79	8,84511.27	1,44676.21	51
3 $0,085_{10}37$ 9,57899'71 8,84314'55 1,50349'78 53 4 $0,11347'15$ 9,46770'23 8,84225'70 1,53186'57 54 5 $0,17020'73$ 9,31843'70 8,8404'98 1,58860'15 50 7 $0,19857'52$ 9,2646'41 8,83992'35 1,61690'94 57 9 $0,22594'31$ 9,3194'370 8,83024'43 1,64533'73 58 9 $0,25530'78$ 9,14840'71 8,83902'43 1,64533'73 58 9 $0,25530'78$ 9,14840'71 8,8380'40 1,7020'730 60 11 $0,31204'67$ 9,11958'96 8,83745'86 1,7324'00 61 12 $0,3404'1'46$ 9,09422'58 8,8360'38 1,75880'88 62 13 $0,360'78'25$ 9,07173'86 8,8364'10 1,778717'67 63 14 $0,39715'04$ 9,0516'797 8,85597'00 1,84554'46 64 15 $0,42538'61$ 9,007173'86 8,8354'10 1,78717'67 63 16 $0,4538'61$ 9,00742'58 8,8345'700 1,84391'24 65 16 $0,4538'61$ 9,00742'58 8,8341'10 1,8722'80'3 66 19 $0,53898'98$ 8,97747'98 8,8341'211 1,95738'40 69 20 $0,50'735'77$ 8,96645'47 8,83352'90 2,0448'76'72 23 $0,65240'13$ 8,9356'51 8,83352'90 2,0448'76'72 23 $0,65240'13$ 8,9356'51 8,83352'90 2,0448'76'72 23 $0,65240'13$ 8,9356'51 8,83352'90 2,0448'76'72 23 $0,65240'13$ 8,9356'51 8,83325'90 2,0448'76'72 23 $0,65240'13$ 8,9356'51 8,83352'90 2,0448'76'72 23 $0,65240'13$ 8,9356'91 8,83325'90 2,0448'76'72 23 $0,65240'13$ 8,9356'91 8,83325'92 70'72'75'73 73 24 $0,68082'92$ 8,9366'91 8,8335'74 0,2078'55'57 73 24 $0,68082'92$ 8,93260'92 8,83277'36' 2,0092'3'5'77 27 $0,755'50$ 8,9010'16 8,83325'90 2,0448'76'72 23 $0,65240'13$ 8,9366'91 8,8335'82 2,2078'72'70 74 $0,7593'29$ 8,9010'705 8,8318'40 2,210'028'79 90 $0,85216'86$ 8,9001'40 8,83180'40 2,210'028'79 90 $0,85216'86$ 8,9001'40 8,83180'40 2,210'028'79 90 $0,85216'57$ 8,8563'74 8,8316'47 2,3356'55 73 32 $0,9364'759$ 8,8652'73 8,8566'73 8,8310'58 2,33200'72 8,7356'58 33 $0,9364'759$ 8,8652'73 8,8560'73 8,8310'58 2,33200'72 8,7356'58 8,8300'73 2,25343'79 76 75 $0,73750'50$ 8,9010'705 8,8310'758 2,35200'22 8,44 35 $0,9028'759$ 8,8558'67 8,8310'758 2,35200'22 8,44 35 $0,9028'759$ 8,8569'74 8,8310'758 2,35200'22 8,44 35 $0,9028'759$ 8,85756'73 8,8306'371 5,25310'95 90 41 $1,1638'32$ 8,86021'12 8,8300'73 2,55310'95 97 44 $1,24818'6$	2	0,05673.58	9,74129.03	8,84409.58	1,47513.00	52
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	3	0,08510.32	9,57899.71	8,84314.55	1,50349.78	53
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	4	0,11347.15	9,46770.23	8,84225.70	1,53186.57	54
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	5	0,14183.94	9,38428.23	8,84142.64	1,56023.36	55
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6	0,17020.73	9,31843.76	8,84064.98	1,58860.15	56
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	7	0,19857.52	9,26467.41	8,83992-35	1,61696'94	57
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	8,	0,22694.31	9,21971.27	8,83924.43	1,64533.73	58
io $0,28367\cdot88$ $9,14840\cdot71$ $8,8380\cdot46$ $1,70207\cdot30$ for11 $0,31204^{6}7$ $9,11958\cdot96$ $8,83745^{4}86$ $1,73544\cdot90$ for12 $0,34041\cdot46$ $9,09422\cdot58$ $8,83693\cdot84$ $1,75880\cdot88$ for13 $0,3678\cdot25$ $9,07173\cdot86$ $8,83695^{4}25$ $1,7371^{4}7^{6}7$ for14 $0,39715\cdot94$ $9,05167\cdot97$ $8,83599^{4}25$ $1,81554\cdot46$ for15 $0,42551\cdot83$ $9,00369^{4}3$ $8,8355700$ $1,84391\cdot24$ for16 $0,45285\cdot10$ $9,00285'12$ $8,83412'11$ $1,9020^{16}16$ for18 $0,51062\cdot10$ $8,98956\cdot55$ $8,83412'11$ $1,95738\cdot40$ for19 $0,55735\cdot77$ $8,96645^{14}7$ $8,83381\cdot49$ $1,96575^{19}$ 7021 $0,59572\cdot56$ $8,95637\cdot47$ $8,83325\cdot33$ $2,01411\cdot97$ 7122 $0,24073$ $8,9366^{13}1$ $8,83325^{13}3$ $2,0028^{5}55$ 7323 $0,65240^{13}$ $8,93086^{12}42$ $8,83325^{13}3$ $2,00225\cdot34$ 7425 $0,73755\cdot50$ $8,91097\cdot0^{7}81$ $8,83325^{13}42$ $2,0022.344$ 7425 $0,73755\cdot50$ $8,91097\cdot0^{7}81$ $8,8316^{14}55$ $2,20942.34$ 7729 $0,852103\cdot65$ $8,89525^{13}73$ $8,8316^{14}55$ $2,2043.07$ 8031 $0,87940^{14}4$ $8,80978^{17}4$ $8,8316^{12}52$ $2,2043.07$ 8031 $0,87940^{14}44$ $8,80978^{17}4$ $8,8316^{12}52$ $2,20943.07$ 80	9	0,25531.10	9,18143.83	8,83860-89	1,67370-51	59
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10	0,28367.88	9,14840.71	8,83801.40	1,70207.30	60
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11	0,31204.67	9,11958.96	8,83745.86	1,73044.00	61
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12	0,34041.40	9,09422.58	8,83093.84	1,75880.88	02
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	13	0,30878-25	9,07173.80	8,83045.10	1,78717 07	03
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	14	0,39715.04	9,05107.97	8,83599.02	1,81554.40	04
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15	0,42551.83	9,03309.43	8,83557.00	1,84391.24	25
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10	0,45388.01	9,01749.00	8,83517.10	1,87228.03	00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17	0,48225.40	9,00285.12	8,83479.77	1,90004.82	27
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	18	0,51002.10	8,98950.05	8,83444.82	1,92901.01	60
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	19	0,53898 98	8,97747'98	8,83412.11	1,95738.40	09
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	0,50735.77	8,90045.47	8,83381.49	1,98575.19	10
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	21	0,59572.56	8,95637.47	8,83352.83	2,01411.97	71
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22	0,02409.34	8,94713.90	8,83325.99	2,04248.70	72
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23	0,05240.13	8,93866.31	8,83300.87	2,07085.55	73
