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PRACTICAL LESSONS
IN
ACTUARIAL SCIENCE

AN ELEMENTARY TEXT-BOOK

SECOND EDITION
REVISED

CONTAINING ALSO QUESTIONS AND EXAMPLES

Volume II. TABLES.

BY

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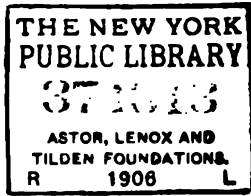


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TABLES.

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AMERICAN EXPERIENCE MORTALITY TABLE. INTRODUCTION.

THIS table is an adaptation of the Seventeen Offices or Actuaries' Table to the early experience of the Mutual Life Insurance Company of New York, assuming age ninety-five instead of 100 as the final or extreme limit of life.

It was adopted by the State of New York as its legal standard, interest being taken at four and one-half per cent, and this was followed by its adoption in several other States. When New York changed its interest assumption to four per cent, it also changed to the Actuaries' Table, but now to the American Experience Table and $3\frac{1}{2}$ per cent.

The American Experience Table is, however, largely employed by New York companies in their calculations, and notably in more recent departures, such as three per cent and three and one-half per cent reserves.

For permission to use the three per cent tables in this series we are indebted to the Connecticut Mutual Life Insurance Company, which computed them and has copyrighted them. For assistance in supplying other tables thanks are due John Tatlock, Jr., assistant actuary of the Mutual Life Insurance Company of New York. The tables, American Experience $3\frac{1}{2}$ per cent, are taken by permission from tables with 20 places of decimals, published by W. S. Smith, actuary of the John Hancock Mutual Life Insurance Company. The valuation columns, 3 per cent and $3\frac{1}{2}$ per cent, are taken from "Various Derived Tables." These columns, as printed in the former edition of this book, were found to be too inexact for use in computations.

The American Experience Table is regarded a safe ultimate table by American actuaries.

AMERICAN EXPERIENCE TABLE.

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TABLE I.
AMERICAN EXPERIENCE TABLE OF MORTALITY.

| Age. | Number Living. | Number Dying. | Yearly Probability of Dying. | Yearly Probability of Living. | Age. | Number Living. | Number Dying. | Yearly Probability of Dying. | Yearly Probability of Living. |
|------|----------------|---------------|------------------------------|-------------------------------|------|----------------|---------------|------------------------------|-------------------------------|
| 10 | 100,000 | 749 | .007490 | .992510 | 53 | 66,797 | 1,091 | .016333 | .983667 |
| 11 | 99,251 | 746 | .007516 | .992484 | 54 | 65,706 | 1,143 | .017396 | .982604 |
| 12 | 98,505 | 743 | .007543 | .992457 | 55 | 64,563 | 1,199 | .018571 | .981429 |
| 13 | 97,762 | 740 | .007569 | .992421 | 56 | 63,364 | 1,260 | .019885 | .980115 |
| 14 | 97,022 | 737 | .007596 | .992404 | 57 | 62,104 | 1,325 | .021335 | .978665 |
| 15 | 96,285 | 735 | .007634 | .992366 | 58 | 60,779 | 1,394 | .022936 | .977064 |
| 16 | 95,550 | 732 | .007661 | .992339 | 59 | 59,385 | 1,463 | .024720 | .975280 |
| 17 | 94,818 | 729 | .007688 | .992312 | 60 | 57,917 | 1,546 | .026693 | .973307 |
| 18 | 94,089 | 727 | .007727 | .992273 | 61 | 56,371 | 1,628 | .028880 | .971120 |
| 19 | 93,362 | 725 | .007765 | .992235 | 62 | 54,743 | 1,713 | .031292 | .968708 |
| 20 | 92,637 | 723 | .007805 | .992195 | 63 | 53,030 | 1,800 | .033943 | .966057 |
| 21 | 91,914 | 722 | .007855 | .992145 | 64 | 51,230 | 1,889 | .036873 | .963127 |
| 22 | 91,192 | 721 | .007906 | .992094 | 65 | 49,341 | 1,980 | .040129 | .959871 |
| 23 | 90,471 | 720 | .007958 | .992042 | 66 | 47,361 | 2,070 | .043707 | .956293 |
| 24 | 89,751 | 719 | .008011 | .991989 | 67 | 45,291 | 2,158 | .047647 | .952353 |
| 25 | 89,032 | 718 | .008065 | .991935 | 68 | 43,133 | 2,243 | .052002 | .947998 |
| 26 | 88,314 | 718 | .008120 | .991870 | 69 | 40,890 | 2,321 | .056764 | .943238 |
| 27 | 87,596 | 718 | .008177 | .991803 | 70 | 38,569 | 2,391 | .061993 | .938007 |
| 28 | 86,878 | 718 | .008234 | .991736 | 71 | 36,178 | 2,448 | .067665 | .932335 |
| 29 | 86,160 | 719 | .008291 | .991665 | 72 | 33,730 | 2,487 | .073733 | .926267 |
| 30 | 85,441 | 720 | .008347 | .991573 | 73 | 31,243 | 2,505 | .080178 | .919822 |
| 31 | 84,721 | 721 | .008404 | .991490 | 74 | 28,738 | 2,501 | .087028 | .912072 |
| 32 | 84,000 | 723 | .008460 | .991393 | 75 | 26,237 | 2,470 | .094371 | .902529 |
| 33 | 83,277 | 726 | .008518 | .991282 | 76 | 23,761 | 2,431 | .102311 | .891689 |
| 34 | 82,551 | 729 | .008571 | .991169 | 77 | 21,330 | 2,369 | .111064 | .880936 |
| 35 | 81,822 | 732 | .008626 | .991054 | 78 | 18,961 | 2,291 | .120827 | .870173 |
| 36 | 81,090 | 737 | .008689 | .990911 | 79 | 16,670 | 2,196 | .131734 | .860266 |
| 37 | 80,353 | 742 | .008754 | .990766 | 80 | 14,474 | 2,091 | .144490 | .855534 |
| 38 | 79,611 | 749 | .008820 | .990592 | 81 | 12,383 | 1,964 | .158605 | .841395 |
| 39 | 78,862 | 756 | .008886 | .990414 | 82 | 10,419 | 1,816 | .174297 | .825703 |
| 40 | 78,106 | 765 | .008954 | .990206 | 83 | 8,603 | 1,648 | .191561 | .808439 |
| 41 | 77,341 | 774 | .010008 | .989992 | 84 | 6,955 | 1,470 | .211359 | .788641 |
| 42 | 76,567 | 785 | .010252 | .989748 | 85 | 5,485 | 1,292 | .235552 | .764448 |
| 43 | 75,782 | 797 | .010517 | .989483 | 86 | 4,193 | 1,114 | .265681 | .734319 |
| 44 | 74,985 | 812 | .010829 | .989171 | 87 | 3,079 | 933 | .303020 | .696980 |
| 45 | 74,173 | 828 | .011163 | .988837 | 88 | 2,146 | 744 | .346692 | .653308 |
| 46 | 73,345 | 848 | .011562 | .988438 | 89 | 1,402 | 555 | .395863 | .604137 |
| 47 | 72,497 | 870 | .012000 | .988000 | 90 | 847 | 385 | .454545 | .545455 |
| 48 | 71,627 | 896 | .012509 | .987491 | 91 | 462 | 246 | .532466 | .467534 |
| 49 | 70,731 | 927 | .013106 | .986894 | 92 | 216 | 137 | .634259 | .365741 |
| 50 | 69,804 | 962 | .013781 | .986219 | 93 | 79 | 58 | .734177 | .265823 |
| 51 | 68,842 | 1,001 | .014541 | .985459 | 94 | 21 | 18 | .857143 | .142857 |
| 52 | 67,841 | 1,044 | .015389 | .984611 | 95 | 3 | 3 | 1.000000 | .000000 |

AMERICAN EXPERIENCE TABLE.

TABLE II.
COMMUTATION COLUMNS, AMERICAN EXPERIENCE,
FOUR AND ONE-HALF PER CENT.

| Age. | D ₁ | N ₁ | C ₁ | M ₁ | R ₁ |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 64,392.77 | 1,149,751.32 | 461.5329 | 12,109.051 | 322,708.03 |
| 11 | 61,158.34 | 1,088,592.98 | 439.8892 | 11,647.519 | 310,598.98 |
| 12 | 58,084.84 | 1,030,508.14 | 419.2538 | 11,207.629 | 298,951.46 |
| 13 | 55,164.32 | 975,343.82 | 399.5799 | 10,788.375 | 287,743.83 |
| 14 | 52,389.25 | 922,954.57 | 380.8230 | 10,388.796 | 276,955.46 |
| 15 | 49,752.43 | 873,202.15 | 363.4350 | 10,007.973 | 266,566.66 |
| 16 | 47,246.54 | 825,955.60 | 346.3051 | 9,644.538 | 256,558.69 |
| 17 | 44,865.64 | 781,089.96 | 330.0915 | 9,298.173 | 246,914.15 |
| 18 | 42,603.53 | 738,486.43 | 315.0104 | 8,968.081 | 237,615.98 |
| 19 | 40,453.92 | 698,032.51 | 300.6161 | 8,653.071 | 228,647.90 |
| 20 | 38,411.27 | 659,621.24 | 286.8773 | 8,352.455 | 219,994.83 |
| 21 | 36,470.32 | 623,150.92 | 274.1440 | 8,065.577 | 211,642.37 |
| 22 | 34,625.68 | 588,525.23 | 261.9754 | 7,791.433 | 203,576.79 |
| 23 | 32,872.65 | 555,652.58 | 250.3465 | 7,529.458 | 195,785.36 |
| 24 | 31,206.73 | 524,445.85 | 239.2333 | 7,279.111 | 188,255.90 |
| 25 | 29,623.67 | 494,822.13 | 228.6130 | 7,039.878 | 180,976.79 |
| 26 | 28,119.40 | 466,702.78 | 218.7684 | 6,811.265 | 173,936.91 |
| 27 | 26,689.75 | 440,013.04 | 209.3478 | 6,592.497 | 167,125.65 |
| 28 | 25,331.08 | 414,681.96 | 200.3328 | 6,383.149 | 160,533.15 |
| 29 | 24,039.93 | 390,642.02 | 191.9730 | 6,182.816 | 154,150.00 |
| 30 | 22,812.75 | 367,829.28 | 183.9617 | 5,990.843 | 147,967.19 |
| 31 | 21,646.42 | 346,182.86 | 176.2844 | 5,806.881 | 141,976.34 |
| 32 | 20,537.99 | 325,644.86 | 169.1612 | 5,630.597 | 136,109.46 |
| 33 | 19,484.42 | 306,160.44 | 162.5484 | 5,461.436 | 130,538.87 |
| 34 | 18,482.83 | 287,677.61 | 156.1915 | 5,298.887 | 125,077.43 |
| 35 | 17,530.73 | 270,146.89 | 150.0806 | 5,142.696 | 119,778.54 |
| 36 | 16,625.73 | 253,521.15 | 144.5988 | 4,992.615 | 114,635.85 |
| 37 | 15,765.20 | 237,755.96 | 139.3108 | 4,848.016 | 109,643.23 |
| 38 | 14,947.00 | 222,808.66 | 134.5695 | 4,708.706 | 104,795.22 |
| 39 | 14,168.78 | 208,640.18 | 129.9781 | 4,574.136 | 100,086.51 |
| 40 | 13,428.66 | 195,211.51 | 125.8617 | 4,444.158 | 95,512.375 |
| 41 | 12,724.53 | 182,486.98 | 121.8588 | 4,318.296 | 91,068.217 |
| 42 | 12,054.73 | 170,432.25 | 118.2685 | 4,196.438 | 86,749.920 |
| 43 | 11,417.36 | 159,014.90 | 114.9057 | 4,078.169 | 82,553.483 |
| 44 | 10,810.79 | 148,204.10 | 112.0271 | 3,963.263 | 78,475.314 |
| 45 | 10,233.23 | 137,970.87 | 109.3153 | 3,851.236 | 74,512.050 |
| 46 | 9,683.250 | 128,287.62 | 107.1347 | 3,741.921 | 70,660.814 |
| 47 | 9,159.133 | 119,128.49 | 105.1810 | 3,634.786 | 66,918.893 |
| 48 | 8,659.542 | 110,468.95 | 103.6597 | 3,529.605 | 63,284.107 |
| 49 | 8,182.981 | 102,285.96 | 102.6278 | 3,425.946 | 59,754.592 |
| 50 | 7,727.976 | 94,557.992 | 101.9164 | 3,323.318 | 56,328.556 |
| 51 | 7,293.276 | 87,264.715 | 101.4815 | 3,221.401 | 53,005.239 |
| 52 | 6,877.730 | 80,385.985 | 101.2831 | 3,119.920 | 49,783.837 |
| 53 | 6,480.277 | 73,906.705 | 101.2850 | 3,018.637 | 46,663.918 |
| 54 | 6,099.937 | 67,806.768 | 101.5431 | 2,917.352 | 43,645.281 |

AMERICAN EXPERIENCE TABLE.

TABLE II.—*Cont.*
 COMMUTATION COLUMNS, AMERICAN EXPERIENCE,
 FOUR AND ONE-HALF PER CENT.

| Age. | D _x | N _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 5,735.717 | 62,071.052 | 101.9312 | 2,815.809 | 40,727.929 |
| 56 | 5,386.794 | 56,684.258 | 102.5043 | 2,713.877 | 37,912.121 |
| 57 | 5,052.322 | 51,631.936 | 103.1504 | 2,611.373 | 35,198.243 |
| 58 | 4,731.609 | 46,900.329 | 103.8488 | 2,508.223 | 32,586.870 |
| 59 | 4,424.005 | 42,476.324 | 104.6523 | 2,404.374 | 30,078.647 |
| 60 | 4,128.846 | 38,347.478 | 105.4668 | 2,299.722 | 27,674.274 |
| 61 | 3,845.582 | 34,501.897 | 106.2782 | 2,194.255 | 25,374.552 |
| 62 | 3,573.704 | 30,928.193 | 107.0117 | 2,087.977 | 23,180.297 |
| 63 | 3,312.801 | 27,615.392 | 107.6044 | 1,980.965 | 21,092.320 |
| 64 | 3,062.540 | 24,552.851 | 108.0620 | 1,873.361 | 19,111.356 |
| 65 | 2,822.598 | 21,730.253 | 108.3902 | 1,765.299 | 17,237.995 |
| 66 | 2,592.661 | 19,137.592 | 108.4373 | 1,656.908 | 15,472.697 |
| 67 | 2,372.578 | 16,705.014 | 108.1792 | 1,548.471 | 13,815.788 |
| 68 | 2,162.230 | 14,602.784 | 107.5983 | 1,440.292 | 12,267.317 |
| 69 | 1,961.522 | 12,641.263 | 106.5454 | 1,332.694 | 10,827.025 |
| 70 | 1,770.509 | 10,870.754 | 105.0323 | 1,226.148 | 9,494.3319 |
| 71 | 1,589.234 | 9,281.520 | 102.9055 | 1,121.116 | 8,268.1830 |
| 72 | 1,417.893 | 7,863.027 | 100.0430 | 1,018.210 | 7,147.0681 |
| 73 | 1,266.792 | 6,606.834 | 96.42778 | 918.1673 | 6,128.8578 |
| 74 | 1,106.244 | 5,500.590 | 92.12806 | 821.7395 | 5,210.6905 |
| 75 | 966.4790 | 4,534.111 | 87.27957 | 729.6114 | 4,388.9510 |
| 76 | 837.5807 | 3,696.530 | 82.00317 | 642.3319 | 3,659.3395 |
| 77 | 719.5095 | 2,977.021 | 76.47059 | 560.3287 | 3,017.0077 |
| 78 | 612.0552 | 2,304.966 | 70.76821 | 483.8581 | 2,456.6789 |
| 79 | 514.9306 | 1,850.935 | 64.91260 | 413.0899 | 1,972.8208 |
| 80 | 427.8440 | 1,422.191 | 59.14724 | 348.1773 | 1,559.7309 |
| 81 | 350.2727 | 1,071.9185 | 53.16253 | 289.0301 | 1,211.5536 |
| 82 | 282.0267 | 789.89177 | 47.03961 | 235.8675 | 922.52322 |
| 83 | 222.8424 | 567.04938 | 40.84970 | 188.8279 | 686.65598 |
| 84 | 172.3966 | 394.65274 | 34.86844 | 147.9782 | 497.82805 |
| 85 | 130.1044 | 264.54837 | 29.32659 | 113.1098 | 349.83984 |
| 86 | 95.17523 | 169.37314 | 24.19730 | 83.78319 | 236.74004 |
| 87 | 66.87940 | 102.49372 | 19.39314 | 59.58583 | 152.95684 |
| 88 | 44.60629 | 57.88742 | 14.79868 | 40.19269 | 93.37098 |
| 89 | 27.88676 | 30.00064 | 10.56396 | 25.39401 | 53.178320 |
| 90 | 16.12194 | 13.87871 | 7.012586 | 14.83005 | 27.784310 |
| 91 | 8.415106 | 5.46,611 | 4.287819 | 7.8174567 | 12.954265 |
| 92 | 3.764915 | 1.698697 | 2.285102 | 3.5206396 | 5.1368062 |
| 93 | 1.317687 | 0.381009 | .9257566 | 1.2445372 | 1.6071665 |
| 94 | 0.335188 | 0.045822 | .2749318 | .3187806 | .36262938 |
| 95 | 0.045822 | 0.000000 | .0438488 | .0438488 | .04384878 |

AMERICAN EXPERIENCE TABLE.

TABLE III.
 COMMUTATION COLUMNS, AMERICAN EXPERIENCE,
 FOUR PER CENT.

| Age. | D _x | N _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|
| 10 | 6755.641 | 131152.680 | 1451.4759 | 42004.234 |
| 11 | 6447.156 | 124705.524 | 1402.8223 | 40552.758 |
| 12 | 6152.593 | 118552.931 | 1356.2274 | 39149.936 |
| 13 | 5871.333 | 112681.598 | 1311.6047 | 37793.709 |
| 14 | 5602.778 | 107078.820 | 1268.8716 | 36482.104 |
| 15 | 5346.364 | 101732.456 | 1227.6486 | 35213.232 |
| 16 | 5101.492 | 96630.964 | 1188.7063 | 33985.283 |
| 17 | 4867.702 | 91763.262 | 1151.1274 | 32796.577 |
| 18 | 4644.497 | 87118.765 | 1115.1419 | 31645.449 |
| 19 | 4431.356 | 82687.409 | 1080.6354 | 30530.307 |
| 20 | 4227.832 | 78459.577 | 1047.5473 | 29449.672 |
| 21 | 4033.496 | 74420.081 | 1015.8195 | 28402.125 |
| 22 | 3847.894 | 70578.187 | 985.3544 | 27386.305 |
| 23 | 3670.647 | 66907.540 | 956.1015 | 26400.951 |
| 24 | 3501.380 | 63406.160 | 928.0128 | 25444.849 |
| 25 | 3339.739 | 60066.421 | 901.0419 | 24516.836 |
| 26 | 3185.391 | 56881.039 | 875.1444 | 23615.794 |
| 27 | 3037.974 | 53843.056 | 850.2130 | 22740.650 |
| 28 | 2897.185 | 50945.871 | 826.2993 | 21890.407 |
| 29 | 2762.733 | 48183.138 | 803.2765 | 21064.108 |
| 30 | 2634.305 | 45548.833 | 781.1084 | 20260.831 |
| 31 | 2511.641 | 43037.102 | 759.7633 | 19479.723 |
| 32 | 2394.487 | 40642.705 | 739.2106 | 18719.961 |
| 33 | 2282.574 | 38360.131 | 719.3936 | 17980.750 |
| 34 | 2175.649 | 36184.482 | 700.2597 | 17261.356 |
| 35 | 2073.496 | 34110.986 | 681.7857 | 16561.006 |
| 36 | 1975.910 | 32135.076 | 663.9491 | 15879.310 |
| 37 | 1882.045 | 30252.431 | 646.6814 | 15215.361 |
| 38 | 1793.520 | 28458.911 | 629.9652 | 14568.680 |
| 39 | 1708.314 | 26750.597 | 613.7403 | 13938.715 |
| 40 | 1626.862 | 25123.735 | 597.9936 | 13324.975 |
| 41 | 1548.970 | 23574.765 | 582.6723 | 12726.981 |
| 42 | 1474.492 | 22100.273 | 567.7670 | 12144.308 |
| 43 | 1403.242 | 20697.031 | 553.2313 | 11576.541 |
| 44 | 1335.081 | 19361.950 | 539.0410 | 11023.310 |
| 45 | 1269.830 | 18092.120 | 525.1397 | 10484.269 |
| 46 | 1207.360 | 16884.760 | 511.5097 | 9959.1291 |
| 47 | 1147.501 | 15737.259 | 498.0873 | 9447.6194 |
| 48 | 1090.126 | 14647.133 | 484.8464 | 8949.5321 |
| 49 | 1035.085 | 13612.048 | 473.7342 | 8464.6857 |
| 50 | 982.2302 | 12629.817 | 458.6601 | 7992.9515 |
| 51 | 931.4304 | 11698.381 | 445.6742 | 7534.2614 |
| 52 | 882.5892 | 10815.792 | 432.6515 | 7088.5872 |
| 53 | 835.5838 | 9980.2079 | 419.5918 | 6655.9357 |
| 54 | 790.3230 | 9189.8849 | 406.4691 | 6236.3439 |

AMERICAN EXPERIENCE TABLE.

II

TABLE III.—Cont.
COMMUTATION COLUMNS, AMERICAN EXPERIENCE,
FOUR PER CENT.

| Age. | D _x | N _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|
| 55 | 746.7065 | 8443.1784 | 393.2497 | 5829.8748 |
| 56 | 704.6535 | 7738.5249 | 379.9160 | 5436.6251 |
| 57 | 664.0783 | 7074.4466 | 366.4428 | 5056.7091 |
| 58 | 624.9134 | 6449.5332 | 352.8195 | 4692.2663 |
| 59 | 587.0969 | 5862.4303 | 339.0380 | 4337.4468 |
| 60 | 550.5613 | 5311.8750 | 325.0831 | 3998.4088 |
| 61 | 515.2547 | 4796.6203 | 310.9520 | 3673.3257 |
| 62 | 481.1291 | 4315.4912 | 296.6437 | 3362.3737 |
| 63 | 448.1477 | 3867.3435 | 282.1674 | 3065.7300 |
| 64 | 416.2850 | 3451.0585 | 267.5410 | 2783.5626 |
| 65 | 385.5146 | 3065.5439 | 252.7817 | 2516.0216 |
| 66 | 355.8122 | 2700.7319 | 237.9064 | 2263.2399 |
| 67 | 327.1735 | 2362.5584 | 222.9531 | 2025.3335 |
| 68 | 299.6005 | 2042.9579 | 207.9637 | 1802.3804 |
| 69 | 273.0909 | 1809.8610 | 192.9831 | 1594.4167 |
| 70 | 247.6878 | 1562.1732 | 178.0778 | 1401.4336 |
| 71 | 223.3970 | 1338.7762 | 163.3135 | 1223.3558 |
| 72 | 200.2700 | 1138.5062 | 148.7786 | 1060.0423 |
| 73 | 178.3688 | 960.1374 | 134.5801 | 911.2637 |
| 74 | 157.7573 | 802.3801 | 120.8289 | 776.6836 |
| 75 | 138.4886 | 663.8915 | 107.6277 | 655.8547 |
| 76 | 120.5954 | 543.2961 | 95.0611 | 548.2270 |
| 77 | 104.0936 | 439.2025 | 83.1975 | 453.1659 |
| 78 | 88.97350 | 350.2290 | 72.0811 | 369.0684 |
| 79 | 75.21453 | 275.0144 | 61.7442 | 297.8873 |
| 80 | 62.79449 | 212.2199 | 52.2170 | 236.1431 |
| 81 | 51.65655 | 160.5634 | 43.4942 | 183.9261 |
| 82 | 41.79190 | 118.7715 | 35.6104 | 140.4319 |
| 83 | 33.18048 | 85.59102 | 28.6124 | 104.8155 |
| 84 | 25.79209 | 59.79833 | 22.5007 | 76.2031 |
| 85 | 19.55883 | 40.23950 | 17.2589 | 53.7024 |
| 86 | 14.37665 | 25.86285 | 12.8290 | 36.4435 |
| 87 | 10.15101 | 15.71184 | 9.15627 | 23.6145 |
| 88 | 6.802926 | 8.908914 | 6.19861 | 14.4582 |
| 89 | 4.273472 | 4.635442 | 3.93081 | 8.25962 |
| 90 | 2.482463 | 2.152970 | 2.30417 | 4.32881 |
| 91 | 1.301991 | .859883 | 1.21918 | 2.02464 |
| 92 | .5853109 | .2656774 | .55281 | .805462 |
| 93 | .2058384 | .0598390 | .195621 | .25281 |
| 94 | .0526121 | .0072269 | .0503106 | .0572596 |
| 95 | .0072269 | .0000000 | .0069490 | .0069490 |

AMERICAN EXPERIENCE TABLE.

COMMUTATION COLUMNS—AMERICAN EXPERIENCE.
THREE AND ONE-HALF PER CENT.

| Age | l_x | N_x | S_x | M_x | R_x |
|-----|----------|-------------|------------|-----------|------------|
| 10 | 70 891.9 | 1 504 643.4 | 28 677 206 | 17 612.91 | 552 495.74 |
| 11 | 67 981.5 | 1 436 661.9 | 27 172 562 | 17 099.89 | 534 882.83 |
| 12 | 65 189.0 | 1 371 472.9 | 25 735 901 | 16 606.20 | 517 782.94 |
| 13 | 62 509.4 | 1 308 963.5 | 24 364 428 | 16 131.12 | 501 176.74 |
| 14 | 59 938.4 | 1 249 025.0 | 23 055 464 | 15 673.96 | 485 045.63 |
| 15 | 57 471.6 | 1 191 553.4 | 21 806 439 | 15 234.05 | 469 371.67 |
| 16 | 55 104.2 | 1 136 449.2 | 20 614 886 | 14 810.17 | 454 137.61 |
| 17 | 52 832.9 | 1 083 616.2 | 19 478 437 | 14 402.30 | 439 327.44 |
| 18 | 50 653.9 | 1 032 962.4 | 18 394 820 | 14 009.83 | 424 925.14 |
| 19 | 48 562.8 | 984 399.6 | 17 361 858 | 13 631.68 | 410 915.31 |
| 20 | 46 556.2 | 937 843.4 | 16 377 458 | 13 267.32 | 397 283.63 |
| 21 | 44 630.8 | 893 212.6 | 15 439 615 | 12 916.25 | 384 016.31 |
| 22 | 42 782.8 | 850 429.9 | 14 546 402 | 12 577.53 | 371 100.05 |
| 23 | 41 009.2 | 809 420.6 | 13 695 972 | 12 250.71 | 358 522.53 |
| 24 | 39 307.1 | 770 113.6 | 12 886 552 | 11 935.38 | 346 271.82 |
| 25 | 37 673.6 | 732 439.9 | 12 116 438 | 11 631.14 | 334 336.44 |
| 26 | 36 106.1 | 696 333.8 | 11 383 998 | 11 337.59 | 322 705.31 |
| 27 | 34 601.5 | 661 732.4 | 10 687 664 | 11 053.97 | 311 367.72 |
| 28 | 33 157.4 | 628 575.0 | 10 025 932 | 10 779.94 | 300 313.75 |
| 29 | 31 771.3 | 596 803.6 | 9 397 357 | 10 515.18 | 289 533.80 |
| 30 | 30 440.8 | 566 362.9 | 8 800 553 | 10 259.02 | 279 018.62 |
| 31 | 29 163.5 | 537 199.3 | 8 234 191 | 10 011.17 | 268 759.60 |
| 32 | 27 937.5 | 509 261.8 | 7 696 991 | 9 771.375 | 258 748.43 |
| 33 | 26 760.5 | 482 501.3 | 7 187 729 | 9 539 044 | 248 977.06 |
| 34 | 25 630.1 | 456 871.2 | 6 705 228 | 9 313.638 | 239 438.01 |
| 35 | 24 544.7 | 432 326.5 | 6 248 357 | 9 094.955 | 230 124.37 |
| 36 | 23 502.5 | 408 824.0 | 5 816 030 | 8 882.798 | 221 029.42 |
| 37 | 22 501.4 | 386 322.6 | 5 407 266 | 8 676.415 | 212 146.62 |
| 38 | 21 539.7 | 364 782.9 | 5 020 884 | 8 475.658 | 203 470.21 |
| 39 | 20 615.5 | 344 167.4 | 4 656 101 | 8 279.860 | 194 994.55 |
| 40 | 19 727.4 | 324 440.0 | 4 311 934 | 8 088.915 | 186 714.69 |
| 41 | 18 873.6 | 305 566.3 | 3 987 494 | 7 902.231 | 178 625.77 |
| 42 | 18 052.9 | 287 513.4 | 3 681 927 | 7 719.738 | 170 723.54 |
| 43 | 17 263.6 | 270 249.8 | 3 394 414 | 7 540 910 | 163 003.81 |
| 44 | 16 504.4 | 253 745.5 | 3 124 164 | 7 365.489 | 155 462.90 |
| 45 | 15 773.6 | 237 971.9 | 2 870 419 | 7 192.809 | 148 097.41 |
| 46 | 15 070.0 | 222 901.9 | 2 632 447 | 7 022 682 | 140 904.60 |
| 47 | 14 392.1 | 208 509.8 | 2 409 545 | 6 854 337 | 133 881.92 |
| 48 | 13 738.5 | 194 771.3 | 2 201 035 | 6 687.466 | 127 027.58 |
| 49 | 13 107.9 | 181 663.4 | 2 006 264 | 6 521.419 | 120 340.11 |
| 50 | 12 498.6 | 169 164.7 | 1 824 600 | 6 355 436 | 113 818.69 |
| 51 | 11 909.6 | 157 255.2 | 1 655 436 | 6 189 012 | 107 463.26 |
| 52 | 11 339.5 | 145 915.7 | 1 498 181 | 6 021.696 | 101 274.25 |
| 53 | 10 787.4 | 135 128.2 | 1 352 265 | 5 853.095 | 95 252.55 |
| 54 | 10 252.4 | 124 875.8 | 1 217 137 | 5 682.861 | 89 399.46 |

AMERICAN EXPERIENCE TABLE.

COMMUTATION COLUMNS—AMERICAN EXPERIENCE.
THREE AND ONE-HALF PER CENT.

| Age | D _x | N _x | S _x | M _x | R _x |
|-----|----------------|----------------|----------------|----------------|----------------|
| 55 | 9 733.40 | 115 142.4 | 1 092 261 | 5 510.544 | 83 716.59 |
| 56 | 9 229.60 | 105 912.8 | 977 118.5 | 5 335.898 | 78 206.05 |
| 57 | 8 740.17 | 97 172.64 | 871 205.7 | 5 158.573 | 72 870.15 |
| 58 | 8 264.44 | 88 908.20 | 774 033.0 | 4 978 405 | 67 711 58 |
| 59 | 7 801.82 | 81 106.38 | 685 124.8 | 4 795.266 | 62 733.17 |
| 60 | 7 351.65 | 73 754.73 | 604 018.4 | 4 608.926 | 57 937.91 |
| 61 | 6 913.44 | 66 841.28 | 530 263.7 | 4 419.322 | 53 328.98 |
| 62 | 6 486.75 | 60 354.54 | 463 422.4 | 4 226 413 | 48 900.66 |
| 63 | 6 071.27 | 54 283.27 | 403 067.9 | 4 030.296 | 44 683 25 |
| 64 | 5 666.85 | 48 616.41 | 348 784.6 | 3 831.187 | 40 652.95 |
| 65 | 5 273.33 | 43 343.08 | 300 168.2 | 3 629.300 | 36 821.76 |
| 66 | 4 890.55 | 38 452.53 | 256 825.1 | 3 424.843 | 33 192.46 |
| 67 | 4 518.65 | 33 933 88 | 218 372.6 | 3 218.321 | 29 767.62 |
| 68 | 4 157.82 | 29 776 06 | 184 438.7 | 3 010.299 | 26 549.30 |
| 69 | 3 808.32 | 25 967.74 | 154 662.7 | 2 801.396 | 23 539.00 |
| 70 | 3 470.67 | 22 497.07 | 128 694.9 | 2 592.538 | 20 737.61 |
| 71 | 3 145.43 | 19 351.64 | 106 197.8 | 2 384.657 | 18 145.07 |
| 72 | 2 833.42 | 16 518.22 | 86 846.20 | 2 179.018 | 15 760.41 |
| 73 | 2 535.75 | 13 982.47 | 70 327.98 | 1 977.167 | 13 581.39 |
| 74 | 2 253.57 | 11 728 90 | 56 345.51 | 1 780.731 | 11 604.22 |
| 75 | 1 987.87 | 9 741 028 | 44 616.62 | 1 591.240 | 9 823.494 |
| 76 | 1 739.39 | 8 001.633 | 34 875.59 | 1 409.988 | 8 232.253 |
| 77 | 1 508.63 | 6 492.999 | 26 873.95 | 1 238.047 | 6 822.265 |
| 78 | 1 295.73 | 5 197.271 | 20 380.96 | 1 076.158 | 5 584.218 |
| 79 | 1 100.65 | 4 096.624 | 15 183.69 | 924.8937 | 4 508.060 |
| 80 | 923.338 | 3 173.286 | 11 087.06 | 784.8046 | 3 583.166 |
| 81 | 763.234 | 2 410.052 | 7 913.775 | 655.9245 | 2 798.361 |
| 82 | 620.465 | 1 789.587 | 5 503.723 | 538.9657 | 2 142.437 |
| 83 | 494.995 | 1 294 592 | 3 714.136 | 434.4776 | 1 603.471 |
| 84 | 386.641 | 907.9513 | 2 419.544 | 342.8624 | 1 168.993 |
| 85 | 294.610 | 613.3417 | 1 511.592 | 263 9059 | 826.1310 |
| 86 | 217.598 | 395.7438 | 898.2505 | 196 8569 | 562.2251 |
| 87 | 154.383 | 241.3609 | 502.5068 | 141.0003 | 365.3682 |
| 88 | 103.963 | 137.3978 | 261.1459 | 95.80107 | 224.3679 |
| 89 | 65.6231 | 71.77470 | 123.7481 | 60.97681 | 128.5668 |
| 90 | 38.3047 | 33.47001 | 51.97338 | 35.87752 | 67.58998 |
| 91 | 20.1869 | 13.28309 | 18.50337 | 19.05509 | 31.71246 |
| 92 | 9 11888 | 4.16421 | 5.22028 | 8.669605 | 12.65737 |
| 93 | 3 22236 | .94184 | 1.05608 | 3.081545 | 3.987676 |
| 94 | .82761 | .11423 | .11423 | .795762 | .906131 |
| 95 | .11423 | .00000 | .00000 | .110369 | .110369 |

AMERICAN EXPERIENCE TABLE.

COMMUTATION COLUMN—AMERICAN EXPERIENCE.
THREE PER CENT.

| Age | D _x | N _x | S _x | M _x | R _x |
|-----|----------------|----------------|----------------|----------------|----------------|
| 10 | 74 409.3 | I 736 936.2 | 35 170 109 | 21 651.75 | 734 215.97 |
| 11 | 71 701.0 | I 665 235.3 | 33 433 173 | 21 110.66 | 712 504.22 |
| 12 | 69 089.4 | I 596 145.9 | 31 767 938 | 20 587.43 | 651 453.57 |
| 13 | 66 571.2 | I 529 574.7 | 30 171 792 | 20 081.48 | 670 866.14 |
| 14 | 64 143.0 | I 465 431.7 | 28 642 217 | 19 592.25 | 650 784.66 |
| 15 | 61 801.7 | I 403 630.1 | 27 176 785 | 19 119.20 | 631 192.41 |
| 16 | 59 543.6 | I 344 086.5 | 25 773 155 | 18 661.17 | 612 073.21 |
| 17 | 57 366.4 | I 286 720.0 | 24 429 069 | 18 218.30 | 593 412.04 |
| 18 | 55 267.4 | I 231 452.6 | 23 142 349 | 17 790.09 | 575 193.74 |
| 19 | 53 243.0 | I 178 209.6 | 21 910 896 | 17 375.49 | 557 403.65 |
| 20 | 51 290.9 | I 126 918.7 | 20 732 687 | 16 974.08 | 540 028.16 |
| 21 | 49 408.3 | I 077 510.4 | 19 605 768 | 16 585.43 | 523 054.08 |
| 22 | 47 592.4 | I 029 918.0 | 18 528 257 | 16 208.62 | 506 468.66 |
| 23 | 45 840.9 | 984 077.1 | 17 498 339 | 15 843.30 | 490 260.03 |
| 24 | 44 151.5 | 939 925.6 | 16 514 262 | 15 489.11 | 474 416.74 |
| 25 | 42 522.2 | 897 403.4 | 15 574 337 | 15 145.71 | 458 927.63 |
| 26 | 40 950.7 | 856 452.7 | 14 676 933 | 14 812.77 | 443 781.93 |
| 27 | 39 434.8 | 817 017.9 | 13 820 480 | 14 489.54 | 428 969.15 |
| 28 | 37 972.4 | 779 045.5 | 13 003 463 | 14 175.72 | 414 479.61 |
| 29 | 36 561.7 | 742 483.8 | 12 224 417 | 13 871.04 | 400 303.90 |
| 30 | 35 200.6 | 707 283.3 | 11 481 933 | 13 574.82 | 386 432.86 |
| 31 | 33 887.3 | 673 396.0 | 10 774 650 | 13 286.83 | 372 858.04 |
| 32 | 32 620.3 | 640 775.7 | 10 101 254 | 13 006.84 | 359 571.22 |
| 33 | 31 397.6 | 609 378.0 | 9 460 479 | 12 734.25 | 346 564.38 |
| 34 | 30 217.4 | 579 160.7 | 8 851 103 | 12 468.50 | 333 830.13 |
| 35 | 29 078.1 | 550 082.5 | 8 271 940 | 12 209.42 | 321 361.64 |
| 36 | 27 978.7 | 522 103.8 | 7 721 857 | 11 956.86 | 309 152.21 |
| 37 | 26 916.9 | 495 186.9 | 7 199 753 | 11 709.98 | 297 195.36 |
| 38 | 25 891.6 | 469 295.4 | 6 704 567 | 11 468.66 | 285 485.38 |
| 39 | 24 901.0 | 444 394.4 | 6 235 271 | 11 232.16 | 274 016.72 |
| 40 | 23 943.9 | 420 450.5 | 5 790 877 | 11 000.40 | 262 784.56 |
| 41 | 23 018.8 | 397 431.6 | 5 370 426 | 10 772.72 | 251 784.16 |
| 42 | 22 124.7 | 375 366.9 | 4 972 995 | 10 549.06 | 241 011 44 |
| 43 | 21 260.1 | 354 046.8 | 4 597 688 | 10 328.84 | 230 462 38 |
| 44 | 20 423.8 | 333 623.0 | 4 243 641 | 10 111.76 | 220 133.54 |
| 45 | 19 614.2 | 314 008.8 | 3 910 018 | 9 897.02 | 210 021.786 |
| 46 | 18 830.3 | 295 178.4 | 3 597 009 | 9 684.454 | 200 124.754 |
| 47 | 18 070.5 | 277 107.9 | 3 300 831 | 9 473 083 | 190 440 300 |
| 48 | 17 333.6 | 259 774.3 | 3 023 723 | 9 262 544 | 180 967.217 |
| 49 | 16 618.3 | 243 156.0 | 2 763 949 | 9 152.028 | 171 704.674 |
| 50 | 15 922.8 | 227 233.2 | 2 520 793 | 8 840 573 | 162 652.645 |
| 51 | 15 246.0 | 211 987.3 | 2 293 559 | 8 627 525 | 153 812.072 |
| 52 | 14 568.7 | 197 400.6 | 2 081 572 | 8 412 298 | 145 184 547 |
| 53 | 13 943.9 | 183 456.7 | 1 884 172 | 8 194 302 | 136 772.250 |
| 54 | 13 316.6 | 170 140.0 | 1 700 715 | 7 973 249 | 128 577.887 |

AMERICAN EXPERIENCE TABLE.

15

COMMUTATION COLUMN—AMERICAN EXPERIENCE.
THREE PER CENT.

| Age | D _x | N _x | S _x | M _x | R _x |
|-----|----------------|----------------|----------------|----------------|----------------|
| 55 | 12 703.88 | 157 436.2 | 1 530 575 | 7 748.344 | 120 604.64 |
| 56 | 12 104.81 | 145 331.3 | 1 373 139 | 7 519.292 | 112 856.29 |
| 57 | 11 518.55 | 133 812.8 | 1 227 807 | 7 285.597 | 105 337.00 |
| 58 | 10 944.47 | 122 868.3 | 1 093 995 | 7 047 005 | 98 051.41 |
| 59 | 10 381.99 | 112 486.3 | 971 126.3 | 6 803.299 | 91 004.40 |
| 60 | 9 830.431 | 102 655.9 | 858 640.0 | 6 554.130 | 84 201.10 |
| 61 | 9 289.344 | 93 366.56 | 755 984.0 | 6 299.366 | 77 646.97 |
| 62 | 8 758.317 | 84 608.24 | 662 617.5 | 6 038.903 | 71 347.61 |
| 63 | 8 237.140 | 76 371.10 | 578 009.3 | 5 772.823 | 65 308.70 |
| 64 | 7 725.774 | 68 645.33 | 501 638.2 | 5 501.373 | 59 535.88 |
| 65 | 7 224.176 | 61 421.15 | 432 992.9 | 5 224 798 | 54 034.51 |
| 66 | 6 732.309 | 54 688.84 | 371 571.7 | 4 943 343 | 48 809.71 |
| 67 | 6 250.545 | 48 438.30 | 316 882.9 | 4 657.666 | 43 866.37 |
| 68 | 5 779 342 | 42 658.96 | 268 444.6 | 4 368.518 | 39 208.70 |
| 69 | 5 319 228 | 37 339.73 | 225 785.6 | 4 076.734 | 34 840.18 |
| 70 | 4 871.163 | 32 468.57 | 188 445.9 | 3 783.598 | 30 763.45 |
| 71 | 4 436.103 | 28 032.46 | 155 977.3 | 3 490.416 | 26 979.85 |
| 72 | 4 015.468 | 24 017.00 | 127 944.8 | 3 198.988 | 23 489.44 |
| 73 | 3 611.065 | 20 405.93 | 103 927.8 | 2 911.541 | 20 290.45 |
| 74 | 3 224.794 | 17 181.14 | 83 521.92 | 2 630.446 | 17 378.91 |
| 75 | 2 858.366 | 14 322.74 | 66 340 78 | 2 357.974 | 14 748.46 |
| 76 | 2 513 259 | 11 809.49 | 52 018.04 | 2 096.083 | 12 390.49 |
| 77 | 2 190.406 | 9 619.086 | 40 208.55 | 1 846.440 | 10 204.40 |
| 78 | 1 890.417 | 7 728.668 | 30 589.46 | 1 610.250 | 8 447.963 |
| 79 | 1 613.596 | 6 115.072 | 22 860.79 | 1 388.489 | 6 837.713 |
| 80 | 1 360.225 | 4 754.848 | 16 745.72 | 1 182.116 | 5 449.224 |
| 81 | 1 129.824 | 3 625.024 | 11 990.87 | 991.3330 | 4 267.108 |
| 82 | 922.9403 | 2 702.084 | 8 365.850 | 817.3571 | 3 275.775 |
| 83 | 739.8783 | 1 962.206 | 5 663.766 | 661.1768 | 2 458.418 |
| 84 | 580.7247 | 1 381.481 | 3 701.561 | 523.5730 | 1 797.241 |
| 85 | 444.6441 | 936.8367 | 2 320.080 | 404.4068 | 1 273 668 |
| 86 | 330.0073 | 606.8294 | 1 383.243 | 302.7208 | 869.2616 |
| 87 | 235.2725 | 371.5570 | 776.4136 | 217.5978 | 566.5108 |
| 88 | 159.2040 | 212.3530 | 404.8566 | 148.3819 | 348.0430 |
| 89 | 100.9799 | 111.3731 | 192.5037 | 94.79488 | 200.5610 |
| 90 | 59.22884 | 52.14422 | 81.13062 | 55.98496 | 105.7661 |
| 91 | 31.36567 | 20.77855 | 28.98640 | 29.84690 | 49.78119 |
| 92 | 14.23735 | 6.54120 | 8.20785 | 13.63215 | 19.93429 |
| 93 | 5.05551 | 1.48569 | 1.66665 | 4.86499 | 6.30214 |
| 94 | 1.30473 | .18096 | .18096 | 1.26146 | 1.43715 |
| 95 | .18096 | .00000 | .00000 | .17569 | .17569 |

AMERICAN EXPERIENCE TABLE—VALUATION COLUMNS,
THREE PER CENT.

| Age. | u_x | c_x | k_x | Age. | u_x | c_x | k_x |
|------|----------|---------|---------|------|----------|---------|----------|
| 20 | 1.038103 | .007577 | .007866 | 58 | 1.054178 | .022268 | .023474 |
| 21 | 1.038155 | .007626 | .007917 | 59 | 1.056107 | .024000 | .025347 |
| 22 | 1.038208 | .007676 | .007969 | 60 | 1.058248 | .025916 | .027425 |
| 23 | 1.038263 | .007727 | .008022 | 61 | 1.060631 | .028039 | .029739 |
| 24 | 1.038318 | .007778 | .008076 | 62 | 1.063272 | .030380 | .032302 |
| 25 | 1.038374 | .007830 | .008130 | 63 | 1.066190 | .032954 | .035136 |
| 26 | 1.038443 | .007893 | .008197 | 64 | 1.069433 | .035799 | .038285 |
| 27 | 1.038512 | .007958 | .008264 | 65 | 1.073001 | .038960 | .041807 |
| 28 | 1.038583 | .008024 | .008333 | 66 | 1.077076 | .042434 | .045704 |
| 29 | 1.038668 | .008102 | .008415 | 67 | 1.081532 | .046260 | .050031 |
| 30 | 1.038753 | .008181 | .008498 | 68 | 1.086570 | .050487 | .054854 |
| 31 | 1.038841 | .008262 | .008583 | 69 | 1.091983 | .055109 | .060178 |
| 32 | 1.038942 | .008356 | .008682 | 70 | 1.098073 | .060187 | .066090 |
| 33 | 1.039058 | .008464 | .008795 | 71 | 1.104754 | .065605 | .072576 |
| 34 | 1.039177 | .008574 | .008910 | 72 | 1.111990 | .071585 | .079602 |
| 35 | 1.039298 | .008686 | .009027 | 73 | 1.119782 | .077843 | .087167 |
| 36 | 1.039447 | .008824 | .009172 | 74 | 1.128183 | .084493 | .095323 |
| 37 | 1.039600 | .008965 | .009320 | 75 | 1.137330 | .091622 | .104201 |
| 38 | 1.039783 | .009134 | .009498 | 76 | 1.147390 | .099331 | .113971 |
| 39 | 1.039970 | .009307 | .009679 | 77 | 1.158689 | .107829 | .124941 |
| 40 | 1.040188 | .009509 | .009891 | 78 | 1.171555 | .117308 | .137433 |
| 41 | 1.040412 | .009716 | .010109 | 79 | 1.186272 | .127897 | .151720 |
| 42 | 1.040669 | .009954 | .010359 | 80 | 1.203926 | .140258 | .168861 |
| 43 | 1.040948 | .010211 | .010629 | 81 | 1.224157 | .153985 | .188502 |
| 44 | 1.041276 | .010513 | .010947 | 82 | 1.247422 | .169220 | .211089 |
| 45 | 1.041628 | .010838 | .011289 | 83 | 1.274060 | .185982 | .236952 |
| 46 | 1.042018 | .011225 | .011697 | 84 | 1.306044 | .205203 | .268004 |
| 47 | 1.042511 | .011651 | .012146 | 85 | 1.343777 | .228691 | .308133 |
| 48 | 1.043048 | .012145 | .012668 | 86 | 1.402660 | .257943 | .361806 |
| 49 | 1.043678 | .012724 | .013280 | 87 | 1.477805 | .294195 | .434762 |
| 50 | 1.044393 | .013380 | .013974 | 88 | 1.576591 | .336594 | .530670 |
| 51 | 1.045198 | .014117 | .014755 | 89 | 1.704911 | .384333 | .655254 |
| 52 | 1.046008 | .014941 | .015629 | 90 | 1.888333 | .441306 | .833333 |
| 53 | 1.047102 | .015857 | .016604 | 91 | 2.203056 | .516959 | 1.138889 |
| 54 | 1.048235 | .016889 | .017704 | 92 | 2.816203 | .615785 | 1.734177 |
| 55 | 1.049490 | .018030 | .018922 | 93 | 3.874756 | .712793 | 2.761905 |
| 56 | 1.050897 | .019306 | .020289 | 94 | 7.210046 | .832177 | 6.000000 |
| 57 | 1.052454 | .020714 | .021800 | | | | |

AMERICAN EXPERIENCE TABLE.

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AMERICAN EXPERIENCE TABLE—VALUATION COLUMNS,
THREE AND ONE-HALF PER CENT.

| Age. | u_x | c_x | k_x | Age. | u_x | c_x | k_x |
|------|----------|---------|---------|------|----------|---------|----------|
| 20 | 1.043141 | .007541 | .007866 | 58 | 1.059295 | .022160 | .023474 |
| 21 | 1.043195 | .007590 | .007917 | 59 | 1.061235 | .023884 | .025347 |
| 22 | 1.043249 | .007639 | .007969 | 60 | 1.063385 | .025791 | .027425 |
| 23 | 1.043303 | .007689 | .008022 | 61 | 1.065779 | .027903 | .029739 |
| 24 | 1.043359 | .007740 | .008076 | 62 | 1.068434 | .030234 | .032302 |
| 25 | 1.043414 | .007792 | .008130 | 63 | 1.071366 | .032795 | .035136 |
| 26 | 1.043484 | .007855 | .008197 | 64 | 1.074625 | .035626 | .038285 |
| 27 | 1.043553 | .007920 | .008264 | 65 | 1.078269 | .038772 | .041807 |
| 28 | 1.043627 | .007985 | .008333 | 66 | 1.082303 | .042229 | .045704 |
| 29 | 1.043708 | .008063 | .008415 | 67 | 1.086783 | .046036 | .050031 |
| 30 | 1.043798 | .008142 | .008498 | 68 | 1.091773 | .050243 | .054854 |
| 31 | 1.043884 | .008222 | .008583 | 69 | 1.097287 | .054843 | .060178 |
| 32 | 1.043983 | .008316 | .008682 | 70 | 1.103401 | .059896 | .066000 |
| 33 | 1.044104 | .008423 | .008795 | 71 | 1.110118 | .065377 | .072562 |
| 34 | 1.044221 | .008532 | .008910 | 72 | 1.117289 | .071239 | .079602 |
| 35 | 1.044344 | .008644 | .009027 | 73 | 1.125215 | .077467 | .087167 |
| 36 | 1.044491 | .008781 | .009172 | 74 | 1.133661 | .084085 | .095323 |
| 37 | 1.044648 | .008922 | .009320 | 75 | 1.142855 | .091179 | .104204 |
| 38 | 1.044830 | .009090 | .009498 | 76 | 1.152959 | .098851 | .113971 |
| 39 | 1.045019 | .009262 | .009679 | 77 | 1.164309 | .107308 | .124941 |
| 40 | 1.045238 | .009463 | .009891 | 78 | 1.177241 | .116741 | .137433 |
| 41 | 1.045461 | .009669 | .010109 | 79 | 1.192034 | .127279 | .151720 |
| 42 | 1.045720 | .009906 | .010359 | 80 | 1.209771 | .139581 | .168861 |
| 43 | 1.046000 | .010161 | .010629 | 81 | 1.230100 | .153241 | .188502 |
| 44 | 1.046331 | .010463 | .010947 | 82 | 1.253477 | .168403 | .211089 |
| 45 | 1.046689 | .010786 | .011289 | 83 | 1.280244 | .185083 | .236952 |
| 46 | 1.047102 | .011171 | .011697 | 84 | 1.312382 | .204211 | .268004 |
| 47 | 1.047574 | .011595 | .012146 | 85 | 1.353919 | .227586 | .308133 |
| 48 | 1.048108 | .012086 | .012668 | 86 | 1.409469 | .256696 | .361806 |
| 49 | 1.048749 | .012663 | .013280 | 87 | 1.484980 | .292773 | .434762 |
| 50 | 1.049456 | .013315 | .013974 | 88 | 1.584244 | .334968 | .530670 |
| 51 | 1.050276 | .014049 | .014755 | 89 | 1.713187 | .382476 | .655254 |
| 52 | 1.051180 | .014860 | .015629 | 90 | 1.897503 | .439174 | .833333 |
| 53 | 1.052183 | .015781 | .016604 | 91 | 2.213745 | .514461 | 1.138889 |
| 54 | 1.053322 | .016807 | .017704 | 92 | 2.829879 | .612811 | 1.734177 |
| 55 | 1.054585 | .017943 | .018922 | 93 | 3.893568 | .709350 | 2.761905 |
| 56 | 1.055998 | .019213 | .020289 | 94 | 7.245001 | .828157 | 6.000000 |
| 57 | 1.057564 | .020614 | .021800 | | | | |

AMERICAN EXPERIENCE TABLE.

(HUNTER'S MAKEHAMIZED.)

INTRODUCTION.

THIS table is a regraduation of the American Experience Table by "Makeham's first law." It was presented to the Actuarial Society of America in May, 1902, by its author, Arthur Hunter, A. I. A., actuary of the New York Life Insurance Company; and the Society undertook the publication of a very complete volume of commutation, premium and reserve tables, for joint lives, especially, Mr. Hunter doing the work. The tables which follow are republished by permission of the Society and their author.

Reference should be made to the book of tables mentioned, for values for two and for three lives.

AMERICAN EXPERIENCE TABLE.

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(HUNTER S MAKEHAMIZED.)

| Age. | l_x | d_x | p_x | q_x | Age. | l_x | d_x | p_x | q_x |
|------|---------|-------|--------|--------|------|--------|-------|--------|---------|
| 10 | 100,081 | 766 | .99235 | .00765 | 56 | 64,383 | 1,196 | .98142 | .01858 |
| 11 | 99,315 | 762 | .99233 | .00767 | 56 | 63,187 | 1,251 | .98020 | .01980 |
| 12 | 98,553 | 757 | .99232 | .00768 | 57 | 61,936 | 1,310 | .97885 | .02115 |
| 13 | 97,796 | 752 | .99231 | .00769 | 58 | 60,626 | 1,373 | .97735 | .02265 |
| 14 | 97,044 | 748 | .99229 | .00771 | 59 | 59,253 | 1,441 | .97568 | .02432 |
| 15 | 96,296 | 744 | .99227 | .00773 | 60 | 57,812 | 1,512 | .97385 | .02615 |
| 16 | 95,552 | 740 | .99226 | .00774 | 61 | 56,300 | 1,589 | .97178 | .02822 |
| 17 | 94,812 | 736 | .99224 | .00776 | 62 | 54,711 | 1,667 | .96953 | .03047 |
| 18 | 94,076 | 733 | .99221 | .00779 | 63 | 53,044 | 1,750 | .96701 | .03299 |
| 19 | 93,343 | 729 | .99219 | .00781 | 64 | 51,294 | 1,835 | .96423 | .03577 |
| 20 | 92,614 | 726 | .99216 | .00784 | 65 | 49,459 | 1,923 | .96112 | .03888 |
| 21 | 91,888 | 723 | .99213 | .00787 | 66 | 47,532 | 2,010 | .95772 | .04228 |
| 22 | 91,165 | 721 | .99209 | .00791 | 67 | 45,526 | 2,097 | .95394 | .04606 |
| 23 | 90,444 | 718 | .99206 | .00794 | 68 | 43,429 | 2,183 | .94973 | .05027 |
| 24 | 89,726 | 716 | .99202 | .00798 | 69 | 41,246 | 2,264 | .94511 | .05489 |
| 25 | 89,010 | 715 | .99197 | .00803 | 70 | 38,982 | 2,340 | .93997 | .06003 |
| 26 | 88,295 | 714 | .99191 | .00809 | 71 | 36,642 | 2,407 | .93431 | .06569 |
| 27 | 87,581 | 713 | .99186 | .00814 | 72 | 34,235 | 2,462 | .92800 | .07191 |
| 28 | 86,868 | 712 | .99180 | .00820 | 73 | 31,773 | 2,504 | .92119 | .07881 |
| 29 | 86,156 | 714 | .99171 | .00829 | 74 | 29,269 | 2,530 | .91356 | .08644 |
| 30 | 85,442 | 714 | .99164 | .00836 | 75 | 26,739 | 2,535 | .90519 | .09481 |
| 31 | 84,728 | 715 | .99156 | .00844 | 76 | 24,204 | 2,517 | .89601 | .10399 |
| 32 | 84,013 | 718 | .99145 | .00855 | 77 | 21,687 | 2,476 | .88583 | .11417 |
| 33 | 83,295 | 720 | .99136 | .00864 | 78 | 19,211 | 2,406 | .87476 | .12524 |
| 34 | 82,575 | 725 | .99122 | .00878 | 79 | 16,805 | 2,310 | .86254 | .13746 |
| 35 | 81,850 | 729 | .99109 | .00891 | 80 | 14,495 | 2,186 | .84919 | .15081 |
| 36 | 81,121 | 734 | .99095 | .00905 | 81 | 12,309 | 2,036 | .83459 | .16541 |
| 37 | 80,387 | 741 | .99078 | .00922 | 82 | 10,273 | 1,863 | .81805 | .18135 |
| 38 | 79,646 | 750 | .99058 | .00942 | 83 | 8,410 | 1,671 | .80131 | .19869 |
| 39 | 78,896 | 758 | .99039 | .00961 | 84 | 6,739 | 1,465 | .78261 | .21739 |
| 40 | 78,138 | 769 | .99016 | .00984 | 85 | 5,274 | 1,255 | .76204 | .23796 |
| 41 | 77,369 | 780 | .98992 | .01008 | 86 | 4,019 | 1,045 | .73999 | .26001 |
| 42 | 76,589 | 795 | .98962 | .01038 | 87 | 2,974 | 844 | .71621 | .28379 |
| 43 | 75,794 | 809 | .98933 | .01067 | 88 | 2,130 | 659 | .69061 | .30939 |
| 44 | 74,985 | 827 | .98897 | .01103 | 89 | 1,471 | 495 | .66349 | .33651 |
| 45 | 74,158 | 847 | .98858 | .01142 | 90 | 976 | 357 | .63422 | .36578 |
| 46 | 73,311 | 868 | .98800 | .01184 | 91 | 619 | 245 | .60420 | .39580 |
| 47 | 72,443 | 892 | .98769 | .01231 | 92 | 374 | 160 | .57219 | .42781 |
| 48 | 71,551 | 920 | .98714 | .01286 | 93 | 214 | 99 | .53733 | .46262 |
| 49 | 70,631 | 948 | .98658 | .01342 | 94 | 115 | 57 | .50435 | .49565 |
| 50 | 69,683 | 981 | .98592 | .01408 | 95 | 58 | 31 | .46552 | .53448 |
| 51 | 68,702 | 1,017 | .98520 | .01480 | 96 | 27 | 16 | .40741 | .59259 |
| 52 | 67,685 | 1,057 | .98438 | .01562 | 97 | 11 | 7 | .36364 | .63636 |
| 53 | 66,628 | 1,099 | .98351 | .01649 | 98 | 4 | 3 | .25000 | .75000 |
| 54 | 65,529 | 1,146 | .98251 | .01749 | 99 | 1 | 1 | ..... | 1.00000 |

AMERICAN EXPERIENCE TABLE.

*(HUNTER'S MAKEHAMIZED.)

COMMUTATION COLUMNS. ONE LIFE. THREE AND ONE-HALF PER CENT.

| Age. | D ₁ | N ₁ | S ₁ | M ₁ | R ₁ |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 70950 | 1504846 | 28690717 | 17661.57 | 553278.87 |
| 11 | 68025 | 1436821 | 27185871 | 17136.90 | 535617.30 |
| 12 | 65221 | 1371600 | 25749050 | 16632.61 | 518480.40 |
| 13 | 62532 | 1309068 | 24377450 | 16148.57 | 501847.79 |
| 14 | 59953 | 1249115 | 23068382 | 15683.99 | 485699.22 |
| 15 | 57478 | 1191637 | 21829267 | 15237.52 | 470015.23 |
| 16 | 55105 | 1136532 | 20627630 | 15808.46 | 454777.71 |
| 17 | 52829 | 1083703 | 19491098 | 14396.13 | 438969.25 |
| 18 | 50647 | 1033056 | 18407395 | 13999.90 | 424573.12 |
| 19 | 48552 | 984504 | 17374339 | 13618.63 | 410573.22 |
| 20 | 46545 | 937959 | 16389835 | 13252.26 | 396954.59 |
| 21 | 44618 | 893341 | 15451876 | 12899.73 | 383702.33 |
| 22 | 42770 | 850571 | 14558535 | 12500.53 | 370802.60 |
| 23 | 40997 | 809574 | 13707964 | 12223.71 | 358242.07 |
| 24 | 39296 | 770278 | 12898390 | 11919.26 | 346018.36 |
| 25 | 37664 | 732614 | 12128112 | 11616.29 | 334099.10 |
| 26 | 36099 | 696515 | 11395498 | 11323.97 | 322482.81 |
| 27 | 34596 | 661910 | 10698983 | 11041.93 | 311158.84 |
| 28 | 33154 | 628765 | 10037064 | 10769.81 | 300116.91 |
| 29 | 31770 | 596995 | 9408299 | 10507.26 | 289347.10 |
| 30 | 30441 | 566554 | 8811304 | 10252.88 | 278839.84 |
| 31 | 29166 | 537388 | 8244750 | 10007.10 | 268586.96 |
| 32 | 27942 | 509446 | 7707362 | 9759.30 | 258579.86 |
| 33 | 26766 | 482680 | 7197916 | 9538.58 | 248810.56 |
| 34 | 25638 | 457042 | 6715236 | 9315.04 | 239271.98 |
| 35 | 24553 | 432480 | 6258194 | 9097.55 | 229956.94 |
| 36 | 23511 | 408978 | 5825795 | 8880.26 | 220859.39 |
| 37 | 22511 | 386467 | 5416727 | 8670.71 | 211973.13 |
| 38 | 21549 | 364918 | 5030260 | 8480.22 | 203292.42 |
| 39 | 20625 | 344293 | 4665342 | 8284.16 | 194812.20 |
| 40 | 19736 | 324557 | 4321049 | 8092.71 | 186528.04 |
| 41 | 18881 | 305679 | 3996492 | 7905.05 | 178435.33 |
| 42 | 18058 | 287618 | 3690816 | 7721.14 | 170530.28 |
| 43 | 17266 | 270352 | 3403198 | 7540.03 | 162809.14 |
| 44 | 16504 | 253848 | 3132846 | 7361.97 | 155269.11 |
| 45 | 15770 | 238078 | 2878998 | 7186.10 | 147907.14 |
| 46 | 15063 | 223015 | 2640920 | 7012.07 | 140721.04 |
| 47 | 14381 | 208634 | 2417905 | 6839.76 | 133708.97 |
| 48 | 13724 | 194910 | 2209271 | 6668.67 | 126869.21 |
| 49 | 13089 | 181821 | 2014361 | 6498.18 | 120200.54 |
| 50 | 12477 | 169344 | 1832540 | 6328.44 | 113702.36 |
| 51 | 11885 | 157459 | 1663196 | 6158.72 | 107373.92 |
| 52 | 11313 | 146146 | 1505737 | 5988.74 | 101215.20 |
| 53 | 10760 | 135386 | 1359591 | 5818.04 | 95226.45 |
| 54 | 10225 | 125160.6 | 1224204.5 | 5646.56 | 89408.42 |

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(HUNTER'S MAKEHAMIZED.)
 COMMUTATION COLUMNS. ONE LIFE. THREE AND ONE-
 HALF PER CENT.—*Cont.*

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 9706.2 | 115454.4 | 1099043.9 | 5473.79 | 83761.86 |
| 56 | 9203.9 | 106250.5 | 983589.5 | 5299.58 | 78288.07 |
| 57 | 8716.5 | 97534.0 | 877339.0 | 5123.52 | 74988.49 |
| 58 | 8243.7 | 89290.3 | 779805.0 | 4945.39 | 67864.97 |
| 59 | 7784.5 | 81505.8 | 690514.7 | 4765.01 | 62919.58 |
| 60 | 7338.4 | 74167.4 | 609008.9 | 4582.10 | 58154.57 |
| 61 | 6904.8 | 67262.6 | 534841.5 | 4396.67 | 53572.47 |
| 62 | 6482.9 | 60779.7 | 467578.9 | 4208.38 | 49175.80 |
| 63 | 6073.0 | 54706.7 | 406799.2 | 4017.53 | 44967.42 |
| 64 | 5674.0 | 49032.7 | 352092.5 | 3823.95 | 40949.89 |
| 65 | 5286.0 | 43746.7 | 303059.8 | 3627.83 | 37125.94 |
| 66 | 4908.6 | 38838.1 | 259313.1 | 3429.26 | 33498.11 |
| 67 | 4542.1 | 34296.0 | 220475.0 | 3228.72 | 30068.85 |
| 68 | 4186.4 | 30109.6 | 186179.0 | 3026.58 | 26840.13 |
| 69 | 3841.5 | 26268.1 | 156069.4 | 2823.26 | 23813.55 |
| 70 | 3507.8 | 22760.3 | 129801.3 | 2619.53 | 20990.29 |
| 71 | 3185.8 | 19574.5 | 107041.0 | 2416.08 | 18370.76 |
| 72 | 2875.8 | 16698.7 | 87466.5 | 2213.89 | 15954.68 |
| 73 | 2578.8 | 14119.9 | 70767.8 | 2014.07 | 13740.79 |
| 74 | 2295.2 | 11824.7 | 56647.9 | 1817.72 | 11726.72 |
| 75 | 2025.9 | 9798.8 | 44823.2 | 1626.03 | 9909.00 |
| 76 | 1771.8 | 8027.0 | 35024.4 | 1440.46 | 8282.97 |
| 77 | 1533.9 | 6403.1 | 26997.4 | 1262.44 | 6842.51 |
| 78 | 1312.8 | 5180.3 | 20504.3 | 1093.24 | 5580.07 |
| 79 | 1109.6 | 4070.65 | 15323.98 | 934.38 | 4486.83 |
| 80 | 924.68 | 3145.97 | 11253.33 | 787.02 | 3552.45 |
| 81 | 758.66 | 2387.31 | 8107.36 | 652.29 | 2765.43 |
| 82 | 611.77 | 1775.54 | 5720.05 | 531.04 | 2113.14 |
| 83 | 483.89 | 1291.65 | 3944.51 | 423.489 | 1582.097 |
| 84 | 374.64 | 917.01 | 2652.86 | 330.954 | 1158.248 |
| 85 | 283.28 | 633.73 | 1735.85 | 252.266 | 827.294 |
| 86 | 208.57 | 425.16 | 1102.12 | 187.138 | 575.028 |
| 87 | 149.12 | 276.04 | 676.96 | 134.741 | 387.840 |
| 88 | 103.19 | 172.852 | 400.924 | 93.854 | 253.149 |
| 89 | 68.853 | 103.999 | 228.072 | 63.008 | 159.295 |
| 90 | 44.139 | 59.860 | 124.073 | 40.622 | 96.287 |
| 91 | 27.047 | 32.813 | 64.213 | 25.023 | 55.665 |
| 92 | 15.789 | 17.024 | 31.400 | 14.6796 | 30.6421 |
| 93 | 8.729 | 8.295 | 14.376 | 8.1533 | 15.9625 |
| 94 | 4.532 | 3.763 | 6.081 | 4.2516 | 7.8092 |
| 95 | 2.209 | 1.554 | 2.318 | 2.0812 | 3.5576 |
| 96 | .993 | .561 | .764 | .9407 | 1.4764 |
| 97 | .391 | .170 | .203 | .3720 | .5357 |
| 98 | .137 | .033 | .033 | .1316 | .1637 |
| 99 | .033 | .000 | .000 | .0321 | .0321 |

*(HUNTER'S MAKEHAMIZED.)

COMMUTATION COLUMNS. TWO LIVES. THREE AND ONE-HALF PER CENT.

| Equal Ages. | D _{xx} | N _{xx} | S _{xx} | M _{xx} | R _{xx} |
|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 10 | 7100700000 | 128026500000 | 2123131900000 | 2531020000 | 58760930000 |
| 11 | 6755600000 | 121270700000 | 1995105300000 | 2426360000 | 56299910000 |
| 12 | 6427800000 | 114842900000 | 1878834600000 | 2326760000 | 53803550000 |
| 13 | 6 15300000 | 108727600000 | 1758991700000 | 2231680000 | 51476790000 |
| 14 | 5818100000 | 102909500000 | 1650264100000 | 2141236000 | 49245107000 |
| 15 | 5534900000 | 97374600000 | 1547354600000 | 2054926000 | 47103871000 |
| 16 | 5265400000 | 92109200000 | 1449480000000 | 1972573000 | 45048945000 |
| 17 | 5008800000 | 87100400000 | 1357870800000 | 1894008000 | 43076372000 |
| 18 | 4764600000 | 82335800000 | 1270770400000 | 1819231000 | 41182364000 |
| 19 | 4532000000 | 77803800000 | 1188434600000 | 1747711000 | 39363133000 |
| 20 | 4310700000 | 73493100000 | 1110630800000 | 1679714000 | 37615422000 |
| 21 | 4099900000 | 69393200000 | 1037137700000 | 1614649000 | 35935708000 |
| 22 | 3899200000 | 65494000000 | 967744500000 | 1552533000 | 34321059000 |
| 23 | 3707900000 | 61786100000 | 902250500000 | 1493153000 | 32768526000 |
| 24 | 3525900000 | 58260200000 | 840464400000 | 1436525000 | 31275373000 |
| 25 | 3352500000 | 54907700000 | 782204200000 | 1382362000 | 29838848000 |
| 26 | 3187400000 | 51720300000 | 727296500000 | 1330562000 | 28456486000 |
| 27 | 3029900000 | 48690400000 | 675576200000 | 1280908000 | 27125924000 |
| 28 | 2880000000 | 45810400000 | 626885800000 | 1233469000 | 25845016000 |
| 29 | 2737200000 | 43073200000 | 581075400000 | 1188076000 | 24611547000 |
| 30 | 2600900000 | 40472300000 | 538002200000 | 1144351000 | 23423471000 |
| 31 | 2471200000 | 38001100000 | 497529900000 | 1102571000 | 22279110000 |
| 32 | 2347500000 | 35653600000 | 459528800000 | 1062460000 | 21176539000 |
| 33 | 2229500000 | 33424100000 | 423875200000 | 1023835000 | 20114079000 |
| 34 | 2117000000 | 31307100000 | 390451100000 | 986764000 | 19090244000 |
| 35 | 2009700000 | 29297400000 | 359144000000 | 951006000 | 18103480000 |
| 36 | 1907300000 | 27390100000 | 329846600000 | 916515000 | 17152474000 |
| 37 | 1809600000 | 25580500000 | 302456500000 | 883387000 | 16235959000 |
| 38 | 1716300000 | 23864200000 | 276876000000 | 851240000 | 15352572000 |
| 39 | 1627200000 | 22237000000 | 253011800000 | 820214000 | 14501328000 |
| 40 | 1542100000 | 20694900000 | 230774800000 | 790107000 | 13681114000 |
| 41 | 1460800000 | 19234100000 | 210079900000 | 760945000 | 12891007000 |
| 42 | 1383100000 | 17851000000 | 190845800000 | 732651000 | 12130062000 |
| 43 | 1308700000 | 16523000000 | 172994800000 | 704995000 | 11397411000 |
| 44 | 1237500000 | 15304800000 | 156452500000 | 678143000 | 10692416000 |
| 45 | 1169500000 | 14135300000 | 141147700000 | 651965000 | 10014273000 |
| 46 | 1104300000 | 13031000000 | 127012400000 | 626282000 | 9362308000 |
| 47 | 1041800000 | 11989230000 | 113981380000 | 601189000 | 8736026000 |
| 48 | 9819700000 | 11007260000 | 101992150000 | 576542000 | 8134837000 |
| 49 | 9245300000 | 10082730000 | 90984890000 | 552302000 | 7558295000 |
| 50 | 8694400000 | 9213290000 | 80902160000 | 528488000 | 7005993000 |
| 51 | 8165400000 | 8396750000 | 71688870000 | 504995000 | 6477505000 |
| 52 | 7657400000 | 7631010000 | 63292120000 | 481795000 | 5972510000 |
| 53 | 7169400000 | 6914070000 | 55661110000 | 458895000 | 5490715000 |
| 54 | 6700100000 | 6244090000 | 48747040000 | 436208000 | 5031820000 |

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(HUNTER'S MAKEHAMIZED.)

COMMUTATION COLUMNS. TWO LIVES. THREE AND ONE-HALF PER CENT.—Cont.

| Equal Ages. | D _{xx} | N _{xx} | S _{xx} | M _{xx} | R _{xx} |
|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 55 | 624910000 | 5619150000 | 42502980000 | 413760000 | 4595612000 |
| 56 | 581570000 | 5037580000 | 36883830000 | 391547000 | 4181852000 |
| 57 | 539860000 | 4497720000 | 31846250000 | 369508000 | 3790305000 |
| 58 | 499780000 | 3997940000 | 27348530000 | 347684000 | 3420797000 |
| 59 | 461250000 | 3536690000 | 23350590000 | 326059000 | 3073112000 |
| 60 | 424250000 | 3112440000 | 19813900000 | 304658000 | 2747054000 |
| 61 | 388740000 | 2723700000 | 16701460000 | 283490000 | 2442396000 |
| 62 | 354680000 | 2369020000 | 1397760000 | 262576000 | 2158906000 |
| 63 | 322140000 | 2046880000 | 11608740000 | 242026000 | 1866330000 |
| 64 | 291040000 | 1755840000 | 9561860000 | 221827000 | 1654304000 |
| 65 | 261440000 | 1494400000 | 7806020000 | 202065000 | 1432477000 |
| 66 | 233340000 | 1251060000 | 6311620000 | 182796000 | 1230412000 |
| 67 | 206790000 | 1054270000 | 5050560000 | 164139000 | 1047616000 |
| 68 | 181810000 | 872460000 | 3996290000 | 146161000 | 883477000 |
| 69 | 158450000 | 714010000 | 3123830000 | 128940000 | 737316000 |
| 70 | 136740000 | 577270000 | 2409820000 | 112598000 | 608376000 |
| 71 | 116730000 | 460539000 | 1832547000 | 97200000 | 495778000 |
| 72 | 98453000 | 362086000 | 1372008000 | 82878000 | 398569000 |
| 73 | 81935000 | 280151000 | 1009922000 | 69689000 | 315691000 |
| 74 | 67178000 | 212973000 | 729771000 | 57705000 | 246002000 |
| 75 | 54171000 | 158802000 | 516798000 | 46969500 | 188296900 |
| 76 | 42885000 | 115917000 | 357996000 | 37515400 | 141327400 |
| 77 | 33205000 | 82652000 | 242079000 | 29345600 | 103812000 |
| 78 | 25220000 | 57432000 | 159427000 | 22425200 | 74466400 |
| 79 | 18646000 | 38786000 | 101995000 | 16704100 | 52041200 |
| 80 | 13403000 | 25382500 | 63209200 | 12091900 | 35337100 |
| 81 | 9338300 | 16044200 | 37826700 | 8480000 | 23245200 |
| 82 | 6284800 | 9750400 | 21782500 | 5742500 | 14765200 |
| 83 | 4069600 | 5689800 | 12023100 | 3739500 | 9022700 |
| 84 | 2524700 | 3165100 | 6333300 | 2332290 | 5283240 |
| 85 | 1494000 | 1671070 | 3168160 | 1386970 | 2950950 |
| 86 | 838240 | 832830 | 1497090 | 781770 | 1563980 |
| 87 | 443480 | 389350 | 664260 | 415320 | 782210 |
| 88 | 219790 | 169560 | 274910 | 206630 | 366890 |
| 89 | 101280 | 68275 | 105352 | 95548 | 160264 |
| 90 | 43079 | 25196 | 37077 | 40772 | 64716 |
| 91 | 16742 | 8454.1 | 11881.1 | 15891 | 23944 |
| 92 | 5905.1 | 2549.0 | 3427.0 | 5619.5 | 8052.6 |
| 93 | 1868.0 | 681.00 | 877.99 | 1781.8 | 2433.1 |
| 94 | 521.21 | 159.79 | 196.99 | 498.17 | 651.31 |
| 95 | 128.090 | 31.703 | 37.203 | 122.690 | 153.136 |
| 96 | 28.819 | 4.884 | 5.500 | 25.748 | 30.446 |
| 97 | 4.301 | .583 | .616 | 4.1359 | 4.6978 |
| 98 | .550 | .033 | .033 | .5298 | .5619 |
| 99 | .033 | .000 | .000 | .0321 | .0321 |

AMERICAN EXPERIENCE TABLE.

(HUNTER'S MAKEHAMIZED), THREE PER CENT.
COMMUTATION COLUMNS—ONE LIFE.

| Age | D _x | N _x | S _x | C _x | M _x | R _x |
|-----|----------------|----------------|----------------|----------------|----------------|----------------|
| 10 | 74470 | 1811702 | 37000410 | 553.38 | 21701.71 | 733961.72 |
| 11 | 71746 | 1737232 | 35188708 | 534.45 | 21148.33 | 712260.01 |
| 12 | 69123 | 1665480 | 33451476 | 515.49 | 20613.88 | 691111.68 |
| 13 | 66595 | 1593933 | 31785990 | 497.16 | 20098.39 | 670497.80 |
| 14 | 64158 | 1529708 | 30189627 | 480.11 | 19601.23 | 650399.41 |
| 15 | 61809 | 1465610 | 28650859 | 463.63 | 19121.12 | 630798.18 |
| 16 | 59544 | 1403801 | 27194249 | 447.71 | 18657.49 | 611677.06 |
| 17 | 57363 | 1344257 | 25700448 | 432.32 | 18209.78 | 593019.57 |
| 18 | 55260 | 1288084 | 24446191 | 418.01 | 17777.46 | 574809.79 |
| 19 | 53232 | 1231634 | 23159297 | 403.64 | 17359.45 | 557032.33 |
| 20 | 51279 | 1178402 | 21927663 | 390.27 | 16955.81 | 539672.88 |
| 21 | 49395 | 1127123 | 20740201 | 377.33 | 16565.54 | 522717.07 |
| 22 | 47578 | 1077728 | 19622138 | 365.33 | 16188.21 | 506151.53 |
| 23 | 45827 | 1030150 | 18544410 | 353.21 | 15822.88 | 489993.32 |
| 24 | 44140 | 984323 | 17514260 | 341.96 | 15469.67 | 474140.44 |
| 25 | 42512 | 940183 | 16520037 | 331.54 | 15127.71 | 458670.77 |
| 26 | 40942 | 897671 | 15589754 | 321.43 | 14796.17 | 443543.06 |
| 27 | 39428 | 856720 | 14602083 | 311.64 | 14474.74 | 428746.89 |
| 28 | 37968 | 817301 | 13835354 | 302.13 | 14163.10 | 414272.15 |
| 29 | 36560 | 779333 | 13018053 | 294.16 | 13860.97 | 400109.05 |
| 30 | 35201 | 742773 | 12238720 | 285.59 | 13566.81 | 386248.08 |
| 31 | 33891 | 707572 | 11495947 | 277.66 | 13281.22 | 372681.27 |
| 32 | 32620 | 673681 | 10788375 | 270.70 | 13003.56 | 359400.05 |
| 33 | 31404 | 641055 | 10114604 | 263.55 | 12732.86 | 346396.49 |
| 34 | 30220 | 609651 | 9473939 | 257.66 | 12469.31 | 333663.63 |
| 35 | 29088 | 579425 | 8863988 | 251.53 | 12211.65 | 321194.32 |
| 36 | 27980 | 550337 | 8284503 | 245.88 | 11960.12 | 308982.67 |
| 37 | 26928 | 522348 | 7734226 | 241.00 | 11714.24 | 297022.55 |
| 38 | 25903 | 495420 | 7211878 | 236.82 | 11473.24 | 285308.31 |
| 39 | 24912 | 469517 | 6716458 | 232.37 | 11236.42 | 273835.07 |
| 40 | 23954 | 444605 | 6246941 | 228.88 | 11004.05 | 262598.65 |
| 41 | 23027 | 420651 | 5802336 | 225.39 | 10775.17 | 251594.60 |
| 42 | 22131 | 397624 | 5381685 | 223.03 | 10549.78 | 240819.43 |
| 43 | 21263 | 375493 | 4984061 | 220.35 | 10326.75 | 230269.65 |
| 44 | 20423 | 354230 | 4608508 | 218.69 | 10106.40 | 219942.90 |
| 45 | 19610 | 333807 | 4254338 | 217.46 | 9887.71 | 209836.50 |
| 46 | 18822 | 314197 | 3920531 | 216.36 | 9670.25 | 199948.79 |
| 47 | 18057 | 295375 | 3606334 | 215.86 | 9453.89 | 190278.54 |
| 48 | 17315 | 277318 | 3310059 | 216.16 | 9238.03 | 180824.65 |
| 49 | 16595 | 260003 | 3033641 | 216.25 | 9021.87 | 171586.62 |
| 50 | 15895 | 243408 | 2773638 | 217.26 | 8805.62 | 162564.75 |
| 51 | 15215 | 227513 | 2530230 | 218.67 | 8588.36 | 153759.13 |
| 52 | 14553 | 212298 | 2302717 | 220.65 | 8369.69 | 145170.77 |
| 53 | 13909 | 197745 | 2090419 | 222.74 | 8149.04 | 136801.08 |
| 54 | 13281 | 183836 | 1892674 | 225.49 | 7926.30 | 128652.04 |

(HUNTER'S MAKEHAMIZED), THREE PER CENT.
COMMUTATION COLUMNS—ONE LIFE.—Cont.

| Age | D _x | N _x | S _x | C _x | M _x | R _x |
|-----|----------------|----------------|----------------|----------------|----------------|----------------|
| 56 | 12668 | 170555 | 1708838 | 228.48 | 7700.81 | 190725.74 |
| 56 | 12071 | 157867 | 1538283 | 232.03 | 7472.33 | 113024.93 |
| 57 | 11487 | 145816 | 1380396 | 235.89 | 7240.30 | 105552.60 |
| 58 | 10917 | 134329 | 1234580 | 240.03 | 7004.41 | 98312.30 |
| 59 | 10359 | 123412 | 1100251 | 244.59 | 6764.38 | 91307.89 |
| 60 | 9812.7 | 113053.4 | 976838.7 | 249.16 | 6519.79 | 84543.51 |
| 61 | 9277.7 | 103240.7 | 863785.3 | 254.22 | 6270.63 | 78023.72 |
| 62 | 8753.1 | 93963.0 | 760544.6 | 258.93 | 6016.41 | 71753.09 |
| 63 | 8239.3 | 85209.9 | 666581.6 | 263.91 | 5757.48 | 65736.68 |
| 64 | 7735.5 | 76970.6 | 581371.7 | 268.67 | 5493.57 | 59979.20 |
| 66 | 7241.5 | 69235.1 | 504401.1 | 273.35 | 5224.90 | 54485.63 |
| 66 | 6757.1 | 61993.6 | 435166.0 | 277.40 | 4951.55 | 49260.73 |
| 67 | 6283.0 | 55230.5 | 373172.4 | 280.98 | 4674.15 | 44309.18 |
| 68 | 5819.0 | 48953.5 | 317935.9 | 283.97 | 4397.17 | 39335.03 |
| 69 | 5365.5 | 43134.5 | 268982.4 | 285.94 | 4109.20 | 35241.86 |
| 70 | 4923.2 | 37769.0 | 225847.9 | 286.93 | 3823.26 | 31132.66 |
| 71 | 4493.0 | 32845.8 | 188078.9 | 286.55 | 3536.33 | 27309.40 |
| 72 | 4075.6 | 28352.8 | 155233.1 | 284.56 | 3249.78 | 23773.07 |
| 73 | 3672.3 | 24277.2 | 126880.3 | 280.98 | 2965.22 | 20523.29 |
| 74 | 3284.4 | 20604.9 | 102603.1 | 275.63 | 2684.24 | 17558.07 |
| 76 | 2913.1 | 17320.5 | 81998.2 | 268.13 | 2408.61 | 14873.83 |
| 76 | 2560.1 | 14407.4 | 64677.7 | 258.47 | 2140.48 | 12465.22 |
| 77 | 2227.1 | 11847.3 | 50270.3 | 246.86 | 1882.01 | 10324.74 |
| 78 | 1915.4 | 9620.2 | 38423.0 | 232.89 | 1635.15 | 8442.73 |
| 79 | 1626.7 | 7704.8 | 28802.8 | 217.09 | 1402.26 | 6807.58 |
| 80 | 1362.2 | 6078.1 | 21098.0 | 199.45 | 1185.17 | 5405.32 |
| 81 | 1123.1 | 4715.9 | 15019.9 | 180.36 | 985.72 | 4220.15 |
| 82 | 910.02 | 3592.83 | 10304.02 | 160.22 | 805.36 | 3234.43 |
| 83 | 723.29 | 2682.81 | 6711.19 | 139.52 | 645.14 | 2426.07 |
| 84 | 562.69 | 1959.52 | 6028.38 | 118.76 | 505.62 | 1783.93 |
| 85 | 427.54 | 1396.83 | 4068.86 | 98.773 | 386.856 | 1278.312 |
| 86 | 316.32 | 969.29 | 2672.03 | 79.851 | 288.083 | 891.456 |
| 87 | 227.25 | 652.97 | 1702.74 | 62.612 | 208.232 | 603.373 |
| 88 | 158.02 | 425.72 | 1049.77 | 47.466 | 145.620 | 395.141 |
| 89 | 105.95 | 267.70 | 624.05 | 34.615 | 98.154 | 249.521 |
| 90 | 68.250 | 161.746 | 356.349 | 24.237 | 63.539 | 151.367 |
| 91 | 42.074 | 93.496 | 194.603 | 16.149 | 39.302 | 87.828 |
| 92 | 24.652 | 51.472 | 101.107 | 10.239 | 23.153 | 48.526 |
| 93 | 13.695 | 26.820 | 49.635 | 6.1509 | 12.9135 | 25.3734 |
| 94 | 7.145 | 13.125 | 22.815 | 3.4382 | 6.7626 | 12.4599 |
| 95 | 3.499 | 5.980 | 9.600 | 1.8155 | 3.3244 | 5.6973 |
| 96 | 1.581 | 2.481 | 3.710 | .9097 | 1.5089 | 2.3729 |
| 97 | .625 | .900 | 1.229 | .3864 | .5992 | .8640 |
| 98 | .221 | .275 | .329 | .1608 | .2128 | .2648 |
| 99 | .054 | .054 | .054 | .0520 | .0520 | .0520 |

AMERICAN EXPERIENCE TABLE.