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	24	0,08082.92	8,93080.99	8,83277.30	2,09922.34	74
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	25	0,70919.71	8,92309.42	8,83255.33	2,12759.13	75
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	0,73750.50	8,91707.81	8,83234.70	2,15595.92	70
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	27	0,70593.29	8,91097.05	8,83215.40	2,18432.70	77
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	28	0,79430.07	8,90532.59	0,03107.32	2,21209.49	70
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	29	0,02200.00	8,00010.40	0,03100.40	2,24100.29	172
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	30	0,85103.05	8,89520-87	8,83104.55	2,20943.07	00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	31	0,87940.44	8,89078.74	8,83149.70	2,29779.80	81
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	32	0,90777'23	8,88003.09	8,83135.80	2,32010.05	82
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	33	0,93014.02	8,88277.31	8,83122.78	2,35453.43	03
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	34	0,90450.80	8,87919.00	8,83110.58	2,38290.22	04
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35	0,99287.59	8,87580.01	0,03000.17	2,41127.01	85
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	30	1,02124'30	0,07270.30	0,03000'40	2,43903.00	00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	37	1,04901.17	0,00900'30	0,03070.47	2,40800.50	87
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	30	1,07797.90	0,0072017	0,03009.09	2,49037.30	00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	- 39	1,10034.75	0,004/0.40	0,03000.30	2,52474.10	09
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	40	1,134/1 53	0,00237.90	0,03052.00	2,55310.95	90
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	41	1,10308.32	8,80021.12	8,83044.37	2,58147.74	91
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	42	1,19145-11	0,05019.04	0,03037.15	2,00084.53	92
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	43	1,21901.90	0,05030.50	0,03030-30	2,03021.32	93
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	- 44	1,24010.00	8 8 6 9 9 9 7 9	8 80078.70	2,00058-11	94
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	45	1,27055 40	8 877270-74	8 82010-13	2,09494 90	1 22
48 1,3015;54 8,84801:21 8,83002:50 2,78005;26 98 49 1,39002:63 8,84736;54 8,8297;94 2,8605;26 98	40	1,30492.27	884004/62	8 820072-57	2,72331.00	190
49 1,39002.63 8,84736.54 8,82997.94 2,80842.05 99	- 46	1 2616-184	8 84867107	8 82007 37	2,75100.47	1 %
4y - , , , , , , , , , , , , , , , , , ,	40	1 20002-62	8 84726.14	8 82002.50	2,70005-20	1 20
COLITATESO 42   8.84620:00    8.82002.06   2.826/8.92 100	49	1.41820.42	8.8/620:00	8 82002.66	2,00042.05	100
50	2	-14-039 44	0,0402009	8.82020-28	-,030/0 04	Perp.
Years	Log. r.	Log. a".	Log. a ⁿ .	Log. r.	Years	
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1	0,02938.38	0,02938.38	8,85910.02	1,49857.27	51	
3	0,05876.76	9,74279.72	8,85817.02	1,52795.64	52	
3	0,08815.13	9,58098.38	8,85730.29	1,55734.02	53	
4	0,11753.51	9,47015.78	8,85649.39	1,58672.40	54	
5	0,14691.89	9,38719.52	8,85573.91	1,01010.78	55	
	0,17030.27	9,32179.09	8,85503.20	1,04549.10	50	
2	0,20508.04	9,20840.85	8,85437.79	1,07487.53	57	
0	0,23507.02	9,22393.12	8,85370.47	1,70425.91	50	
	0,20445.40	9,18007.01	0,05319.24	1,73304-29	1 22	
10	0,29303.70	9,15344-14	0,05205.02	1,70302.07	6-	
II	0,32322.10	9,12501.50	8,85215.96	1,79241.04	01	
12	0,35200-53	9,10003.20	8,85109.41	1,02179.42	62	
13	0,38198.91	9,07791.58	0,05125.95	1,05117.00	163	
14	0,41137-29	9,05021.70	0,05005-37	1,0005010	67	
12	0,44075 07	9,0405010	8 8 6 7 7 40	1,90994 50	62	
10	0,47014 04	9,024/2 23	8 84070'07	1,93934 93	67	
- 16	0 52800-80	8 00744114	8 84048-21	1,900/1 51	68	
10	0 55820118	8 08:66:4	8 84010:20	2 027 48:07	60	
20	0,58767.56	8,97493.95	8,84892.48	2,05686.44	70	
21	0.61705.02	8.06514.00	8.84867.24	2.08624.82	71	
22	0.64644 21	8.05610.62	8.84843 87	2.11563.20	72	
22	0.67682.60	8.04700-18	8.84821.03	2.14501.58	73	
24	0.70521 07	8.04046.18	8.84801.44	2.17430.05	74	
25	0.73450.44	8,93354.06	8.84782.30	2,20378.33	75	
26	0.76307 82	8,92717.03	8,84764.42	2,23316.71	76	
27	0,70336.20	8,921,30.00	8,84747.72	2,26255.09	77	
28	0,82274.58	8,91588.47	8,84732.11	2,29193.47	78	
29	0,85212.96	8,91088.39	8,84717.54	2,32131.84	79	
30	0,88151.33	8,90626.18	8,84703.91	2,35070.22	80	
31	0,91089.71	8,90198.61	8,84691.19	2,38008.60	81	
32	0,94028.09	8,89802.78	8,84679.30	2,40946.98	82	
33	0,96966.47	8,89436.08	8,84668.19	2,43885.35	83	
34	0,99904.84	8,89096.14	8,84657.81	2,46823.73	84	
35	1,02843.22	8,88780.83	8,84648.11	2,49762.11	85	
36	1,05781.00	8,88488.21	8,84039.05	2,52700.49	00	
37	1,08719.98	8,88216.49	8,84030.58	2,55038.87	87	
38	1,11058.30	8,87904.09	8,84022.07	2,58577-24	00	
39	1,14596.73	8,87729.51	0,04015'20	2,01515.02	l og	
40	1,17535.11	8,87511.42	8,84008.37	2,04454 00	90	
<b>4</b> I	1,20473.49	8,87308.58	8,84601.92	2,67392.38	91	
42	1,23411.87	8,87119.87	0,84595.88	2,70330.75	92	
43	1,20350.24	8,80944.23	0,04590.25	2,73209.13	93	
44	1,29288.02	0,80780.72	0,04504.98	2,70207-51	94	
45	1,32227.00	0,80028.48	884500.00	2,79145'09	198	
40	1,35105.38	0,00400.07	8 84575 40	2 8:022:64	07	
47	1,38103.70	8 86227	8 84657115	2,05022.04	1 08	
48	1,41042.13	8 861 16.47	8 84662:40	2,07901 02	00	
49	1,43980.51	8 86000174	8 845 50 88	2.02827.78	100	
50	1,40910 09	0,00009 /4	0,04559,00	11000110	Pern	