(HUNTER'S MAKEHAMIZED), THREE PER CENT.
COMMUTATION COLUMNS—TWO LIVES.

| Equal Age: | D _{xx} | N _{xx} | S _{xx} | C _{xx} | M _{xx} | R _{xx} |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 55 | 815620 | 842604 | 6714381 | 29139 | 570204 | 6470386 |
| 56 | 762750 | 761042 | 5871777 | 29045 | 541071 | 5900182 |
| 57 | 711480 | 694767 | 5110735 | 28901 | 512026 | 5359111 |
| 58 | 661850 | 613619 | 4425968 | 28776 | 483125 | 4847085 |
| 59 | 613790 | 547434 | 3812349 | 28617 | 454349 | 4363960 |
| 60 | 567300 | 489055 | 3264915 | 28443 | 425732 | 3909011 |
| 61 | 522340 | 429325 | 2778960 | 28238 | 397289 | 3483879 |
| 62 | 478880 | 377091 | 2349535 | 27881 | 369061 | 3063590 |
| 63 | 437050 | 329203 | 1972444 | 27537 | 341170 | 2717539 |
| 64 | 396790 | 285498 | 1643241 | 27072 | 313633 | 2376369 |
| 65 | 358160 | 245819 | 1357743 | 26525 | 286561 | 2062736 |
| 66 | 321300 | 210003 | 1111924 | 25806 | 260036 | 1776175 |
| 67 | 286040 | 177883 | 901921 | 24989 | 234228 | 1516139 |
| 68 | 252710 | 149279 | 724038 | 24053 | 209239 | 1281911 |
| 69 | 221300 | 124006 | 574759 | 22936 | 185188 | 1072672 |
| 70 | 191920 | 101878 | 450751 | 21704 | 162250 | 887486 |
| 71 | 164630 | 826900 | 3489732 | 20310 | 140546 | 725236 |
| 72 | 139590 | 662290 | 2661872 | 18781 | 120236 | 584690 |
| 73 | 116680 | 522700 | 1999642 | 17149 | 101455 | 464454 |
| 74 | 961320 | 406016 | 1476942 | 15437 | 84306 | 362999 |
| 75 | 778950 | 309684 | 1070926 | 13660 | 69969 | 278993 |
| 76 | 619660 | 231969 | 761042 | 11862 | 55209 | 209824 |
| 77 | 482960 | 170023 | 529063 | 10097 | 43347 | 154615 |
| 78 | 367960 | 121725 | 359030 | 83875 | 33250 | 111268 |
| 79 | 273360 | 84929 | 237305 | 67945 | 248625 | 780178 |
| 80 | 197450 | 57593 | 152376 | 53466 | 180680 | 531533 |
| 81 | 138240 | 37948 | 94783 | 40721 | 127214 | 350673 |
| 82 | 934870 | 240239 | 569849 | 29689 | 86493 | 229659 |
| 83 | 692390 | 146732 | 329110 | 21136 | 58554 | 137166 |
| 84 | 379200 | 85923 | 182358 | 14268 | 35418 | 80612 |
| 85 | 225490 | 49008 | 96435 | 91765 | 211502 | 451989 |
| 86 | 127180 | 25454 | 48432 | 55844 | 119717 | 240437 |
| 87 | 675890 | 12741 | 22978 | 31957 | 63873 | 120730 |
| 88 | 336570 | 59627 | 102366 | 17093 | 31916 | 56847 |
| 89 | 165850 | 26170 | 42541 | 84697 | 148226 | 249810 |
| 90 | 66612 | 105851 | 163709 | 38656 | 63529 | 101094 |
| 91 | 26018 | 39239 | 57358 | 16036 | 24871 | 37555 |
| 92 | 9219.8 | 12225.5 | 18619.1 | 6020.9 | 8894.9 | 12683.6 |
| 93 | 2980.6 | 4005.7 | 5393.6 | 2023.6 | 2814.0 | 3848.7 |
| 94 | 821.67 | 1075.10 | 1387.85 | 564.81 | 790.35 | 1084.67 |
| 95 | 202.92 | 253.43 | 312.75 | 154.32 | 195.54 | 244.32 |
| 96 | 42.692 | 50.569 | 59.317 | 24.569 | 41.321 | 48.781 |
| 97 | 6.890 | 7.817 | 8.808 | 5.796 | 6.652 | 7.560 |
| 98 | .883 | .937 | .991 | .804 | .856 | .908 |
| 99 | .051 | .064 | .054 | .052 | .052 | .052 |

AMERICAN EXPERIENCE TABLE.

29

(HUNTER'S MAKEHAMIZED), THREE PER CENT.
COMMUTATION COLUMNS—TWO LIVES.

| Equal Ages. | D _{xx} | N _{xx} | S _{xx} | C _{xx} | M _{xx} | R _{xx} |
|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 10 | 74530 | 153390 | 2714959 | 110390 | 298518 | 7451727 |
| 11 | 71254 | 145937 | 2561569 | 105560 | 287479 | 7153209 |
| 12 | 68122 | 1388116 | 24156319 | 101200 | 276923 | 6865730 |
| 13 | 65127 | 1399904 | 22768203 | 96788 | 2667974 | 65888070 |
| 14 | 62262 | 1254867 | 21368209 | 92813 | 2571186 | 63220096 |
| 15 | 59520 | 1192605 | 20113342 | 88988 | 2478373 | 60648910 |
| 16 | 56896 | 1133085 | 18920737 | 85308 | 2389385 | 58170537 |
| 17 | 54386 | 1076189 | 17787652 | 81589 | 2304077 | 55781152 |
| 18 | 51986 | 1021803 | 16711463 | 78413 | 2222488 | 53477075 |
| 19 | 49688 | 969817 | 15689660 | 74913 | 2144075 | 51254587 |
| 20 | 47492 | 920129 | 14719843 | 72031 | 2069162 | 49110512 |
| 21 | 45388 | 872637 | 13799714 | 69099 | 1997131 | 47041350 |
| 22 | 43375 | 827249 | 12927077 | 66376 | 1928032 | 45044219 |
| 23 | 41448 | 783874 | 12099828 | 63608 | 1861656 | 43116187 |
| 24 | 39605 | 742426 | 11315954 | 61134 | 1798048 | 41254531 |
| 25 | 37840 | 702821 | 10573528 | 58750 | 1726914 | 39456483 |
| 26 | 36150 | 664981 | 9870707 | 56589 | 1678164 | 37719599 |
| 27 | 34531 | 628831 | 9215726 | 54329 | 1621575 | 36041405 |
| 28 | 32982 | 594300 | 8586895 | 52237 | 1567246 | 34419830 |
| 29 | 31499 | 561318 | 7992395 | 50550 | 1515009 | 32852584 |
| 30 | 30076 | 529819 | 7431277 | 48559 | 1464459 | 31337575 |
| 31 | 28715 | 499743 | 6901458 | 46834 | 1415900 | 29873116 |
| 32 | 27410 | 471028 | 6401715 | 45318 | 1369066 | 28457216 |
| 33 | 26158 | 443618 | 5930687 | 43705 | 1323748 | 27088150 |
| 34 | 24959 | 417460 | 5487069 | 42362 | 1280043 | 25764402 |
| 35 | 23809 | 392501 | 5069609 | 41059 | 1237681 | 24484359 |
| 36 | 22705 | 368692 | 4677108 | 39628 | 1196622 | 23246678 |
| 37 | 21647 | 345987 | 4308416 | 38638 | 1156994 | 22050056 |
| 38 | 20631 | 324340 | 3962429 | 37480 | 1118356 | 20843062 |
| 39 | 19655 | 303709 | 3638089 | 36542 | 1080876 | 19774706 |
| 40 | 18717 | 284054 | 3334380 | 35566 | 1044534 | 18693830 |
| 41 | 17816 | 265337 | 3050326 | 34675 | 1008768 | 17644496 |
| 42 | 16950 | 247521 | 2784480 | 34058 | 974003 | 16640728 |
| 43 | 16116 | 230571 | 2537468 | 33229 | 940035 | 15666635 |
| 44 | 15314 | 214455 | 2306897 | 32552 | 906806 | 14726600 |
| 45 | 14543 | 199141 | 2092442 | 32092 | 874254 | 13819794 |
| 46 | 13798 | 184598 | 1893301 | 31506 | 842162 | 12945540 |
| 47 | 13081 | 170300 | 1708703 | 31096 | 810656 | 12103378 |
| 48 | 12389 | 157719 | 1537003 | 30732 | 779560 | 11292722 |
| 49 | 11721 | 145330 | 1380184 | 30338 | 748828 | 10513162 |
| 50 | 11076 | 133609 | 1234854 | 30075 | 718490 | 9764334 |
| 51 | 10453 | 122533 | 1101245 | 29844 | 688415 | 9045844 |
| 52 | 98501 | 1120803 | 9787116 | 29601 | 658571 | 8357429 |
| 53 | 92672 | 1022302 | 8666313 | 29468 | 628970 | 7668858 |
| 54 | 87026 | 929630 | 7644011 | 29298 | 599502 | 7069888 |

AMERICAN EXPERIENCE TABLE.

(HUNTER'S MAKEHAMIZED), FORCE OF MORTALITY.

| Age. | μ_x | Age. | μ_x | Age. | μ_x | Age. | μ_x |
|------|---------|------|---------|------|---------|------|---------|
| 10 | .00768 | 33 | .00863 | 56 | .01818 | 77 | .11531 |
| 11 | .00769 | 34 | .00875 | 56 | .01936 | 78 | .12729 |
| 12 | .00770 | 35 | .00888 | 57 | .02066 | 79 | .14060 |
| 13 | .00772 | 36 | .00902 | 58 | .02212 | 80 | .15540 |
| 14 | .00773 | 37 | .00918 | 59 | .02373 | 81 | .17183 |
| 15 | .00775 | 38 | .00935 | 60 | .02553 | 82 | .19010 |
| 16 | .00776 | 39 | .00955 | 61 | .02752 | 83 | .21040 |
| 17 | .00778 | 40 | .00977 | 62 | .02974 | 84 | .23295 |
| 18 | .00781 | 41 | .01001 | 63 | .03220 | 85 | .25801 |
| 19 | .00783 | 42 | .01028 | 64 | .03494 | 86 | .28586 |
| 20 | .00786 | 43 | .01058 | 65 | .03798 | 87 | .31681 |
| 21 | .00788 | 44 | .01091 | 66 | .04136 | 88 | .35120 |
| 22 | .00792 | 45 | .01128 | 67 | .04512 | 89 | .38941 |
| 23 | .00795 | 46 | .01169 | 68 | .04929 | 90 | .43187 |
| 24 | .00799 | 47 | .01215 | 69 | .05393 | 91 | .47905 |
| 25 | .00804 | 48 | .01265 | 70 | .05908 | 92 | .53149 |
| 26 | .00809 | 49 | .01321 | 71 | .06481 | 93 | .58975 |
| 27 | .00814 | 50 | .01384 | 72 | .07117 | 94 | .65449 |
| 28 | .00821 | 51 | .01453 | 73 | .07824 | 95 | .72643 |
| 29 | .00827 | 52 | .01531 | 74 | .08610 | 96 | .80637 |
| 30 | .00835 | 53 | .01617 | 75 | .09483 | 97 | .89521 |
| 31 | .00843 | 54 | .01712 | 76 | .10453 | 98 | .99392 |
| 32 | .00853 | | | | | | |

TABLE SHOWING THE ADDITION TO BE MADE TO THE YOUNGER OF TWO LIVES IN ORDER TO OBTAIN THE EQUIVALENT—EQUAL AGES

| Difference of Ages. | Addition to Younger Ages. | Difference of Ages. | Addition to Younger Ages. | Difference of Ages. | Addition to Younger Ages. |
|---------------------|---------------------------|---------------------|---------------------------|---------------------|---------------------------|
| 1 | 0.513 | 18 | 12.751 | 35 | 28.660 |
| 2 | 1.053 | 19 | 13.625 | 36 | 29.637 |
| 3 | 1.618 | 20 | 14.513 | 37 | 30.616 |
| 4 | 2.209 | 21 | 15.410 | 38 | 31.598 |
| 5 | 2.826 | 22 | 16.316 | 39 | 32.581 |
| 6 | 3.467 | 23 | 17.230 | 40 | 33.565 |
| 7 | 4.132 | 24 | 18.153 | 41 | 34.552 |
| 8 | 4.820 | 25 | 19.083 | 42 | 35.539 |
| 9 | 5.530 | 26 | 20.019 | 43 | 36.528 |
| 10 | 6.261 | 27 | 20.961 | 44 | 37.518 |
| 11 | 7.013 | 28 | 21.909 | 45 | 38.509 |
| 12 | 7.784 | 29 | 22.862 | 46 | 39.501 |
| 13 | 8.572 | 30 | 23.819 | 47 | 40.493 |
| 14 | 9.378 | 31 | 24.781 | 48 | 41.487 |
| 15 | 10.200 | 32 | 25.745 | 49 | 42.481 |
| 16 | 11.037 | 33 | 26.714 | 50 | 43.475 |
| 17 | 11.887 | 34 | 27.686 | | |

AMERICAN EXPERIENCE TABLE.

SELECT AND ULTIMATE.

INTRODUCTION.

THIS table assumes that the benefits of fresh medical selections endure for five years and that the ultimate mortality, to be expected after five years, is as per the American Experience Mortality Table, while the mortality rates during the five years bear the following ratios to the ultimate mortality rates at the same ages, viz. :

| | |
|----------------------------------------|-------------|
| The first year after admission, . . . | 50 per cent |
| The second year after admission, . . . | 65 “ |
| The third year after admission, . . . | 75 “ |
| The fourth year after admission, . . . | 85 “ |
| The fifth year after admission, . . . | 95 “ |

The tables were computed especially for this book, the work being done by Scott's Five Place Logarithms throughout, and are not more accurate than this method admits of, great accuracy not being considered to be important.

SELECT AND ULTIMATE.

| [x] | l_x | l_{x+1} | l_{x+2} | l_{x+3} | l_{x+4} | l_{x+5} |
|-----|-------|-----------|-----------|-----------|-----------|-----------|
| 20 | 91690 | 91331 | 90866 | 90328 | 89716 | 89032 |
| 21 | 90668 | 90611 | 90145 | 89607 | 88996 | 88314 |
| 22 | 90246 | 89890 | 89425 | 88887 | 88277 | 87596 |
| 23 | 89528 | 89172 | 88707 | 88170 | 87561 | 86878 |
| 24 | 88808 | 88452 | 87989 | 87452 | 86842 | 86160 |
| 25 | 88089 | 87734 | 87271 | 86734 | 86125 | 85441 |
| 26 | 87370 | 87014 | 86551 | 86014 | 85404 | 84721 |
| 27 | 86650 | 86296 | 85832 | 85294 | 84684 | 84000 |
| 28 | 85933 | 85578 | 85114 | 84577 | 83965 | 83277 |
| 29 | 85212 | 84857 | 84392 | 83853 | 83240 | 82551 |
| 30 | 84491 | 84136 | 83670 | 83130 | 82514 | 81822 |
| 31 | 83768 | 83412 | 82947 | 82404 | 81786 | 81090 |
| 32 | 83041 | 82684 | 82215 | 81671 | 81051 | 80353 |
| 33 | 82317 | 81958 | 81487 | 80941 | 80316 | 79611 |
| 34 | 81585 | 81225 | 80753 | 80203 | 79574 | 78862 |
| 35 | 80850 | 80489 | 80013 | 79458 | 78822 | 78106 |
| 36 | 80111 | 79746 | 79268 | 78708 | 78067 | 77341 |
| 37 | 79364 | 78997 | 78515 | 77951 | 77302 | 76567 |
| 38 | 78612 | 78242 | 77755 | 77184 | 76528 | 75782 |
| 39 | 77852 | 77478 | 76984 | 76409 | 75741 | 74985 |
| 40 | 77081 | 76704 | 76206 | 75621 | 74945 | 74173 |
| 41 | 76301 | 75919 | 75414 | 74819 | 74131 | 73345 |
| 42 | 75509 | 75122 | 74609 | 74003 | 73301 | 72497 |
| 43 | 74707 | 74314 | 73799 | 73173 | 72454 | 71627 |
| 44 | 73884 | 73484 | 72951 | 72319 | 71581 | 70731 |
| 45 | 73045 | 72637 | 72092 | 71443 | 70684 | 69804 |
| 46 | 72186 | 71768 | 71208 | 70541 | 69754 | 68842 |
| 47 | 71302 | 70875 | 70298 | 69607 | 68791 | 67841 |
| 48 | 70390 | 69950 | 69354 | 68637 | 67789 | 66797 |
| 49 | 69445 | 68991 | 68372 | 67627 | 66742 | 65706 |
| 50 | 68462 | 67991 | 67349 | 66572 | 65648 | 64563 |
| 51 | 67440 | 66950 | 66281 | 65470 | 64502 | 63364 |
| 52 | 66374 | 65864 | 65164 | 64315 | 63299 | 62104 |
| 53 | 65257 | 64725 | 63993 | 63102 | 62035 | 60779 |
| 54 | 64088 | 63532 | 62765 | 61830 | 60709 | 59385 |
| 55 | 62861 | 62277 | 61472 | 60490 | 59310 | 57917 |
| 56 | 61572 | 60959 | 60113 | 59080 | 57839 | 56371 |
| 57 | 60213 | 59570 | 58683 | 57594 | 56287 | 54743 |
| 58 | 58783 | 58109 | 57174 | 56030 | 54655 | 53030 |
| 59 | 57277 | 56569 | 55588 | 54384 | 52937 | 51230 |
| 60 | 55692 | 54918 | 53916 | 52651 | 51133 | 49341 |
| 61 | 54022 | 53241 | 52159 | 50831 | 49238 | 47361 |
| 62 | 52266 | 51448 | 50313 | 48922 | 47253 | 45291 |
| 63 | 50420 | 49594 | 48376 | 46920 | 45177 | 43133 |
| 64 | 48484 | 47590 | 46349 | 44830 | 43015 | 40890 |
| 65 | 46458 | 45526 | 44232 | 42652 | 40767 | 38569 |
| 66 | 44341 | 43373 | 42030 | 40391 | 38441 | 36178 |
| 67 | 42137 | 41133 | 39744 | 38052 | 36047 | 33730 |
| 68 | 39843 | 38807 | 37376 | 35639 | 33566 | 31243 |
| 69 | 37494 | 36430 | 34962 | 33188 | 31108 | 28738 |
| 70 | 35072 | 33984 | 32490 | 30673 | 28602 | 26237 |

SELECT AND ULTIMATE.

| [x] | d[x] | d[x]+1 | d[x]+2 | d[x]+3 | d[x]+4 | d _x +6 |
|-----|------|--------|--------|--------|--------|-------------------|
| 20 | 359 | 465 | 538 | 612 | 684 | 718 |
| 21 | 357 | 466 | 538 | 611 | 682 | 718 |
| 22 | 356 | 465 | 538 | 610 | 681 | 718 |
| 23 | 356 | 465 | 537 | 609 | 683 | 718 |
| 24 | 356 | 463 | 537 | 610 | 682 | 719 |
| 25 | 355 | 463 | 537 | 609 | 684 | 720 |
| 26 | 356 | 463 | 537 | 610 | 683 | 721 |
| 27 | 354 | 464 | 538 | 610 | 684 | 723 |
| 28 | 355 | 464 | 537 | 612 | 688 | 726 |
| 29 | 355 | 465 | 539 | 613 | 689 | 729 |
| 30 | 355 | 466 | 540 | 616 | 692 | 732 |
| 31 | 356 | 465 | 543 | 618 | 696 | 737 |
| 32 | 357 | 469 | 544 | 620 | 698 | 742 |
| 33 | 359 | 471 | 546 | 625 | 705 | 749 |
| 34 | 350 | 472 | 550 | 629 | 712 | 756 |
| 35 | 362 | 475 | 555 | 636 | 716 | 765 |
| 36 | 365 | 478 | 560 | 641 | 726 | 774 |
| 37 | 367 | 482 | 564 | 649 | 735 | 785 |
| 38 | 370 | 487 | 571 | 656 | 746 | 797 |
| 39 | 374 | 494 | 578 | 665 | 756 | 812 |
| 40 | 377 | 498 | 585 | 676 | 772 | 828 |
| 41 | 382 | 505 | 595 | 688 | 786 | 848 |
| 42 | 387 | 513 | 606 | 702 | 804 | 870 |
| 43 | 393 | 524 | 617 | 719 | 827 | 896 |
| 44 | 400 | 533 | 632 | 738 | 850 | 927 |
| 45 | 408 | 545 | 649 | 759 | 880 | 962 |
| 46 | 418 | 560 | 667 | 787 | 912 | 1001 |
| 47 | 427 | 577 | 691 | 816 | 950 | 1044 |
| 48 | 440 | 596 | 717 | 848 | 992 | 1091 |
| 49 | 454 | 619 | 745 | 885 | 1036 | 1143 |
| 50 | 471 | 642 | 777 | 924 | 1085 | 1199 |
| 51 | 490 | 669 | 811 | 968 | 1138 | 1260 |
| 52 | 510 | 700 | 849 | 1016 | 1195 | 1325 |
| 53 | 532 | 732 | 891 | 1067 | 1256 | 1394 |
| 54 | 556 | 767 | 935 | 1121 | 1324 | 1468 |
| 55 | 584 | 805 | 982 | 1180 | 1393 | 1546 |
| 56 | 613 | 846 | 1033 | 1241 | 1468 | 1628 |
| 57 | 643 | 887 | 1089 | 1307 | 1544 | 1713 |
| 58 | 674 | 935 | 1144 | 1375 | 1625 | 1800 |
| 59 | 708 | 981 | 1204 | 1447 | 1707 | 1889 |
| 60 | 744 | 1032 | 1265 | 1518 | 1792 | 1980 |
| 61 | 781 | 1082 | 1328 | 1593 | 1877 | 2070 |
| 62 | 818 | 1135 | 1391 | 1669 | 1962 | 2158 |
| 63 | 856 | 1188 | 1456 | 1743 | 2044 | 2243 |
| 64 | 894 | 1241 | 1519 | 1815 | 2125 | 2321 |
| 65 | 932 | 1294 | 1580 | 1885 | 2198 | 2391 |
| 66 | 968 | 1343 | 1639 | 1950 | 2263 | 2448 |
| 67 | 1004 | 1389 | 1692 | 2005 | 2317 | 2487 |
| 68 | 1036 | 1431 | 1737 | 2043 | 2353 | 2505 |
| 69 | 1064 | 1468 | 1774 | 2080 | 2370 | 2501 |
| 70 | 1088 | 1494 | 1797 | 2091 | 2375 | 2476 |

AMERICAN EXPERIENCE TABLE.

SELECT AND ULTIMATE.

| [x] | p[x] | p[x]+ ₁ | p[x]+ ₂ | p[x]+ ₃ | p[x]+ ₄ | p _x + ₅ |
|-----|---------|--------------------|--------------------|--------------------|--------------------|-------------------------------|
| 20 | .996097 | .994894 | .994070 | .993236 | .992399 | .991935 |
| 21 | .996072 | .994861 | .994031 | .993191 | .992338 | .991870 |
| 22 | .996047 | .994827 | .993992 | .993145 | .992276 | .991803 |
| 23 | .996021 | .994793 | .993951 | .993089 | .992213 | .991736 |
| 24 | .995994 | .994758 | .993902 | .993033 | .992149 | .991655 |
| 25 | .995967 | .994715 | .993852 | .992976 | .992072 | .991573 |
| 26 | .995935 | .994672 | .993802 | .992907 | .991994 | .991490 |
| 27 | .995901 | .994628 | .993741 | .992837 | .991915 | .991393 |
| 28 | .995868 | .994576 | .993680 | .992766 | .991823 | .991282 |
| 29 | .995827 | .994522 | .993617 | .992684 | .991718 | .991169 |
| 30 | .995786 | .994468 | .993545 | .992599 | .991611 | .991054 |
| 31 | .995745 | .994405 | .993461 | .992494 | .991501 | .990911 |
| 32 | .995696 | .994333 | .993377 | .992396 | .991365 | .990766 |
| 33 | .995641 | .994260 | .993290 | .992274 | .991228 | .990592 |
| 34 | .995584 | .994185 | .993183 | .992151 | .991062 | .990414 |
| 35 | .995527 | .994102 | .993074 | .992003 | .990893 | .990206 |
| 36 | .995455 | .993998 | .992944 | .991852 | .990696 | .989992 |
| 37 | .995383 | .993885 | .992810 | .991675 | .990492 | .989748 |
| 38 | .995296 | .993769 | .992654 | .991493 | .990261 | .989483 |
| 39 | .995207 | .993634 | .992494 | .991286 | .990009 | .989171 |
| 40 | .995103 | .993495 | .992311 | .991061 | .989712 | .988837 |
| 41 | .994999 | .993336 | .992112 | .990795 | .989395 | .988438 |
| 42 | .994874 | .993164 | .991878 | .990511 | .989010 | .988000 |
| 43 | .994741 | .992961 | .991628 | .990172 | .988600 | .987491 |
| 44 | .994585 | .992744 | .991328 | .989800 | .988116 | .986894 |
| 45 | .994418 | .992485 | .991000 | .989367 | .987549 | .986219 |
| 46 | .994219 | .992200 | .990618 | .988850 | .986608 | .985459 |
| 47 | .994000 | .991869 | .990170 | .988286 | .986186 | .984611 |
| 48 | .993745 | .991481 | .989664 | .987640 | .985380 | .983667 |
| 49 | .993447 | .991042 | .989004 | .986919 | .984484 | .982604 |
| 50 | .993109 | .990548 | .988458 | .986117 | .983474 | .981429 |
| 51 | .992729 | .989997 | .987750 | .985213 | .982358 | .980115 |
| 52 | .992305 | .989384 | .986953 | .984215 | .981109 | .978665 |
| 53 | .991833 | .988693 | .986072 | .983098 | .977932 | .977064 |
| 54 | .991302 | .987929 | .985086 | .981865 | .972811 | .975280 |
| 55 | .990714 | .987075 | .983409 | .980504 | .976516 | .973307 |
| 56 | .990057 | .986132 | .982748 | .978883 | .974642 | .971120 |
| 57 | .989332 | .985092 | .981460 | .977311 | .972564 | .968708 |
| 58 | .988532 | .983932 | .979980 | .975452 | .970273 | .966057 |
| 59 | .987640 | .982650 | .978340 | .973402 | .967754 | .963127 |
| 60 | .986653 | .981228 | .979531 | .971148 | .964071 | .959871 |
| 61 | .985560 | .979660 | .974543 | .968958 | .961877 | .956293 |
| 62 | .984354 | .977937 | .972345 | .965860 | .958478 | .952353 |
| 63 | .983028 | .976033 | .969903 | .962849 | .954735 | .947998 |
| 64 | .981563 | .973910 | .967220 | .955000 | .950598 | .943238 |
| 65 | .979935 | .971529 | .964265 | .952798 | .946076 | .938007 |
| 66 | .978146 | .969029 | .960908 | .951752 | .941107 | .933335 |
| 67 | .976176 | .966190 | .957428 | .947306 | .935718 | .926207 |
| 68 | .973999 | .963105 | .953505 | .942565 | .929954 | .919822 |
| 69 | .971619 | .959705 | .949251 | .937327 | .923531 | .912972 |
| 70 | .969003 | .956018 | .944700 | .931849 | .917323 | .905629 |

SELECT AND ULTIMATE.

| [x] | .50 q ₍₁₎ | .65 q ₍₁₎₊₁ | .75 q ₍₁₎₊₂ | .85 q ₍₁₎₊₃ | .95 q ₍₁₎₊₄ | 1.00 q ₊₅ |
|-----|-------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-------------------------|
| 20 | .003903 | .005106 | .005930 | .006764 | .007610 | .008c65 |
| 21 | .003928 | .005139 | .005969 | .006809 | .007662 | .008130 |
| 22 | .003953 | .005173 | .006008 | .006855 | .007724 | .008197 |
| 23 | .003979 | .005207 | .006049 | .006911 | .007787 | .008.64 |
| 24 | .004006 | .005242 | .006098 | .006967 | .007851 | .008345 |
| 25 | .004033 | .005285 | .006148 | .007024 | .007928 | .008427 |
| 26 | .004065 | .005328 | .006198 | .007093 | .008066 | .008510 |
| 27 | .004099 | .005372 | .006259 | .007163 | .008085 | .008607 |
| 28 | .004132 | .005424 | .006320 | .007234 | .008177 | .008718 |
| 29 | .004173 | .005478 | .006383 | .007316 | .008282 | .008831 |
| 30 | .004214 | .005532 | .006455 | .007410 | .008389 | .008946 |
| 31 | .004255 | .005595 | .006539 | .007506 | .008499 | .009089 |
| 32 | .004304 | .005667 | .006623 | .007604 | .008635 | .009234 |
| 33 | .004359 | .005740 | .006710 | .007726 | .008772 | .009408 |
| 34 | .004416 | .005815 | .006817 | .007849 | .008938 | .009586 |
| 35 | .004473 | .005908 | .006926 | .007997 | .009107 | .009794 |
| 36 | .004545 | .006002 | .007056 | .008148 | .009304 | .010008 |
| 37 | .004617 | .006115 | .007100 | .008325 | .009508 | .010252 |
| 38 | .004704 | .006231 | .007346 | .008507 | .009739 | .010517 |
| 39 | .004793 | .006366 | .007506 | .008714 | .009991 | .010829 |
| 40 | .004897 | .006505 | .007689 | .008939 | .010288 | .011163 |
| 41 | .005004 | .006664 | .007888 | .009205 | .010605 | .011562 |
| 42 | .005126 | .006836 | .008122 | .009489 | .010984 | .012000 |
| 43 | .005259 | .007039 | .008372 | .009828 | .011400 | .012509 |
| 44 | .005415 | .007256 | .008672 | .010200 | .011834 | .013106 |
| 45 | .005582 | .007515 | .009000 | .010633 | .012451 | .013781 |
| 46 | .005781 | .007800 | .009382 | .011140 | .013092 | .014541 |
| 47 | .006000 | .008131 | .009830 | .011714 | .013814 | .015389 |
| 48 | .006255 | .008519 | .010336 | .012360 | .014620 | .016333 |
| 49 | .006553 | .008958 | .010966 | .013081 | .015516 | .017396 |
| 50 | .006891 | .009452 | .011542 | .013883 | .016526 | .018571 |
| 51 | .007271 | .010003 | .012250 | .014787 | .017642 | .019885 |
| 52 | .007695 | .010616 | .013047 | .015785 | .018891 | .021335 |
| 53 | .008167 | .011307 | .013928 | .016902 | .020268 | .022936 |
| 54 | .008698 | .012071 | .014914 | .018135 | .021789 | .024720 |
| 55 | .009286 | .012925 | .016001 | .019496 | .023484 | .026693 |
| 56 | .009943 | .013868 | .017202 | .021012 | .025358 | .028880 |
| 57 | .010668 | .014908 | .018540 | .022689 | .027136 | .031292 |
| 58 | .011468 | .016068 | .020020 | .024548 | .029277 | .033643 |
| 59 | .012330 | .017350 | .021660 | .026598 | .032240 | .036873 |
| 60 | .013347 | .018772 | .023469 | .028852 | .035029 | .040129 |
| 61 | .014440 | .020340 | .025457 | .031342 | .038123 | .043707 |
| 62 | .015646 | .022063 | .027655 | .034110 | .041522 | .047747 |
| 63 | .016972 | .023967 | .030097 | .037151 | .045265 | .052002 |
| 64 | .018437 | .026084 | .032780 | .040500 | .049402 | .057662 |
| 65 | .020065 | .028410 | .035735 | .044202 | .053924 | .061993 |
| 66 | .021854 | .030971 | .039002 | .048248 | .058843 | .067695 |
| 67 | .023824 | .033801 | .042572 | .052694 | .064282 | .073733 |
| 68 | .026001 | .036895 | .046495 | .057515 | .070046 | .080178 |
| 69 | .028381 | .040295 | .050749 | .062673 | .076169 | .087c28 |
| 70 | .030997 | .043982 | .055300 | .068151 | .082677 | .094371 |

AMERICAN EXPERIENCE TABLE.

SELECT AND ULTIMATE.
THREE AND ONE-HALF PER CENT.

| Age. [x] | $D[x]$ | $D[x]+1$ | $D[x]+2$ | $D[x]+3$ | $D[x]+4$ | D_x+5 | Age $x+5$ |
|-----------------|--------|----------|----------|----------|----------|---------|--------------|
| 20 | 46080 | 44348 | 42629 | 40944 | 39292 | 37674 | 25 |
| 21 | 44171 | 42510 | 40861 | 39244 | 37658 | 36106 | 26 |
| 22 | 42339 | 40746 | 39164 | 37612 | 36091 | 34601 | 27 |
| 23 | 40582 | 39054 | 37536 | 36047 | 34588 | 33157 | 28 |
| 24 | 38894 | 37428 | 35973 | 34545 | 33144 | 31772 | 29 |
| 25 | 37274 | 35869 | 34473 | 33102 | 31759 | 30441 | 30 |
| 26 | 35720 | 34372 | 33032 | 31718 | 30428 | 29164 | 31 |
| 27 | 34228 | 32935 | 31650 | 30389 | 29151 | 27938 | 32 |
| 28 | 32797 | 31557 | 30324 | 29114 | 27926 | 26761 | 33 |
| 29 | 31422 | 30233 | 29050 | 27889 | 26749 | 25630 | 34 |
| 30 | 30102 | 28962 | 27828 | 26713 | 25619 | 24545 | 35 |
| 31 | 28836 | 27742 | 26654 | 25585 | 24534 | 23503 | 36 |
| 32 | 27618 | 26570 | 25526 | 24500 | 23491 | 22501 | 37 |
| 33 | 26452 | 25446 | 24444 | 23460 | 22491 | 21540 | 38 |
| 34 | 25330 | 24366 | 23405 | 22460 | 21530 | 20616 | 39 |
| 35 | 24253 | 23328 | 22406 | 21499 | 20605 | 19727 | 40 |
| 36 | 23219 | 22332 | 21447 | 20575 | 19718 | 18874 | 41 |
| 37 | 22224 | 21374 | 20525 | 19688 | 18864 | 18053 | 42 |
| 38 | 21270 | 20454 | 19639 | 18836 | 18044 | 17264 | 43 |
| 39 | 20352 | 19569 | 18787 | 18015 | 17254 | 16504 | 44 |
| 40 | 19469 | 18718 | 17968 | 17227 | 16495 | 15774 | 45 |
| 41 | 18620 | 17900 | 17180 | 16468 | 15704 | 15070 | 46 |
| 42 | 17804 | 17114 | 16421 | 15737 | 15061 | 14392 | 47 |
| 43 | 17019 | 16356 | 15692 | 15035 | 14383 | 13739 | 48 |
| 44 | 16262 | 15627 | 14989 | 14357 | 13730 | 13108 | 49 |
| 45 | 15534 | 14925 | 14312 | 13703 | 13099 | 12499 | 50 |
| 46 | 14832 | 14247 | 13658 | 13073 | 12490 | 11909 | 51 |
| 47 | 14155 | 13594 | 13027 | 12463 | 11901 | 11339 | 52 |
| 48 | 13501 | 12963 | 12418 | 11874 | 11331 | 10787 | 53 |
| 49 | 12869 | 12353 | 11828 | 11304 | 10779 | 10253 | 54 |
| 50 | 12258 | 11762 | 11257 | 10751 | 10243 | 9733.3 | 55 |
| 51 | 11667 | 11191 | 10704 | 10216 | 9724.1 | 9229.5 | 56 |
| 52 | 11094 | 10637 | 10168 | 9695.9 | 9220.2 | 8740.2 | 57 |
| 53 | 10539 | 10099 | 9647.4 | 9191.4 | 8730.5 | 8264.4 | 58 |
| 54 | 10000 | 9577.9 | 9142.4 | 8701.6 | 8254.9 | 7801.9 | 59 |
| 55 | 9476.8 | 9071.3 | 8651.3 | 8225.1 | 7792.0 | 7351.7 | 60 |
| 56 | 8968.5 | 8579.1 | 8173.9 | 7761.8 | 7341.8 | 6913.5 | 61 |
| 57 | 8474.0 | 8100.1 | 7709.6 | 7310.7 | 6903.2 | 6486.8 | 62 |
| 58 | 7993.0 | 7634.1 | 7257.4 | 6871.6 | 6470.3 | 6071.3 | 63 |
| 59 | 7524.9 | 7180.6 | 6817.4 | 6444.2 | 6060.7 | 5666.8 | 64 |
| 60 | 7069.2 | 6738.9 | 6388.8 | 6028.0 | 5656.1 | 5273.4 | 65 |
| 61 | 6625.4 | 6308.8 | 5971.6 | 5622.8 | 5262.4 | 4890.6 | 66 |
| 62 | 6193.3 | 5890.2 | 5565.4 | 5228.5 | 4879.4 | 4518.7 | 67 |
| 63 | 5772.4 | 5482.6 | 5170.2 | 4845.1 | 4507.3 | 4157.9 | 68 |
| 64 | 5363.2 | 5086.3 | 4786.1 | 4472.7 | 4146.5 | 3808.4 | 69 |
| 65 | 4965.2 | 4701.1 | 4413.1 | 4111.5 | 3796.9 | 3470.7 | 70 |
| 66 | 4578.8 | 4327.3 | 4051.5 | 3761.8 | 3459.2 | 3145.4 | 71 |
| 67 | 4204.0 | 3965.1 | 3701.6 | 3424.2 | 3134.1 | 2833.4 | 72 |
| 68 | 3840.7 | 3614.3 | 3363.3 | 3098.6 | 2822.1 | 2535.7 | 73 |
| 69 | 3492.0 | 3278.2 | 3039.8 | 2787.9 | 2524.8 | 2253.6 | 74 |
| 70 | 3156.0 | 2954.7 | 2729.2 | 2491.1 | 2242.8 | 1987.8 | 75 |

AMERICAN EXPERIENCE TABLE.