7 Per Cent.

 $7\frac{1}{2}$  Per Cent.

Years	Log. r*.	Log. a*.	Log. a ⁿ .	Log. r.	Year
I	0,03140.85	0,03140.85	8,88606.25	1,60183.17	51
2	0,06281.69	9,74579.88	8,88528.58	1,63324.01	52
3	0,09422.54	9,58493.88	8,88456.46	1,66464.86	53
4	0,12563.39	9,47504.25	8,88389.48	1,69605.71	54
5	0,15704.23	9,39298.64	8,88327.27	1,72746.55	55
6	0,18845.08	9,32847.11	8,88269.47	1,75887.40	56
7	0,21985.92	9,27600.27	8,88215.78	1,70028.25	57
8	0,25120.77	9,23230.23	8,88165.80	1,82160.00	58
9	0,28267.62	9,19525.51	8,88119.53	1,85300.04	59
ιó	0,31408.46	9,16341.76	8,88076.46	1,88450.79	66
11	0,34549.31	9,13576.05	8,88036.42	1,91591.63	61
12	0,37690.10	9,11152.40	8,87999.21	1,94732.48	62
13	0,40831.00	9,09013.17	8,87964.63	1,97873.32	63
14	0,43971.85	9,07113.50	8,87932.48	2,01014.17	64
15	0,47112.70	9,05418 10	8,87902.60	3,04155.02	65
16	0,50253.54	9,03898.22	8,87874.82	2.07205.86	66
17	0,53394.39	9.02530.00	8.87848.00	2.10430.71	67
18	0,50535-24	9.01205.03	8.87824.00	2.13577.56	68
10	0,50070.08	0.00178.08	8.87802.66	2.16718.40	60
20	0,62816.93	8,99163.44	8,87781.91	2,19859.25	70
21	0,65957.77	8,98240.41	8,87762.62	2,23000.10	71
22	0,69098.62	8,97399.04	8,87744.67	2.20140.04	72
23	0,72239.47	8,96630 73	8,87727 98	2.20281.70	73
24	0,75380.31	8.05028.03	8.87712.47	2.32422.64	74
25	0.78521-16	8.05284.41	8.87608.04	2.35563.48	75
26	0.81662.01	8.04604.14	8.87684.62	2.28704*22	1 76
27	0.84802.85	8.04152.15	8.87672.15	2.41845.17	77
28	0.87043.70	8.03653.00	8.87660-54	2.44080.02	1 78
20	0.01084.55	8.03105 65	8.87640.75	2 481 26.87	70
30	0,94225.39	8,92773.59	8,87639.71	2,51267.71	80
31	0,97366.24	8.92384.62	8,87630'38	2.54408.56	81
32	1.00507.00	8.02025.80	8.87621.70	2.57540-41	82
33	1.03647 03	8.01604.84	8.87613.62	2.00000.25	83
34	1.06788.78	8.01380.13	8.87606.12	2 62821.10	84
35	1.00020 62	8.01100.04	8.87500.12	2.66071.05	85
36	1.13070.47	8.00845.52	8.87502.64	2 70112'70	86
37	1.10211.32	8.00004.04	8.87586.60	2.72252.64	87
38	1.10352.10	8.00380.68	8,87580.08	2 70204:40	88
30	1.22403 01	8.00172'74	8.87575.75	4 70525+22	80
40	1,25633.86	8,89982.22	8,87570.89	2,82676.18	90
ΔI	1.28774.70	8.80804.82	8.87566.37	2.8:817.02	01
42	1.31915.55	8.80640.43	8.87562.17	2.88057.87	02
43	1.35050.40	8.80488.08	8.87558.25	2.02008.77	03
44	1.38107.24	8.80346.82	1.87554.62	2 05220106	04
4	1.41338.00	8.80215.84	8.87551.22	2.08280.41	05
76	1.44478.04	8.80004.35	8.87548.08	2 01 521-26	1 28
47	1.47010.78	8,88001.64	887645.16	2 04662120	07
78	1.50760.62	8 83877 05	8 87642.42	2 07802 10	1 68
10	1 52001.44	8 88770.00	8 87520.80	3,0/002 95	120
77	1.57042:20	8 88680.80	8 87520154	3,10943.00	1.22
24	-10/04-02	0,00009.09	8 87506 12	3, 14004 04	Perp
L L		•	0,0/500 13 1		1 W.

lears	Log. <b>7⁸.</b>	Log. a [*] .	Log. a"	Log. r.	Year
1	0,03342.38	0,03342.38	8,91174.95	1,70461.15	151
2	0,06684.75	9,74878.43	8,91110.22	1,73803.53	52
3	0,10027.13	9,58886.92	8,91050.36	1,77145.90	53
4	0,13360.50	9.47989.30	8,00005.00	1,80488.28	54
5	0.16711.88	0.30873.22	8,00043.81	1.83830.66	55
6	0.20054.25	0.33508.74	8.00806.47	1.87173.03	56
7	0.23206.62	0.28346.40	8.00852 68	1.00515.41	57
Ś.	0.26720.00	0.24058.61	8.00812.18	1.02857.78	1 28
ň	0,20081.28	0,20422.62	8 00774:70	1.07200'16	50
10	0.33423.76	0.17327.22	8.00740.04	2.00542.53	66
	-,554-570	9,-13-1	8 00707:06	2 0 2 8 4 0 1	61
12	0,30700-13	0.12285.46	8.00678.27	2,03004.91	61
1.4	0,40100 51	9,1220540	8 00650-81	2 10:60:66	62
13	0,43450 00	9,10210 54	8,00625147	2,10,000 00	64
14	0,40793-20	9,00304.95	8,90025 41	2,13912 04	67
12 1	0,50135-03	9,00755-27	8,90001.09	2,1/254 41	62
10	0,53478.01	9,05298.95	0,90500-13	2,20590.79	125
17	0,50820.38	9,03992 72	8,90559.98	2,23939.10	22
18	0,00102.70	9,02817.29	8,90541.34	2,27281.54	00
19	0,03505.14	9,01756.60	8,90524.08	2,30023.01	09
20	0,66847.51	9,00797.05	8,90508.15	2,33966.29	170
21	0,70189.89	8,99927.09	8,90493.34	2,37308.66	71
22	0.73532.20	8.00136.82	8,90479.66	2,40651.04	72
23	0.76874.64	8,98417.69	8,90466.99	2,43993.42	73
24	0.80217.01	8.07762.28	8.00455.27	2.47335.70	74
25	0.83550.30	8.07164.12	8.00444.41	2.50678.17	75
28	0.86001.26	8 06617.52	8.00424-27	2.54020.54	76
27	0.00244'14	8 06117.47	8.00425.07	2.57362.02	77
<i>.</i> 6	0,90244 14	8 05650152	8 00416:46	2 00705-20	1 78
20	0,95500 52	8 05 2 20 7 20	8 00408.40	2 64047.67	170
20	1.00271-27	8.04854.71	8.00401.13	2.67300.04	80
<u> </u>	1,002/1 2/	0,94094 /1	0,90401 1 <b>0</b>		0.
31	1,03013.04	8,94501.18	0,90394-29	2,70732.42	
32	1,06950.02	8,94170.38	8,90387.90	2,74074.79	02
33	1,10298.39	8,93877.80	8,90382.11	2,77417.17	03
34	1,13640.77	8,93603-14	8,90370.08	2,80759.55	84
35	1,16983.14	8,93350.38	8,90371.08	2,84101.92	85
36	1,20325.52	8,93117.65	8,90307.03	2,87444.30	80
37	1,23667.90	8,92903.25	8,90362.72	2,90786.67	87
38	1,27010.27	8,92705.68	8,90358.74	2,94129.05	88
30	1,30352.65	8,92523.54	8,90355.06	2,97471.42	89
ίóΙ	1,33695.02	8,92355.57	8,90351 64	3,00813.80	90
4T	1.37037.40	8.02200.62	8.00348.40	3.04156.17	91
	->3/-3/ 40 I /0270-77	8.02057.62	8.00345 50	3.07498.55	02
1	->+>)/ 2/3/3/1/	8 01025-07	8.003/2.8	3.10840.02	02
13	1,43/44 15	8 01802-82	8 00240.24	2.14182.20	04
<del>14</del>	1,47004.52	8 01601120	8 00228:02	2 17525.68	1 05
4 <u>5</u>	1,50400.90	8,91091.32	8 00221186	2 20868.01	1 22
40	1,53749.20	0,91507.40	0,90335.00	3,20000 05	1 22
47	1,57091.05	0,91491'4I	0,90333.07	3,24210 43	1 %
48	1,00434.03	8,91402.71	0,90332.04	3,27552.00	90
19	1,03770.40	8,91320.74	8,90330.33	3,30895-18	99
50	1,67118'78	8,91244.98	8,90328'74	3,34237.55	Dam
		1	8.00300.00		prerp.

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9 Per Cent.

Years	Log. 7".	Log. a*.	Log. a*.	Log. 7*.	Years
1	0,03742.65	0,03742.65	8,95963.42	1,90875.14	51
2	0,07485.30	9,75470.67	8,95918.65	1,94617.79	52
3	0,11227.95	9,59665.73	8,95877.61	1,98360.44	53
4	0,14970 60	9,48949 26	8,95840.00	2,02103.09	54
5	0,18713.25	9,41008.93	8,95805.52	2,05845.74	55
6	0,22455.90	9,34814.86	8,95773.91	2,09588.39	56
7	0,26198.55	9,29817.72	8,95744.93	2,13331.04	57
8	0,29941.20	9,25689.66	8,95718.36	2,17073.69	58
9	0,33683.85	9,22219.29	8,95694.01	2,20816.34	59
IÓ	0,37426.50	9,19262.35	8,95671.67	2,24558.99	60
п	0,41169.15	9,16715.98	8,95651-19	2,28301.64	61
12	0,44911.80	9,14504.29	8,95032.40	2,32044.29	02
13	0,48654.45	9,12509.77	8,95015.18	2,35780.94	03
14	0,52397.10	9,10807.72	8,95599.38	2,39529.59	04
15	0,50139.75	9,09302.78	8,95584.89	2,43272.24	25
16	0,59882.40	9,08020.53	8,95571.01	2,47014.89	00
17	0,03025.05	9,00835.74	8,95559.43	2,50757.54	27
18	0,07307.70	9,05771.28	8,95548.24	2,54500.19	00
19	0,71110.35	9,04817.14	0,95537.99	2,50242.04	09
20	0,74853.00	9,03959'84	0,95520.59	2,01905.49	170
21	0,78595.65	9,03187.94	8,95519.96	2,65728.14	71
22	0,82338.30	9,02491.04	8,95512.00	2,09470.79	72
23	0,80080.95	9,01802.51	8,95504.80	2,73213.43	73
24	0,89823.00	9,01293.22	8,95498'14	2,70950 08	74
25	0,93500.24	9,00777'44	8,95492.04	2,80098.73	75
26	0,97308.89	9,00309.57	8,95480.44	2,84441 38	1 70
27	1,01051.54	8,99884.72	8,95481.29	2,00104.03	77
28	1,04794.19	0,99490.57	0,95470.59	2,91920.08	70
29	1,08530.84	0,99147.30	0,95472.20	2,95009.33	1 72
30	1,12279.49	0,90027-51	0,95400 29	2,99411.90	00
31	1,16022.14	8,98530.18	8,95464 65	3,03154.63	81
32	1,19764.79	8,98270.02	8,95401.32	3,00897.28	82
33	1,23507.44	8,98028.40	8,95458.20	3,10039.93	83
34	1,27250.09	8,97807*30	8,95455.45	3,14382.28	84
35	1,30992.74	8,97005.57	8,95452.87	3,18125.23	85
30	1,34735.39	8,97421.25	0,95450.50	3,21007.00	00
37	1,38478.04	8,97252.83	0,95440.34	3,25010.53	1 87
38	1,42220.09	8,97098'90	0,95440.35	3,29353.18	00
39	1,45903.34	0,90950.15	0,95444 52	3,33095 83	09
40	1,49705.99	0,90029-43	0,95442.05	3,30030.40	90
41	1,53448.64	8,96711.67	8,95441.31	3,40581.13	91
42	1,57191.29	8,90003.01	0,95439.91	3,44323.78	92
43	1,00933'94	0,90505'28	0,95430.01	3,40000.43	93
44	1,04070.59	0,00415.00	0,95437.42	3,51009.08	94
45	1,08419'24	0,90332-33	0,95430.34	3,55551.73	1 95
40	1,72101.89	8,90250.03	9,95435 34	3,59294-30	90
47	1,75904.54	8 06102/20	8 05 4 2 2 5 4 3	3,03037.03	1 2%
40	1,79047.19	8 0606 1170	8 05 433 50	3,00779.00	90
49	1,03309.04	8 06070:59	8 05432 01	3,70522 33	199
50	1,07132.49	0,90012 20	8 05424125	3,14204 90	Pern
1		. l	03934445		1-0-1-