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SELECT AND ULTIMATE.
THREE AND ONE-HALF PER CENT.

| Age [x] | $N_{[x]}$ | $N_{[x]+1}$ | $N_{[x]+2}$ | $N_{[x]+3}$ | $N_{[x]+4}$ | N_{x+5} | Age x + 6 |
|------------|-----------|-------------|-------------|-------------|-------------|-----------|--------------|
| 20 | 983407 | 937327 | 892979 | 850350 | 809406 | 770114 | 25 |
| 21 | 930884 | 892713 | 850203 | 809342 | 770098 | 732440 | 26 |
| 22 | 892286 | 849947 | 809201 | 770037 | 732425 | 696334 | 27 |
| 23 | 849539 | 808957 | 769903 | 732367 | 696320 | 661732 | 28 |
| 24 | 808559 | 769665 | 732237 | 696264 | 661719 | 628575 | 29 |
| 25 | 769281 | 732007 | 696138 | 661665 | 628563 | 596804 | 30 |
| 26 | 731633 | 695913 | 661541 | 628509 | 596791 | 566363 | 31 |
| 27 | 695552 | 661324 | 628389 | 596739 | 566350 | 537199 | 32 |
| 28 | 660980 | 628183 | 596626 | 566302 | 537188 | 509262 | 33 |
| 29 | 627844 | 596422 | 566189 | 537139 | 509250 | 482501 | 34 |
| 30 | 596095 | 565993 | 537031 | 509203 | 482490 | 456871 | 35 |
| 31 | 565678 | 536842 | 509100 | 482446 | 456861 | 432327 | 36 |
| 32 | 535529 | 508911 | 482341 | 456815 | 432315 | 408824 | 37 |
| 33 | 506616 | 482164 | 456718 | 432274 | 408814 | 386323 | 38 |
| 34 | 481874 | 456544 | 432178 | 408773 | 386313 | 364783 | 39 |
| 35 | 456258 | 432005 | 408677 | 386271 | 364772 | 344167 | 40 |
| 36 | 431731 | 408512 | 386180 | 364733 | 344158 | 324440 | 41 |
| 37 | 408241 | 386017 | 364643 | 344118 | 324430 | 305566 | 42 |
| 38 | 385756 | 364486 | 344032 | 324393 | 305557 | 287513 | 43 |
| 39 | 364227 | 343875 | 324306 | 305519 | 287504 | 270250 | 44 |
| 40 | 343622 | 324150 | 305435 | 287467 | 270240 | 253745 | 45 |
| 41 | 323904 | 305284 | 287384 | 270204 | 253736 | 237972 | 46 |
| 42 | 305039 | 287235 | 270121 | 253700 | 237963 | 222902 | 47 |
| 43 | 286995 | 269976 | 253620 | 237928 | 222893 | 208510 | 48 |
| 44 | 269736 | 253474 | 237847 | 222858 | 208501 | 194771 | 49 |
| 45 | 253236 | 237702 | 222777 | 208465 | 194762 | 181663 | 50 |
| 46 | 237465 | 222633 | 208386 | 194728 | 181655 | 169165 | 51 |
| 47 | 222395 | 208240 | 194646 | 181619 | 169156 | 157255 | 52 |
| 48 | 208003 | 194502 | 181539 | 169121 | 157247 | 145916 | 53 |
| 49 | 194261 | 181392 | 169039 | 157211 | 145907 | 135128 | 54 |
| 50 | 181147 | 168889 | 157127 | 145870 | 135119 | 124876 | 55 |
| 51 | 168644 | 156977 | 145786 | 135082 | 124866 | 115142 | 56 |
| 52 | 156728 | 145634 | 134997 | 124829 | 115133 | 105913 | 57 |
| 53 | 145380 | 134841 | 124742 | 115095 | 105904 | 97173 | 58 |
| 54 | 134585 | 124585 | 115007 | 105865 | 97163 | 88908 | 59 |
| 55 | 124322 | 114845 | 105774 | 97123 | 88898 | 81106 | 60 |
| 56 | 114581 | 105612 | 97033 | 88859 | 81097 | 73755 | 61 |
| 57 | 105339 | 96865 | 88765 | 81055 | 73744 | 66841 | 62 |
| 58 | 96587 | 88594 | 80960 | 73703 | 66831 | 60355 | 63 |
| 59 | 88311 | 80786 | 73605 | 66788 | 60344 | 54284 | 64 |
| 60 | 80497 | 73428 | 66689 | 60300 | 54272 | 48616 | 65 |
| 61 | 73134 | 66509 | 60200 | 54228 | 48605 | 43343 | 66 |
| 62 | 66209 | 60016 | 54126 | 48561 | 43332 | 38453 | 67 |
| 63 | 59711 | 53939 | 48456 | 43286 | 38441 | 33934 | 68 |
| 64 | 53631 | 48268 | 43182 | 38396 | 33923 | 29770 | 69 |
| 65 | 47956 | 42991 | 38290 | 33877 | 29765 | 25968 | 70 |
| 66 | 42676 | 38097 | 33770 | 29718 | 25956 | 22497 | 71 |
| 67 | 37781 | 33577 | 29612 | 25910 | 22486 | 19352 | 72 |
| 68 | 33257 | 29416 | 25802 | 22439 | 19340 | 16518 | 73 |
| 69 | 29105 | 25013 | 22335 | 19295 | 16507 | 13982 | 74 |
| 70 | 25303 | 22147 | 19192 | 16463 | 13972 | 11729 | 75 |

AMERICAN EXPERIENCE TABLE.

SELECT AND ULTIMATE.
THREE AND ONE-HALF PER CENT.

| Age [x] | S[x] | S[x]+1 | S[x]+2 | S[x]+3 | S[x]+4 | S _x +5 | Age x+5 |
|------------|----------|----------|----------|----------|----------|-------------------|------------|
| 20 | 17360021 | 16376614 | 15439287 | 14546308 | 13695958 | 12886552 | 26 |
| 21 | 16375678 | 15438794 | 14546081 | 13695878 | 12886536 | 12116438 | 26 |
| 22 | 15537894 | 14645608 | 13795661 | 12986460 | 12216423 | 11483998 | 27 |
| 23 | 14544750 | 13695211 | 12886254 | 12116351 | 11383984 | 10687664 | 28 |
| 24 | 13694376 | 12883817 | 12116152 | 11383915 | 10687651 | 10025932 | 29 |
| 25 | 12885011 | 12115730 | 11383723 | 10687585 | 10025920 | 9397357 | 30 |
| 26 | 12114941 | 11383308 | 10687395 | 10025854 | 9377345 | 8800554 | 31 |
| 27 | 11382545 | 10686993 | 10025669 | 9397280 | 8800541 | 8234191 | 32 |
| 28 | 10682670 | 10025290 | 9397107 | 8800481 | 8234179 | 7696991 | 33 |
| 29 | 10024572 | 9396728 | 8800306 | 8234117 | 7696978 | 7187728 | 34 |
| 30 | 9396040 | 8799945 | 8233952 | 7696921 | 7187718 | 6705228 | 35 |
| 31 | 8799284 | 8233606 | 7696764 | 7187664 | 6705218 | 6248357 | 36 |
| 32 | 8232941 | 7696412 | 7187501 | 6705160 | 6248345 | 5816030 | 37 |
| 33 | 7695792 | 7187176 | 6705012 | 6248294 | 5816020 | 5427206 | 38 |
| 34 | 7186505 | 6704691 | 6248147 | 5815969 | 5427196 | 5020883 | 39 |
| 35 | 6704084 | 6247826 | 5815821 | 5407144 | 5020873 | 4656101 | 40 |
| 36 | 6347248 | 5915517 | 5507005 | 5120825 | 4756092 | 4311934 | 41 |
| 37 | 5814943 | 5405702 | 5020685 | 4656042 | 4311924 | 3987494 | 42 |
| 38 | 5406151 | 5020395 | 4655909 | 4311877 | 3987484 | 3681927 | 43 |
| 39 | 5010845 | 4655618 | 4311743 | 3987437 | 3681918 | 3394414 | 44 |
| 40 | 4655081 | 4311459 | 3987306 | 3681871 | 3394404 | 3124164 | 45 |
| 41 | 4310931 | 3987027 | 3681743 | 3394359 | 3124455 | 2870419 | 46 |
| 42 | 3986957 | 3681466 | 3394231 | 3124110 | 2870410 | 2632447 | 47 |
| 43 | 3686957 | 3393962 | 3123986 | 2870366 | 2632438 | 2409545 | 48 |
| 44 | 3393451 | 3123715 | 2870241 | 2632394 | 2409536 | 2201935 | 49 |
| 45 | 3123206 | 2869970 | 2632268 | 2409491 | 2201926 | 2006264 | 50 |
| 46 | 2869467 | 2632002 | 2409369 | 2200983 | 2006255 | 1824600 | 51 |
| 47 | 2631492 | 2409097 | 2200857 | 2006211 | 1824592 | 1655436 | 52 |
| 48 | 2408593 | 2200590 | 2006088 | 1824549 | 1655428 | 1498181 | 53 |
| 49 | 2200075 | 2000581 | 1824422 | 1655383 | 1498172 | 1352265 | 54 |
| 50 | 2005289 | 1824142 | 1655253 | 1498126 | 1352256 | 1217137 | 55 |
| 51 | 1823616 | 1654972 | 1497995 | 1352209 | 1217127 | 1092261 | 56 |
| 52 | 1654439 | 1497711 | 1352077 | 1217080 | 1092251 | 977118 | 57 |
| 53 | 1497168 | 1351788 | 1216947 | 1092205 | 977110 | 871206 | 58 |
| 54 | 1351238 | 1216653 | 1092068 | 977061 | 871196 | 774033 | 59 |
| 55 | 1216086 | 1091764 | 976919 | 871145 | 774022 | 685124 | 60 |
| 56 | 1091200 | 976619 | 871007 | 773974 | 685115 | 604018 | 61 |
| 57 | 976032 | 870693 | 773828 | 685063 | 604008 | 530264 | 62 |
| 58 | 870097 | 773510 | 684916 | 603956 | 530253 | 463422 | 63 |
| 59 | 772902 | 684591 | 603805 | 530200 | 463412 | 403068 | 64 |
| 60 | 683971 | 603474 | 530046 | 463357 | 403057 | 348785 | 65 |
| 61 | 602844 | 529710 | 463201 | 403001 | 348773 | 300168 | 66 |
| 62 | 529069 | 462860 | 402844 | 348718 | 300157 | 256825 | 67 |
| 63 | 462206 | 402495 | 348556 | 300100 | 256814 | 218373 | 68 |
| 64 | 401839 | 348208 | 299940 | 256758 | 218362 | 184139 | 69 |
| 65 | 347542 | 299586 | 256595 | 218305 | 184228 | 154663 | 70 |
| 66 | 298912 | 256236 | 218139 | 184369 | 154651 | 128695 | 71 |
| 67 | 255564 | 217783 | 184206 | 154594 | 128684 | 106198 | 72 |
| 68 | 217100 | 183843 | 154427 | 128625 | 106186 | 86846 | 73 |
| 69 | 183183 | 154078 | 128465 | 106130 | 86835 | 70328 | 74 |
| 70 | 153423 | 128120 | 105973 | 86781 | 70318 | 56346 | 75 |

AMERICAN EXPERIENCE TABLE.

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SELECT AND ULTIMATE.
THREE AND A HALF PER CENT.

| Age [x] | M[x] | M[x]+1 | M[x]+2 | M[x]+3 | M[x]+4 | M _{x+5} |
|------------|----------|----------|----------|----------|----------|------------------|
| 20 | 12824.94 | 12650.62 | 12432.47 | 12189.60 | 11920.57 | 11631.14 |
| 21 | 12489.29 | 12321.80 | 12110.57 | 11874.95 | 11616.41 | 11337.59 |
| 22 | 12165.03 | 12003.66 | 11800.01 | 11572.36 | 11322.97 | 11053.97 |
| 23 | 11853.38 | 11697.47 | 11500.71 | 11281.17 | 11040.61 | 10779.94 |
| 24 | 11551.52 | 11400.88 | 11211.59 | 10999.47 | 10766.66 | 10515.18 |
| 25 | 11260.27 | 11115.13 | 10932.24 | 10727.29 | 10502.72 | 10259.02 |
| 26 | 10978.66 | 10838.34 | 10661.63 | 10461.61 | 10246.28 | 10011.17 |
| 27 | 10706.72 | 10571.62 | 10400.52 | 10208.84 | 9998.86 | 9771.37 |
| 28 | 10444.74 | 10313.83 | 10148.52 | 9963.67 | 9760.13 | 9539.04 |
| 29 | 10190.36 | 10063.88 | 9903.81 | 9724.54 | 9527.56 | 9313.64 |
| 30 | 9944.51 | 9822.31 | 9667.32 | 9493.80 | 9302.55 | 9094.96 |
| 31 | 9706.33 | 9587.93 | 9438.51 | 9269.92 | 9084.53 | 8882.80 |
| 32 | 9475.37 | 9360.65 | 9215.04 | 9051.85 | 8872.15 | 8676.41 |
| 33 | 9252.43 | 9140.97 | 8999.68 | 8841.43 | 8666.41 | 8475.66 |
| 34 | 9034.98 | 8926.99 | 8790.19 | 8636.17 | 8465.99 | 8279.86 |
| 35 | 8824.10 | 8719.18 | 8586.17 | 8430.01 | 8269.75 | 8088.91 |
| 36 | 8619.23 | 8517.02 | 8387.69 | 8241.30 | 8079.40 | 7902.23 |
| 37 | 8419.17 | 8319.87 | 8193.87 | 8051.42 | 7893.04 | 7719.74 |
| 38 | 8224.59 | 8127.87 | 8004.87 | 7865.53 | 7710.86 | 7540.91 |
| 39 | 8034.66 | 7940.20 | 7819.65 | 7683.37 | 7531.88 | 7365.49 |
| 40 | 7848.46 | 7756.46 | 7639.04 | 7505.77 | 7356.98 | 7192.81 |
| 41 | 7666.56 | 7576.49 | 7461.45 | 7330.49 | 7184.18 | 7022.68 |
| 42 | 7488.13 | 7399.97 | 7287.06 | 7158.19 | 7013.95 | 6854.34 |
| 43 | 7313.74 | 7227.24 | 7115.59 | 6988.82 | 6846.09 | 6687.47 |
| 44 | 7140.52 | 7055.46 | 6945.95 | 6820.49 | 6678.94 | 6521.42 |
| 45 | 6970.17 | 6886.34 | 6778.15 | 6653.67 | 6513.01 | 6355.44 |
| 46 | 6801.69 | 6718.71 | 6611.30 | 6487.69 | 6346.78 | 6189.01 |
| 47 | 6634.22 | 6552.32 | 6445.39 | 6321.66 | 6180.49 | 6021.70 |
| 48 | 6467.33 | 6385.79 | 6279.07 | 6155.03 | 6013.29 | 5853.09 |
| 49 | 6300.34 | 6219.05 | 6111.96 | 5987.43 | 5844.51 | 5682.86 |
| 50 | 6132.56 | 6051.08 | 5943.77 | 5818.29 | 5674.11 | 5510.54 |
| 51 | 5964.08 | 5882.18 | 5774.14 | 5647.60 | 5501.66 | 5335.90 |
| 52 | 5794.31 | 5711.95 | 5602.73 | 5474.74 | 5326.75 | 5158.57 |
| 53 | 5622.50 | 5539.49 | 5429.14 | 5299.36 | 5149.20 | 4978.41 |
| 54 | 5448.77 | 5364.95 | 5253.23 | 5121.04 | 4969.21 | 4795.27 |
| 55 | 5272.66 | 5187.59 | 5074.30 | 4940.77 | 4785.75 | 4608.93 |
| 56 | 5093.91 | 5007.64 | 4892.60 | 4756.89 | 4599.36 | 4419.32 |
| 57 | 4911.86 | 4824.43 | 4707.90 | 4569.67 | 4409.37 | 4226.41 |
| 58 | 4726.80 | 4638.25 | 4519.57 | 4379.27 | 4216.34 | 4030.30 |
| 59 | 4538.52 | 4448.65 | 4328.34 | 4185.67 | 4020.01 | 3831.19 |
| 60 | 4347.11 | 4255.86 | 4133.57 | 3988.74 | 3820.82 | 3629.30 |
| 61 | 4152.24 | 4059.70 | 3935.82 | 3788.92 | 3618.66 | 3424.84 |
| 62 | 3954.29 | 3860.64 | 3735.09 | 3586.42 | 3414.07 | 3218.32 |
| 63 | 3753.24 | 3658.55 | 3531.58 | 3381.23 | 3207.33 | 3010.30 |
| 64 | 3549.53 | 3453.98 | 3325.83 | 3174.28 | 2999.32 | 2801.40 |
| 65 | 3343.54 | 3247.30 | 3118.20 | 2965.89 | 2790.33 | 2592.54 |
| 66 | 3135.57 | 3038.99 | 2909.53 | 2756.88 | 2581.41 | 2381.66 |
| 67 | 2926.38 | 2829.60 | 2700.23 | 2547.97 | 2373.65 | 2179.02 |
| 68 | 2716.71 | 2620.22 | 2491.45 | 2340.34 | 2168.14 | 1977.17 |
| 69 | 2507.80 | 2412.05 | 2284.41 | 2135.39 | 1966.58 | 1780.73 |
| 70 | 2300.34 | 2205.74 | 2080.24 | 1934.39 | 1779.42 | 1591.24 |

AMERICAN EXPERIENCE TABLE.

SELECT AND ULTIMATE.
THREE AND ONE-HALF PER CENT.

| Age [_x] | R [_x] | R [_x + 1] | R [_x + 2] | R [_x + 3] | R [_x + 4] | R _{x+5} | Age x + 5 |
|-------------------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|--------------|
| 20 | 306353.64 | 383528.70 | 370878.08 | 358445.61 | 346257.01 | 334336.44 | 25 |
| 21 | 383118.33 | 370629.04 | 358307.24 | 346196.67 | 334321.72 | 322705.31 | 26 |
| 22 | 370231.75 | 358066.72 | 346063.06 | 334203.05 | 322690.69 | 311367.72 | 27 |
| 23 | 357687.09 | 345833.71 | 334136.24 | 322635.53 | 311354.36 | 300313.75 | 28 |
| 24 | 345463.92 | 333912.40 | 322511.52 | 311299.93 | 300300.46 | 289533.80 | 29 |
| 25 | 333556.27 | 322296.00 | 311180.87 | 300248.63 | 289521.34 | 279018.62 | 30 |
| 26 | 321948.42 | 310969.46 | 300131.12 | 289469.49 | 279005.88 | 268759.60 | 31 |
| 27 | 310534.99 | 299928.27 | 289356.65 | 278956.13 | 268747.29 | 258748.33 | 32 |
| 28 | 299607.95 | 289163.21 | 278849.38 | 268700.86 | 258737.19 | 248777.06 | 33 |
| 29 | 288818.16 | 278657.80 | 268593.92 | 258690.11 | 248695.57 | 239438.01 | 34 |
| 30 | 278354.86 | 268410.35 | 258588.04 | 248620.72 | 239426.92 | 230124.37 | 35 |
| 31 | 268110.64 | 258410.31 | 248822.38 | 239383.87 | 230113.95 | 221029.42 | 36 |
| 32 | 258121.68 | 248046.31 | 239285.66 | 230070.62 | 221018.77 | 212146.62 | 37 |
| 33 | 248371.13 | 239118.70 | 229977.73 | 220978.05 | 212136.62 | 203470.21 | 38 |
| 34 | 238848.87 | 229813.89 | 220886.90 | 212096.71 | 203460.54 | 194994.55 | 39 |
| 35 | 229549.90 | 220725.80 | 212006.62 | 203420.45 | 194984.44 | 186714.69 | 40 |
| 36 | 220470.41 | 211851.18 | 203334.16 | 194916.47 | 186705.17 | 178625.77 | 41 |
| 37 | 211600.91 | 203181.74 | 194861.87 | 186668.00 | 178616.58 | 170723.54 | 42 |
| 38 | 202937.53 | 194712.94 | 186585.07 | 178580.20 | 170714.67 | 163003.81 | 43 |
| 39 | 194472.66 | 186438.00 | 178497.80 | 170678.15 | 162994.78 | 155462.90 | 44 |
| 40 | 186204.12 | 178355.66 | 170599.20 | 162660.16 | 155454.39 | 148007.41 | 45 |
| 41 | 178124.77 | 170457.21 | 162880.72 | 155419.27 | 148088.78 | 140904.60 | 46 |
| 42 | 170229.22 | 162741.09 | 155341.12 | 148054.06 | 140895.87 | 133881.92 | 47 |
| 43 | 162519.06 | 155205.32 | 147978.08 | 140862.49 | 133873.67 | 127027.58 | 48 |
| 44 | 154981.47 | 147840.95 | 140785.49 | 133839.54 | 127019.05 | 120340.11 | 49 |
| 45 | 147620.03 | 140649.80 | 133763.52 | 126985.37 | 120331.70 | 113818.69 | 50 |
| 46 | 140429.43 | 133627.74 | 126909.03 | 120297.73 | 113810.04 | 107463.26 | 51 |
| 47 | 133408.33 | 126774.11 | 120221.79 | 113776.40 | 107454.74 | 101274.25 | 52 |
| 48 | 126553.06 | 120085.73 | 113699.94 | 107420.87 | 101265.84 | 95252.55 | 53 |
| 49 | 119862.75 | 113562.41 | 107343.36 | 101231.40 | 95243.97 | 89399.46 | 54 |
| 50 | 113336.41 | 107203.85 | 101152.77 | 95209.00 | 89390.71 | 83716.60 | 55 |
| 51 | 106975.71 | 101011.63 | 95129.45 | 89355.31 | 83707.71 | 78206.05 | 56 |
| 52 | 100780.63 | 94986.32 | 89274.37 | 83671.64 | 78196.90 | 72870.15 | 57 |
| 53 | 94751.27 | 89128.77 | 83589.28 | 78160.14 | 72860.78 | 67711.58 | 58 |
| 54 | 88890.98 | 83442.21 | 78077.26 | 72824.03 | 67702.30 | 62733.18 | 59 |
| 55 | 83198.08 | 77926.32 | 72738.73 | 67664.43 | 62723.66 | 57937.91 | 60 |
| 56 | 77679.38 | 72585.47 | 67577.83 | 62685.23 | 57928.34 | 53328.08 | 61 |
| 57 | 72332.89 | 67421.03 | 62595.63 | 57883.70 | 53319.03 | 48909.66 | 62 |
| 58 | 67163.48 | 62436.68 | 57798.43 | 53278.86 | 48899.59 | 44683.25 | 63 |
| 59 | 62173.14 | 57634.62 | 53185.97 | 48857.63 | 44672.96 | 40652.95 | 64 |
| 60 | 57367.86 | 53020.75 | 48764.89 | 44631.32 | 40642.58 | 36821.76 | 65 |
| 61 | 52747.80 | 48595.56 | 44535.86 | 40600.04 | 36811.12 | 33192.46 | 66 |
| 62 | 48318.13 | 44363.84 | 40503.20 | 36768.11 | 33181.69 | 29767.62 | 67 |
| 63 | 44081.23 | 40327.99 | 36669.44 | 33137.86 | 29756.63 | 26549.30 | 68 |
| 64 | 40041.94 | 36492.41 | 33038.43 | 29712.60 | 26538.32 | 23539.00 | 69 |
| 65 | 36202.87 | 32859.33 | 29612.03 | 26493.83 | 23527.94 | 20737.61 | 70 |
| 66 | 32567.45 | 29431.88 | 26392.89 | 23483.36 | 20726.48 | 18145.07 | 71 |
| 67 | 29138.24 | 26211.86 | 23382.26 | 20682.03 | 18134.06 | 15760.41 | 72 |
| 68 | 25918.35 | 23201.64 | 20581.42 | 18089.07 | 15749.53 | 13581.39 | 73 |
| 69 | 22910.46 | 20402.66 | 17900.61 | 15706.20 | 13570.81 | 11604.23 | 74 |
| 70 | 20114.62 | 17814.28 | 15608.54 | 13528.30 | 11593.91 | 9823.49 | 75 |

AMERICAN EXPERIENCE TABLE.

SELECT AND ULTIMATE.
THREE PER CENT.

| Age x | $D_{[x]}$ | $D_{[x]+1}$ | $D_{[x]+2}$ | $D_{[x]+3}$ | $D_{[x]+4}$ | D_{x+5} | Age $x+5$ |
|------------|-----------|-------------|-------------|-------------|-------------|-----------|--------------|
| 20 | 50767 | 49095 | 47422 | 45768 | 44135 | 42523 | 25 |
| 21 | 48900 | 47289 | 45675 | 44081 | 42595 | 40951 | 26 |
| 22 | 47099 | 45546 | 43992 | 42453 | 40934 | 39434 | 27 |
| 23 | 45363 | 43867 | 42367 | 40884 | 39418 | 37973 | 28 |
| 24 | 43688 | 42245 | 40800 | 39370 | 37957 | 36562 | 29 |
| 25 | 42072 | 40682 | 39288 | 37910 | 36547 | 35201 | 30 |
| 26 | 40513 | 39172 | 37829 | 36500 | 35185 | 33888 | 31 |
| 27 | 39009 | 37718 | 36423 | 35140 | 33873 | 32620 | 32 |
| 28 | 37560 | 36314 | 35066 | 33830 | 32607 | 31398 | 33 |
| 29 | 36159 | 34960 | 33756 | 32563 | 31383 | 30217 | 34 |
| 30 | 34809 | 33653 | 32492 | 31342 | 30204 | 29078 | 35 |
| 31 | 33507 | 32392 | 31273 | 30163 | 29066 | 27979 | 36 |
| 32 | 32248 | 31174 | 30094 | 29025 | 27965 | 26917 | 37 |
| 33 | 31036 | 30000 | 28959 | 27927 | 26904 | 25892 | 38 |
| 34 | 29863 | 28866 | 27862 | 26866 | 25880 | 24901 | 39 |
| 35 | 28733 | 27771 | 26803 | 25842 | 24889 | 23944 | 40 |
| 36 | 27641 | 26713 | 25780 | 24853 | 23932 | 23019 | 41 |
| 37 | 26585 | 25692 | 24791 | 23896 | 23007 | 22125 | 42 |
| 38 | 25567 | 24705 | 23836 | 22972 | 22114 | 21260 | 43 |
| 39 | 24582 | 23751 | 22912 | 22079 | 21249 | 20423 | 44 |
| 40 | 23630 | 22829 | 22021 | 21215 | 20213 | 19614 | 45 |
| 41 | 22709 | 21938 | 21157 | 20378 | 19603 | 18830 | 46 |
| 42 | 21819 | 21075 | 20321 | 19569 | 18819 | 18070 | 47 |
| 43 | 20958 | 20241 | 19513 | 18786 | 18060 | 17334 | 48 |
| 44 | 20124 | 19432 | 18729 | 18026 | 17322 | 16618 | 49 |
| 45 | 19316 | 18649 | 17970 | 17289 | 16607 | 15923 | 50 |
| 46 | 18533 | 17889 | 17232 | 16574 | 15911 | 15246 | 51 |
| 47 | 17773 | 17151 | 16517 | 15878 | 15235 | 14586 | 52 |
| 48 | 17034 | 16435 | 15820 | 15201 | 14575 | 13944 | 53 |
| 49 | 16316 | 15737 | 15142 | 14541 | 13933 | 13317 | 54 |
| 50 | 15617 | 15057 | 14481 | 13897 | 13305 | 12704 | 55 |
| 51 | 14936 | 14395 | 13836 | 13269 | 12692 | 12105 | 56 |
| 52 | 14271 | 13749 | 13207 | 12655 | 12093 | 11519 | 57 |
| 53 | 13623 | 13118 | 12592 | 12055 | 11566 | 10944 | 58 |
| 54 | 12989 | 12501 | 11991 | 11468 | 10932 | 10382 | 59 |
| 55 | 12369 | 11897 | 11401 | 10892 | 10369 | 9830.6 | 60 |
| 56 | 11763 | 11306 | 10825 | 10329 | 9817.3 | 9289.5 | 61 |
| 57 | 11168 | 10727 | 10259 | 9775.7 | 9275.6 | 8758.3 | 62 |
| 58 | 10585 | 10159 | 9704.4 | 9233.2 | 8744.2 | 8237.0 | 63 |
| 59 | 10013 | 9601.7 | 9160.3 | 8700.8 | 8222.6 | 7725.7 | 64 |
| 60 | 9452.8 | 9054.8 | 8626.0 | 8178.2 | 7711.2 | 7224.2 | 65 |
| 61 | 8902.3 | 8518.0 | 8101.8 | 7665.7 | 7209.1 | 6722.2 | 66 |
| 62 | 8362.0 | 7991.3 | 7587.5 | 7162.8 | 6716.9 | 6250.6 | 67 |
| 63 | 7831.6 | 7474.6 | 7082.9 | 6666.6 | 6234.9 | 5779.4 | 68 |
| 64 | 7311.7 | 6967.9 | 6588.4 | 6187.0 | 5793.5 | 5319.2 | 69 |
| 65 | 6802.1 | 6471.4 | 6104.5 | 5714.9 | 5303.2 | 4871.1 | 70 |
| 66 | 6303.0 | 5985.9 | 5631.6 | 5254.2 | 4855.0 | 4436.1 | 71 |
| 67 | 5815.3 | 5511.4 | 5170.1 | 4805.8 | 4420.1 | 4015.5 | 72 |
| 68 | 5339.6 | 5049.3 | 4721.4 | 4370.9 | 3999.5 | 3611.0 | 73 |
| 69 | 4877.4 | 4601.0 | 4287.1 | 3950.9 | 3595.4 | 3224.9 | 74 |
| 70 | 4429.5 | 4167.2 | 3867.9 | 3547.5 | 3209.5 | 2858.4 | 75 |

AMERICAN EXPERIENCE TABLE.

SELECT AND ULTIMATE.
THREE PER CENT.

| Age [x] | $N_{[x]}$ | $N_{[x]+1}$ | $N_{[x]+2}$ | $N_{[x]+3}$ | $N_{[x]+4}$ | N_{x+5} | Age $x+5$ |
|------------|-----------|-------------|-------------|-------------|-------------|-----------|--------------|
| 20 | 1177113 | 1126346 | 1077251 | 1029829 | 984061 | 939926 | 25 |
| 21 | 1125853 | 1076953 | 1029664 | 983989 | 939908 | 897403 | 26 |
| 22 | 1076477 | 1029378 | 983832 | 939840 | 897387 | 856453 | 27 |
| 23 | 1028917 | 983554 | 939687 | 897320 | 856436 | 817018 | 28 |
| 24 | 983106 | 939418 | 897173 | 856373 | 817003 | 779046 | 29 |
| 25 | 938983 | 896911 | 856229 | 816941 | 779031 | 742484 | 30 |
| 26 | 896482 | 855969 | 816797 | 778968 | 742468 | 707283 | 31 |
| 27 | 855559 | 816550 | 778832 | 742409 | 707269 | 673396 | 32 |
| 28 | 816153 | 778593 | 742279 | 707213 | 673383 | 640776 | 33 |
| 29 | 778199 | 742040 | 707080 | 673224 | 640761 | 609378 | 34 |
| 30 | 741661 | 706852 | 673109 | 640707 | 609365 | 579161 | 35 |
| 31 | 706484 | 672977 | 640585 | 609312 | 579149 | 550083 | 36 |
| 32 | 672610 | 640362 | 609188 | 579094 | 550069 | 522104 | 37 |
| 33 | 640013 | 608977 | 578977 | 550018 | 522091 | 495187 | 38 |
| 34 | 608632 | 578769 | 549903 | 522041 | 495175 | 469295 | 39 |
| 35 | 578432 | 549699 | 521928 | 495125 | 469283 | 444394 | 40 |
| 36 | 549369 | 521728 | 495015 | 469235 | 444382 | 420450 | 41 |
| 37 | 521403 | 494818 | 469126 | 444335 | 420439 | 397432 | 42 |
| 38 | 494501 | 468934 | 444229 | 420393 | 397421 | 375307 | 43 |
| 39 | 468620 | 444038 | 420287 | 397375 | 375296 | 354047 | 44 |
| 40 | 443731 | 420101 | 397272 | 375251 | 354036 | 333623 | 45 |
| 41 | 419794 | 397085 | 375147 | 353990 | 333612 | 314009 | 46 |
| 42 | 396781 | 374962 | 353887 | 333935 | 313997 | 295178 | 47 |
| 43 | 374666 | 353708 | 333697 | 313954 | 295168 | 277108 | 48 |
| 44 | 353407 | 333283 | 313851 | 295122 | 277066 | 259774 | 49 |
| 45 | 332987 | 313671 | 295022 | 277052 | 259763 | 243156 | 50 |
| 46 | 313372 | 294839 | 276950 | 259718 | 243144 | 227233 | 51 |
| 47 | 294541 | 276768 | 256917 | 243100 | 227222 | 211987 | 52 |
| 48 | 276466 | 259432 | 242997 | 227177 | 211976 | 197401 | 53 |
| 49 | 259126 | 242810 | 227073 | 211931 | 197390 | 183457 | 54 |
| 50 | 242497 | 226880 | 211823 | 197342 | 183445 | 170140 | 55 |
| 51 | 226564 | 211628 | 197233 | 183397 | 170128 | 157436 | 56 |
| 52 | 211306 | 197035 | 183286 | 170079 | 157424 | 145331 | 57 |
| 53 | 196707 | 183084 | 169966 | 157374 | 145319 | 133813 | 58 |
| 54 | 182749 | 169760 | 157259 | 145268 | 133800 | 122868 | 59 |
| 55 | 169414 | 157045 | 145148 | 133747 | 122855 | 112486 | 60 |
| 56 | 156696 | 144933 | 133627 | 122802 | 112473 | 102656 | 61 |
| 57 | 144573 | 133405 | 122678 | 112419 | 102643 | 93367 | 62 |
| 58 | 133033 | 122448 | 112289 | 102585 | 93352 | 84608 | 63 |
| 59 | 122070 | 112057 | 102455 | 93295 | 84594 | 76371 | 64 |
| 60 | 111668 | 102215 | 93160 | 84534 | 76356 | 68645 | 65 |
| 61 | 101818 | 92916 | 84398 | 76296 | 68630 | 61421 | 66 |
| 62 | 92510 | 84148 | 76157 | 68569 | 61406 | 54689 | 67 |
| 63 | 83733 | 75901 | 68426 | 61343 | 54673 | 48338 | 68 |
| 64 | 75478 | 68166 | 61198 | 54610 | 48423 | 42659 | 69 |
| 65 | 67730 | 60934 | 54463 | 48358 | 42643 | 37340 | 70 |
| 66 | 60499 | 54196 | 48210 | 42578 | 37324 | 32469 | 71 |
| 67 | 53754 | 47939 | 42428 | 37258 | 32452 | 28032 | 72 |
| 68 | 47498 | 42158 | 37109 | 32388 | 28017 | 24017 | 73 |
| 69 | 41717 | 36840 | 32239 | 27952 | 24001 | 20406 | 74 |
| 70 | 36404 | 31974 | 27807 | 23939 | 20391 | 17181 | 75 |

AMERICAN EXPERIENCE TABLE.

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SELECT AND ULTIMATE.
THREE PER CENT.

| Age [x] | S _[x] | S _{[x]+1} | S _{[x]+2} | S _{[x]+3} | S _{[x]+4} | S _{x+5} | Age x+5 |
|------------|------------------|--------------------|--------------------|--------------------|--------------------|------------------|------------|
| 20 | 21908862 | 20731749 | 19605403 | 18528152 | 17498323 | 16514262 | 25 |
| 21 | 20730704 | 19604851 | 18527898 | 17498234 | 16514245 | 15574337 | 26 |
| 22 | 19603847 | 18527370 | 17497992 | 16514100 | 15574320 | 14676933 | 27 |
| 23 | 18526395 | 17497478 | 16513924 | 15574237 | 14676917 | 13820481 | 28 |
| 24 | 17496536 | 16513430 | 15574012 | 14676839 | 13820466 | 13003463 | 29 |
| 25 | 16512512 | 15573529 | 14676618 | 13820389 | 13003448 | 12224417 | 30 |
| 26 | 15572617 | 14676135 | 13820166 | 13003369 | 12224401 | 11481933 | 31 |
| 27 | 14675269 | 13819710 | 13003160 | 12224328 | 11481919 | 10774650 | 32 |
| 28 | 13818875 | 13002722 | 12224129 | 11481850 | 10774637 | 10101254 | 33 |
| 29 | 13001883 | 12223684 | 11481644 | 10774564 | 10101240 | 9460479 | 34 |
| 30 | 12222884 | 11481223 | 10774371 | 10101172 | 9460465 | 8851100 | 35 |
| 31 | 11480447 | 10773963 | 10100986 | 9460401 | 8851089 | 8271940 | 36 |
| 32 | 10773180 | 10100570 | 9460208 | 8851020 | 8271926 | 7721857 | 37 |
| 33 | 10099829 | 9459816 | 8850839 | 8271862 | 7721844 | 7199757 | 38 |
| 34 | 9459087 | 8850455 | 8271686 | 7721783 | 7199742 | 6704953 | 39 |
| 35 | 8849738 | 8271306 | 7721607 | 7199679 | 6704554 | 6235271 | 40 |
| 36 | 8270606 | 7721237 | 7199509 | 6704494 | 6235259 | 5790877 | 41 |
| 37 | 7720547 | 7199144 | 6701326 | 6235200 | 5790865 | 5370426 | 42 |
| 38 | 7198473 | 6703972 | 6235038 | 5790809 | 5370416 | 4972995 | 43 |
| 39 | 6703304 | 6234684 | 5790646 | 5370359 | 4972984 | 4597688 | 44 |
| 40 | 6234032 | 5790301 | 5370200 | 4972928 | 4597677 | 4243641 | 45 |
| 41 | 5789646 | 5369852 | 4972767 | 4597620 | 4243630 | 3910018 | 46 |
| 42 | 5369202 | 4972421 | 4597459 | 4243572 | 3910006 | 3596009 | 47 |
| 43 | 4971794 | 4597128 | 4243420 | 3909953 | 3595999 | 3300831 | 48 |
| 44 | 4596482 | 4243075 | 3909792 | 3595941 | 3300819 | 3023723 | 49 |
| 45 | 4242444 | 3909457 | 3595786 | 3300764 | 3023712 | 2763949 | 50 |
| 46 | 3908816 | 3595444 | 3300605 | 3023655 | 2763937 | 2520793 | 51 |
| 47 | 3594807 | 3300266 | 3023498 | 2763581 | 2520781 | 2293559 | 52 |
| 48 | 3299620 | 3023154 | 2763222 | 2520725 | 2293548 | 2081572 | 53 |
| 49 | 3022502 | 2763376 | 2520566 | 2293493 | 2081562 | 1884172 | 54 |
| 50 | 2762702 | 2520205 | 2293325 | 2081502 | 1884160 | 1700715 | 55 |
| 51 | 2519525 | 2292961 | 2081333 | 1884100 | 1700703 | 1530575 | 56 |
| 52 | 2292269 | 2080963 | 1883928 | 1700642 | 1530563 | 1373139 | 57 |
| 53 | 2080257 | 1883550 | 1700466 | 1530500 | 1373126 | 1227807 | 58 |
| 54 | 1882831 | 1700082 | 1530322 | 1373063 | 1227795 | 1093995 | 59 |
| 55 | 1699335 | 1529921 | 1372876 | 1227728 | 1093981 | 971126 | 60 |
| 56 | 1529171 | 1372475 | 1227542 | 1093915 | 971113 | 858640 | 61 |
| 57 | 1371702 | 1227129 | 1093724 | 971046 | 858627 | 755984 | 62 |
| 58 | 1224325 | 1093292 | 970844 | 858555 | 755970 | 662618 | 63 |
| 59 | 1092480 | 970410 | 858353 | 755898 | 662603 | 578009 | 64 |
| 60 | 969571 | 857903 | 755688 | 662528 | 577994 | 501638 | 65 |
| 61 | 857051 | 755233 | 662317 | 577919 | 501623 | 432993 | 66 |
| 62 | 754362 | 661852 | 577704 | 501547 | 432978 | 371572 | 67 |
| 63 | 660959 | 577226 | 501325 | 432899 | 371556 | 316883 | 68 |
| 64 | 576320 | 500842 | 432676 | 371478 | 316868 | 268445 | 69 |
| 65 | 499920 | 432184 | 371250 | 316787 | 268429 | 225786 | 70 |
| 66 | 431253 | 370754 | 316558 | 268348 | 225770 | 188446 | 71 |
| 67 | 369808 | 316054 | 268115 | 225687 | 188429 | 155977 | 72 |
| 68 | 315115 | 267617 | 225459 | 188350 | 155962 | 127945 | 73 |
| 69 | 266677 | 224060 | 188120 | 155881 | 127929 | 103928 | 74 |
| 70 | 224037 | 187633 | 155659 | 127852 | 103913 | 83522 | 75 |

AMERICAN EXPERIENCE TABLE.