For explanation see pp. 216-228

10 Per Cent.

Tean	Log. 7 [.] .	Log a".	Log. a".	Log. 7.	Year
I	0,04139.27	0,04139.27	9,00337.63	2,11102.09	51
2	0,08278.54	9,76056.60	9,00306*83	2,15241.96	52
3	0,12417.81	9,60435.01	9,00278.85	2,19381.23	53
4	0,16557.07	9,49895 92	9,00253.42	2,23520'50	54
5	0,20696.34	9,42127.07	9,00230.32	2,27659.77	55
6	0,24835.61	9,36098.59	9,00209.33	2,31700.04	56
7	0,28974.88	9,31261.21	9,00100.20	2,35938.31	57
8	0,33114.15	9,27287.16	9,00172.03	2,40077.57	58
9	0,37253.42	9,23965.11	9.001 17 18	2.44216.84	59
IÓ	0,41392.69	9,21150.87	9,00142.87	2,48356.11	66
11	0.45531.05	0.18741-68	0.00120.86	2.52405.28	61
12	0,40071.22	0.16661.75	0.00118.04	2.56634.65	62
13	0.53810.40	0.148:3.64	0.00107.20	2.60772.02	62
14	0.57040 76	0.13272.77	0.00007.52	2.64012.10	64
i e l	0.62080.03	0.11882.01	0.00088.65	2 60052.45	64
īð l	0.66228.20	0.10668.72	0.00080.50	2,72101.72	1 66
17	0.70367.67	0.00574.15	0.00072:26	2,77220.00	67
īś I	0.74506.82	0.08611.14	0,00060.50	2 81 470.26	68
ĩŏ	0.78646.10	0.07752.82	0,00060:62	2,81600.12	6
20	0.82785.37	0.06088.86	0.00055'03	2.80748.80	170
	0.86024164	0 of the unit	0.00070100	0.00999.06	
	0,00924 04	9,00304 95	9,000,003	2,93000 00	
22	0,91003.91	9,05092.41	9,00045.47	2,00027-33	72
23	0,95203 18	9,05142 97	9,00041-34	3,02100.00	173
-4	0,99342.44	9,04049.44	9,00037.57	3,00305.87	1 74
<u>-2</u>	1,03401.71	9,04205.57	9,00034.10	3,10445.14	1 75
20	1,07020.98	9,03805.97	9,00031.05	3,14584.41	1 70
26	1,11700-25	9,03445.80	9,00028.23	3,18723.08	177
20	1,15899.52	9,03121.05	9,00025.00	3,22802.94	1 70
29	1,20038.70	9,02827.87	9,00023.33	3,27002.21	1 72
30	1,24178.00	9,02503.04	9,00021.21	3,31141.48	00
31	1,28317.32	9,02323.69	9,00019.38	3,35280.75	81
32	1,32456.59	9,02107.23	9,00017.53	3,39420.02	82
33	1,36595.86	9,01911.38	9,00015.93	3,43559.29	83
34	1,40735.13	9,01734.10	9,00014.48	3,47698.56	84
35 I	1,44874.40	9,01573.56	9,00013117	3,51837.82	85
36	1,49013*67	9,01428.13	9,00011.97	3,55977.09	86
37	1,53152.94	9,01296.35	9,00010.88	3,60116.36	87
38	1,57292.20	9,01176.88	9,0009.89	3,64255.63	88
39	1,61431.47	9.01068.57	9,00009.00	3,68394 <b>.90</b>	89
40	1,65570'74	<b>9,009</b> 70 <b>*32</b>	9,00008.17	3,72534.17	90
41	1,69710.01	9,00881.21	9,00007.43	3,76673.43	91
42	1,73849.28	9,00800.36	9,00006.76	3,80812.70	92
<b>4</b> 3	1.77988 55	9,00726.00	9,00006.14	3,84951 07	93
44	1,82127.81	9,00660 40	9,00005.58	3,89091.24	94
as I	1 8/12/07:08	0,00500.04	9,00005.08	3,03230 51	95
اŏ⊿	1.4-106.34	0.00545.00	9,00004.61	3,97369.78	1 66
47	1.04545 62	0.00405.22	0.00004.10	4.01 500 04	97
78 I	1.08684.80	0.00440.07	0.00003.81	4.0:648.21	68
10	2.02824.16	0.00408.87	0.00003'47	4.00787.58	1 00
50	2.06062.42	0.00371.54	0.00003.14	4.13026.84	100
<b>5</b> ~	-,00903 43		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Dam

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12 Per Cent.