SELECT AND ULTIMATE.
THREE PER CENT.

| Age [x] | M[x] | M[x]+ ₁ | M[x]+ ₂ | M[x]+ ₃ | M[x]+ ₄ | M[x]+ ₅ | Age x+ ₆ |
|------------|----------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------|
| 20 | 16481.72 | 16288.74 | 16046.06 | 15773.46 | 15472.40 | 15145.71 | 26 |
| 21 | 16107.93 | 15921.61 | 15685.49 | 15420.83 | 15129.01 | 14812.77 | 26 |
| 22 | 15745.05 | 15564.67 | 15335.92 | 15078.97 | 14796.12 | 14489.54 | 27 |
| 23 | 15394.62 | 15219.49 | 14997.40 | 14748.40 | 14474.24 | 14175.72 | 28 |
| 24 | 15053.53 | 14883.50 | 14668.81 | 14427.06 | 14160.44 | 13871.04 | 29 |
| 25 | 14722.80 | 14558.19 | 14349.76 | 14115.05 | 13856.62 | 13574.82 | 30 |
| 26 | 14401.84 | 14241.57 | 14039.20 | 13811.33 | 13560.02 | 13286.83 | 31 |
| 27 | 14089.73 | 13935.01 | 13738.11 | 13516.46 | 13272.47 | 13006.84 | 32 |
| 28 | 13787.89 | 13637.25 | 13446.09 | 13231.30 | 12993.64 | 12734.25 | 33 |
| 29 | 13493.37 | 13347.12 | 13161.13 | 12951.82 | 12720.70 | 12468.50 | 34 |
| 30 | 13207.39 | 13065.39 | 12884.42 | 12680.83 | 12455.35 | 12209.42 | 35 |
| 31 | 12928.96 | 12790.71 | 12615.39 | 12416.63 | 12197.00 | 11956.86 | 36 |
| 32 | 12657.65 | 12523.05 | 12351.38 | 12158.05 | 11944.13 | 11709.98 | 37 |
| 33 | 12394.50 | 12263.09 | 12095.70 | 11907.31 | 11697.95 | 11468.66 | 38 |
| 34 | 12136.58 | 12008.64 | 11845.79 | 11661.55 | 11456.98 | 11232.16 | 39 |
| 36 | 11885.22 | 11760.32 | 11601.21 | 11420.71 | 11219.89 | 11000.40 | 40 |
| 36 | 11639.85 | 11517.58 | 11362.12 | 11185.30 | 10988.80 | 10772.72 | 41 |
| 37 | 11399.06 | 11279.70 | 11127.51 | 10954.61 | 10761.45 | 10549.06 | 42 |
| 38 | 11163.76 | 11046.93 | 10897.64 | 10727.69 | 10538.13 | 10328.84 | 43 |
| 39 | 10932.93 | 10818.28 | 10671.25 | 10504.23 | 10317.67 | 10111.76 | 44 |
| 40 | 10705.52 | 10593.32 | 10449.42 | 10285.30 | 10101.18 | 9897.03 | 45 |
| 41 | 10482.28 | 10371.90 | 10230.23 | 10068.17 | 9886.24 | 9684.45 | 46 |
| 42 | 10262.27 | 10153.70 | 10013.97 | 9853.72 | 9673.49 | 9473.08 | 47 |
| 43 | 10046.17 | 9939.13 | 9800.30 | 9641.89 | 9462.67 | 9262.54 | 48 |
| 44 | 9830.48 | 9724.71 | 9587.87 | 9430.34 | 9251.74 | 9052.03 | 49 |
| 45 | 9617.28 | 9512.53 | 9376.68 | 9219.63 | 9041.30 | 8840.57 | 50 |
| 46 | 9405.44 | 9301.25 | 9165.73 | 9009.02 | 8829.50 | 8627.53 | 51 |
| 47 | 9193.79 | 9090.46 | 8954.89 | 8797.27 | 8616.56 | 8412.30 | 52 |
| 48 | 8981.89 | 8878.51 | 8742.56 | 8583.77 | 8401.44 | 8194.36 | 53 |
| 49 | 8768.79 | 8665.23 | 8528.14 | 8367.96 | 8183.22 | 7973.25 | 54 |
| 50 | 8553.65 | 8449.34 | 8311.30 | 8149.10 | 7951.83 | 7748.34 | 55 |
| 51 | 8336.55 | 8231.19 | 8091.53 | 7927.16 | 7736.69 | 7519.29 | 56 |
| 52 | 8116.72 | 8010.26 | 7868.39 | 7701.33 | 7507.24 | 7285.60 | 57 |
| 53 | 7893.14 | 7785.32 | 7641.29 | 7471.07 | 7273.17 | 7027.00 | 58 |
| 54 | 7665.98 | 7556.58 | 7410.05 | 7236.63 | 7034.77 | 6803.30 | 59 |
| 55 | 7434.57 | 7323.00 | 7173.69 | 6996.86 | 6790.57 | 6554.13 | 60 |
| 56 | 7198.54 | 7084.85 | 6932.51 | 6751.92 | 6541.28 | 6299.37 | 61 |
| 57 | 6956.99 | 6841.21 | 6686.14 | 6501.30 | 6285.92 | 6038.90 | 62 |
| 58 | 6710.26 | 6592.43 | 6433.73 | 6245.21 | 6025.23 | 5772.82 | 63 |
| 59 | 6458.01 | 6337.84 | 6176.18 | 5983.55 | 5758.79 | 5501.37 | 64 |
| 60 | 6200.29 | 6077.69 | 5912.58 | 5716.09 | 5487.17 | 5224.80 | 65 |
| 61 | 5936.68 | 5811.73 | 5643.66 | 5443.39 | 5210.15 | 4943.34 | 66 |
| 62 | 5667.59 | 5540.53 | 5369.36 | 5165.70 | 4928.45 | 4657.67 | 67 |
| 63 | 5392.94 | 5263.85 | 5089.91 | 4882.64 | 4642.39 | 4368.52 | 68 |
| 64 | 5113.28 | 4982.39 | 4805.99 | 4596.35 | 4353.16 | 4076.73 | 69 |
| 66 | 4829.17 | 4696.69 | 4518.11 | 4306.41 | 4051.20 | 3783.60 | 70 |
| 66 | 4540.93 | 4407.34 | 4227.39 | 4014.18 | 3767.91 | 3490.42 | 71 |
| 67 | 4249.58 | 4115.06 | 3934.37 | 3720.68 | 3474.83 | 3198.99 | 72 |
| 68 | 3955.59 | 3820.82 | 3640.09 | 3426.98 | 3183.50 | 2911.54 | 73 |
| 69 | 3661.38 | 3528.00 | 3347.99 | 3136.80 | 2896.40 | 2630.45 | 74 |
| 70 | 3369.24 | 3235.83 | 3057.97 | 2850.27 | 2615.63 | 2357.97 | 75 |

AMERICAN EXPERIENCE TABLE.

SELECT AND ULTIMATE.
THREE PER CENT.

| Age [x] | R _[x] | R _{[x]+1} | R _{[x]+2} | R _{[x]+3} | R _{[x]+4} | R _{x+5} | Age N+x |
|------------|------------------|--------------------|--------------------|--------------------|--------------------|------------------|------------|
| 20 | 538990.01 | 522508.29 | 506219.55 | 490173.49 | 474400.03 | 458927.63 | 26 |
| 21 | 522046.80 | 505938.87 | 490017.26 | 474331.77 | 458910.94 | 443781.93 | 26 |
| 22 | 505489.88 | 489744.83 | 474180.16 | 458844.24 | 443765.27 | 428669.15 | 27 |
| 23 | 489313.76 | 473919.14 | 458699.65 | 443702.25 | 428953.85 | 414479.61 | 28 |
| 24 | 473497.24 | 458443.71 | 443560.21 | 428891.40 | 414464.34 | 400303.90 | 29 |
| 25 | 458035.28 | 443312.48 | 428754.29 | 414404.53 | 400289.48 | 386432.86 | 30 |
| 26 | 442912.00 | 428510.16 | 414268.59 | 400229.39 | 386418.00 | 372858.04 | 31 |
| 27 | 428123.00 | 414033.27 | 400098.26 | 386360.15 | 372843.69 | 359571.22 | 32 |
| 28 | 413660.55 | 399872.66 | 386235.41 | 372789.32 | 359558.02 | 346564.38 | 33 |
| 29 | 399504.27 | 386010.90 | 372663.78 | 359502.65 | 346550.83 | 333830.13 | 34 |
| 30 | 385655.02 | 372447.63 | 359382.24 | 346497.82 | 333816.99 | 321361.64 | 35 |
| 31 | 372100.90 | 359171.94 | 346381.23 | 333765.84 | 321349.21 | 309152.21 | 36 |
| 32 | 358829.62 | 346171.97 | 333648.92 | 321297.54 | 309139.49 | 297195.36 | 37 |
| 33 | 345843.93 | 333449.43 | 321186.34 | 309090.64 | 297183.33 | 285485.38 | 38 |
| 34 | 333126.26 | 320989.68 | 308981.04 | 297135.25 | 285473.70 | 274016.72 | 39 |
| 35 | 320671.91 | 308786.69 | 297026.37 | 285425.16 | 274004.45 | 262784.56 | 40 |
| 36 | 308477.81 | 296837.96 | 285320.38 | 273958.26 | 262772.06 | 251784.16 | 41 |
| 37 | 296533.77 | 285134.71 | 273855.01 | 262727.50 | 251772.89 | 241011.44 | 42 |
| 38 | 284836.53 | 273672.77 | 262625.84 | 251728.20 | 241000.51 | 230462.38 | 43 |
| 39 | 273377.90 | 262444.97 | 251626.69 | 240955.44 | 230451.21 | 220133.54 | 44 |
| 40 | 262156.53 | 251451.01 | 240857.69 | 230408.27 | 220122.97 | 210021.79 | 45 |
| 41 | 251163.57 | 240681.29 | 230309.39 | 220079.16 | 210010.99 | 200124.75 | 46 |
| 42 | 240397.45 | 230135.18 | 219981.48 | 209967.51 | 200113.79 | 190440.30 | 47 |
| 43 | 229857.38 | 219811.21 | 209872.08 | 200007.18 | 190429.89 | 180667.22 | 48 |
| 44 | 219529.81 | 209699.33 | 199974.62 | 190386.75 | 180356.41 | 171704.67 | 49 |
| 45 | 209420.07 | 199802.79 | 190290.26 | 180313.58 | 171693.95 | 162652.65 | 50 |
| 46 | 199523.01 | 190117.57 | 180816.32 | 17165059 | 162641.57 | 153812.07 | 51 |
| 47 | 189837.52 | 180643.73 | 171553.27 | 162598.38 | 153801.11 | 145184.55 | 52 |
| 48 | 180360.42 | 171378.53 | 162500.02 | 153757.46 | 145173.64 | 136772.25 | 53 |
| 49 | 171091.23 | 162322.44 | 153657.21 | 145129.07 | 136761.11 | 128577.89 | 54 |
| 50 | 162029.86 | 153476.21 | 145026.87 | 136715.57 | 128566.47 | 120604.64 | 55 |
| 51 | 153179.41 | 144842.86 | 136611.67 | 128520.14 | 120592.98 | 112856.29 | 56 |
| 52 | 144540.94 | 136424.22 | 128413.96 | 120545.57 | 112844.24 | 105337.00 | 57 |
| 53 | 136115.40 | 128222.26 | 120436.94 | 112795.65 | 105324.58 | 98051.41 | 58 |
| 54 | 127908.41 | 120242.43 | 112685.85 | 105275.80 | 98039.17 | 91004.40 | 59 |
| 55 | 119919.79 | 112485.22 | 105162.22 | 97988.53 | 90991.67 | 84201.10 | 60 |
| 56 | 112156.07 | 104957.53 | 97872.68 | 90940.17 | 84188.25 | 77646.97 | 61 |
| 57 | 104619.17 | 97662.18 | 90820.97 | 84134.83 | 77633.53 | 71347.61 | 62 |
| 58 | 97315.56 | 90605.30 | 84012.87 | 77579.14 | 71333.93 | 65308.70 | 63 |
| 59 | 90250.25 | 83792.24 | 77454.40 | 71278.22 | 65294.67 | 59535.88 | 64 |
| 60 | 83428.33 | 77228.04 | 71150.35 | 65237.77 | 59521.68 | 54034.51 | 65 |
| 61 | 76855.32 | 70918.64 | 65106.91 | 59463.25 | 54019.86 | 48809.71 | 66 |
| 62 | 70538.00 | 64870.41 | 59329.88 | 53960.52 | 48794.82 | 43866.37 | 67 |
| 63 | 64480.73 | 59087.79 | 53823.94 | 48734.03 | 43851.09 | 39208.70 | 68 |
| 64 | 58691.35 | 53578.07 | 48595.68 | 43789.69 | 39193.34 | 34840.18 | 69 |
| 65 | 53175.03 | 48345.86 | 43649.17 | 39131.06 | 34824.65 | 30763.45 | 70 |
| 66 | 47937.63 | 43396.67 | 38980.33 | 34761.94 | 30747.76 | 26979.85 | 71 |
| 67 | 42983.96 | 38734.38 | 34619.32 | 30684.95 | 26954.27 | 23489.44 | 72 |
| 68 | 38317.43 | 34361.84 | 30541.02 | 26900.93 | 23473.95 | 20290.45 | 73 |
| 69 | 33950.48 | 30288.10 | 26760.10 | 23412.11 | 20275.31 | 17378.91 | 74 |
| 70 | 29877.40 | 26508.16 | 23272.33 | 20214.36 | 17364.99 | 14748.46 | 75 |



THE ACTUARIES' OR COMBINED EXPERIENCE TABLES.

INTRODUCTION.

THE 17 Offices Table of Mortality, which has in America come to be known as the Actuaries' or Combined Experience Table, was the first table deduced from the combined experience of companies with insured lives. It was decided upon at a meeting of actuaries in London, March 19, 1838, and was undertaken by a committee of actuaries, headed by Messrs. Charles Ansell, Griffith Davies and Benjamin Gompertz. Only 62,537 insurances in all were involved. The graduation was by the graphic system.

The table became far more popular and was more generally used in America than in Great Britain, where it was long ago wholly superseded as an authority by the Institute of Actuaries' H^M and H^F tables. In America, as a result of Hon. Elizur Wright's initiative, the Actuaries' Table was adopted as the standard of legal solvency in Massachusetts, and it has since been made the standard in nearly every State. New York was the last important State to abandon its former standard—the American Experience Table—for the Actuaries'.

The Actuaries' Table, together with commutation tables based thereon, was first published in "A Series of Tables of Annuities and Assurances Calculated from a New Rate of Mortality amongst Insured Lives," by Jenkin Jones, published in 1843, in London. This book is now a classic, and is familiarly known as "Jenkin Jones." It is out of print and brings a high price.

The commutation columns at three and three and one-half per cent are taken from this book. The columns at four per cent are taken from "Principles and Practice of

INTRODUCTION TO ACTUARIES' MORTALITY TABLE.

Life Insurance," the N column being revised to correspond with the English notation.

Valuation columns (Wright's Accumulation) are also given for 3 per cent, $3\frac{1}{2}$ per cent and 4 per cent. The last mentioned are from Wright's reports, and, for the other two, thanks are due Walter C. Wright, Esq., actuary

ACTUARIES' MORTALITY TABLE.

TABLE I.

ACTUARIES' OR COMBINED EXPERIENCE MORTALITY TABLE.
PROBABILITIES FROM ACTUARIES' TABLE.

| Completed Age. | Number Surviving at Each Age. | Deaths in Each Year. | Probability of Dying in One Year. | Probability of Surviving One Year. | Completed Age. | Number Surviving at Each Age. | Deaths in Each Year. | Probability of Dying in One Year. | Probability of Surviving One Year. |
|----------------|-------------------------------|----------------------|-----------------------------------|------------------------------------|----------------|-------------------------------|----------------------|-----------------------------------|------------------------------------|
| 10 | 100300 | 676 | .0067600 | .9932400 | 56 | 63469 | 1375 | .0216643 | .9783357 |
| 11 | 99324 | 674 | .0067859 | .9932141 | 58 | 62094 | 1436 | .0231261 | .9768739 |
| 12 | 98650 | 672 | .0068119 | .9931881 | 57 | 60658 | 1497 | .0246793 | .9753207 |
| 13 | 97978 | 671 | .0068484 | .9931516 | 58 | 59161 | 1561 | .0263856 | .9738144 |
| 14 | 97307 | 671 | .0068959 | .9931041 | 59 | 57600 | 1627 | .0282464 | .971736 |
| 15 | 96536 | 671 | .0069544 | .9930566 | 60 | 55973 | 1698 | .0303352 | .9696638 |
| 16 | 95765 | 672 | .0070246 | .9929974 | 61 | 54275 | 1770 | .0326116 | .9673884 |
| 17 | 94993 | 673 | .0070965 | .9929375 | 62 | 52505 | 1844 | .0351201 | .9648796 |
| 18 | 94220 | 675 | .0071736 | .9928664 | 63 | 50661 | 1917 | .0378398 | .9621602 |
| 19 | 93445 | 677 | .0072564 | .9927936 | 64 | 48744 | 1990 | .0408256 | .9591744 |
| 20 | 92668 | 630 | .0072900 | .9927091 | 65 | 46754 | 2051 | .0440818 | .9559182 |
| 21 | 91888 | 633 | .0073768 | .9926232 | 66 | 44693 | 2128 | .0476138 | .9523862 |
| 22 | 91105 | 685 | .0074641 | .9925359 | 67 | 42565 | 2191 | .0514741 | .9485259 |
| 23 | 90319 | 630 | .0075543 | .9924357 | 68 | 40374 | 2246 | .0556300 | .9443700 |
| 24 | 89529 | 694 | .0076639 | .9923341 | 69 | 38128 | 2291 | .0600872 | .9399128 |
| 25 | 88735 | 698 | .0077700 | .9922300 | 70 | 35837 | 2327 | .0649328 | .9350672 |
| 26 | 87937 | 704 | .0078866 | .9921134 | 71 | 33510 | 2351 | .0701581 | .9298419 |
| 27 | 87134 | 708 | .0080061 | .9919939 | 72 | 31159 | 2362 | .0758049 | .9241951 |
| 28 | 86326 | 714 | .0081339 | .9918611 | 73 | 28797 | 2358 | .0818834 | .9181166 |
| 29 | 85512 | 720 | .0082750 | .9917250 | 74 | 26439 | 2339 | .0884679 | .9115321 |
| 30 | 84692 | 727 | .0084248 | .9915752 | 75 | 24100 | 2303 | .0955602 | .9044398 |
| 31 | 83865 | 734 | .0085844 | .9914216 | 76 | 21797 | 2249 | .1031794 | .8968206 |
| 32 | 83031 | 742 | .0087458 | .9912532 | 77 | 19543 | 2179 | .1114692 | .8885308 |
| 33 | 82189 | 750 | .0089191 | .9910809 | 78 | 17369 | 2092 | .1204444 | .8795556 |
| 34 | 81339 | 758 | .0090955 | .9909045 | 79 | 15277 | 1987 | .1300548 | .8699352 |
| 35 | 80481 | 767 | .0092877 | .9907123 | 80 | 13290 | 1865 | .1404064 | .8595936 |
| 36 | 79614 | 776 | .0094849 | .9905151 | 81 | 11424 | 1730 | .1514357 | .8485643 |
| 37 | 78738 | 785 | .0096867 | .9903133 | 82 | 9594 | 1582 | .1631938 | .8368062 |
| 38 | 77853 | 795 | .0098934 | .9900936 | 83 | 8112 | 1427 | .1759121 | .8244079 |
| 39 | 76958 | 805 | .0101131 | .9898689 | 84 | 6635 | 1268 | .1896785 | .8113215 |
| 40 | 76053 | 815 | .0103469 | .9896381 | 85 | 5417 | 1111 | .2050951 | .7974949 |
| 41 | 75138 | 826 | .0106118 | .9893822 | 86 | 4306 | 958 | .2221804 | .7775196 |
| 42 | 74212 | 839 | .0109043 | .9891057 | 87 | 3348 | 811 | .2412340 | .7577660 |
| 43 | 73273 | 857 | .0112509 | .9887451 | 88 | 2537 | 673 | .2622741 | .7347259 |
| 44 | 72316 | 881 | .0116973 | .9883027 | 89 | 1854 | 545 | .2853820 | .7076180 |
| 45 | 71335 | 909 | .0122120 | .9877880 | 90 | 1319 | 427 | .3237300 | .6762700 |
| 46 | 70326 | 944 | .0128389 | .9871611 | 91 | 832 | 322 | .3699866 | .6390134 |
| 47 | 69282 | 981 | .0135157 | .9864843 | 92 | 570 | 231 | .4252632 | .5917368 |
| 48 | 68161 | 1021 | .0142505 | .9857405 | 93 | 339 | 155 | .4972271 | .5412729 |
| 49 | 66980 | 1063 | .0150611 | .9849389 | 94 | 184 | 95 | .5863043 | .4836957 |
| 50 | 65717 | 1108 | .0159385 | .9840614 | 95 | 89 | 52 | .6942697 | .4157303 |
| 51 | 64409 | 1155 | .0168982 | .9831018 | 96 | 37 | 24 | .8186185 | .3513514 |
| 52 | 62953 | 1207 | .0179473 | .9820527 | 97 | 13 | 9 | .9623077 | .3076923 |
| 53 | 61346 | 1251 | .0190927 | .9809273 | 98 | 4 | 3 | 1.0000000 | .2500000 |
| 54 | 64785 | 1316 | .0203133 | .9795867 | 99 | 1 | 1 | 1.0000000 | .0000000 |

ACTUARIES' TABLE.

TABLE II.
COMMUTATION COLUMNS—FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 67 556.4 | I 314 214.9 | 23 433 050.1 | 14 411.37 | 427 355.12 |
| 11 | 64 519.0 | I 249 695.9 | 22 118 835.2 | 13 972.25 | 412 943.75 |
| 12 | 61 616.5 | I 188 079.4 | 20 869 139.3 | 13 551.27 | 398 971.50 |
| 13 | 58 843.0 | I 129 236.4 | 19 681 059.9 | 13 147.68 | 385 420.23 |
| 14 | 56 192.4 | I 073 044.0 | 18 551 823.5 | 12 760.20 | 372 272.55 |
| 15 | 53 658.5 | I 019 385.5 | 17 478 779.5 | 12 387.616 | 359 512.35 |
| 16 | 51 236.5 | 968 148.99 | 16 459 394.0 | 12 020.364 | 347 124.73 |
| 17 | 48 920.9 | 919 228.12 | 15 491 245.0 | 11 664.377 | 335 095.37 |
| 18 | 46 707.1 | 872 521.02 | 14 572 016.9 | 11 352.165 | 323 410.99 |
| 19 | 44 590.3 | 827 930.74 | 13 699 495.9 | 11 031.782 | 312 058.83 |
| 20 | 42 566.3 | 785 364.44 | 12 871 565.2 | 10 722.808 | 301 027.05 |
| 21 | 40 630.7 | 744 733.72 | 12 086 200.8 | 10 424.401 | 290 304.24 |
| 22 | 38 779.8 | 705 953.91 | 11 341 467.1 | 10 136.205 | 279 879.84 |
| 23 | 37 010.0 | 668 943.96 | 10 635 513.2 | 9 857.877 | 269 743.63 |
| 24 | 35 317.3 | 633 626.65 | 9 966 569.2 | 9 588.693 | 259 885.76 |
| 25 | 33 698.6 | 599 928.03 | 9 332 942.6 | 9 328.362 | 250 297.06 |
| 26 | 32 150.8 | 567 777.28 | 8 733 014.6 | 9 076.601 | 240 968.70 |
| 27 | 30 670.4 | 537 106.90 | 8 165 237.3 | 8 832.789 | 231 892.10 |
| 28 | 29 254.6 | 507 852.25 | 7 628 130.4 | 8 596.687 | 223 059.31 |
| 29 | 27 900.5 | 479 951.73 | 7 120 278.1 | 8 367.742 | 214 462.62 |
| 30 | 26 605.4 | 453 346.30 | 6 640 326.4 | 8 145.752 | 206 094.88 |
| 31 | 25 366.6 | 427 979.68 | 6 186 980.1 | 7 930.226 | 197 940.13 |
| 32 | 24 181.8 | 403 797.93 | 5 759 000.4 | 7 720.993 | 190 018.90 |
| 33 | 23 048.3 | 380 749.62 | 5 355 202.5 | 7 517.615 | 182 297.91 |
| 34 | 21 964.2 | 358 785.45 | 4 974 452.9 | 7 319.951 | 174 780.29 |
| 35 | 20 927.3 | 337 858.15 | 4 615 667.4 | 7 127.862 | 167 460.34 |
| 36 | 19 935.5 | 317 922.64 | 4 277 809.2 | 6 940.969 | 160 332.48 |
| 37 | 18 986.9 | 298 935.69 | 3 959 886.6 | 6 759.154 | 153 391.51 |
| 38 | 18 079.8 | 280 855.86 | 3 660 950.9 | 6 582.305 | 146 632.36 |
| 39 | 17 212.2 | 263 643.62 | 3 380 095.0 | 6 410.092 | 140 050.05 |
| 40 | 16 382.6 | 247 261.06 | 3 116 451.4 | 6 242.419 | 133 639.96 |
| 41 | 15 589.2 | 231 671.83 | 2 869 190.3 | 6 079.193 | 127 397.542 |
| 42 | 14 830.6 | 216 841.25 | 2 637 518.5 | 5 920.126 | 121 318.349 |
| 43 | 14 104.8 | 202 736.43 | 2 420 677.3 | 5 764.770 | 115 398.224 |
| 44 | 13 409.7 | 189 326.69 | 2 217 940.9 | 5 612.184 | 109 633.454 |
| 45 | 12 743.15 | 176 583.54 | 2 028 614.2 | 5 461.358 | 104 021.270 |
| 46 | 12 101.40 | 164 480.14 | 1 852 030.7 | 5 311.724 | 98 559.912 |
| 47 | 11 488.46 | 152 991.67 | 1 687 550.6 | 5 162.305 | 93 248.188 |
| 48 | 10 897.30 | 142 094.38 | 1 534 558.9 | 5 013.092 | 88 085.883 |
| 49 | 10 328.76 | 131 765.62 | 1 392 464.5 | 4 863.588 | 83 072.882 |
| 50 | 9 781.92 | 121 983.70 | 1 260 698.9 | 4 714.010 | 78 209.293 |
| 51 | 9 255.78 | 112 727.92 | 1 138 715.2 | 4 564.997 | 73 495.283 |
| 52 | 8 749.39 | 103 978.53 | 1 025 987.3 | 4 413.706 | 68 931.185 |
| 53 | 8 261.89 | 95 716.64 | 922 008.75 | 4 262.718 | 64 517.480 |
| 54 | 7 792.45 | 87 924.18 | 826 292.11 | 4 111.043 | 60 251.761 |

ACTUARIES' TABLE.

TABLE II.—Cont.
COMMUTATION COLUMNS.—FOUR PER CENT.

| Age. | D ₁ | N ₁ | S ₁ | M ₁ | R ₁ |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 7 340.54 | 80 583.64 | 738 367.93 | 3 958.840 | 56 143.718 |
| 56 | 6 905.30 | 73 678.34 | 657 784.29 | 3 855.930 | 52 184.878 |
| 57 | 6 486.16 | 67 192.18 | 584 105.95 | 3 652.379 | 48 378.948 |
| 58 | 6 082.78 | 61 109.41 | 516 913.77 | 3 498.461 | 44 726.569 |
| 59 | 5 694.50 | 55 414.91 | 455 804.36 | 3 344.137 | 41 228.107 |
| 60 | 5 320.82 | 50 094.09 | 400 389.45 | 3 189.473 | 37 883.971 |
| 61 | 4 960.96 | 45 133.13 | 350 295.36 | 3 034.269 | 34 694.497 |
| 62 | 4 614.60 | 40 518.53 | 305 162.23 | 2 878.706 | 31 660.229 |
| 63 | 4 281.28 | 36 237.25 | 264 643.70 | 2 722.872 | 28 781.523 |
| 64 | 3 960.84 | 32 276.41 | 228 406.45 | 2 567.101 | 26 058.650 |
| 65 | 3 653.02 | 28 623.40 | 196 130.04 | 2 411.617 | 23 491.549 |
| 66 | 3 357.68 | 25 265.72 | 167 506.64 | 2 257.779 | 21 079.933 |
| 67 | 3 074.81 | 22 190.90 | 142 240.92 | 2 103.056 | 18 823.154 |
| 68 | 2 804.37 | 19 386.54 | 120 050.02 | 1 950.870 | 16 720.098 |
| 69 | 2 546.50 | 16 840.04 | 100 663.48 | 1 800.864 | 14 769.228 |
| 70 | 2 301.43 | 14 538.61 | 83 823.44 | 1 653.737 | 12 968.3644 |
| 71 | 2 069.22 | 12 469.383 | 69 284.83 | 1 510.046 | 11 314.6275 |
| 72 | 1 850.05 | 10 619.334 | 56 815.45 | 1 370.457 | 9 804.5814 |
| 73 | 1 641.04 | 8 975.290 | 46 195.115 | 1 235.6082 | 8 434.1247 |
| 74 | 1 451.37 | 7 523.921 | 37 220.825 | 1 106.1658 | 7 198.5165 |
| 75 | 1 272.086 | 6 251.835 | 29 696.904 | 982.7048 | 6 092.3507 |
| 76 | 1 106.275 | 5 145.560 | 23 445.069 | 865.8194 | 5 109.6459 |
| 77 | 953.971 | 4 191.589 | 18 299.509 | 756.0649 | 4 243.8265 |
| 78 | 815.031 | 3 376.557 | 14 107.920 | 653.8165 | 3 487.7616 |
| 79 | 689.294 | 2 687.264 | 10 731.363 | 559.4261 | 2 833.9451 |
| 80 | 576.578 | 2 110.685 | 8 044.099 | 473.2214 | 2 274.5191 |
| 81 | 476.560 | 1 634.126 | 5 933.413 | 395.3799 | 1 801.2977 |
| 82 | 388.838 | 1 245.2875 | 4 299.287 | 325.9874 | 1 405.9178 |
| 83 | 312.868 | 932.4198 | 3 053.9994 | 264.9721 | 1 079.9303 |
| 84 | 247.914 | 684.5059 | 2 121.5796 | 212.0516 | 814.9583 |
| 85 | 193.163 | 491.3424 | 1 437.0737 | 166.8363 | 602.9067 |
| 86 | 147.641 | 343.7014 | 945.7313 | 128.7432 | 436.0703 |
| 87 | 110.3786 | 233.3228 | 602.0298 | 97.1593 | 307.3272 |
| 88 | 80.4242 | 152.8687 | 368.7070 | 71.4.02 | 210.1678 |
| 89 | 56.8171 | 96.0816 | 215.8083 | 50.9363 | 138.7176 |
| 90 | 38.6584 | 57.4232 | 119.7267 | 34.9630 | 87.7813 |
| 91 | 25.1380 | 32.2852 | 62.3035 | 22.9294 | 52.8183 |
| 92 | 15.4457 | 16.3995 | 30.0184 | 14.2040 | 29.8889 |
| 93 | 8.8328 | 8.0066 | 13.1789 | 8.1851 | 15.6849 |
| 94 | 4.6098 | 3.3968 | 5.1723 | 4.3019 | 7.4998 |
| 95 | 2.1440 | 1.2528 | 1.7755 | 2.0133 | 3.1979 |
| 96 | .8570 | .3958 | .5226 | .8089 | 1.1845 |
| 97 | .2895 | .1063 | .1268 | .2743 | .3757 |
| 98 | .0857 | .0206 | .0206 | .0816 | .1014 |
| 99 | .0206 | .0000 | .0000 | .0198 | .0198 |

52 COMMUTATION TABLES—ACTUARIES' $3\frac{1}{2}$ PER CENT.

TABLE III.
COMMUTATION TABLES. ACTUARIES' TABLE,
THREE AND ONE-HALF PER CENT.

| Age. | D | N | S | M | R |
|------|-----------|-------------|-------------|-----------|-----------|
| 10 | 70891.881 | 1506695 173 | 27483798 21 | 17543.524 | 561018 40 |
| 11 | 68031.548 | 1438663.630 | 25977103 03 | 17080.501 | 543474.87 |
| 12 | 65284.922 | 1373478 708 | 24538439.40 | 16634.459 | 526394.37 |
| 13 | 62647 540 | 1310731.168 | 23165060 69 | 16204.779 | 509759.91 |
| 14 | 60114.491 | 1250616.677 | 21854329 52 | 15790.248 | 493555.13 |
| 15 | 57681.122 | 1192935.555 | 20603712.84 | 15389.734 | 477764 89 |
| 16 | 55343 582 | 1137591.973 | 19410777.28 | 15002.764 | 462375.15 |
| 17 | 53097.620 | 1084494.353 | 18273185.31 | 14628.324 | 447372 39 |
| 18 | 50939.731 | 1033554 622 | 17188690 96 | 14266.007 | 432744.06 |
| 19 | 48866.026 | 984688.596 | 16155136.34 | 13914.901 | 418478 06 |
| 20 | 46873.313 | 937815.283 | 15170447.74 | 13574 664 | 404563.16 |
| 21 | 44958 039 | 892837.244 | 14232632.46 | 13244.476 | 390988.49 |
| 22 | 43117 289 | 849737.955 | 13339775.21 | 12924.046 | 377744.02 |
| 23 | 41348.262 | 808311 693 | 13490035.26 | 12613.092 | 364819.97 |
| 24 | 39647.821 | 768743.872 | 12681643.57 | 12310.902 | 352206.88 |
| 25 | 38013 408 | 730730 461 | 11912899 69 | 12017 238 | 339895.98 |
| 26 | 36442.563 | 694287.901 | 11182163.23 | 11731.869 | 327878.74 |
| 27 | 34932.512 | 659355 389 | 10487881.33 | 11454 176 | 316146 87 |
| 28 | 33481.008 | 625874.381 | 9828525 940 | 11183.964 | 304692.69 |
| 29 | 32085.513 | 593788.808 | 9222651.559 | 10920 678 | 293508.73 |
| 30 | 30743.976 | 563044.802 | 8608862.691 | 10664.153 | 282588.05 |
| 31 | 29454.070 | 533590.822 | 8045817.799 | 10413.992 | 271923.89 |
| 32 | 28213.917 | 505376.905 | 7512226.977 | 10163.781 | 261509.99 |
| 33 | 27021 337 | 478355.518 | 7005850.072 | 9931.340 | 251349.21 |
| 34 | 25874 763 | 452480.755 | 6528494.554 | 9698 4880 | 241408 86 |
| 35 | 24772 389 | 427708.366 | 6076013.797 | 9471 1055 | 231710.38 |
| 36 | 23712 374 | 403991.992 | 5648305.433 | 9243 8038 | 222239.27 |
| 37 | 22693 202 | 381302.790 | 5244309 441 | 9031.4993 | 212990.47 |
| 38 | 21713.407 | 359589.383 | 4863006 6.1 | 8819.1082 | 203958.97 |
| 39 | 20771.315 | 338818.008 | 4503417.263 | 8611.2853 | 195139 86 |
| 40 | 19865 580 | 318952 488 | 4164599 200 | 8407 9645 | 186528.57 |
| 41 | 18994.913 | 299957 575 | 384646 712 | 8209.0789 | 178120 61 |
| 42 | 18157.820 | 281799.755 | 3545639.137 | 8014 3254 | 169911.53 |
| 43 | 17352 658 | 264417 007 | 3253880 382 | 7823.1062 | 161897.20 |
| 44 | 16577.227 | 247809.870 | 2993442.285 | 7634.5685 | 154074.01 |
| 45 | 15829.291 | 232740 579 | 2751572.415 | 7447 2157 | 146439.44 |
| 46 | 15107 229 | 216733 350 | 2519531 836 | 7270.4454 | 138992 22 |
| 47 | 14408.955 | 202521.305 | 2302398 486 | 7073.0428 | 131731 78 |
| 48 | 13733.534 | 188797.861 | 2100074 031 | 6884 8307 | 124658.74 |
| 49 | 13079.903 | 175710.953 | 1911283.230 | 6695 6688 | 117773.86 |
| 50 | 12447.253 | 163253.705 | 1735572.272 | 6505.3351 | 111078.19 |
| 51 | 11834.628 | 151429 057 | 1572308.597 | 6313 6529 | 104572 85 |
| 52 | 11241 219 | 140187 833 | 1420379.510 | 6120.4295 | 98259.198 |
| 53 | 10666 156 | 129521 682 | 1280691.672 | 5925.5042 | 92138.769 |
| 54 | 10108 704 | 119412 978 | 1151169 990 | 5728.7445 | 86213.264 |

COMMUTATION TABLES—ACTUARIES' 3½ PER CENT. 53

TABLE III.—*Cont.*

COMMUTATION TABLES, ACTUARIES' TABLE,
THREE AND ONE-HALF PER CENT.

| Age. | D | N | S | M | R |
|------|----------|------------|-------------|-----------|-----------|
| 55 | 9568.466 | 109844.512 | 1031757.012 | 5530.3468 | 80484.520 |
| 56 | 9044.613 | 100799.899 | 921912.500 | 5330.0643 | 74954.173 |
| 57 | 8536.663 | 92263.236 | 821112.601 | 5127.9699 | 69624.109 |
| 58 | 8044.429 | 84218.807 | 728849.365 | 4924.4150 | 64496.139 |
| 59 | 7577.316 | 76651.491 | 644630.558 | 4719.3355 | 59571.724 |
| 60 | 7104.894 | 69546.597 | 567979.067 | 4512.8134 | 54852.388 |
| 61 | 6656.385 | 62890.212 | 498432.470 | 4304.5676 | 50339.575 |
| 62 | 6221.555 | 56668.657 | 435542.258 | 4094.8323 | 46035.007 |
| 63 | 5800.049 | 50868.608 | 378873.601 | 3883.7174 | 41940.175 |
| 64 | 5391.860 | 45476.748 | 328004.993 | 3671.6667 | 38056.458 |
| 65 | 4996.846 | 40479.902 | 282528.245 | 3458.9849 | 34384.791 |
| 66 | 4615.050 | 35864.852 | 242048.343 | 3246.1637 | 30925.806 |
| 67 | 4246.677 | 31618.175 | 206183.491 | 3033.8549 | 27679.612 |
| 68 | 3891.866 | 27726.309 | 174565.316 | 2822.6526 | 24645.788 |
| 69 | 3551.075 | 24175.234 | 146839.007 | 2613.4700 | 21823.135 |
| 70 | 3224.832 | 20950.402 | 122663.773 | 2407.3118 | 19209.665 |
| 71 | 2913.463 | 18036.939 | 101713.371 | 2204.9952 | 16802.353 |
| 72 | 2617.419 | 15419.490 | 83676.432 | 2007.5041 | 14597.358 |
| 73 | 2317.229 | 13082.261 | 68256.942 | 1815.7987 | 12589.854 |
| 74 | 2073.285 | 11008.976 | 55174.681 | 1630.8898 | 10774.055 |
| 75 | 1825.959 | 9183.017 | 44165.705 | 1453.6734 | 9143.1653 |
| 76 | 1595.611 | 7587.306 | 34982.688 | 1285.0851 | 7689.4919 |
| 77 | 1382.596 | 6204.800 | 27395.292 | 1126.0173 | 6404.4068 |
| 78 | 1186.937 | 5017.863 | 21190.492 | 977.1121 | 5278.3895 |
| 79 | 1008.672 | 4009.191 | 16172.629 | 838.9866 | 4301.2774 |
| 80 | 847.806 | 3161.385 | 12163.438 | 712.2393 | 3462.2908 |
| 81 | 704.125 | 2457.260 | 9002.0527 | 597.2182 | 2750.1605 |
| 82 | 577.2904 | 1879.9697 | 6544.7926 | 494.1945 | 2152.8423 |
| 83 | 466.7443 | 1413.2254 | 4664.8229 | 403.1702 | 1658.6478 |
| 84 | 371.6310 | 1041.5914 | 3251.5975 | 323.8407 | 1255.4776 |
| 85 | 290.9572 | 750.6372 | 2210.0031 | 255.7341 | 931.6369 |
| 86 | 223.4621 | 527.1751 | 1459.3659 | 198.0782 | 675.9028 |
| 87 | 167.8707 | 359.3044 | 932.1908 | 150.0435 | 477.8246 |
| 88 | 122.9051 | 236.39934 | 572.8864 | 110.7546 | 327.7810 |
| 89 | 87.24784 | 149.15150 | 336.48707 | 79.25367 | 217.0264 |
| 90 | 59.65039 | 89.50111 | 187.33557 | 54.60661 | 137.7727 |
| 91 | 38.97561 | 50.52550 | 97.83446 | 35.94900 | 83.16612 |
| 92 | 24.06371 | 26.46179 | 47.32866 | 22.35512 | 47.21712 |
| 93 | 13.82760 | 12.63419 | 20.84717 | 12.93277 | 24.86200 |
| 94 | 7.25115 | 5.38274 | 8.21298 | 6.82421 | 11.92923 |
| 95 | 3.38888 | 1.99386 | 2.83024 | 3.20686 | 5.10502 |
| 96 | 1.36122 | 0.63264 | 0.83638 | 1.29379 | 1.89816 |
| 97 | 0.46209 | 0.17055 | 0.20374 | 0.4070 | 0.60437 |
| 98 | 0.13737 | 0.03218 | 0.03318 | 0.13161 | 0.16367 |
| 99 | 0.03318 | 0.00000 | 0.00000 | 0.03206 | 0.03206 |