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Years	Log. r.	Log. a".	Log. a.	Log. r.	Years
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	I	0,04921.80	0,049:21.80	9,08052.50	2,51011.92	51
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2	0,09843.60	9,77210 02	9,08038.09	2,55933.72	52
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3	0,14765.41	9,61945.76	9,08025.22	2,60855.52	53
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	4	0,19687.21	9,51750.53	9,08013.73	2,65777*32	54
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	5	0,24009.01	9,44312.17	9,08003*48	2,70699.12	55
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6	0,29530.81	9,38600 95	9,07994.32	2,75620.93	56
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	7	0,34452.02	9,34067.76	9,07986.15	2,80542.73	57
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8	0,39374.42	9,30384.99	9,07978.86	2,85464 53	58
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9	0,44290.22	9,27341.55	9,07972.35	2,90386.33	59
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10	0,49218.02	9,24793 <b>.4</b> 4	9,07966•53	2,95308.14	60
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	II	0,54139.82	9,22638.18	9,07961.35	3,00229.94	61
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	12	0,59001.03	9,20500.20	9,07956.71	3,05151.74	02
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	13	0,03983.43	9,19222.50	9,07952.59	3,10073.54	03
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	14	0,08905.23	9,17800.05	9,07948.88	3,14995.35	04
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	15	0,73827 03	9,10079.78	9,07945.59	3,19917.15	05
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	10	0,70740.04	9,15051.89	9,07942.04	3,24838.95	00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	-17	0,03070.04	9,14754.25	9,07940.02	3,29700.75	1 97
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10	0,88592.44	9,13908.18	9,07937.07	3,34682.55	68
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	19	5,93514.24	9,13278.15	9,07935.58	3,39604.36	69
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	0,98430.05	9,12071.17	9,07933.71	3,44526.16	70
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	21	1,03357.85	9,12136.31	9,07932.04	3,49447.96	71
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22	1,08279.05	9,11004.20	9,07930.55	3,54309.70	72
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23	1,13201.45	9,11247'08	9,07929:21	3,59291.57	73
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	24	1,18123.25	9,10877.90	9,07928.03	3,04213.37	74
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	25	1,23045.00	9,10551.01	9,07920.97	3,09135.17	75
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	1,27000.60	9,10201.10	9,07920'01	3,74050.97	70
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	- 27	1,32000.00	9,10003.99	9,07925.17	3,78978.77	177
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	1,3/010.40	9,09775.05	9,07924.42	3,83900.28	78
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	29	1,42/32 2/	9,09572.78	9,07923.75	3,00022.30	1 29
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	30	1,47054.07	9,09392.45	9,07923-14	3,93744.18	80
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	31	1,52575.87	9,09232.07	9,07922.60	3,98665.98	81
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	32	1,57497.07	9,00089.38	9,07922-12	4,03587.79	82
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	33	1,02419.47	9,08962:36	9,07921.70	4,08509.59	83
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	34	1,07341.28	9,08849.27	9,07921.31	4,13431.39	84
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35	1,72203'08	9,08748.55	9,07920.97	4,18353.19	85
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	30	1,77184'88	9,08058.81	9,07920.07	4,23274.99	80
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	37	1,82100.08	9,08578.84	9,07920.39	4,28190.80	87
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	30	1,87028.49	9,08507.57	9,07920.12	4,33118.00	88
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	- 39	1,91950.29	9,08444.03	9,07919.93	4,36040.40	89
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	40	1,90872.09	9,08387.38	9,07919.74	4,42962.20	90
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	41	2,01793.89	9,08336.86	9,07919.57	4,47884.01	91
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	42	2,00715.70	9,08291.80	9,07919.41	4,52805.81	92
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	43	2,11037.50	9,08251.01	9,07919.27	4,57727.61	93
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	44	2,10559.30	9,08215.70	9,07919.15	4,02049.41	94
40         2,20402'90         9,08155'33         9,07918'04         4,72493'02         96           47         2,31324'71         9,08129'76         9,07918'64         4,77414'82         97           48         2,36240'51         9,08129'76         9,07918'86         4,87336'62         98           49         2,41168'31         9,08086'76         9,07918'71         4,83336'62         98           50         2,46090'11         9,08086'66         9,07918'65         4,92180'23         100	45	2,21401.10	9,08183.77	9,07919.04	4,07571.22	95
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	40	2,20402.00	9,08155.23	9,07918.04	4,72493.02	90
40         2,5049 51         9,05107 04         9,0791878         4,82330 02         98           49         2,4116831         9,0808676         9,0791875         4,8725842         99           50         2,4609011         9,0806866         9,0791875         4,9218023         100	47	2,31324.71	9,08129.70	9,07918.86	4,77414.82	97
49         2,41100 31         9,0000070         9,07910 71         4,87258 42         99           50         2,46090 11         9,08068 66         9,07918 65         4,92180 23         100	40	2,30240.51	9,08107.04	9,07918.78	4,82330.02	98
50 2,4009011 9,0000000 9,07918.05 4,92180.23 100	49	a,41100'31	9,00000-70	9,07918.71	4,07250.42	99
	50	a,40090-11	9,00000.00	9,07918.05	4,92100.23	Par

For explanation see pp. 216-228

## TABLE II.

#### SHOWING

- A. For every rate contained in the preceding table the logarithms, to 10 and 7 decimals,
  of t, t being the interest of £1 per annum or the rate ;
  of r, r being £1 increased by interest for one year ; and the logarithm of log² r.
- B. For every rate between o and 10 per cent., proceeding by 10ths, the logarithms of t and r.
- C. For every fractionary rate between o and 10 per cent., proceeding by 12ths, the logarithms of t and r.

The rate of interest which M. Thoman calls t is in modern notation denoted by t, and the amount of I in I period is now expressed by I + i instead of by r.