54 COMMUTATION TABLES—ACTUARIES' 3 PER CENT.

TABLE IV.
COMMUTATION TABLES, ACTUARIES' TABLE,
THREE PER CENT.

| Age. | D | N | S | M | R |
|------|-----------|-------------|-------------|-----------|-----------|
| 10 | 74409.391 | 1737895.587 | 34875249.57 | 21623.8c8 | 743735.36 |
| 11 | 71753.769 | 1666141.818 | 33137353.98 | 21135.452 | 722111.55 |
| 12 | 69191.125 | 1595250.693 | 31471212.16 | 20662.722 | 700976.10 |
| 13 | 66718.250 | 1530232.443 | 29874261.47 | 20205.122 | 680313.37 |
| 14 | 64331.391 | 1465921.052 | 28344029.03 | 19761.512 | 660108.25 |
| 15 | 62026.971 | 1403874.081 | 26878127.98 | 19330.823 | 640346.74 |
| 16 | 59802.215 | 1344071.856 | 25474253.90 | 18912.678 | 621015.92 |
| 17 | 57653.813 | 1286418.033 | 24130182.03 | 18506.107 | 602103.24 |
| 18 | 55579.278 | 1230838.755 | 22813764.00 | 18110.700 | 583597.13 |
| 19 | 53575.521 | 1177263.234 | 21612925.25 | 17725.847 | 565486.34 |
| 20 | 51640.230 | 1126623.004 | 20435662.02 | 17351.009 | 547760.50 |
| 21 | 49770.613 | 1075852.391 | 19310039.02 | 16985.475 | 530409.49 |
| 22 | 47964.530 | 1027887.861 | 18234186.63 | 16629.022 | 513424.01 |
| 23 | 46219.915 | 98667.946 | 17206208.77 | 16281.432 | 495794.99 |
| 24 | 44534.270 | 937133.676 | 16224630.82 | 15941.998 | 480513.56 |
| 25 | 42905.695 | 894227.981 | 15297497.14 | 15610.539 | 464571.56 |
| 26 | 41332.357 | 852895.624 | 14393269.16 | 15286.880 | 448961.02 |
| 27 | 39812.019 | 813083.605 | 13540373.54 | 14970.398 | 433674.14 |
| 28 | 38342.995 | 774740.610 | 12727289.93 | 14660.947 | 418703.74 |
| 29 | 36923.226 | 737817.384 | 11952549.32 | 14357.964 | 404042.80 |
| 30 | 35551.161 | 702265.223 | 11214731.94 | 14061.333 | 389684.83 |
| 31 | 34224.900 | 668041.323 | 10512465.72 | 13770.543 | 375623.50 |
| 32 | 32943.218 | 635098.305 | 9844424.394 | 13485.503 | 361852.96 |
| 33 | 31703.760 | 603394.545 | 9209326.089 | 13205.750 | 348367.45 |
| 34 | 30505.816 | 572888.729 | 8605931.544 | 12931.216 | 335161.70 |
| 35 | 29347.917 | 543540.812 | 8033242.815 | 12661.835 | 322230.49 |
| 36 | 28228.483 | 515312.320 | 7489502.003 | 12397.196 | 309568.65 |
| 37 | 27146.347 | 488165.982 | 6974189.674 | 12137.249 | 297171.46 |
| 38 | 26100.374 | 462095.608 | 6486023.612 | 11881.946 | 285034.21 |
| 39 | 25089.146 | 436976.462 | 6023958.084 | 11630.922 | 273152.26 |
| 40 | 24111.615 | 412964.847 | 5586981.622 | 11384.144 | 261521.34 |
| 41 | 23166.768 | 389693.009 | 5174116.775 | 11141.577 | 250137.19 |
| 42 | 22253.327 | 367444.752 | 4784418.696 | 10902.897 | 238995.62 |
| 43 | 21369.797 | 346274.955 | 4416973.944 | 10657.521 | 228092.72 |
| 44 | 20513.953 | 325561.002 | 4070898.989 | 10434.099 | 217425.20 |
| 45 | 19683.489 | 305877.513 | 3745337.987 | 10201.128 | 206991.10 |
| 46 | 18876.807 | 287000.704 | 3434650.474 | 9967.7518 | 196789.97 |
| 47 | 18091.700 | 268920.004 | 3152459.770 | 9732.4545 | 186822.22 |
| 48 | 17327.356 | 251581.618 | 2883550.766 | 9495.0537 | 177089.76 |
| 49 | 16582.791 | 234938.857 | 2631969.118 | 9255.1635 | 167594.71 |
| 50 | 15857.320 | 219141.537 | 2396970.261 | 9012.6917 | 158339.54 |
| 51 | 15150.075 | 203991.462 | 2177828.724 | 8767.3105 | 149326.85 |
| 52 | 14460.256 | 189531.205 | 1973837.262 | 8518.7557 | 140559.54 |
| 53 | 13787.122 | 175714.084 | 1784305.056 | 8266.7941 | 132040.78 |
| 54 | 13129.988 | 162614.096 | 1608561.972 | 8011.2270 | 123773.99 |

COMMUTATION TABLES—ACTUARIES' 3 PER CENT. 55

TABLE IV. *Cont.*
COMMUTATION TABLES, ACTUARIES' TABLE,
THREE PER CENT.

| Age. | D | N | S | M | R |
|------|------------|-------------|-------------|-----------|-----------|
| 56 | 12488.615 | 150125.481 | 1445947.876 | 7752.2815 | 115762.76 |
| 57 | 11862.195 | 138263.286 | 1295822.395 | 7489.6069 | 108010.48 |
| 58 | 11250.356 | 127012.990 | 1157559.109 | 7223.2693 | 100520.87 |
| 59 | 10653.112 | 116359.8179 | 1030516.179 | 6953.7048 | 93297.603 |
| 60 | 10069.9246 | 106289.8933 | 914186.361 | 6680.8029 | 86343.898 |
| 61 | 9500.4702 | 96789.4231 | 807896.468 | 6404.6472 | 79663.095 |
| 62 | 8943.9451 | 87845.4780 | 711107.045 | 6124.8348 | 73258.448 |
| 63 | 8400.2602 | 79445.2178 | 623261.567 | 5841.6530 | 67133.613 |
| 64 | 7860.1640 | 71576.0538 | 543816.349 | 5555.2249 | 61291.960 |
| 65 | 7350.8705 | 64225.1833 | 472240.295 | 5266.1305 | 55736.735 |
| 66 | 6845.4050 | 57379.7783 | 408015.112 | 4974.7681 | 50470.605 |
| 67 | 6353.0557 | 51026.7226 | 350035.334 | 4681.7995 | 45495.837 |
| 68 | 5874.3331 | 45152.3895 | 299508.611 | 4388.1174 | 40814.037 |
| 69 | 5409.6665 | 39742.7230 | 254456.222 | 4094.5478 | 35425.920 |
| 70 | 4959.9295 | 34782.7935 | 214713.499 | 3802.3741 | 32331.372 |
| 71 | 4526.1183 | 30256.6752 | 179930.706 | 3513.0269 | 28528.998 |
| 72 | 4108.9560 | 26147.7192 | 149674.031 | 3227.6930 | 25015.971 |
| 73 | 3709.3972 | 22438.3220 | 123526.312 | 2947.8127 | 21788.278 |
| 74 | 3328.3564 | 19109.9656 | 101087.990 | 2674.8128 | 18840.465 |
| 75 | 2966.8145 | 16143.1511 | 81978.024 | 2410.2132 | 16165.652 |
| 76 | 2625.5795 | 13517.5716 | 65834.873 | 2155.3993 | 13755.439 |
| 77 | 2305.5134 | 11212.0582 | 52317.301 | 1911.7973 | 11600.049 |
| 78 | 2007.4097 | 9204.6485 | 41105.2426 | 1680.8446 | 9698.2516 |
| 79 | 1731.6945 | 7472.9540 | 31900.5041 | 1461.5977 | 8007.4070 |
| 80 | 1478.7588 | 5994.1952 | 24427.6401 | 1261.0997 | 6543.8093 |
| 81 | 1248.9556 | 4745.23959 | 18433.4449 | 1074.3672 | 5282.7006 |
| 82 | 1042.3246 | 3702.01499 | 13688.2053 | 904.1135 | 4208.3424 |
| 83 | 858.71807 | 2844.19692 | 9985.2203 | 750.8060 | 3304.2288 |
| 84 | 697.65114 | 2146.54578 | 7141.0934 | 614.8103 | 2553.3648 |
| 85 | 558.18032 | 1588.36546 | 4994.5476 | 495.6595 | 1938.5525 |
| 86 | 439.13164 | 1149.23382 | 3406.1821 | 392.8685 | 1442.8930 |
| 87 | 338.90088 | 810.33294 | 2256.9483 | 305.42803 | 1050.0245 |
| 88 | 255.82730 | 554.50564 | 1446.6154 | 232.22536 | 744.5965 |
| 89 | 188.21086 | 366.29478 | 892.1008 | 172.06020 | 512.3711 |
| 90 | 134.25576 | 232.03902 | 525.8150 | 123.58696 | 340.3109 |
| 91 | 92.23475 | 139.80427 | 293.7760 | 85.47631 | 216.7239 |
| 92 | 60.55882 | 79.24545 | 153.9717 | 56.48683 | 131.2476 |
| 93 | 37.57077 | 41.67458 | 74.72624 | 35.26264 | 74.76080 |
| 94 | 21.69390 | 19.98078 | 33.05156 | 20.48007 | 39.49816 |
| 95 | 11.43190 | 8.54888 | 13.07078 | 10.84993 | 19.01809 |
| 96 | 5.36850 | 3.18038 | 4.52190 | 5.11950 | 8.16816 |
| 97 | 2.16684 | 1.01354 | 1.34152 | 2.07420 | 3.04866 |
| 98 | 0.73915 | 0.27439 | 0.32798 | 0.70962 | 0.97446 |
| 99 | 0.22080 | 0.05359 | 0.05359 | 0.21281 | 0.26484 |
| 100 | 0.05359 | 0.00000 | 0.00000 | 0.05203 | 0.05203 |

ACTUARIES' TABLE.

TABLE V.
ACTUARIES' TABLE. VALUATION COLUMNS.

| Age. | THREE PER CENT. | | THREE AND ONE-HALF PER CENT. | | FOUR PER CENT. | |
|------|-----------------|---------|------------------------------|---------|----------------|---------|
| | u_x . | c_x . | u_x . | c_x . | u_x . | c_x . |
| 10 | 1.03701 | .006563 | 1.04204 | .006531 | 1.04708 | .006500 |
| 11 | 1.03704 | .006588 | 1.04207 | .006556 | 1.04710 | .006525 |
| 12 | 1.03706 | .006613 | 1.04210 | .006582 | 1.04713 | .006550 |
| 13 | 1.03710 | .006664 | 1.04214 | .006617 | 1.04717 | .006585 |
| 14 | 1.03715 | .006695 | 1.04219 | .006663 | 1.04722 | .006630 |
| 15 | 1.03720 | .006741 | 1.04224 | .006709 | 1.04727 | .006677 |
| 16 | 1.03726 | .006799 | 1.04230 | .006766 | 1.04733 | .006733 |
| 17 | 1.03732 | .006857 | 1.04236 | .006824 | 1.04740 | .006791 |
| 18 | 1.03740 | .006926 | 1.04244 | .006892 | 1.04747 | .006860 |
| 19 | 1.03748 | .006996 | 1.04251 | .006963 | 1.04755 | .006929 |
| 20 | 1.03756 | .007078 | 1.04260 | .007041 | 1.04763 | .007010 |
| 21 | 1.03765 | .007162 | 1.04269 | .007127 | 1.04773 | .007093 |
| 22 | 1.03775 | .007247 | 1.04278 | .007212 | 1.04782 | .007177 |
| 23 | 1.03785 | .007344 | 1.04289 | .007308 | 1.04793 | .007273 |
| 24 | 1.03796 | .007443 | 1.04300 | .007407 | 1.04803 | .007371 |
| 25 | 1.03807 | .007544 | 1.04310 | .007507 | 1.04814 | .007471 |
| 26 | 1.03819 | .007657 | 1.04323 | .007620 | 1.04827 | .007583 |
| 27 | 1.03831 | .007773 | 1.04335 | .007735 | 1.04839 | .007698 |
| 28 | 1.03845 | .007902 | 1.04349 | .007864 | 1.04854 | .007826 |
| 29 | 1.03859 | .008034 | 1.04364 | .007995 | 1.04868 | .007956 |
| 30 | 1.03875 | .008179 | 1.04379 | .008140 | 1.04884 | .008101 |
| 31 | 1.03891 | .008329 | 1.04396 | .008288 | 1.04900 | .008248 |
| 32 | 1.03909 | .008492 | 1.04413 | .008451 | 1.04918 | .008410 |
| 33 | 1.03927 | .008659 | 1.04431 | .008617 | 1.04936 | .008576 |
| 34 | 1.03945 | .008831 | 1.04450 | .008783 | 1.04955 | .008746 |
| 35 | 1.03966 | .009017 | 1.04470 | .008974 | 1.04975 | .008931 |
| 36 | 1.03986 | .009209 | 1.04491 | .009161 | 1.04996 | .009122 |
| 37 | 1.04007 | .009405 | 1.04512 | .009359 | 1.05017 | .009314 |
| 38 | 1.04031 | .009611 | 1.04536 | .009571 | 1.05040 | .009525 |
| 39 | 1.04054 | .009836 | 1.04559 | .009788 | 1.05064 | .009741 |
| 40 | 1.04078 | .010067 | 1.04584 | .010011 | 1.05089 | .009963 |
| 41 | 1.04105 | .010303 | 1.04610 | .010253 | 1.05116 | .010204 |
| 42 | 1.04134 | .010577 | 1.04640 | .010526 | 1.05145 | .010476 |
| 43 | 1.04172 | .010923 | 1.04678 | .010870 | 1.05183 | .010818 |
| 44 | 1.04219 | .011357 | 1.04725 | .011302 | 1.05231 | .011247 |
| 45 | 1.04271 | .011856 | 1.04779 | .011799 | 1.05286 | .011742 |
| 46 | 1.04339 | .012465 | 1.04846 | .012405 | 1.05353 | .012345 |
| 47 | 1.04411 | .013122 | 1.04918 | .013059 | 1.05425 | .012996 |
| 48 | 1.04491 | .013844 | 1.04997 | .013777 | 1.05504 | .013711 |
| 49 | 1.04575 | .014622 | 1.05083 | .014552 | 1.05590 | .014482 |
| 50 | 1.04668 | .015474 | 1.05176 | .015400 | 1.05684 | .015326 |
| 51 | 1.04770 | .016406 | 1.05279 | .016327 | 1.05788 | .016248 |
| 52 | 1.04882 | .017425 | 1.05391 | .017340 | 1.05901 | .017257 |
| 53 | 1.05005 | .018537 | 1.05515 | .018447 | 1.06021 | .018359 |
| 54 | 1.05136 | .019722 | 1.05646 | .019606 | 1.06156 | .019532 |

TABLE V.—Cont.
ACTUARIES' TABLE. VALUATION COLUMNS.

| Age. | THREE PER CENT. | | THREE AND ONE-HALF PER CENT. | | FOUR PER CENT. | |
|------|------------------|------------------|------------------------------|------------------|------------------|------------------|
| | U ₁ . | C ₁ . | U ₁ . | C ₁ . | U ₂ . | C ₂ . |
| 55 | 1.05281 | .021033 | 1.05792 | .020932 | 1.06303 | .020831 |
| 56 | 1.05438 | .022453 | 1.05950 | .022344 | 1.06462 | .022237 |
| 57 | 1.05606 | .023960 | 1.06119 | .023845 | 1.06632 | .023730 |
| 58 | 1.05791 | .025617 | 1.06305 | .025493 | 1.06819 | .025371 |
| 59 | 1.05994 | .027423 | 1.06508 | .027291 | 1.07023 | .027160 |
| 60 | 1.06222 | .029453 | 1.06738 | .029310 | 1.07254 | .029169 |
| 61 | 1.06472 | .031661 | 1.06989 | .031509 | 1.07506 | .031357 |
| 62 | 1.06749 | .034098 | 1.07267 | .033933 | 1.07786 | .033770 |
| 63 | 1.07051 | .036738 | 1.07570 | .036560 | 1.08090 | .036384 |
| 64 | 1.07384 | .039636 | 1.07905 | .039445 | 1.08427 | .039255 |
| 65 | 1.07750 | .042798 | 1.08273 | .042591 | 1.08796 | .042386 |
| 66 | 1.08149 | .046227 | 1.08674 | .046004 | 1.09199 | .045782 |
| 67 | 1.08589 | .049975 | 1.09117 | .049733 | 1.09644 | .049494 |
| 68 | 1.09067 | .054010 | 1.09597 | .053749 | 1.10126 | .053490 |
| 69 | 1.09585 | .058337 | 1.10117 | .058055 | 1.10648 | .057776 |
| 70 | 1.10153 | .063042 | 1.10687 | .062737 | 1.11222 | .062436 |
| 71 | 1.10772 | .068115 | 1.11309 | .067786 | 1.11847 | .067460 |
| 72 | 1.11448 | .073597 | 1.11989 | .073241 | 1.12530 | .072889 |
| 73 | 1.12186 | .079498 | 1.12731 | .079114 | 1.13275 | .078734 |
| 74 | 1.12997 | .085891 | 1.13545 | .085476 | 1.14093 | .085065 |
| 75 | 1.13883 | .092777 | 1.14435 | .092329 | 1.14988 | .091885 |
| 76 | 1.14850 | .100174 | 1.15408 | .099690 | 1.15965 | .099211 |
| 77 | 1.15922 | .108222 | 1.16484 | .107700 | 1.17047 | .107182 |
| 78 | 1.17105 | .116936 | 1.17673 | .116371 | 1.18242 | .115812 |
| 79 | 1.18400 | .126276 | 1.18974 | .125666 | 1.19549 | .125062 |
| 80 | 1.19824 | .136317 | 1.20406 | .135658 | 1.20987 | .135006 |
| 81 | 1.21381 | .147025 | 1.21971 | .146315 | 1.22560 | .145611 |
| 82 | 1.23087 | .158441 | 1.23684 | .157671 | 1.24282 | .156917 |
| 83 | 1.24987 | .170788 | 1.25593 | .169961 | 1.26200 | .166146 |
| 84 | 1.26980 | .184153 | 1.27727 | .183256 | 1.28344 | .182383 |
| 85 | 1.29575 | .199121 | 1.30204 | .198159 | 1.30833 | .197207 |
| 86 | 1.32472 | .216000 | 1.33116 | .214956 | 1.33759 | .213923 |
| 87 | 1.35926 | .235179 | 1.36585 | .234042 | 1.37246 | .232917 |
| 88 | 1.40188 | .257548 | 1.40869 | .256303 | 1.41549 | .255071 |
| 89 | 1.46643 | .283866 | 1.46265 | .282495 | 1.46972 | .281137 |
| 90 | 1.52306 | .314301 | 1.53045 | .312782 | 1.53785 | .311279 |
| 91 | 1.61186 | .350473 | 1.61968 | .348780 | 1.62751 | .347103 |
| 92 | 1.73186 | .393459 | 1.74027 | .391558 | 1.74867 | .389676 |
| 93 | 1.89766 | .443910 | 1.90687 | .441765 | 1.91609 | .439941 |
| 94 | 2.12944 | .501266 | 2.13981 | .498841 | 2.15011 | .496446 |
| 95 | 2.47757 | .567252 | 2.48959 | .564511 | 2.50162 | .561798 |
| 96 | 2.93153 | .629756 | 2.94579 | .626714 | 2.95999 | .623701 |
| 97 | 3.34760 | .672144 | 3.36383 | .668897 | 3.37999 | .665680 |
| 98 | 4.12017 | .728155 | 4.14014 | .724638 | 4.15999 | .721154 |
| 99 | | .970874 | | .966183 | | .961538 |

INTRODUCTION to H^M AND H^F TABLES.

THE Healthy Male and Healthy Female Tables, sometimes known as the Institute of Actuaries' Tables, which must not be confused with the Actuaries' Tables, and often referred to as the Twenty Offices' Tables, because the mortality statistics of twenty British offices were employed in making it, was published in 1869. It was the work of a number of English and Scotch actuaries, under the joint control of the Institute of Actuaries of London and of the Faculty of Actuaries of Scotland. The famous Woolhouse had charge, and his method of graduation, the most perfect adaptation of the system of graduating by differences, was adopted; indeed, it was invented for the work. Very full tables, commutation and derived, were published by the Institute of Actuaries in connection with this table.

Just as it thus reached perfection, the old system of graduating was ready to be discarded. What had formerly seemed nearly a chimera, viz., the idea of discovering a law of mortality and applying that law in graduation, was realized. Makeham's formula became recognized as offering great advantages over all that preceded it. The consequence was that from the same data another set of mortality and commutation tables were evolved by applying Makeham's formula instead of Woolhouse's. These tables were published in the Text-Book of the Institute of Actuaries, which appeared in 1887. They are reproduced here by special permission of the Institute.

In the following pages the results of both systems of graduation for male lives are presented. We also present a mortality table known as H^{Mb} which illustrates the mortality, the first five years of insurance being eliminated.

H^M (WOOLHOUSE) TABLE.

TABLE I.
 INSTITUTE OF ACTUARIES' MORTALITY TABLES.
 MALE LIVES, H^M WOOLHOUSE'S FORMULA.

| Age. | No. Living. | Decrement. | Probability of Surviving. | Probability of Dying. |
|------|-------------|------------|---------------------------|-----------------------|
| 10 | 100 000 | 499 | .995 100 0 | .004 900 0 |
| 11 | 99 510 | 397 | .996 010 5 | .003 989 5 |
| 12 | 99 113 | 329 | .996 680 6 | .003 319 4 |
| 13 | 98 784 | 288 | .997 084 5 | .002 915 5 |
| 14 | 98 496 | 272 | .997 238 5 | .002 761 5 |
| 15 | 98 224 | 282 | .997 129 0 | .002 871 0 |
| 16 | 97 942 | 318 | .996 753 2 | .003 246 8 |
| 17 | 97 624 | 379 | .996 117 8 | .003 882 2 |
| 18 | 97 245 | 466 | .995 208 0 | .004 792 0 |
| 19 | 96 779 | 556 | .994 255 0 | .005 745 0 |
| 20 | 96 223 | 609 | .993 671 0 | .006 329 0 |
| 21 | 95 614 | 643 | .993 275 0 | .006 725 0 |
| 22 | 94 971 | 650 | .993 155 8 | .006 844 2 |
| 23 | 94 321 | 638 | .993 235 9 | .006 764 1 |
| 24 | 93 683 | 622 | .993 360 6 | .006 639 4 |
| 25 | 93 061 | 617 | .993 369 9 | .006 630 1 |
| 26 | 92 444 | 618 | .993 314 9 | .006 685 1 |
| 27 | 91 826 | 634 | .993 095 6 | .006 904 4 |
| 28 | 91 192 | 654 | .992 828 3 | .007 171 7 |
| 29 | 90 538 | 673 | .992 566 7 | .007 433 3 |
| 30 | 89 865 | 694 | .992 277 3 | .007 722 7 |
| 31 | 89 171 | 706 | .992 082 6 | .007 917 4 |
| 32 | 88 465 | 717 | .991 895 1 | .008 101 9 |
| 33 | 87 748 | 727 | .991 714 9 | .008 285 1 |
| 34 | 87 021 | 740 | .991 496 3 | .008 503 7 |
| 35 | 86 281 | 757 | .991 226 3 | .008 773 7 |
| 36 | 85 524 | 779 | .990 891 4 | .009 108 6 |
| 37 | 84 745 | 802 | .990 536 3 | .009 463 7 |
| 38 | 83 943 | 821 | .990 219 6 | .009 780 4 |
| 39 | 83 122 | 838 | .989 918 4 | .010 081 6 |
| 40 | 82 284 | 848 | .989 694 2 | .010 305 8 |
| 41 | 81 436 | 854 | .989 513 2 | .010 486 8 |
| 42 | 80 582 | 865 | .989 265 6 | .010 734 4 |
| 43 | 79 717 | 887 | .988 873 1 | .011 126 9 |
| 44 | 78 830 | 911 | .988 443 5 | .011 556 5 |
| 45 | 77 919 | 950 | .987 807 9 | .012 192 1 |
| 46 | 76 969 | 996 | .987 059 7 | .012 940 3 |
| 47 | 75 973 | 1041 | .986 297 8 | .013 702 2 |
| 48 | 74 932 | 1082 | .985 560 2 | .014 439 8 |
| 49 | 73 850 | 1124 | .984 780 0 | .015 220 0 |
| 50 | 72 726 | 1160 | .984 019 7 | .015 950 3 |
| 51 | 71 566 | 1193 | .983 330 1 | .016 669 9 |
| 52 | 70 373 | 1235 | .982 450 7 | .017 549 3 |
| 53 | 69 138 | 1286 | .981 309 5 | .018 600 5 |
| 54 | 67 852 | 1339 | .980 265 9 | .019 734 1 |

TABLE I.—Cont.
 INSTITUTE OF ACTUARIES' MORTALITY TABLES.
 MALE LIVES, H^M WOOLHOUSE'S FORMULA.

| Age. | No. Living. | Decrement. | Probability of Surviving. | Probability of Dying. |
|------|-------------|------------|---------------------------|-----------------------|
| 55 | 66 513 | 1399 | .978 966 5 | .021 033 5 |
| 56 | 65 114 | 1462 | .977 547 1 | .022 452 9 |
| 57 | 63 652 | 1527 | .976 010 2 | .023 989 8 |
| 58 | 62 125 | 1592 | .974 374 2 | .025 625 8 |
| 59 | 60 533 | 1667 | .972 461 3 | .027 538 7 |
| 60 | 58 866 | 1747 | .970 322 4 | .029 677 6 |
| 61 | 57 119 | 1830 | .967 961 6 | .032 038 4 |
| 62 | 55 289 | 1915 | .965 363 8 | .034 636 2 |
| 63 | 53 374 | 2001 | .962 509 8 | .037 490 2 |
| 64 | 51 373 | 2076 | .959 589 7 | .040 410 3 |
| 65 | 49 297 | 2141 | .956 569 4 | .043 430 6 |
| 66 | 47 156 | 2195 | .953 431 2 | .046 568 8 |
| 67 | 44 960 | 2243 | .950 111 2 | .049 888 8 |
| 68 | 42 717 | 2274 | .946 765 9 | .053 234 1 |
| 69 | 40 443 | 2319 | .942 660 0 | .057 340 0 |
| 70 | 38 124 | 2371 | .937 808 2 | .062 191 8 |
| 71 | 35 753 | 2433 | .931 919 8 | .068 050 2 |
| 72 | 33 320 | 2497 | .925 660 0 | .074 910 0 |
| 73 | 30 823 | 2554 | .917 137 8 | .082 860 2 |
| 74 | 28 269 | 2578 | .908 804 7 | .091 195 3 |
| 75 | 25 601 | 2527 | .901 638 7 | .098 361 3 |
| 76 | 23 164 | 2464 | .893 628 1 | .106 271 9 |
| 77 | 20 700 | 2374 | .885 314 0 | .114 686 0 |
| 78 | 18 326 | 2258 | .876 787 1 | .123 212 9 |
| 79 | 16 068 | 2138 | .866 940 5 | .133 059 5 |
| 80 | 13 930 | 2015 | .855 348 1 | .144 651 9 |
| 81 | 11 915 | 1883 | .841 963 9 | .158 036 1 |
| 82 | 10 032 | 1719 | .828 648 3 | .171 351 7 |
| 83 | 8 313 | 1545 | .814 146 5 | .185 853 5 |
| 84 | 6 768 | 1346 | .801 122 9 | .198 877 1 |
| 85 | 5 422 | 1138 | .790 114 3 | .209 885 7 |
| 86 | 4 284 | 941 | .780 345 5 | .219 654 5 |
| 87 | 3 343 | 773 | .768 770 6 | .231 229 4 |
| 88 | 2 570 | 615 | .760 700 4 | .239 299 6 |
| 89 | 1 955 | 495 | .746 803 1 | .253 196 9 |
| 90 | 1 460 | 408 | .720 547 9 | .279 452 1 |
| 91 | 1 052 | 329 | .687 262 3 | .312 737 7 |
| 92 | 723 | 254 | .618 686 0 | .351 314 0 |
| 93 | 469 | 195 | .584 221 7 | .415 778 3 |
| 94 | 274 | 139 | .492 700 8 | .507 299 2 |
| 95 | 135 | 86 | .362 962 9 | .637 037 1 |
| 96 | 49 | 47 | .183 673 5 | .816 326 5 |
| 97 | 9 | 9 | .000 000 0 | 1.000 000 0 |
| 98 | 0 | | | |

H^M (WOOLHOUSE) TABLE.

TABLE II.
COMMUTATION COLUMNS. H^M TABLES,
WOOLHOUSE'S FORMULA. FOUR AND ONE-HALF PER CENT.

| Age. | D _t | N _t | S _t | M _t | R _t |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 64 392.8 | 1 188 642 | 20 229 255 | 10 434.33 | 327,960.1 |
| 11 | 61 317.9 | 1 127 324 | 19 040 613 | 10 132.39 | 317 525.8 |
| 12 | 58 443.4 | 1 068 881 | 17 913 289 | 9 898.29 | 307 393.4 |
| 13 | 55 741.0 | 1 013 140 | 16 844 408 | 9 712 65 | 297 495.1 |
| 14 | 53 185.2 | 959 954.7 | 15 831 268 | 9 557.14 | 287 782.5 |
| 15 | 50 754.3 | 909 200.3 | 14 871 313 | 9 416.59 | 278 225.4 |
| 16 | 48 429.3 | 860 771.0 | 13 962 113 | 9 277 15 | 268 808.8 |
| 17 | 46 193.4 | 814 577.6 | 13 101 342 | 9 126 68 | 259 531.6 |
| 18 | 44 032.6 | 770 545.1 | 12 286 764 | 8 955.07 | 250 404.9 |
| 19 | 41 934.5 | 728 610.6 | 11 516 219 | 8 753.15 | 241 449.9 |
| 20 | 39 898.2 | 688 712.4 | 10 787 609 | 8 522.61 | 232 696.7 |
| 21 | 37 938.4 | 650 773.9 | 10 098 896 | 8 280.96 | 224 174.1 |
| 22 | 36 060.6 | 614 713.3 | 9 448 122 | 8 036 81 | 215 893.2 |
| 23 | 34 271.5 | 580 441.8 | 8 833 409 | 7 800 64 | 207 859.3 |
| 24 | 32 573.9 | 547 807.9 | 8 252 967 | 7 578.80 | 200 055.7 |
| 25 | 30 964.2 | 516 903.7 | 7 705 099 | 7 371.84 | 192 476.9 |
| 26 | 29 434.4 | 487 499.3 | 7 188 196 | 7 175.39 | 185 105.1 |
| 27 | 27 978.6 | 459 490.7 | 6 700 726 | 6 987 09 | 177 929.7 |
| 28 | 26 588.9 | 432 901.8 | 6 241 236 | 6 802.23 | 170 942.6 |
| 29 | 25 261.5 | 407 640.3 | 5 808 334 | 6 619.76 | 164 140.4 |
| 30 | 23 994.0 | 383 616.3 | 5 400 694 | 6 440.07 | 157 520.6 |
| 31 | 22 783.4 | 360 862.9 | 5 017 047 | 6 262.75 | 151 080.5 |
| 32 | 21 629.7 | 339 233.2 | 4 656 185 | 6 090.13 | 144 817.8 |
| 33 | 20 530.5 | 318 702.7 | 4 316 951 | 5 922.38 | 138 727.6 |
| 34 | 19 483.7 | 299 219.1 | 3 998 249 | 5 759.60 | 132 805.3 |
| 35 | 18 486.1 | 280 733.0 | 3 699 030 | 5 601.05 | 127 045.7 |
| 36 | 17 534.8 | 263 198.2 | 3 418 297 | 5 445.85 | 121 444.6 |
| 37 | 16 626.9 | 246 571.3 | 3 155 098 | 5 293.01 | 115 998.8 |
| 38 | 15 760.3 | 230 810.9 | 2 908 527 | 5 142.43 | 110 705.8 |
| 39 | 14 934.2 | 215 876.8 | 2 677 716 | 4 994.93 | 105 593.3 |
| 40 | 14 147.0 | 201 729.8 | 2 461 839 | 4 850 85 | 100 568.4 |
| 41 | 13 398.3 | 188 331.5 | 2 260 110 | 4 711.31 | 95 717.54 |
| 42 | 12 686.9 | 175 644.7 | 2 071 778 | 4 576.88 | 91 006.21 |
| 43 | 12 010.2 | 163 634.5 | 1 896 133 | 4 446 56 | 86 429.33 |
| 44 | 11 365.1 | 152 269.3 | 1 732 499 | 4 318 68 | 81 982.77 |
| 45 | 10 750.1 | 141 519.3 | 1 580 230 | 4 192.99 | 77 664.09 |
| 46 | 10 161.7 | 131 357.6 | 1 438 710 | 4 067.57 | 73 471.10 |
| 47 | 9 598.20 | 121 759.3 | 1 307 353 | 3 941.74 | 69 403.53 |
| 48 | 9 059.11 | 112 700.2 | 1 185 594 | 3 815 88 | 65 461.79 |
| 49 | 8 543.82 | 104 156.4 | 1 072 893 | 3 690.70 | 61 645.91 |
| 50 | 8 051.47 | 96 104.90 | 968 737.0 | 3 566 27 | 57 955.20 |
| 51 | 7 581.86 | 88 523.03 | 872 632.1 | 3 443 37 | 54 388.94 |
| 52 | 7 134.43 | 81 388.61 | 784 102.1 | 3 322.43 | 50 945.56 |
| 53 | 6 707.39 | 74 681.22 | 702 720.4 | 3 202 61 | 47 623.14 |
| 54 | 6 299.17 | 68 382.05 | 628 039.2 | 3 083.23 | 44 420.52 |

TABLE II. —Cont.
 COMMUTATION COLUMNS. H^M TABLES.
 WOOLHOUSE'S FORMULA. FOUR AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 5 908.95 | 62 473.10 | 559 657.2 | 2 064.27 | 41 337.29 |
| 56 | 5 535.57 | 56 937.53 | 497 184.1 | 2 845.34 | 38 373.02 |
| 57 | 5 178.26 | 51 759.28 | 440 246.5 | 2 726.40 | 35 527.69 |
| 58 | 4 836.39 | 46 922.89 | 388 487.3 | 2 607.52 | 32 801.29 |
| 59 | 4 509.53 | 42 413.36 | 341 564.4 | 2 488.92 | 30 193.76 |
| 60 | 4 196.50 | 38 216.86 | 299 151.0 | 2 370.09 | 27 704.84 |
| 61 | 3 896.61 | 34 320.25 | 260 934.2 | 2 250.91 | 25 334.75 |
| 62 | 3 609.35 | 30 710.90 | 226 613.9 | 2 131.44 | 23 083.85 |
| 63 | 3 334.29 | 27 376.61 | 195 903.0 | 2 011.81 | 20 952.40 |
| 64 | 3 071.09 | 24 305.52 | 168 526.4 | 1 892.19 | 18 940.59 |
| 65 | 2 820.08 | 21 485.44 | 144 220.9 | 1 773.43 | 17 048.40 |
| 66 | 2 581.44 | 18 904.00 | 122 735.4 | 1 656.23 | 15 274.97 |
| 67 | 2 355.24 | 16 548.77 | 103 831.4 | 1 541.19 | 13 618.74 |
| 68 | 2 141.38 | 14 407.39 | 87 282.66 | 1 428.75 | 12 077.55 |
| 69 | 1 940.08 | 12 467.31 | 72 875.28 | 1 319.66 | 10 648.80 |
| 70 | 1 750.08 | 10 717.23 | 60 407.97 | 1 213.21 | 9 329.138 |
| 71 | 1 570.57 | 9 146.663 | 49 690.74 | 1 109.06 | 8 115.927 |
| 72 | 1 400.66 | 7 746.005 | 40 544.08 | 1 006.78 | 7 006.870 |
| 73 | 1 239.90 | 6 506.108 | 32 798.07 | 906.337 | 6 000.088 |
| 74 | 1 088.19 | 5 417.918 | 26 291.96 | 808.023 | 5 093.751 |
| 75 | 946.366 | 4 471.552 | 20 874.04 | 713.059 | 4 285.728 |
| 76 | 816.536 | 3 655.016 | 16 402.49 | 623.981 | 3 572.669 |
| 77 | 698.258 | 2 956.758 | 12 747.48 | 540.865 | 2 948.688 |
| 78 | 591.558 | 2 365.200 | 9 790.717 | 464.233 | 2 407.823 |
| 79 | 496.335 | 1 868.865 | 7 425.517 | 394.484 | 1 943.590 |
| 80 | 411.764 | 1 457.102 | 5 556.652 | 331.286 | 1 549.106 |
| 81 | 337.035 | 1 120.067 | 4 099.550 | 274.289 | 1 217.820 |
| 82 | 271.551 | 848.516 | 2 979.482 | 223.319 | 943.531 |
| 83 | 215.331 | 633.186 | 2 130.966 | 178.792 | 720.213 |
| 84 | 167.761 | 465.424 | 1 497.781 | 140.495 | 541.421 |
| 85 | 128.610 | 336.814 | 1 032.357 | 108.568 | 400.926 |
| 86 | 97.240 8 | 239.573 | 695.543 | 82.736 8 | 292.358 |
| 87 | 72.613 8 | 166.960 | 455.969 | 62.297 2 | 209.622 |
| 88 | 53.419 4 | 113.540 | 289.010 | 46.229 8 | 147.324 |
| 89 | 38.886 3 | 74.654 | 175.470 | 33.997 0 | 101.095 |
| 90 | 27.789 9 | 46.864 | 100.816 | 24.575 1 | 67.097 |
| 91 | 19.161 7 | 27.702 | 53.952 | 17.143 6 | 42.522 |
| 92 | 12.602 0 | 15.100 | 26.250 | 11.409 1 | 25.379 |
| 93 | 7.822 7 | 7.278 | 11.150 | 7.172 4 | 13.970 |
| 94 | 4.373 4 | 2.904 | 3.872 | 4.060 0 | 6.797 |
| 95 | 2.062 0 | .842 | .968 | 1.936 9 | 2.737 |
| 96 | .716 2 | .126 | .126 | .679 9 | .800 |
| 97 | .125 9 | .000 | .000 | .120 5 | .121 |

H^M (WOOLHOUSE) TABLE.

TABLE III.
 COMMUTATION COLUMNS. H^M TABLES.
 WOOLHOUSE'S FORMULA. FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 67 556.4 | I 356 297 | 24 434 671 | 12 792.8 | 429 295.1 |
| 11 | 64 639.8 | I 291 658 | 23 078 374 | 12 474.5 | 416 502.2 |
| 12 | 61 905.7 | I 229 752 | 21 786 716 | 12 226.6 | 404 027.7 |
| 13 | 59 327.1 | I 170 425 | 20 556 964 | 12 029.0 | 391 801.2 |
| 14 | 56 879 0 | I 113 546 | 19 386 540 | 11 862.6 | 379 772.2 |
| 15 | 54 540.3 | I 059 005 | 18 272 994 | 11 711.6 | 367 909.6 |
| 16 | 52 292.0 | I 006 713 | 17 213 988 | 11 561.1 | 356 198.0 |
| 17 | 50 117 6 | 956 595 8 | 16 207 275 | 11 397.8 | 344 636.9 |
| 18 | 48 002.9 | 908 593.0 | 15 250 679 | 11 210.7 | 333 239.1 |
| 19 | 45 935.4 | 862 657.6 | 14 342 086 | 10 989 5 | 322 028.4 |
| 20 | 43 914.9 | 818 742.6 | 13 479 429 | 10 735.8 | 311 038 8 |
| 21 | 41 958.6 | 776 784.0 | 12 660 686 | 10 468.5 | 300 303.1 |
| 22 | 40 073.5 | 736 710 5 | 11 883 902 | 10 197.2 | 289 834.5 |
| 23 | 38 268.5 | 698 442.0 | 11 147 192 | 9 933.49 | 279 637.3 |
| 24 | 36 547.8 | 661 894.2 | 10 448 750 | 9 684.60 | 269 703.8 |
| 25 | 34 908.7 | 626 985.5 | 9 786 855 | 9 451.27 | 260 019.2 |
| 26 | 33 343.6 | 593 641.9 | 9 159 870 | 9 228.73 | 250 567.9 |
| 27 | 31 846.8 | 561 795.1 | 8 566 228 | 9 014.40 | 241 339.2 |
| 28 | 30 410.5 | 531 384.7 | 8 004 433 | 8 802.97 | 232 324 8 |
| 29 | 29 031 1 | 502 353.5 | 7 473 048 | 8 593.27 | 223 521.8 |
| 30 | 27 707.1 | 474 646 5 | 6 970 695 | 8 385.77 | 214 928.6 |
| 31 | 26 435.7 | 448 210.8 | 6 496 048 | 8 180.02 | 206 542.8 |
| 32 | 25 217.7 | 422 993.2 | 6 047 838 | 7 978.77 | 198 362 8 |
| 33 | 24 051.2 | 398 941.9 | 5 624 844 | 7 782.25 | 190 384 0 |
| 34 | 22 934.6 | 376 007.4 | 5 225 902 | 7 590.64 | 182 601.8 |
| 35 | 21 864.9 | 354 142.4 | 4 849 895 | 7 403.12 | 175 011.1 |
| 36 | 20 839.5 | 333 302.9 | 4 495 753 | 7 218 66 | 167 608.0 |
| 37 | 19 855.5 | 313 447.4 | 4 162 450 | 7 036 14 | 160 389.3 |
| 38 | 18 911.1 | 294 536.3 | 3 849 002 | 6 855.46 | 153 353.2 |
| 39 | 18 005.9 | 276 530.4 | 3 554 466 | 6 677.62 | 146 497.7 |
| 40 | 17 138.9 | 259 391.5 | 3 277 936 | 6 503.07 | 139 820.1 |
| 41 | 16 309 8 | 243 081 7 | 3 018 544 | 6 333.24 | 133 317.0 |
| 42 | 15 518.1 | 227 563 6 | 2 775 463 | 6 168.78 | 126 983.8 |
| 43 | 14 761.1 | 212 802 5 | 2 547 899 | 6 008.61 | 120 815 0 |
| 44 | 14 035.4 | 198 767.2 | 2 335 096 | 5 850.68 | 114 806.4 |
| 45 | 13 339.6 | 185 427.5 | 2 136 329 | 5 694.72 | 108 955.7 |
| 46 | 12 670.2 | 172 757 4 | 1 950 902 | 5 538 34 | 103 261.0 |
| 47 | 12 025.2 | 160 732.2 | 1 778 144 | 5 380.69 | 97 722.69 |
| 48 | 11 404.3 | 149 327.9 | 1 617 412 | 5 222.25 | 92 342.01 |
| 49 | 10 807.3 | 138 520.6 | 1 468 084 | 5 063.91 | 87 119.76 |
| 50 | 10 233.5 | 128 287 2 | 1 329 564 | 4 905.75 | 82 055.85 |
| 51 | 9 682.92 | 118 604.2 | 1 201 276 | 4 748.80 | 77 150.10 |
| 52 | 9 155 30 | 109 448.9 | 1 082 672 | 4 593.59 | 72 401.30 |
| 53 | 8 648.68 | 100 800.3 | 973 223 3 | 4 439.11 | 67 807.70 |
| 54 | 8 161.36 | 92 638.91 | 874 423.0 | 4 284.42 | 63 368.60 |

TABLE III.—Cont.
COMMUTATION COLUMNS. H^N TABLES,
WOOLHOUSE'S FORMULA. FOUR PER CENT.

| Age | D _x | N _x | S _x | M _x | R _x |
|-----|----------------|----------------|----------------|----------------|----------------|
| 56 | 7 692.59 | 84 946.32 | 779 784.1 | 4 129.56 | 59 084.87 |
| 56 | 7 241.15 | 77 705.17 | 694 837.8 | 3 973.98 | 54 954.61 |
| 57 | 6 806.31 | 70 898.86 | 617 132.6 | 3 817.65 | 50 930.63 |
| 58 | 6 387.53 | 64 511.33 | 546 233.8 | 3 660.65 | 47 162.98 |
| 59 | 5 984.40 | 58 526.87 | 481 722.4 | 3 503.26 | 43 502.34 |
| 60 | 5 595.83 | 52 931.04 | 423 195.6 | 3 344.79 | 39 999.08 |
| 61 | 5 220.92 | 47 710.12 | 370 264.5 | 3 185.11 | 36 654.29 |
| 62 | 4 859.28 | 42 850.85 | 322 554.4 | 3 024.27 | 33 469.18 |
| 63 | 4 510.55 | 38 340.30 | 279 703.6 | 2 862.44 | 30 444.91 |
| 64 | 4 174.47 | 34 165.83 | 241 363.3 | 2 699.84 | 27 582.47 |
| 65 | 3 851.71 | 30 314.12 | 207 197.4 | 2 537.64 | 24 882.62 |
| 66 | 3 542.72 | 26 771.40 | 176 883.3 | 2 376.79 | 22 344.99 |
| 67 | 3 247.83 | 23 523.58 | 150 111.9 | 2 218.16 | 19 968.20 |
| 68 | 2 967.11 | 20 556.47 | 126 588.3 | 2 062.36 | 17 750.04 |
| 69 | 2 701.11 | 17 855.35 | 106 031.9 | 1 910.48 | 15 687.68 |
| 70 | 2 448.30 | 15 407.05 | 88 176.53 | 1 761.56 | 13 777.20 |
| 71 | 2 207.73 | 13 199.32 | 72 769.47 | 1 615.15 | 12 015.65 |
| 72 | 1 978.36 | 11 220.97 | 59 570.15 | 1 470.69 | 10 400.50 |
| 73 | 1 759.71 | 9 461 258 | 48 349.18 | 1 328.13 | 8 929.809 |
| 74 | 1 551.83 | 7 909.431 | 38 887.92 | 1 187.93 | 7 601.675 |
| 75 | 1 356.07 | 6 553.366 | 30 978.49 | 1 051.86 | 6 413.742 |
| 76 | 1 175.66 | 5 377.711 | 24 425.13 | 923.602 | 5 361.886 |
| 77 | 1 010.19 | 4 367.521 | 19 047.42 | 803.355 | 4 438.284 |
| 78 | 859.938 | 3 507.583 | 14 679.90 | 691.957 | 3 634.928 |
| 79 | 724.983 | 2 782.600 | 11 172 31 | 590.076 | 2 942.972 |
| 80 | 604.344 | 2 178.256 | 8 389.713 | 497.321 | 2 352.895 |
| 81 | 497.043 | 1 681.213 | 6 211.457 | 413.264 | 1 855.575 |
| 82 | 402.396 | 1 278.817 | 4 530.244 | 337.734 | 1 442.311 |
| 83 | 320.620 | 958.197 3 | 3 251.427 | 271.435 | 1 104.577 |
| 84 | 250.992 | 707.205 3 | 2 293.230 | 214.138 | 833.143 |
| 85 | 193.342 | 513.863 5 | 1 586.024 | 166.142 | 619.004 |
| 86 | 146.887 | 366.976 9 | 1 072.161 | 127.123 | 452.863 |
| 87 | 110.214 | 256.763 1 | 705.184 | 96.099 3 | 325.740 |
| 88 | 81.470 3 | 175.292 8 | 448.421 | 71.594 8 | 229.641 |
| 88 | 59.590 8 | 115.702 0 | 273.128 | 52.848 8 | 158.046 |
| 90 | 42.791 0 | 72.911 0 | 157.426 | 38.340 9 | 105.197 |
| 91 | 29.647 1 | 43.263 9 | 84.515 | 26.842 8 | 66.856 |
| 92 | 19.591 7 | 23.672 2 | 41.251 | 17.927 7 | 40.013 |
| 93 | 12.220 0 | 11.452 2 | 17.579 | 11.309 6 | 22.086 |
| 94 | 6.864 6 | 4.587 6 | 6.124 | 6.424 2 | 10.776 |
| 95 | 3.252 1 | 1.335 5 | 1.536 | 3.075 7 | 4.352 |
| 96 | 1.135 0 | .200 5 | .201 | 1.083 6 | 1.276 |
| 97 | .200 5 | .000 0 | .000 | .192 7 | .193 |

H^M (WOOLHOUSE) TABLE.

TABLE IV.
 COMMUTATION COLUMNS. H^M TABLES,
 WOOLHOUSE'S FORMULA. THREE AND ONE-HALF PER CENT.

| Age. | D _t | N _t | S _t | M _t | R _t |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 70 891.9 | 1 556 354 | 29 720 786 | 15 864.2 | 567 167.5 |
| 11 | 68 159.0 | 1 488 195 | 28 164 432 | 15 528.6 | 551 303.3 |
| 12 | 65 191.3 | 1 422 604 | 26 676 237 | 15 265.9 | 535 774.6 |
| 13 | 63 162.9 | 1 359 441 | 25 253 633 | 15 055.5 | 520 508.7 |
| 14 | 60 849.0 | 1 298 592 | 23 894 192 | 14 877.6 | 505 453.2 |
| 15 | 58 629.0 | 1 239 963 | 22 595 600 | 14 715.3 | 490 575.6 |
| 16 | 56 483.7 | 1 183 479 | 21 355 638 | 14 552.6 | 475 860.3 |
| 17 | 54 396.5 | 1 129 083 | 20 172 159 | 14 375.4 | 461 307.7 |
| 18 | 52 352.9 | 1 076 730 | 19 043 076 | 14 171.4 | 446 932.3 |
| 19 | 50 340.2 | 1 026 389 | 17 966 346 | 13 929.0 | 432 760.9 |
| 20 | 48 358.4 | 978 031.1 | 16 939 957 | 13 649.6 | 418 831.9 |
| 21 | 46 427.4 | 931 603.7 | 15 961 926 | 13 353.9 | 405 182.3 |
| 22 | 44 555.7 | 887 048.0 | 15 030 322 | 13 052.2 | 391 828.5 |
| 23 | 42 754.4 | 844 293.7 | 14 143 274 | 12 757.6 | 378 776.3 |
| 24 | 41 029.1 | 803 264.5 | 13 298 981 | 12 478.1 | 366 018.7 |
| 25 | 39 378.5 | 763 886.0 | 12 495 716 | 12 214.9 | 353 540.5 |
| 26 | 37 794.6 | 725 091.5 | 11 731 830 | 11 962.7 | 341 325.6 |
| 27 | 36 272.4 | 689 819.1 | 11 005 739 | 11 718.6 | 329 362.9 |
| 28 | 34 803.8 | 655 015.2 | 10 315 919 | 11 476.6 | 317 644.3 |
| 29 | 33 385.7 | 621 629.5 | 9 660 904 | 11 235.4 | 306 167.7 |
| 30 | 32 017.0 | 589 612.6 | 9 039 275 | 10 995.7 | 294 932.3 |
| 31 | 30 695.4 | 558 917.2 | 8 449 662 | 10 756.8 | 283 936.6 |
| 32 | 29 422.6 | 529 494.6 | 7 890 745 | 10 522.0 | 273 179.8 |
| 33 | 28 197.2 | 501 297.5 | 7 361 250 | 10 291.6 | 262 657.8 |
| 34 | 27 017.9 | 474 279.5 | 6 859 953 | 10 065.9 | 252 366.3 |
| 35 | 25 882.3 | 448 397.2 | 6 385 673 | 9 843.87 | 242 300.4 |
| 36 | 24 787.7 | 423 609.6 | 5 937 276 | 9 624.46 | 232 456.6 |
| 37 | 23 731.3 | 399 878.3 | 5 513 667 | 9 406.32 | 222 832.1 |
| 38 | 22 711.8 | 377 166.5 | 5 113 788 | 9 189.33 | 213 425.8 |
| 39 | 21 729.1 | 355 437.4 | 4 736 622 | 8 974.71 | 204 236.4 |
| 40 | 20 782.7 | 334 654.7 | 4 381 185 | 8 763.05 | 195 261.7 |
| 41 | 19 872.9 | 314 781.7 | 4 046 530 | 8 556.11 | 186 498.7 |
| 42 | 18 999.6 | 295 782.2 | 3 731 748 | 8 354.76 | 177 942.6 |
| 43 | 18 160.0 | 277 622.2 | 3 435 966 | 8 157.71 | 169 587.8 |
| 44 | 17 350.7 | 260 271.5 | 3 158 344 | 7 962.48 | 161 430.1 |
| 45 | 16 570.2 | 243 701.3 | 2 898 072 | 7 768.74 | 153 467.6 |
| 46 | 15 814.7 | 227 886.7 | 2 654 371 | 7 573.55 | 145 698.9 |
| 47 | 15 082.1 | 212 804.5 | 2 426 484 | 7 375.82 | 138 125.3 |
| 48 | 14 372.4 | 198 432.1 | 2 213 680 | 7 176.15 | 130 749.5 |
| 49 | 13 685.9 | 184 746.2 | 2 015 248 | 6 975.64 | 123 573.3 |
| 50 | 13 021.8 | 171 724.4 | 1 830 501 | 6 774.38 | 116 597.7 |
| 51 | 12 380.8 | 159 343.5 | 1 658 777 | 6 573.70 | 109 823.3 |
| 52 | 11 762.7 | 147 580.8 | 1 499 434 | 6 374.29 | 103 249.6 |
| 53 | 11 165.5 | 136 415.3 | 1 351 853 | 6 174.85 | 96 875.33 |
| 54 | 10 587.3 | 125 828.1 | 1 215 437 | 5 974.19 | 90 700.49 |

TABLE IV.—Cont.

COMMUTATION COLUMNS. HM TABLES.
WOOLHOUSE'S FORMULA. THREE AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 10 027.4 | 115 800.7 | 1 089 609 | 5 772.32 | 84 726.30 |
| 56 | 9 484.51 | 106 316.2 | 973 808.7 | 5 568.54 | 78 953.98 |
| 57 | 8 958.02 | 97 358.14 | 867 492.6 | 5 362.79 | 73 385.44 |
| 58 | 8 447.46 | 88 910.68 | 770 134.4 | 5 155.16 | 68 022.65 |
| 59 | 7 952.65 | 80 958.04 | 681 223.7 | 4 946.00 | 62 867.49 |
| 60 | 7 472.11 | 73 485.93 | 600 265.7 | 4 734.40 | 57 921.49 |
| 61 | 7 005.18 | 66 480.75 | 526 779.8 | 4 520.15 | 53 187.08 |
| 62 | 6 551.45 | 59 929.30 | 460 299.0 | 4 303.30 | 48 666.91 |
| 63 | 6 110.66 | 53 818.65 | 400 369.7 | 4 084.06 | 44 363.63 |
| 64 | 5 682.67 | 48 135.97 | 346 551.1 | 3 862.72 | 40 279.57 |
| 65 | 5 268.63 | 42 867.34 | 298 415.1 | 3 640.84 | 36 416.85 |
| 66 | 4 869.38 | 37 997.96 | 255 547.8 | 3 419.76 | 32 776.01 |
| 67 | 4 485.63 | 33 512.34 | 217 549.8 | 3 200.67 | 29 356.25 |
| 68 | 4 117.72 | 29 394.61 | 184 037.5 | 2 984.45 | 26 155.58 |
| 69 | 3 766.69 | 25 627.93 | 154 642.9 | 2 772.66 | 23 171.13 |
| 70 | 3 430.63 | 22 197.30 | 129 014.9 | 2 563.99 | 20 398.46 |
| 71 | 3 108.48 | 19 088.82 | 106 817.6 | 2 357.84 | 17 834.48 |
| 72 | 2 798.98 | 16 289.84 | 87 728.81 | 2 153.46 | 15 476.63 |
| 73 | 2 501.67 | 13 788.18 | 71 438.97 | 1 950.80 | 13 323.17 |
| 74 | 2 216.79 | 11 571.39 | 57 650.80 | 1 750.52 | 11 372.37 |
| 75 | 1 946.50 | 9 624.883 | 46 079.41 | 1 555.20 | 9 621.842 |
| 76 | 1 695.69 | 7 929.191 | 36 454.53 | 1 370.21 | 8 066.643 |
| 77 | 1 464.08 | 6 465.116 | 28 525.34 | 1 195.94 | 6 696.430 |
| 78 | 1 252.34 | 5 212.781 | 22 060.22 | 1 033.71 | 5 500.491 |
| 79 | 1 060.90 | 4 151.831 | 16 847.44 | 884.622 | 4 466.784 |
| 80 | 888.634 | 3 263.247 | 12 695.56 | 748.233 | 3 582.162 |
| 81 | 734.388 | 2 528.859 | 9 432.314 | 624.037 | 2 833.929 |
| 82 | 597.419 | 1 931.440 | 6 903.455 | 511.902 | 2 209.892 |
| 83 | 478.309 | 1 453.131 | 4 972.015 | 412.995 | 1 697.990 |
| 84 | 376.245 | 1 076.886 | 3 518.884 | 327.106 | 1 284.995 |
| 85 | 291.226 | 785.660 0 | 2 441.958 | 254.809 | 957.889 5 |
| 86 | 222.321 | 563.339 5 | 1 656.338 | 195.752 | 703.080 2 |
| 87 | 167.620 | 395.719 4 | 1 092.998 | 148.570 | 507.327 9 |
| 88 | 124.504 | 271.215 7 | 697.279 | 111.122 | 358.758 0 |
| 89 | 91.507 3 | 179.708 4 | 426.063 | 82.335 7 | 247.636 1 |
| 90 | 64.027 0 | 113.681 4 | 246.355 | 59.949 9 | 165.300 3 |
| 91 | 45.966 8 | 67.714 6 | 132.673 | 42.122 5 | 105.350 5 |
| 92 | 32.522 9 | 37.191 7 | 64.959 | 28.233 1 | 63.228 00 |
| 93 | 19.130 2 | 18.061 5 | 27.767 | 17.872 5 | 34.994 95 |
| 94 | 10.798 4 | 7.263 1 | 9.706 | 10.187 6 | 17.122 41 |
| 95 | 5.140 5 | 2.122 6 | 2.443 | 4.894 8 | 6.934 83 |
| 96 | 1.802 7 | .319 9 | .320 | 1.730 9 | 2.040 00 |
| 97 | .319 9 | .000 0 | .000 | .309 1 | .309 09 |

TABLE V.
COMMUTATION COLUMNS. H^M TABLES.
WOOLHOUSE'S FORMULA. THREE PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 74 409.4 | I 796 867 | 36 413 646 | 19 906.2 | 756 181.7 |
| 11 | 71 888.1 | I 724 979 | 34 616 779 | 19 552.2 | 736 275.5 |
| 12 | 69 515.9 | I 655 493 | 32 891 800 | 19 273.8 | 716 723.3 |
| 13 | 67 267.1 | I 588 106 | 31 236 337 | 19 049.7 | 697 449.6 |
| 14 | 65 117.5 | I 523 079 | 29 648 141 | 18 859.3 | 678 399.8 |
| 15 | 63 046.2 | I 460 032 | 28 125 062 | 18 684.7 | 659 540.5 |
| 16 | 61 034.2 | I 398 998 | 26 665 030 | 18 509.0 | 640 855.8 |
| 17 | 59 064.1 | I 339 934 | 25 266 032 | 18 316.6 | 622 346.7 |
| 18 | 57 121.2 | I 282 813 | 23 926 098 | 18 094.0 | 604 030.1 |
| 19 | 55 191.7 | I 227 621 | 22 643 285 | 17 828.2 | 585 936.1 |
| 20 | 53 276.3 | I 174 345 | 21 415 664 | 17 520.4 | 568 107.9 |
| 21 | 51 397.2 | I 122 947 | 20 241 319 | 17 193.0 | 550 587.5 |
| 22 | 49 564.7 | I 073 383 | 19 118 371 | 16 857.4 | 533 394.5 |
| 23 | 47 791.7 | I 025 591 | 18 044 988 | 16 528.1 | 516 537.0 |
| 24 | 46 085.8 | 979 505.3 | 17 019 397 | 16 214.2 | 500 008.9 |
| 25 | 44 446.5 | 935 058.8 | 16 039 892 | 15 917.2 | 483 794.7 |
| 26 | 42 895.8 | 892 193.0 | 15 104 833 | 15 631.1 | 467 877.5 |
| 27 | 41 339.1 | 850 854.0 | 14 212 640 | 15 352.9 | 452 246.5 |
| 28 | 39 857.9 | 810 596.1 | 12 361 786 | 15 075.8 | 436 893.6 |
| 29 | 38 419.5 | 772 576.6 | 12 550 790 | 14 798.2 | 421 817.9 |
| 30 | 37 023.2 | 735 553.4 | 11 778 214 | 14 521.0 | 407 019.6 |
| 31 | 35 667.3 | 699 886.1 | 11 042 660 | 14 243.4 | 392 498.7 |
| 32 | 34 354.2 | 665 531.9 | 10 342 774 | 13 969.2 | 378 255.3 |
| 33 | 33 083.3 | 632 448.6 | 9 677 242 | 13 698.9 | 364 286.1 |
| 34 | 31 853.6 | 600 595.0 | 9 044 794 | 13 432.8 | 350 587.2 |
| 35 | 30 662.8 | 569 932.2 | 8 444 199 | 13 169.8 | 337 154.5 |
| 36 | 29 508.6 | 540 423.6 | 7 874 266 | 12 908.6 | 323 984.7 |
| 37 | 28 388.1 | 512 035.5 | 7 333 843 | 12 647.6 | 311 076.1 |
| 38 | 27 300.5 | 484 735.0 | 6 821 807 | 12 386.8 | 298 428.4 |
| 39 | 26 246.1 | 458 489.0 | 6 337 072 | 12 127.6 | 286 041.6 |
| 40 | 25 224.7 | 433 264.2 | 5 878 583 | 11 870.7 | 273 914.1 |
| 41 | 24 237.6 | 409 026.6 | 5 445 319 | 11 618.3 | 262 043.4 |
| 42 | 23 284.9 | 385 741.7 | 5 036 292 | 11 371.5 | 250 425.1 |
| 43 | 22 364.0 | 363 377.6 | 4 650 551 | 11 128.8 | 239 053.6 |
| 44 | 21 471.1 | 341 906.6 | 4 287 173 | 10 887.3 | 227 924.7 |
| 45 | 20 604.8 | 321 301.8 | 3 945 267 | 10 646.3 | 217 037.5 |
| 46 | 19 760.8 | 301 541.0 | 3 623 965 | 10 402.4 | 206 391.1 |
| 47 | 18 936.9 | 282 604.1 | 3 322 424 | 10 154.2 | 195 988.7 |
| 48 | 18 133.5 | 264 470.7 | 3 037 820 | 9 902.27 | 185 831.5 |
| 49 | 17 351.1 | 247 119.6 | 2 775 349 | 9 648.05 | 175 932.2 |
| 50 | 16 589.3 | 230 530.3 | 2 528 229 | 9 391.66 | 166 284.2 |
| 51 | 15 849.2 | 214 681.0 | 2 297 699 | 9 134.76 | 156 892.5 |
| 52 | 15 131.1 | 199 549.9 | 2 083 018 | 8 878.25 | 147 757.8 |
| 53 | 14 432.6 | 185 117.3 | 1 883 468 | 8 620.44 | 138 879.5 |
| 54 | 13 751.6 | 171 365.8 | 1 698 351 | 8 359.81 | 130 259.1 |

TABLE V.—Cont.
COMMUTATION COLUMNS. H^M TABLES.
WOOLHOUSE'S FORMULA. THREE PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 13 087.6 | 158 278.2 | I 526 985 | 8 096 34 | 121 899.2 |
| 56 | 12 439.1 | 145 839.1 | I 368 707 | 7 829.08 | 113 802.9 |
| 57 | 11 805.7 | 134 033.4 | I 222 868 | 7 557.92 | 105 973.8 |
| 58 | 11 186.8 | 122 846.6 | I 088 834 | 7 282.95 | 98 415.91 |
| 59 | 10 582.7 | 112 263.9 | 965 987.7 | 7 004.63 | 91 132.95 |
| 60 | 9 991.51 | 102 272.4 | 853 723.8 | 6 721.69 | 84 128.32 |
| 61 | 9 412.61 | 92 859.77 | 751 451.4 | 6 433.80 | 77 406.64 |
| 62 | 8 845 67 | 84 014.10 | 658 591.6 | 6 141.02 | 70 972.84 |
| 63 | 8 290 57 | 75 723.52 | 574 577.5 | 5 843.56 | 64 831.82 |
| 64 | 7 747.34 | 67 976.19 | 498 854.0 | 5 541.80 | 58 988.26 |
| 65 | 7 217.74 | 60 758.45 | 430 877.8 | 5 237.85 | 53 446 26 |
| 66 | 6 703 17 | 54 055.28 | 370 119.4 | 4 933.50 | 48 208.62 |
| 67 | 6 204.86 | 47 850 42 | 316 064.1 | 4 630.44 | 43 275.11 |
| 68 | 5 723 60 | 42 126.82 | 268 213.7 | 4 329.90 | 38 644.67 |
| 69 | 5 261.08 | 36 865.74 | 226 086.9 | 4 034.08 | 34 314.77 |
| 70 | 4 814.96 | 32 050.78 | 189 221.1 | 3 741.20 | 30 280.69 |
| 71 | 4 383 99 | 27 666 79 | 157 170.3 | 3 450 47 | 26 539.49 |
| 72 | 3 966 66 | 23 700.13 | 129 503.5 | 3 160.83 | 23 089 01 |
| 73 | 3 562.52 | 20 137.61 | 105 803.4 | 2 872 23 | 19 928.18 |
| 74 | 3 172.17 | 16 965.44 | 85 665.80 | 2 585.63 | 17 055.96 |
| 75 | 2 798 91 | 14 166.53 | 68 700.36 | 2 304 77 | 14 470.32 |
| 76 | 2 450.10 | 11 716.43 | 54 533.83 | 2 037 49 | 12 165.55 |
| 77 | 2 125.71 | 9 590.717 | 42 817.40 | 1 784.46 | 10 128.06 |
| 78 | I 827.11 | 7 763.600 | 33 226.68 | I 547.77 | 8 343.609 |
| 79 | I 555.32 | 6 208 285 | 25 463.07 | I 329.20 | 6 795.842 |
| 80 | I 309.10 | 4 899.184 | 19 254.79 | I 128.28 | 5 466.642 |
| 81 | I 087.12 | 3 812 061 | 14 355.61 | 914 429 | 4 338.365 |
| 82 | 888 659 | 2 923.402 | 10 543.54 | 777.628 | 3 393.937 |
| 83 | 714.938 | 2 208.464 | 7 620.14 | 629.790 | 2 616 309 |
| 84 | 565.111 | I 643.354 | 5 411.58 | 500.787 | I 986.518 |
| 85 | 439.537 | I 203.817 | 3 768.32 | 391.672 | I 485.732 |
| 86 | 337.170 | 866.647 | 2 564.51 | 302.107 | I 094.060 |
| 87 | 255.445 | 611.202 | I 697.86 | 230.203 | 791.953 |
| 88 | 190.659 | 420.543 | I 086.66 | 172.857 | 561.750 |
| 89 | 140.810 | 279.733 | 666.11 | 128.561 | 388.893 |
| 90 | 102.095 | 177.638 | 386.38 | 93.947 0 | 260.331 |
| 91 | 71.421 4 | 106.217 | 208.74 | 66 247 5 | 166.384 |
| 92 | 47.655 6 | 58.561 | 102.53 | 44 561 9 | 100.137 |
| 93 | 30.013 1 | 28.548 | 43.97 | 28.307 4 | 55.575 |
| 94 | 17.023 6 | 11.525 | 15.42 | 16.192 1 | 27.268 |
| 95 | 8.143 2 | 3.381 | 3.89 | 7.807 6 | 11.076 |
| 96 | 2.869 6 | .512 | .51 | 2.771 1 | 3.268 |
| 97 | .511 7 | .000 | .00 | .456 8 | .497 |

TABLE I.
 INSTITUTE OF ACTUARIES' TABLES—H^M KING & HARDY'S GRADUATIONS BY MAKEHAM'S FORMULA.

| Age. | No. Living. | No. Dying. | Probabilities of Surviving. | q_x = $(1 - p_x)$ | u_x |
|------|-------------|------------|-----------------------------|------------------------|--------|
| 0 | 127 283 | 14 358 | .88720 | .11280 | .15920 |
| 1 | 112 925 | 3 962 | .96492 | .03508 | .07901 |
| 2 | 108 963 | 2 375 | .97821 | .02179 | .02366 |
| 3 | 106 588 | 1 646 | .98456 | .01544 | .01787 |
| 4 | 104 942 | 1 325 | .98737 | .01263 | .01379 |
| 5 | 103 617 | 1 061 | .98976 | .01024 | .01142 |
| 6 | 102 556 | 852 | .99170 | .00830 | .00925 |
| 7 | 101 704 | 683 | .99328 | .00672 | .00748 |
| 8 | 101 021 | 557 | .99449 | .00551 | .00607 |
| 9 | 100 464 | 464 | .99538 | .00462 | .00502 |
| 10 | 100 000 | 408 | .99591 | .00409 | .00428 |
| 11 | 99 592 | 369 | .99630 | .00370 | .00388 |
| 12 | 99 223 | 346 | .99653 | .00347 | .00359 |
| 13 | 98 877 | 337 | .99658 | .00342 | .00342 |
| 14 | 98 540 | 337 | .99658 | .00342 | .00340 |
| 15 | 98 203 | 360 | .99635 | .00365 | .00353 |
| 16 | 97 843 | 384 | .99607 | .00393 | .00378 |
| 17 | 97 459 | 425 | .99563 | .00437 | .00414 |
| 18 | 97 034 | 465 | .99522 | .00478 | .00458 |
| 19 | 96 569 | 508 | .99474 | .00526 | .00504 |
| 20 | 96 061 | 548 | .99428 | .00572 | .00550 |
| 21 | 95 513 | 582 | .99392 | .00608 | .00592 |
| 22 | 94 931 | 609 | .99357 | .00643 | .00629 |
| 23 | 94 322 | 631 | .99332 | .00668 | .00659 |
| 24 | 93 691 | 647 | .99309 | .00691 | .00682 |
| 25 | 93 044 | 658 | .99293 | .00707 | .00701 |
| 26 | 92 386 | 664 | .99280 | .00720 | .00716 |
| 27 | 91 722 | 673 | .99268 | .00732 | .00729 |
| 28 | 91 049 | 678 | .99254 | .00746 | .00742 |
| 29 | 90 371 | 686 | .99241 | .00759 | .00755 |
| 30 | 89 685 | 691 | .99229 | .00771 | .00768 |
| 31 | 88 994 | 700 | .99213 | .00787 | .00782 |
| 32 | 88 294 | 709 | .99197 | .00803 | .00798 |
| 33 | 87 585 | 719 | .99179 | .00821 | .00815 |
| 34 | 86 866 | 729 | .99161 | .00839 | .00833 |
| 35 | 86 137 | 742 | .99138 | .00862 | .00854 |
| 36 | 85 395 | 756 | .99115 | .00885 | .00876 |
| 37 | 84 639 | 770 | .99090 | .00910 | .00901 |
| 38 | 83 869 | 786 | .99063 | .00937 | .00928 |
| 39 | 83 083 | 806 | .99031 | .00969 | .00957 |
| 40 | 82 277 | 823 | .98999 | .01001 | .00990 |
| 41 | 81 454 | 846 | .98962 | .01038 | .01025 |
| 42 | 80 608 | 871 | .98919 | .01081 | .01064 |
| 43 | 79 737 | 895 | .98878 | .01122 | .01106 |
| 44 | 78 842 | 924 | .98828 | .01172 | .01153 |
| 45 | 77 918 | 954 | .98776 | .01224 | .01204 |
| 46 | 76 964 | 986 | .98719 | .01281 | .01260 |
| 47 | 75 978 | 1 021 | .98655 | .01345 | .01321 |
| 48 | 74 957 | 1 061 | .98585 | .01415 | .01388 |
| 49 | 73 896 | 1 101 | .98510 | .01490 | .01462 |
| 50 | 72 795 | 1 144 | .98428 | .01572 | .01542 |
| 51 | 71 651 | 1 193 | .98335 | .01665 | .01631 |

H^M (KING & HARDY) TABLE.

TABLE I.—Cont.

INSTITUTE OF ACTUARIES' TABLES—H^M KING & HARDY'S GRADUATIONS BY MAKEHAM'S FORMULA.

| Age. | No. Living. | No. Dying. | Probabilities of Surviving. | $\frac{q_x}{1-p_x}$ | μ_x |
|------|-------------|------------|-----------------------------|---------------------|---------|
| 52 | 70 458 | 1 243 | .98236 | .01764 | .01727 |
| 53 | 69 215 | 1 296 | .98127 | .01873 | .01833 |
| 54 | 67 919 | 1 353 | .98008 | .01992 | .01950 |
| 55 | 66 566 | 1 414 | .97877 | .02123 | .02077 |
| 56 | 65 152 | 1 475 | .97735 | .02265 | .02216 |
| 57 | 63 677 | 1 541 | .97580 | .02420 | .02369 |
| 58 | 62 136 | 1 612 | .97407 | .02593 | .02536 |
| 59 | 60 524 | 1 682 | .97221 | .02779 | .02719 |
| 60 | 58 842 | 1 755 | .97017 | .02983 | .02920 |
| 61 | 57 087 | 1 830 | .96794 | .03206 | .03140 |
| 62 | 55 257 | 1 906 | .96549 | .03451 | .03381 |
| 63 | 53 351 | 1 983 | .96283 | .03717 | .03645 |
| 64 | 51 368 | 2 059 | .95993 | .04007 | .03934 |
| 65 | 49 309 | 2 133 | .95673 | .04327 | .04251 |
| 66 | 47 176 | 2 204 | .95328 | .04672 | .04599 |
| 67 | 44 972 | 2 273 | .94947 | .05053 | .04979 |
| 68 | 42 609 | 2 334 | .94534 | .05466 | .05396 |
| 69 | 40 365 | 2 388 | .94083 | .05917 | .05853 |
| 70 | 37 977 | 2 434 | .93590 | .06410 | .06353 |
| 71 | 35 543 | 2 468 | .93057 | .06943 | .06901 |
| 72 | 33 075 | 2 490 | .92472 | .07528 | .07502 |
| 73 | 30 585 | 2 496 | .91840 | .08160 | .08160 |
| 74 | 28 089 | 2 487 | .91144 | .08856 | .08881 |
| 75 | 25 602 | 2 459 | .90396 | .09604 | .09671 |
| 76 | 23 143 | 2 412 | .89578 | .10422 | .10536 |
| 77 | 20 731 | 2 343 | .88697 | .11303 | .11485 |
| 78 | 18 388 | 2 255 | .87738 | .12262 | .12523 |
| 79 | 16 133 | 2 146 | .86696 | .13304 | .13662 |
| 80 | 13 987 | 2 018 | .85574 | .14426 | .14909 |
| 81 | 11 969 | 1 873 | .84351 | .15649 | .16275 |
| 82 | 10 096 | 1 712 | .83042 | .16958 | .17772 |
| 83 | 8 384 | 1 540 | .81632 | .18368 | .19412 |
| 84 | 6 844 | 1 361 | .80114 | .19886 | .21209 |
| 85 | 5 483 | 1 180 | .78478 | .21522 | .23177 |
| 86 | 4 303 | 1 002 | .76715 | .23285 | .25343 |
| 87 | 3 301 | 830 | .74855 | .25145 | .27697 |
| 88 | 2 471 | 671 | .72845 | .27155 | .30286 |
| 89 | 1 800 | 527 | .70723 | .29277 | .33123 |
| 90 | 1 273 | 402 | .68421 | .31579 | .36230 |
| 91 | 871 | 296 | .66016 | .33984 | .39635 |
| 92 | 575 | 209 | .63652 | .36348 | .43366 |
| 93 | 366 | 144 | .60655 | .39345 | .47453 |
| 94 | 222 | 93 | .58109 | .41891 | .51036 |
| 95 | 129 | 58 | .55039 | .44901 | .55036 |
| 96 | 71 | 34 | .52112 | .47888 | .62211 |
| 97 | 37 | 18 | .51351 | .48649 | .68100 |
| 98 | 19 | 10 | .47369 | .52631 | .74552 |
| 99 | 9 | 5 | .44445 | .55555 | .81621 |
| 100 | 4 | 3 | .25000 | .75000 | .89366 |
| 101 | 1 | 1 | .00000 | 1.00000 | .97851 |
| 102 | 0 | .. | ..... | ..... | ..... |

TABLE II.
 COMMUTATION COLUMNS—H^M TABLE, MAKEHAM'S FORMULA,
 FOUR AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 127 280 | 2 016 855 | 36 266 604 | 13 739. | 34 951. | 490 091. |
| 1 | 108 060 | 1 908 795 | 34 249 749 | 3 628.1 | 21 211.8 | 455 139.7 |
| 2 | 99 781 | 1 809 014 | 32 340 954 | 2 081.2 | 17 583.7 | 433 927.9 |
| 3 | 93 403 | 1 715 611 | 30 531 940 | 1 380.3 | 15 502.5 | 416 344.2 |
| 4 | 87 999 | 1 627 612 | 28 816 329 | 1 063.3 | 14 122.2 | 400 841.7 |
| 5 | 83 148 | 1 544 464 | 27 188 717 | 814.74 | 13 058.90 | 386 719.54 |
| 6 | 78 752 | 1 465 712 | 25 644 253 | 626.08 | 12 244.16 | 373 660.64 |
| 7 | 74 736 | 1 390 976 | 24 178 541 | 480.28 | 11 618.08 | 361 416.48 |
| 8 | 71 036 | 1 319 940 | 22 787 565 | 374.81 | 11 137.80 | 349 798.40 |
| 9 | 67 602 | 1 252 338 | 21 467 625 | 298.79 | 10 762.99 | 338 660.60 |
| 10 | 64 393 | 1 187 945 | 20 215 287 | 251.41 | 10 464.20 | 327 897.61 |
| 11 | 61 368 | 1 126 577 | 19 027 342 | 217.59 | 10 212.79 | 317 433.41 |
| 12 | 58 567 | 1 068 070 | 17 900 765 | 195.24 | 9 995.20 | 307 220.62 |
| 13 | 55 794 | 1 012 275 | 16 832 695 | 181.97 | 9 799.96 | 297 225.42 |
| 14 | 53 208 | 959 068 | 15 820 419 | 174.14 | 9 617.99 | 287 425.46 |
| 15 | 50 743 | 908 325 | 14 861 351 | 178.01 | 9 443.85 | 277 807.47 |
| 16 | 48 380 | 859 945 | 13 953 026 | 181.70 | 9 265.84 | 263 363.62 |
| 17 | 46 115 | 813 830 | 13 093 081 | 192.44 | 9 084.14 | 259 097.78 |
| 18 | 43 937 | 769 893 | 12 279 251 | 201.48 | 8 891.70 | 250 013.64 |
| 19 | 41 844 | 728 049 | 11 509 358 | 210.63 | 8 690.22 | 241 121.94 |
| 20 | 39 831 | 688 218 | 10 781 309 | 217.44 | 8 479.59 | 232 431.72 |
| 21 | 37 898 | 650 320 | 10 093 091 | 220.98 | 8 262.15 | 223 952.13 |
| 22 | 36 045 | 614 275 | 9 442 771 | 221.28 | 8 041.17 | 215 689.98 |
| 23 | 34 272 | 580 003 | 8 828 496 | 219.40 | 7 819.89 | 207 648.81 |
| 24 | 32 577 | 547 420 | 8 248 493 | 215.27 | 7 600.49 | 199 828.92 |
| 25 | 30 959 | 516 467 | 7 701 067 | 209.51 | 7 385.22 | 192 228.43 |
| 26 | 29 416 | 487 051 | 7 184 600 | 202.32 | 7 175.71 | 184 843.21 |
| 27 | 27 947 | 459 104 | 6 697 549 | 195.23 | 6 973.39 | 177 667.50 |
| 28 | 26 547 | 432 557 | 6 238 445 | 189.17 | 6 777.15 | 170 694.11 |
| 29 | 25 215 | 407 342 | 5 805 888 | 183.16 | 6 587.99 | 163 916.95 |
| 30 | 23 946 | 383 396 | 5 398 546 | 176.56 | 6 404.83 | 157 328.96 |
| 31 | 22 738 | 360 658 | 5 015 150 | 171.15 | 6 228.27 | 150 924.13 |
| 32 | 21 588 | 339 070 | 4 654 492 | 165.89 | 6 057.12 | 144 695.86 |
| 33 | 20 492 | 318 578 | 4 315 422 | 160.98 | 5 891.23 | 138 638.74 |
| 34 | 19 449 | 299 129 | 3 990 844 | 156.19 | 5 730.25 | 132 747.51 |
| 35 | 18 455 | 280 674 | 3 697 715 | 152.13 | 5 574.06 | 127 017.26 |
| 36 | 17 508 | 263 156 | 3 417 041 | 148.33 | 5 421.93 | 121 443.20 |
| 37 | 16 606 | 246 560 | 3 153 875 | 144.57 | 5 273.60 | 116 021.27 |
| 38 | 15 746 | 230 814 | 2 907 315 | 141.21 | 5 129.03 | 110 747 67 |
| 39 | 14 927 | 215 887 | 2 675 501 | 138.58 | 4 987.82 | 105 618.64 |
| 40 | 14 146 | 201 741 | 2 460 614 | 135.40 | 4 849.24 | 100 630.82 |
| 41 | 13 401 | 188 340 | 2 258 873 | 133.20 | 4 713.84 | 95 781.58 |
| 42 | 12 691 | 175 649 | 2 070 533 | 131.23 | 4 580.64 | 91 067.74 |
| 43 | 12 013 | 163 636 | 1 894 884 | 129.03 | 4 449.41 | 86 487.10 |
| 44 | 11 367 | 152 269 | 1 731 248 | 127.48 | 4 320.38 | 82 037.69 |
| 45 | 10 750 | 141 519 | 1 578 979 | 125.95 | 4 192.90 | 77 717 31 |
| 46 | 10 161 | 131 357.7 | 1 437 459.6 | 124.57 | 4 066.95 | 73 524.41 |
| 47 | 9 598.9 | 121 758.8 | 1 306 101.9 | 123.44 | 3 942 38 | 69 457.45 |
| 48 | 9 062.1 | 112 696.7 | 1 184 343.1 | 122.75 | 3 818.94 | 65 515.08 |
| 49 | 8 549.1 | 104 147.6 | 1 071 646.4 | 121.89 | 3 696.19 | 61 696.14 |

TABLE II.—Cont.