for one year.						
Rats per Cent.	Log. t.	Log. r.	Lag ³ . r.	Rate per Cent.		
3/8	7,69897.00043	0,00216.60618	7,33567.08	1/8		
r	8.00000.00000	0.00432.13738	7.63562.18	1		
t 1/a	8.17600.12501	0.00646.60422	7.81063.85	11/2		
6/	8.21085.32053	0.00700.05586	7.84513.27	1 %		
1 8/4	8.24303.80487	0.00753'44170	7.87704.07			
1 1/0	8,27300.12721	0,00806.70217	7,90674.55	1 7/8		
2	8,30102.99957	0,00860.01718	7,93450.71	2		
2 1/8	8,32735.89344	0,00913-20695	7,96056.92	2 1/6		
2 1/4	8,35218.25181	0,00966.33167	7,98512.62	2 1/4		
2 ⁸ /8	8,37566.36140	0.01019.39148	8,00834.10	2 8/8		
2 ¹ / ₈	8,39794.00087	0,01072.38654	8,03035-14	$2 \frac{1}{9}$		
2 %	8,41912.93077	0,01125.31701	8,05127.49	2 ⁵ / ₈		
2 1/4	8,43933 26938	0,01178.18305	8,07121.28	2 /		
2 7/8	8,45863178490	0,01230.98482	8,09025.27	2 7/6		
3	8,47712.12547	0,01283.72247	8,10847.11	3		
3 1/8	8,49485.00217	0,01336-39616	8,12593.52	3 1/8		
3 1/4	8,51188.33610	0,01389.00603	8,14270.41	3 1/4		
3 %	8,52827.37772	0,01441 55226	8,15883.04	3 1/8		
3 Ja	8,54406 80444	0,01494 03498	8,17436.08	3 1/2		
3 🎾	8,55930 80109	0,01546.45436	8,18933.71	3 1/8		
3 1/4	8,57403.12677	0,01598.81054	8,20379 <b>'70</b>	3 /4		
3 1/8	8,58827.17068	0,0165110368	8,21777.43	3 7/8		
4	8,60205.99913	0,01703.33393	8,23129.98	4		
4 /	8,61542.39529	0,01755.50144	8,24440.12	4 1/0		
4 / 4	8,62838.89301	9,01807.60636	8,25710.39	4 1/4		
4 ¶/a	8,64097.80574	<b>e</b> ,01859.64885	8,26943.10	4 //8		
4 /2	8,65321.25138	0,01911.02904	8,28140.30	4 <i>'</i> /a		
4 %	8,66511.17371	0,01963.54710	8,29304.13	4 /8		
4 /4	8,67669.36096	0,02015-40310	8,30430-19	4 /		
4 1/8	8,08797.40200	0,02007.19738	8,31538.19	4 <b>*/</b> e		
5	8,69897.00043	0,02118.02001	8,32611.66	5		
5 /a	8,70969.38697	0,02170.00088	8,33658.00	5 1/#		
5 /4	8,72015.93034	0,02222.51045	8,34078.52	5 /		
5 % j	8,73037.84686	0,02273.75870	8,35074.44	5 /		
5 /8	8,74030.20895	0,02325.24590	8,30040.89	5 /#		
5 /8	8,75012.25208	0,02370.07220	8,37590.93	5 %e		
5 74	8,75900'78447	0,02,128.03700	8,38525.54	5 /4		
5 74	8,70900.78709	0,02479 34233	8,39433.05	5 /		
61/	8,77815-12504	0,02530.28053	8,40322.13			
6 1/4	a,795aa.00173	0,02032.80387	8,42043.34	0 1/4		
6 8/	0,01291.33500 8 80000025500	0,02734.00078	0,43005.11			
- 74	0,02930 37728	0,02030 70037	0,45202.00	0 74		
7 1/	0,04500°80400	0,02938-37777	8 40704:6	17.4		
1 78	0,07500 12034	0,03140 04043	0,49704.07	0 78		
0	0,90300°99070	0.03342 37555	0,52405-52	0		
9	0,95424.25094	0.03742'04979	0,57317.92	9		
10	9,00000.00000	0,04139.20852	8,01092.36	10		
12	9,07918.12460	0,04921.80227	8,69212.42	12		

Table II This table shows the Logarithms of (t), (r), and  $(\text{Log}^{2}.r)$ , t being the rate of interest per cent. and  $r \pounds 1$  increased by its interest for one year.

For explanation see pp. 227, 228

Rate		ľ – –	<u> </u>	1	Rate
per Cent.	Log. r.	Log. t.	Log. 1.	Log. r.	per Cont.
1/	0.00042.40775	7.00000:00	8.70757.02	0.02160.27160	5 1/10
9/10	0.00086.77215	7.30103.00	8.71000.33	0.02201.57308	5 %
8/10	0.001 20 00 3 30	7.47712.13	8,72427.59	0,02242-83712	5 8/10
4/10	0,00173.37128	7,60206.00	8,73239.38	0,02284.00100	5 %
9/10	0,00216-60618	7,69897.00	8,74036.27	0,02325 24596	5 %
e/10	0,00259.79807	7,77815.13	8,74818.80	0,02366.39182	5 %
7/10	0,00302.94706	7,84509.80	8,75587.49	0,02407.49873	5 7/10
8/10	0,00346.05321	7,90309.00	8,76342.80	0,02448.56677	5 /10
^{9/} 10	0,00389.11662	7,95424.25	8,77085.20	0,02489.59001	5 710
I	0,00432.13738	8,00000.00	8,77815.13	0,02530.28053	D
1 1/10	0,00475.11556	8,04139.27	8,78532.98	0,02571.53839	6 Y ₁₀
1 2/10	0,00518.05125	8,07918.12	8,79239.17	0,02612.45167	6 1/10
I /10	0,00560.94454	8,11,394.34	8,79934.05	0,02653.32645	0 10
1 1/10	0,00003.79550	8,14012.80	8,80018.00	0,02094'10280	2 10
1 /10	0,00040.00422	8,17009.13	8,81291.34	0,02734'90078	6 4
1 /10	0,00089.37079	8,20412.00	0,01954.39	0,02775.72047	6 7/10
1 /10	0,00732.09529	0,23044.00	8 8 2250 7 40	0,02010-44104	6 8/.
, 9/10	0,00/14 1/100	8 27877 25	8 8288 (10)	0,02057 12527	6 %
1 710	0,00860.01741040	8 20102 00	8 8 100 80	0,02038.27777	4/10
	0,00000 01/10	8	0,04,009.00	e,e2930 37777	- 1/
2 /10	0,00002*57421	8,32221.93	0,05125.03	0,02978'94708	7 7/10
2 /10	0,00945.08950	0,34242 27	0,05733 25	0,03019 47054	/ /10
2 7/10	0,00987.50337	8 28021.12	8 86022.14	0,03059 97220	1 4/10
2 51	0,01029 99500	8 20704.00	8.87506.12	0.02140.84642	7 4/10
2 110	0.01114.72608	8,41407.33	8.88081.26	0.03181.22713	7 %
2 7/10	0.01157.04436	8.43136.38	8.88640.07	0.03221.57033	7 7/10
2 %	0.01100.31147	8,44715.80	8,89209.46	0,03261.87600	7 %
2 1/10	0,01241 53748	8,46239.80	8,89762.71	0,03302.14447	7 /10
3	0,01283.72247	8,47712.13	8,90309.00	0,03342.37555	8
3 1/10	0.01325.86653	8.40136.17	8,00848.50	0.03382.56940	8 1/10
3 1/10	0,01367.06073	8,50515.00	8,91381.39	0,03422.72608	8 1/10
3 1/1	0,01410 03215	8,51851.30	8,91907.81	<b>e</b> ,03462 84566	8 1/10
3 1/10	0,01452.05388	8,53147.89	8,92427.93	0,03502 92822	8 1/10
3 1/10	0,01494 03498	8,54406-80	8,92941.89	0,03542.97382	8 %10
3 /10	0,01535 97554	8,55630.25	8.93449.85	•,o3582·98253	8 %10
3 1/10	e,e1577 [.] 87564	8,56820.1.7	8,93951.93	0,03022.05441	8 //10
3 /10	0,01019.73535	8,57978.30	8,94448.27	0,03002.88954	8 /10
3 /10	0,01001.55470	8,59100.40	8,94939.00	0,03702.78798	0 710
4	0,01703.33393	8,00200.00	0,95424.25	0,03/42 049/9	<b>y</b>
4 1/10	o,01745.07295	8,01278.39	0,95904.14	0,03782.47500	9 /10
4 7/10	0,01780.77190	0,02324 93	0,90370.78	0,03822.20384	9 /10
4 710	0,01828 43084	0,03340 85	8 0/212/20	0,03002.01010	9 7/10
4 710	0,01070.04907	6 c 22 C 27	8 07772-29	0,03901 73220	9 10
4 710	0.01911 02004	8.66275.78	8.08227.12	0.02081 05541	0 10
7 //•	0.01953 10045	8.67200.70	8.08677.17	0.04020 66276	0 1/10
7 10	0.02036-12826	8.68124.12	8.00122.01	0.04060 23401	6 %
A 0/10	0.02077.54882	8,60010.61	8,99563.52	0,04000.76924	9 1/10
7 (**)	0.02118 02001	8.6080 .00	9,00000.00	0,04139.26852	10

Table II This table shows the Logarithms of t and r, t being the rate of interest per cent. and r being £1 increased by its interest for one year.

(319)

Intere	of for one year.				
Rate per Cent.	Log. <b>r.</b>	Log. t.	Log. t.	Log. <i>r</i> .	Rate per Cent.
*/19 1/6 1/3 5/15 7/19 5/5 6/6 11/19	0,00036*17614 0,00072*32216 0,00144*52409 0,00180*58009 0,00252*60240 0,00288*56882 0,00360*41243 0,00396*28971	6,92081 · 88 7,221 84 · 87 7,522 87 · 87 7,6197 8 · 88 7,76591 · 68 7,82390 · 87 7,920 81 · 88 7,96221 · 14	8,70614.86 8,71321.04 8,72699.87 8,73373.21 8,74689.36 8,75332.77 8,76591.68 8,77207.71	0,02153*38405 0,02187*81089 0,02250*58279 0,02290*92795 0,02359*53688 0,02393*80075 0,0240*24749 0,02496*43045	5 1/18 5 1/8 5 1/8 5 7/18 5 7/18 5 7/18 5 5 7/18 5 5 7/18
I ¹ / ₁₉ I ⁴ / ₆ I ¹ / ₈ I ³ / ₁₉ I ⁷ / ₁₉ I ² / ₃ I ⁵ / ₆ I ¹¹ / ₁₉	0,00467 95548 0,00503 74407 0,00575 23289 0,00610 93322 0,00682 24596 0,00717 85846 0,00788 99599 0,00824 52110	8,03476*21 8,06694*68 8,12493*87 8,15126*77 8,19957*24 8,22184*87 8,26324*14 8,28254*66	8,78414.16 8,79005.05 8,80163.23 8,80730.95 8,81844.58 8,82390.87 8,83463.26 8,83989.68	0,02564.71576 0,02598.81820 0,02066.94283 0,02700.96512 0,02768.92984 0,02802.87236 0,02870.67791 0,02904.54103	6 1/18 6 1/8 6 1/8 6 6/19 6 7/19 6 8/8 6 1/19 6 11/19
2 1/19 2 1/6 2 1/8 2 5/19 2 7/19 2 8/8 2 5/6 2 11/12	0,00895'48427 0,00930'92241 0,01001'71208 0,01037'06368 0,01142'94618 0,01213'39136 0,01248'57115	8,31875*88 8,33579*21 8,36797*68 8,38321*68 8,41218*04 8,42596*87 8,45229*77 8,46488*68	8,85023-77 8,85531-72 8,80530-14 8,87020-88 8,87986-01 8,88460-66 8,89394-66 8,89394-66 8,89854-24	0,02972*18816 0,03005*97225 0,03073*46170 0,03107*16713 0,03174*49962 0,03208*12676 0,03275*30303 0,03308*85224	7 1/15 7 1/6 7 1/8 7 5/19 7 7/19 7 5/8 7 5/8 7 5/6 7 11/13
3 1/12 3 1/0 3 1/8 3 5/18 3 7/19 3 8/0 3 11/19	0,01318-84536 0,01353-93986 0,01424-04391 0,01459-05355 0,01528-98826 0,01503-91343 0,01633-07903 0,01668-52074	8,48902.05 8,50060.24 8,52287.87 8,53360.26 8,55428.72 8,56427.14 8,58357.66 8,59291.66	8,90759*05 8,91204*48 8,92081*88 8,92514*01 8,93365*60 8,93785*21 8,94612*46 8,95020*25	0,03375'87300 0,03409'34464 0,03476'21063 0,03509'60555 0,03576'31697 0,03609'63453 0,03676'19309 0,03709'43415	8 1/13 8 1/6 8 1/6 8 8/12 8 7/13 8 8/8 8 8/6 8 11/19
4 1/12 4 1/6 4 1/2 4 5/12 4 7/12 4 7/12 4 9/2 4 9/2 4 1/0 4 11/15	0,01738*11923 0,01772*87670 0,01842*30828 0,01876*98249 0,01946*24798 0,01980*83934 0,02049*93951 0,02084*44841	8,61101:48 8,61978:88 8,63682:21 8,64509:46 8,66118:14 8,66900:68 8,68424:67 8,69167:08	8,95824'53 8,96221'14 8,97003'68 8,97389'72 8,98151'66 8,98527'67 8,99270'08 8,99636'57	0,03775'84005 0,03809'00496 0,03875'25890 0,03908'34800 0,03908'34800 0,03908'34800 0,04007'46432 0,0473'41642 0,0473'41642	9 ^{1/18} 9 ^{1/6} 9 ^{6/18} 9 ^{7/19} 9 ^{7/19} 9 ^{5/6} 9 ^{11/12}

Table II This table shews the Logarithms of t and r, t being the rate of interest per cent. and r being  $\pounds l$  increased by its interest for one year.

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