COMMUTATION COLUMNS—H^M TABLE, MAKEHAM'S FORMULA,
FOUR AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 50 | 8 059.2 | 96 088.4 | 967 498.8 | 121.20 | 3 574.30 | 57 999.95 |
| 51 | 7 590.8 | 88 497.6 | 871 410.4 | 120.95 | 3 453.10 | 54 425.65 |
| 52 | 7 143.0 | 81 354.6 | 782 912.8 | 120.59 | 3 332.15 | 50 972.55 |
| 53 | 6 714.9 | 74 039.7 | 701 558.2 | 120.32 | 3 211.56 | 47 640.40 |
| 54 | 6 305.4 | 68 334.3 | 626 918.5 | 120.20 | 3 091.24 | 44 428.84 |
| 55 | 5 913.6 | 62 420.7 | 558 584.2 | 120.21 | 2 971.04 | 41 337.60 |
| 56 | 5 538.9 | 56 881.8 | 496 163.5 | 119.99 | 2 850.83 | 38 356.56 |
| 57 | 5 180.2 | 51 701.6 | 439 281.7 | 119.97 | 2 730.84 | 35 515.73 |
| 58 | 4 837.3 | 46 864.3 | 387 580.1 | 120.09 | 2 610.87 | 32 784.89 |
| 59 | 4 508.9 | 42 355.4 | 340 715.8 | 119.91 | 2 490.78 | 30 174.02 |
| 60 | 4 194.8 | 38 160.6 | 298 360.4 | 119.73 | 2 370.87 | 27 683.24 |
| 61 | 3 804.5 | 34 266.1 | 260 199.8 | 119.46 | 2 251.14 | 25 312.37 |
| 62 | 3 607.3 | 30 658.8 | 225 933.7 | 119.07 | 2 131.68 | 23 061.23 |
| 63 | 3 332.8 | 27 326.0 | 195 274.9 | 118.54 | 2 012.61 | 20 929.55 |
| 64 | 3 070.8 | 24 255.2 | 167 948.9 | 117.79 | 1 894.07 | 18 916.94 |
| 65 | 2 820.8 | 21 434.4 | 143 693.7 | 116.76 | 1 776.28 | 17 022.87 |
| 66 | 2 582.5 | 18 851.9 | 122 259.3 | 115.46 | 1 659.52 | 15 246.59 |
| 67 | 2 355.9 | 16 496.0 | 103 407.4 | 113.94 | 1 544.06 | 13 587.07 |
| 68 | 2 140.5 | 14 355.5 | 86 911.4 | 111.96 | 1 430.12 | 12 043.01 |
| 69 | 1 936.4 | 12 419.1 | 72 555.9 | 109.62 | 1 318.16 | 10 612.89 |
| 70 | 1 743.3 | 10 675.8 | 60 136.8 | 106.92 | 1 208.54 | 9 294.73 |
| 71 | 1 561.3 | 9 114.5 | 49 461.0 | 103.75 | 1 101.62 | 8 086.19 |
| 72 | 1 390.4 | 7 724.1 | 40 346.5 | 102.16 | 997.87 | 6 984.57 |
| 73 | 1 230.3 | 6 493.8 | 32 622.4 | 96.079 | 897.707 | 5 986.699 |
| 74 | 1 081.3 | 5 412.49 | 26 128.57 | 91.614 | 801.628 | 5 088.992 |
| 75 | 943.08 | 4 469.41 | 20 716.08 | 86.680 | 710.014 | 4 287.364 |
| 76 | 815.79 | 3 653.62 | 16 246.67 | 81.364 | 623.334 | 3 577.350 |
| 77 | 699.31 | 2 954.31 | 12 593.05 | 75.631 | 541.970 | 2 954.016 |
| 78 | 593.55 | 2 360.76 | 9 638.74 | 69.656 | 466.339 | 2 412.046 |
| 79 | 498.34 | 1 852.42 | 7 277.98 | 63.435 | 396.683 | 1 945.707 |
| 80 | 413.45 | 1 448.97 | 5 415.46 | 57.082 | 333.248 | 1 549.024 |
| 81 | 338.56 | 1 110.41 | 3 966.59 | 50.699 | 276.166 | 1 215.776 |
| 82 | 273.28 | 837.13 | 2 856.18 | 44.346 | 225.467 | 939.610 |
| 83 | 217.17 | 619.96 | 2 019.05 | 38.172 | 181.121 | 714.143 |
| 84 | 169.64 | 450.32 | 1 399.09 | 32.283 | 142.949 | 533.022 |
| 85 | 130.06 | 320.260 | 948.768 | 26.784 | 110.666 | 390.073 |
| 86 | 97.672 | 222.588 | 628.508 | 21.765 | 83.882 | 279.407 |
| 87 | 71.702 | 150.886 | 405.920 | 17.252 | 62.117 | 195.545 |
| 88 | 51.362 | 99.524 | 255.034 | 13.347 | 44.865 | 133.408 |
| 89 | 35.803 | 63.721 | 155.510 | 10.031 | 31.518 | 88.543 |
| 90 | 24.230 | 39.491 | 91.789 | 7.3223 | 21.4866 | 57.0253 |
| 91 | 15.865 | 23.625 | 52.298 | 5.1593 | 14.1643 | 35.5387 |
| 92 | 10.022 | 13.604 | 28.672 | 3.4861 | 9.0050 | 21.3744 |
| 93 | 6.105 | 7.499 | 15.068 | 2.2984 | 5.5189 | 12.3694 |
| 94 | 3.543 | 3.956 | 7.569 | 1.4205 | 3.2205 | 6.8505 |
| 95 | 1.970 | 1.986 | 3.613 | .8478 | 1.8000 | 3.6300 |
| 96 | 1.038 | .948 | 1.627 | .4755 | .9522 | 1.8300 |
| 97 | .518 | .430 | .679 | .2409 | .4767 | .8778 |
| 98 | .254 | .176 | .249 | .1281 | .2358 | .4011 |
| 99 | .115 | .061 | .073 | .0613 | .1077 | .1653 |
| 100 | .049 | .012 | .012 | .0342 | .0464 | .0576 |
| 101 | .012 | .... | .... | .0112 | .0112 | .0112 |

TABLE III.
COMMUTATION COLUMNS—H^M TABLE, MAKEHAM'S FORMULA.
FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 127 280 | 2 204 737 | 42 280 578 | 13 806. | 37 590. | 616 157. |
| 1 | 108 580 | 2 096 157 | 40 075 841 | 3 663.0 | 23 784.0 | 578 567.3 |
| 2 | 100 740 | 1 995 417 | 37 979 684 | 2 111.3 | 20 121.0 | 554 783.3 |
| 3 | 94 757 | 1 900 660 | 35 084 267 | 1 407.0 | 18 009.7 | 534 662.3 |
| 4 | 89 706 | 1 810 954 | 34 083 607 | 1 089.1 | 16 602.7 | 516 652.6 |
| 5 | 85 165 | 1 725 789 | 32 272 653 | 838.53 | 15 513.57 | 500 049.89 |
| 6 | 81 051 | 1 644 738 | 30 546 864 | 647.46 | 14 675.04 | 484 536.32 |
| 7 | 77 288 | 1 567 450 | 28 902 126 | 499.06 | 14 027.58 | 469 861.28 |
| 8 | 73 814 | 1 493 636 | 27 334 676 | 391.35 | 13 528.52 | 455 833.70 |
| 9 | 70 585 | 1 423 051 | 25 841 040 | 313.47 | 13 137.17 | 442 395.18 |
| 10 | 67 557 | 1 355 494 | 24 417 989 | 265.03 | 12 823.70 | 429 168.01 |
| 11 | 64 692 | 1 290 802 | 23 062 495 | 230.48 | 12 558.67 | 416 344.31 |
| 12 | 61 974 | 1 228 828 | 21 771 693 | 207.80 | 12 328.19 | 403 785.64 |
| 13 | 59 384 | 1 169 444 | 20 542 865 | 194.61 | 12 120.39 | 391 457.45 |
| 14 | 56 904 | 1 112 540 | 19 373 421 | 187.12 | 11 925.78 | 379 337.06 |
| 15 | 54 528 | 1 058 012 | 18 260 881 | 192.21 | 11 738.66 | 367 411.28 |
| 16 | 52 240 | 1 005 772 | 17 202 869 | 197.13 | 11 546.45 | 355 672.62 |
| 17 | 50 032 | 955 740 | 16 197 097 | 209.79 | 11 349.32 | 344 126.17 |
| 18 | 47 898 | 907 842 | 15 241 357 | 220.71 | 11 139.53 | 332 776.85 |
| 19 | 45 836 | 862 006 | 14 333 515 | 231.84 | 10 918.82 | 321 637.32 |
| 20 | 43 841 | 818 165 | 13 471 509 | 240.48 | 10 686.98 | 310 718.50 |
| 21 | 41 914 | 776 251 | 12 653 344 | 245.58 | 10 446.50 | 300 031.52 |
| 22 | 40 057 | 736 194 | 11 877 093 | 247.09 | 10 200.92 | 289 585.02 |
| 23 | 38 268 | 697 926 | 11 140 899 | 246.17 | 9 953.83 | 279 384.10 |
| 24 | 36 551 | 661 375 | 10 442 973 | 242.70 | 9 707.66 | 269 430.27 |
| 25 | 34 903 | 626 472 | 9 781 598 | 237.33 | 9 464.96 | 259 722.61 |
| 26 | 33 323 | 593 149 | 9 155 126 | 230.29 | 9 227.63 | 250 257.65 |
| 27 | 31 810 | 561 339 | 8 561 977 | 224.43 | 8 997.34 | 241 030.02 |
| 28 | 30 363 | 530 976 | 8 000 638 | 217.40 | 8 772.91 | 232 032.68 |
| 29 | 28 977 | 501 999 | 7 469 662 | 211.50 | 8 555.51 | 223 259.77 |
| 30 | 27 652 | 474 347 | 6 967 663 | 204.86 | 8 344.01 | 214 704.26 |
| 31 | 26 383 | 447 964 | 6 493 316 | 199.54 | 8 139.15 | 206 360.25 |
| 32 | 25 169 | 422 795 | 6 045 352 | 194.33 | 7 939.61 | 198 221.10 |
| 33 | 24 007 | 398 788 | 5 622 557 | 189.50 | 7 745.28 | 190 281.49 |
| 34 | 22 894 | 375 894 | 5 223 769 | 184.74 | 7 555.78 | 182 536.21 |
| 35 | 21 828 | 354 066 | 4 847 875 | 180.80 | 7 371.04 | 174 980.43 |
| 36 | 20 808 | 333 258 | 4 493 809 | 177.13 | 7 190.24 | 167 609.39 |
| 37 | 19 831 | 313 427 | 4 160 551 | 173.47 | 7 013.11 | 160 419 15 |
| 38 | 18 894 | 294 533 | 3 847 124 | 170.26 | 6 839.64 | 153 406 04 |
| 39 | 17 997 | 276 536 | 3 552 591 | 167.88 | 6 669 38 | 146 560 40 |
| 40 | 17 138 | 259 398 | 3 276 055 | 164.83 | 6 501.50 | 139 897 02 |
| 41 | 16 313 | 243 085 | 3 016 657 | 162.92 | 6 336 67 | 133 395.12 |
| 42 | 15 523 | 227 562 | 2 773 572 | 161.28 | 6 173.75 | 127 058.85 |
| 43 | 14 765 | 212 797 | 2 546 010 | 159.35 | 6 012.47 | 120 885.18 |
| 44 | 14 038 | 198 759 | 2 333 213 | 158.19 | 5 853.12 | 114 872.63 |
| 45 | 13 340 | 185 419 | 2 134 451 | 157.04 | 5 694.93 | 109 019.51 |
| 46 | 12 670 | 172 749 | 1 949 035 | 156.07 | 5 537.89 | 103 324.58 |
| 47 | 12 026 | 160 723 | 1 776 286 | 155.39 | 5 381.82 | 97 786.69 |
| 48 | 11 408 | 149 315 | 1 615 563 | 155.27 | 5 226.43 | 92 404.87 |
| 49 | 10 814 | 138 501 | 1 466 248 | 154.92 | 5 071.16 | 87 178.44 |

TABLE III.—Cont.

COMMUTATION COLUMNS—H^M TABLE, MAKEHAM'S FORMULA, FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 60 | 10 243. | 128 258.0 | I 327 747.3 | 154.79 | 4 916.24 | 82 107.28 |
| 61 | 9 694.4 | 118 563.6 | I 199 489.3 | 155.21 | 4 761.45 | 77 191.04 |
| 62 | 9 166.4 | 109 397.2 | I 080 925.7 | 155.49 | 4 606.24 | 72 429.59 |
| 63 | 8 658.2 | 100 739.0 | 971 528.5 | 155.89 | 4 450.75 | 67 823.35 |
| 64 | 8 169.4 | 92 569.6 | 870 789.5 | 156.48 | 4 294.86 | 63 372.60 |
| 65 | 7 698.7 | 84 870.9 | 778 219.9 | 157.25 | 4 138.38 | 59 077.74 |
| 66 | 7 245.4 | 77 625.5 | 693 349.0 | 157.72 | 3 981.13 | 54 933.36 |
| 67 | 6 808.0 | 70 816.6 | 615 723.5 | 158.44 | 3 823.41 | 50 958.23 |
| 68 | 6 388.7 | 64 427.9 | 544 906.9 | 159.37 | 3 664.97 | 47 134.82 |
| 69 | 5 983.6 | 58 444.3 | 480 479.0 | 159.89 | 3 505.60 | 43 469.85 |
| 70 | 5 593.6 | 52 550.7 | 422 034.7 | 160.42 | 3 345.71 | 39 964.25 |
| 71 | 5 218.1 | 47 632.6 | 369 184.0 | 160.83 | 3 185.29 | 36 618.54 |
| 72 | 4 856.5 | 42 776.1 | 321 551.4 | 161.07 | 3 024.46 | 33 433.25 |
| 73 | 4 508.6 | 38 267.5 | 278 775.3 | 161.14 | 2 863.39 | 30 408.79 |
| 74 | 4 174.1 | 34 093.4 | 240 507.8 | 160.88 | 2 702.25 | 27 545.40 |
| 75 | 3 852.7 | 30 240.7 | 205 414.4 | 160.25 | 2 541.37 | 24 843.15 |
| 76 | 3 544.2 | 26 696.5 | 176 173.7 | 159.21 | 2 381.12 | 22 301.78 |
| 77 | 3 248.7 | 23 447.8 | 149 477.2 | 157.88 | 2 221.91 | 19 920.66 |
| 78 | 2 965.9 | 20 481.9 | 126 029.4 | 155.88 | 2 064.03 | 17 698.75 |
| 79 | 2 695.9 | 17 786.0 | 105 547.5 | 153.36 | 1 908.15 | 15 634.72 |
| 80 | 2 438.9 | 15 347.1 | 87 761.5 | 150.30 | 1 754.79 | 13 726.57 |
| 81 | 2 194.7 | 13 152.4 | 72 414.4 | 146.54 | 1 604.49 | 11 971.78 |
| 82 | I 963.8 | 11 188.6 | 59 262.0 | 142.16 | I 457.95 | 10 367.29 |
| 83 | I 746.1 | 9 442.5 | 48 073.4 | 137.02 | I 315.79 | 8 909.34 |
| 84 | I 541.9 | 7 900.6 | 38 630.9 | 131.27 | I 178.77 | 7 593.55 |
| 85 | I 351.4 | 6 549.2 | 30 730.3 | 124.80 | I 047.50 | 6 414.78 |
| 86 | I 174.6 | 5 374.6 | 24 181.1 | 117.71 | 922.70 | 5 367.28 |
| 87 | I 011.7 | 4 362.91 | 18 806.47 | 109.94 | 804.99 | 4 444.58 |
| 88 | 862.84 | 3 500.07 | 14 443.56 | 101.75 | 695.05 | 3 639.59 |
| 89 | 727.93 | 2 772.14 | 10 943.49 | 93.102 | 593.299 | 2 944.536 |
| 90 | 606.81 | 2 165.33 | 8 171.35 | 81.182 | 500.197 | 2 351.237 |
| 91 | 499.30 | I 666.03 | 6 006.02 | 75.129 | 416.015 | I 851.040 |
| 92 | 404.97 | I 261.06 | 4 339.99 | 66.028 | 340.886 | I 435.025 |
| 93 | 323.36 | 937.70 | 3 078.93 | 57.111 | 274.858 | I 094.139 |
| 94 | 253.81 | 683.89 | 2 141.23 | 48.532 | 217.747 | 819.281 |
| 95 | 195.52 | 488.37 | I 457.34 | 40.459 | 169.215 | 601.534 |
| 96 | 147.54 | 340.83 | 968.97 | 33.035 | 128.756 | 432.319 |
| 97 | 108.83 | 232.001 | 628.136 | 26.312 | 95.721 | 303.563 |
| 98 | 78.332 | 153.669 | 396.135 | 20.453 | 69.409 | 207.842 |
| 99 | 54.866 | 98.803 | 242.466 | 15.446 | 48.956 | 138.433 |
| 100 | 37.310 | 61.493 | 143.663 | 11.329 | 33.510 | 89.477 |
| 101 | 24.547 | 36.946 | 82.170 | 8.0208 | 22.1811 | 55.9668 |
| 92 | 15.581 | 21.365 | 45.224 | 5.4457 | 14.1603 | 33.7857 |
| 93 | 9.536 | 11.829 | 23.859 | 3.6077 | 8.7146 | 19.6254 |
| 94 | 5.502 | 6.267 | 12.030 | 2.2403 | 5.1069 | 10.9108 |
| 95 | 3.108 | 3.159 | 5.763 | 1.3435 | 2.8666 | 5.8039 |
| 96 | 1.645 | 1.514 | 2.604 | .7573 | 1.5231 | 2.9373 |
| 97 | .824 | .690 | 1.090 | .3855 | .7658 | 1.4142 |
| 98 | .407 | .283 | .400 | .2059 | .3803 | .6484 |
| 99 | .185 | .098 | .117 | .0990 | .1744 | .2681 |
| 100 | .079 | .019 | .019 | .0571 | .0754 | .0937 |
| 101 | .019 | ..... | ..... | .0183 | .0183 | .0183 |

TABLE IV.

COMMUTATION COLUMNS—H_M TABLE, MAKEHAM'S FORMULA.
THREE AND ONE-HALF PER CENT.

| Age | D _x | N _x | S _x | C _x | M _x | R _x |
|-----|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 127 280 | 2 425 772 | 49 703 849 | 13 872. | 40 948. | 785 908 |
| 1 | 109 110 | 2 316 662 | 47 278 077 | 3 698.5 | 27 075.5 | 744 959 6 |
| 2 | 101 720 | 2 214 942 | 44 901 415 | 2 142.1 | 23 377.0 | 717 884.1 |
| 3 | 96 137 | 2 118 805 | 42 746 473 | 1 434.4 | 21 234 9 | 694 507.1 |
| 4 | 91 451 | 2 027 354 | 40 627 668 | 1 115.6 | 19 800 5 | 673 272.2 |
| 5 | 87 243 | 1 940 111 | 38 600 314 | 863.14 | 18 084.94 | 653 471.66 |
| 6 | 83 430 | 1 856 681 | 36 660 203 | 669.67 | 17 821.80 | 634 786 75 |
| 7 | 79 939 | 1 776 742 | 34 803 522 | 518.68 | 17 152 13 | 616 964.95 |
| 8 | 76 717 | 1 700 025 | 33 026 780 | 408.70 | 16 633.45 | 599 812.82 |
| 9 | 73 714 | 1 626 311 | 31 326 755 | 328.94 | 16 224 75 | 583 179 37 |
| 10 | 70 892 | 1 555 419 | 29 700 444 | 279 46 | 15 895.81 | 566 954 62 |
| 11 | 68 215 | 1 487 204 | 28 145 025 | 244 20 | 15 616.35 | 551 058.81 |
| 12 | 65 664 | 1 421 510 | 26 657 821 | 221 24 | 15 372.15 | 535 442.46 |
| 13 | 63 224 | 1 358 316 | 25 236 281 | 208.19 | 15 150.91 | 520 070 31 |
| 14 | 60 877 | 1 297 439 | 23 877 965 | 201.15 | 14 942.72 | 504 919.40 |
| 15 | 58 615 | 1 238 824 | 22 580 526 | 207.61 | 14 741.57 | 489 976 68 |
| 16 | 56 426 | 1 182 398 | 21 341 702 | 213 96 | 14 533 96 | 475 235.11 |
| 17 | 54 324 | 1 128 091 | 20 159 304 | 228.80 | 14 320.00 | 460 701.15 |
| 18 | 52 238 | 1 075 856 | 19 031 210 | 241.87 | 14 091.20 | 446 381 15 |
| 19 | 50 231 | 1 025 625 | 17 955 354 | 255.30 | 13 849.33 | 432 289.95 |
| 20 | 48 277 | 977 348 | 16 929 720 | 266.09 | 13 594.03 | 418 440 62 |
| 21 | 46 378 | 930 970 | 15 952 381 | 273.04 | 13 327.94 | 404 846.59 |
| 22 | 44 537 | 886 433 | 15 021 411 | 276.05 | 13 054.90 | 391 518 65 |
| 23 | 42 754 | 843 679 | 14 134 978 | 276 35 | 12 778.85 | 378 463 75 |
| 24 | 41 033 | 802 646 | 13 291 299 | 273 77 | 12 502.50 | 365 684 90 |
| 25 | 39 371 | 763 275 | 12 488 653 | 269.02 | 12 228.73 | 353 182.40 |
| 26 | 37 771 | 725 504 | 11 725 378 | 262.20 | 11 959.71 | 340 953 67 |
| 27 | 36 231 | 689 273 | 10 999 874 | 256.86 | 11 697.42 | 328 993 96 |
| 28 | 34 750 | 654 523 | 10 310 621 | 250.01 | 11 440.56 | 317 296.54 |
| 29 | 33 324 | 621 199 | 9 656 078 | 244.41 | 11 190.55 | 305 855.98 |
| 30 | 31 953 | 589 246 | 9 034 879 | 237 86 | 10 946.14 | 294 665.43 |
| 31 | 30 634 | 558 612 | 8 445 633 | 232 81 | 10 708.28 | 283 719.29 |
| 32 | 29 366 | 529 246 | 7 887 021 | 227.83 | 10 475.47 | 273 011.01 |
| 33 | 28 145 | 501 101 | 7 357 775 | 223.23 | 10 247.64 | 262 535.54 |
| 34 | 26 970 | 474 131 | 6 856 674 | 218.69 | 10 024.41 | 252 287 90 |
| 35 | 25 839 | 448 292 | 6 382 543 | 215 06 | 9 805.72 | 242 263.49 |
| 36 | 24 750 | 423 542 | 5 934 251 | 211 70 | 9 590.66 | 232 457.77 |
| 37 | 23 702 | 399 840 | 5 510 709 | 208 33 | 9 378.96 | 222 867.11 |
| 38 | 22 692 | 377 148 | 5 110 869 | 205.47 | 9 170.63 | 213 488.15 |
| 39 | 21 719 | 355 420 | 4 733 721 | 203.58 | 8 965 16 | 204 317.52 |
| 40 | 20 781 | 334 648 | 4 378 292 | 200.84 | 8 761.58 | 195 352 36 |
| 41 | 19 877 | 314 771 | 4 043 644 | 199.47 | 8 560.74 | 186 590.78 |
| 42 | 19 006 | 295 765 | 3 728 873 | 198.42 | 8 361.27 | 178 030.04 |
| 43 | 18 165 | 277 600 | 3 433 108 | 196.99 | 8 162.85 | 169 668.77 |
| 44 | 17 353 | 260 247 | 3 155 503 | 196 49 | 7 965.86 | 161 505.92 |
| 45 | 16 570 | 243 677 | 2 895 261 | 196.02 | 7 769.37 | 153 540.06 |
| 46 | 15 814 | 227 863 | 2 651 584 | 195.74 | 7 573.35 | 145 770.69 |
| 47 | 15 083 | 212 781 | 2 423 721 | 195.83 | 7 377.61 | 138 197.34 |
| 48 | 14 377 | 198 403 | 2 210 941 | 196 63 | 7 181.78 | 130 819.73 |
| 49 | 13 694 | 184 709 | 2 012 538 | 197.14 | 6 985.15 | 123 637.95 |

TABLE IV.—Cont.

COMMUTATION COLUMNS—H_M TABLE, MAKEHAM'S FORMULA.
THREE AND ONE-HALF PER CENT.

| Age. | D _t | N _t | S _t | C _t | M _t | R _t |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 50 | 13 034. | 171 675. | 1 827 829. | 197.91 | 6 788.01 | 116 652.80 |
| 51 | 12 395. | 159 280. | 1 656 154. | 199.41 | 6 590.10 | 109 864.79 |
| 52 | 11 777. | 147 503. | 1 496 874. | 200.74 | 6 390.69 | 103 274.69 |
| 53 | 11 178. | 136 325. | 1 349 371. | 202.22 | 6 189.95 | 96 884.00 |
| 54 | 10 598. | 125 727. | 1 213 046. | 203.98 | 5 987.73 | 90 694.05 |
| 55 | 10 035. | 115 691.8 | 1 087 319.3 | 205.96 | 5 783.75 | 84 706.32 |
| 56 | 9 490.1 | 106 201.7 | 971 627.5 | 207.58 | 5 577.79 | 78 922.57 |
| 57 | 8 961.5 | 97 240.2 | 865 425.8 | 209.54 | 5 370.21 | 73 344.78 |
| 58 | 8 448.9 | 88 791.3 | 768 185.6 | 211.78 | 5 160.67 | 67 974.57 |
| 59 | 7 951.5 | 80 839.8 | 679 394.3 | 213.51 | 4 948.89 | 62 813.90 |
| 60 | 7 469.1 | 73 370.7 | 598 554.5 | 215.24 | 4 735.38 | 57 865.01 |
| 61 | 7 001.3 | 66 369.4 | 525 183.8 | 216.85 | 4 520.14 | 53 129.63 |
| 62 | 6 547.7 | 59 821.7 | 458 814.4 | 218.41 | 4 303.20 | 48 609.49 |
| 63 | 6 108.0 | 53 713.7 | 398 992.7 | 219.35 | 4 085.08 | 44 306.20 |
| 64 | 5 682.1 | 48 031.6 | 345 279.0 | 220.00 | 3 865.73 | 40 221.12 |
| 65 | 5 270.0 | 42 761.6 | 297 247.4 | 220.26 | 3 645.67 | 36 355.39 |
| 66 | 4 871.5 | 37 890.1 | 254 485.8 | 219.89 | 3 425.41 | 32 709.72 |
| 67 | 4 486.8 | 33 403.3 | 210 595.7 | 219.11 | 3 205.52 | 29 284.31 |
| 68 | 4 116.0 | 29 287.3 | 183 192.4 | 217.38 | 2 986.41 | 26 078.79 |
| 69 | 3 759.5 | 25 527.8 | 153 905.1 | 214.89 | 2 769.03 | 23 092.38 |
| 70 | 3 417.4 | 22 110.4 | 128 377.3 | 211.62 | 2 554.14 | 20 323.35 |
| 71 | 3 090.2 | 19 020.2 | 106 266.9 | 207.32 | 2 342.52 | 17 769.21 |
| 72 | 2 778.4 | 16 241.8 | 87 246.7 | 202.09 | 2 135.20 | 15 426.69 |
| 73 | 2 482.3 | 13 759.5 | 71 004.9 | 195.73 | 1 933.11 | 13 291.49 |
| 74 | 2 202.7 | 11 556.8 | 57 245.4 | 188.43 | 1 737.38 | 11 358.38 |
| 75 | 1 939.7 | 9 617.1 | 45 688.6 | 180.01 | 1 548.95 | 9 621.00 |
| 76 | 1 694.1 | 7 923.0 | 36 071.5 | 170.60 | 1 368.94 | 8 072.05 |
| 77 | 1 466.3 | 6 457.7 | 28 148.5 | 160.11 | 1 198.34 | 6 703.11 |
| 78 | 1 256.6 | 5 200.1 | 21 691.8 | 148.89 | 1 038.23 | 5 504.77 |
| 79 | 1 065.2 | 4 134.89 | 16 491.72 | 136.90 | 889.34 | 4 466.54 |
| 80 | 892.26 | 3 242.63 | 12 356.83 | 124.28 | 752.44 | 3 577.20 |
| 81 | 737.72 | 2 504.91 | 9 114.20 | 111.54 | 628.06 | 2 824.76 |
| 82 | 601.23 | 1 903.68 | 6 609.29 | 98.503 | 516.521 | 2 196.695 |
| 83 | 482.39 | 1 421.29 | 4 705.61 | 85.611 | 418.018 | 1 680.174 |
| 84 | 380.47 | 1 040.82 | 3 284.32 | 71.102 | 332.407 | 1 262.156 |
| 85 | 294.50 | 746.32 | 2 243.505 | 61.236 | 259.305 | 929.749 |
| 86 | 221.31 | 523.01 | 1 497.18 | 50.241 | 198.069 | 670.444 |
| 87 | 165.52 | 357.49 | 974.17 | 40.210 | 147.828 | 472.375 |
| 88 | 119.71 | 237.784 | 616.680 | 31.407 | 107.618 | 324.547 |
| 89 | 84.252 | 153.532 | 378.896 | 23.833 | 76.211 | 216.929 |
| 90 | 57.571 | 95.961 | 225.364 | 17.565 | 52.378 | 140.718 |
| 91 | 38.058 | 57.903 | 129.403 | 12.495 | 34.813 | 88.340 |
| 92 | 24.275 | 33.628 | 71.500 | 8.5251 | 22.3170 | 53.5272 |
| 93 | 14.929 | 18.699 | 37.872 | 5.6751 | 13.7919 | 31.2102 |
| 94 | 8.749 | 9.950 | 19.173 | 3.5412 | 8.1168 | 17.4183 |
| 95 | 4.912 | 5.038 | 9.223 | 2.1338 | 4.5756 | 9.3015 |
| 96 | 2.612 | 2.426 | 4.185 | 1.2086 | 2.4418 | 4.7259 |
| 97 | 1.315 | 1.111 | 1.759 | .6183 | 1.2332 | 2.2841 |
| 98 | .653 | .458 | .648 | .3317 | .6149 | 1.0509 |
| 99 | .299 | .159 | .190 | .1603 | .2832 | .4360 |
| 100 | .128 | .031 | .031 | .0930 | .1229 | .1528 |
| 101 | .031 | ..... | ..... | .0299 | .0299 | .0299 |

TABLE V.
COMMUTATION COLUMNS—H^M TABLE, MAKEHAM'S FORMULA,
THREE PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 127 283 | 2 688 021 | 58 493 170 | 13 940. | 45284. | 1 016 517. |
| 1 | 109 636 | 2 578 385 | 56 255 149 | 3 734.6 | 31 344.2 | 971 233.2 |
| 2 | 102 708 | 2 475 677 | 53 676 704 | 2 173.5 | 27 609.6 | 939 889.0 |
| 3 | 97 544 | 2 378 133 | 51 201 087 | 1 462.4 | 25 436.1 | 912 279.4 |
| 4 | 93 240 | 2 284 893 | 48 822 954 | 1 143.0 | 23 973.7 | 886 843.3 |
| 5 | 89 380 | 2 195 513 | 42 538 061 | 888.59 | 22 830.68 | 862 809.57 |
| 6 | 85 889 | 2 109 624 | 44 342 548 | 692.76 | 21 942.09 | 840 033.89 |
| 7 | 82 695 | 2 026 929 | 42 232 924 | 539.16 | 21 249.33 | 818 066.80 |
| 8 | 79 746 | 1 947 183 | 40 205 995 | 426.89 | 20 710 17 | 796 847.47 |
| 9 | 76 996 | 1 870 187 | 38 258 812 | 345.26 | 20 283.28 | 776 137.30 |
| 10 | 74 410 | 1 795 777 | 36 388 625 | 294.75 | 19 938.02 | 755 854.02 |
| 11 | 71 947 | 1 723 830 | 34 592 848 | 258.81 | 19 643.27 | 735 916.00 |
| 12 | 69 592 | 1 654 238 | 32 869 018 | 235.61 | 19 384.46 | 716 272.73 |
| 13 | 67 332 | 1 586 905 | 31 214 780 | 222.80 | 19 148.85 | 696 888.27 |
| 14 | 65 146 | 1 521 760 | 29 627 874 | 216.31 | 18 926.05 | 677 739.42 |
| 15 | 63 032 | 1 458 728 | 28 106 114 | 224.34 | 18 709 74 | 658 813.37 |
| 16 | 60 972 | 1 397 756 | 26 647 386 | 232.33 | 18 485.40 | 640 103 63 |
| 17 | 58 954 | 1 338 792 | 25 249 630 | 240.64 | 18 253.07 | 621 618.23 |
| 18 | 56 997 | 1 281 795 | 23 910 838 | 265.18 | 18 003.43 | 603 305 16 |
| 19 | 55 072 | 1 226 723 | 22 629 043 | 281.27 | 17 738.25 | 585 361.73 |
| 20 | 53 188 | 1 173 535 | 21 402 320 | 294.58 | 17 456.98 | 567 621 48 |
| 21 | 51 343 | 1 122 192 | 20 228 785 | 303 74 | 17 162.40 | 550 166.50 |
| 22 | 49 544 | 1 072 648 | 19 106 593 | 308.57 | 16 858.66 | 533 004 10 |
| 23 | 47 791 | 1 024 857 | 18 033 945 | 312.41 | 16 550.09 | 516 145 44 |
| 24 | 46 090 | 978 767 | 17 009 088 | 309.01 | 16 239.68 | 499 595 35 |
| 25 | 44 439 | 934 328 | 16 030 321 | 305.11 | 15 930.67 | 483 355.67 |
| 26 | 42 839 | 891 489 | 19 095 993 | 298.92 | 15 625.56 | 467 425 00 |
| 27 | 41 291 | 850 198 | 14 204 504 | 294.16 | 15 326 64 | 451 799.44 |
| 28 | 39 796 | 810 402 | 13 354 306 | 287.71 | 15 032.48 | 436 472.80 |
| 29 | 38 349 | 772 053 | 12 543 904 | 282 62 | 14 744.77 | 421 440 32 |
| 30 | 36 949 | 735 104 | 11 771 851 | 276.39 | 14 462.15 | 406 695.55 |
| 31 | 35 597 | 699 507 | 11 036 747 | 271.84 | 14 185.76 | 392 233 40 |
| 32 | 34 288 | 665 219 | 10 337 240 | 267.31 | 13 913.92 | 378 047.64 |
| 33 | 33 022 | 632 197 | 9 672 021 | 263.18 | 13 646.61 | 364 133 72 |
| 34 | 31 797 | 600 400 | 9 039 824 | 259.08 | 13 383 43 | 350 487.11 |
| 35 | 30 612 | 569 788 | 8 439 424 | 255.01 | 13 124.35 | 337 103.68 |
| 36 | 29 464 | 540 324 | 7 869 636 | 253.24 | 12 868.34 | 323 979.33 |
| 37 | 28 352 | 511 972 | 7 329 312 | 250.43 | 12 615.10 | 311 110.99 |
| 38 | 27 277 | 484 695 | 6 817 340 | 248.18 | 12 364.67 | 298 495.89 |
| 39 | 26 231 | 458 461 | 6 332 645 | 247.09 | 12 116.49 | 286 131.22 |
| 40 | 25 223 | 433 238 | 5 874 184 | 244.95 | 11 869.40 | 274 014.73 |
| 41 | 24 243 | 408 995 | 5 440 946 | 244.46 | 11 624.45 | 262 145.33 |
| 42 | 23 293 | 385 702 | 5 031 951 | 244.35 | 11 379 99 | 250 520.88 |
| 43 | 22 370 | 363 332 | 4 646 249 | 243.77 | 11 135.64 | 239 140.89 |
| 44 | 21 474 | 341 858 | 4 282 917 | 244.34 | 10 891.87 | 228 005.25 |
| 45 | 20 604 | 321 254 | 3 941 059 | 244.93 | 10 647.53 | 217 113 38 |
| 46 | 19 760 | 301 494 | 3 619 805 | 245.77 | 10 402.60 | 206 465.85 |
| 47 | 18 938 | 282 556 | 3 318 311 | 247.08 | 10 156.83 | 196 063 25 |
| 48 | 18 139 | 264 417 | 3 035 755 | 249.29 | 9 909.75 | 185 906 42 |
| 49 | 17 362 | 247 055 | 2 771 338 | 251.15 | 9 660.46 | 175 966 67 |

TABLE V.—*Cont.*
 COMMUTATION COLUMNS—H^M TABLE, MAKEHAM'S FORMULA.
 THREE PER CENT.

| Age. | D _t | N _t | S _t | C _t | M _t | R _t |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 50 | 16 605. | 230 450. | 2 524 283. | 253.36 | 9 409.31 | 166 336 21 |
| 51 | 15 868. | 214 582. | 2 293 833. | 256.51 | 9 155.95 | 156 926 90 |
| 52 | 15 149. | 199 433. | 2 079 251. | 259.48 | 8 899.44 | 147 770.95 |
| 53 | 14 449. | 184 984. | 1 879 818. | 262.66 | 8 639.96 | 138 871 51 |
| 54 | 13 765. | 171 219. | 1 694 834. | 266.23 | 8 377.30 | 130 231.55 |
| 55 | 13 098. | 158 121. | 1 523 615. | 270.13 | 8 111.07 | 121 854.25 |
| 56 | 12 447. | 145 674. | 1 365 494. | 273.57 | 7 849.94 | 113 743 18 |
| 57 | 11 810. | 133 864. | 1 219 820. | 277.49 | 7 597.37 | 105 902.24 |
| 58 | 11 189. | 122 675. | 1 085 956. | 281.82 | 7 289.88 | 98 334.87 |
| 59 | 10 581. | 112 093.8 | 963 280.6 | 285.50 | 7 008.06 | 91 044.99 |
| 60 | 9 987.6 | 102 106.2 | 851 186.8 | 289.21 | 6 722.56 | 84 036.93 |
| 61 | 9 407.4 | 92 608.8 | 749 080.6 | 292.78 | 6 433.35 | 77 314.37 |
| 62 | 8 840.6 | 83 858.2 | 656 381.8 | 296.05 | 6 140.57 | 70 881.02 |
| 63 | 8 286.9 | 75 571.3 | 572 523.6 | 299.05 | 5 844.52 | 64 749.45 |
| 64 | 7 746.6 | 67 824.7 | 496 952.3 | 301.47 | 5 545.47 | 58 895.93 |
| 65 | 7 219.5 | 60 605.2 | 427 127.6 | 303.20 | 5 244.00 | 53 350.46 |
| 66 | 6 705.9 | 53 899.3 | 368 522.4 | 304.17 | 4 940.80 | 48 106.46 |
| 67 | 6 205.5 | 47 692.8 | 314 623.1 | 304.56 | 4 636.63 | 43 165.66 |
| 68 | 5 721.2 | 41 971.6 | 266 930.3 | 303.62 | 4 332.07 | 38 529.03 |
| 69 | 5 251.0 | 36 720.6 | 224 958.7 | 301.59 | 4 028.45 | 34 196.96 |
| 70 | 4 796.3 | 31 924.3 | 188 238.1 | 298.46 | 3 726.86 | 30 168.51 |
| 71 | 4 358.2 | 27 566.1 | 156 313.8 | 293.81 | 3 428.40 | 26 441.65 |
| 72 | 3 937.5 | 23 628.6 | 128 747.7 | 287.79 | 3 134.59 | 23 013.25 |
| 73 | 3 535.0 | 20 093.6 | 105 119.1 | 280.09 | 2 846.80 | 19 878.66 |
| 74 | 3 152.0 | 16 941.6 | 85 025.5 | 270.95 | 2 566.71 | 17 031.86 |
| 75 | 2 789.2 | 14 152.4 | 68 083.9 | 260.09 | 2 295.76 | 14 495.15 |
| 76 | 2 447.9 | 11 704.5 | 53 931.5 | 247.69 | 2 035.67 | 12 169.39 |
| 77 | 2 128.9 | 9 575.6 | 42 227.0 | 233.60 | 1 787.98 | 10 133.72 |
| 78 | 1 833.3 | 7 742.3 | 32 651.4 | 218.28 | 1 554.38 | 8 345.74 |
| 79 | 1 561.6 | 6 180.7 | 24 909.1 | 201.67 | 1 336.10 | 6 791.36 |
| 80 | 1 314.4 | 4 866.3 | 18 728.4 | 184.12 | 1 134.43 | 5 455.26 |
| 81 | 1 032.0 | 3 774.27 | 13 862.06 | 165.92 | 950.31 | 4 320.83 |
| 82 | 894.33 | 2 879.94 | 10 087.79 | 147.23 | 784.39 | 3 370.52 |
| 83 | 721.04 | 2 158.90 | 7 207.85 | 128.58 | 637.16 | 2 586.13 |
| 84 | 571.45 | 1 587.45 | 5 048.95 | 110.33 | 508.58 | 1 948.97 |
| 85 | 444.49 | 1 142.96 | 3 461.50 | 92.871 | 398.246 | 1 440.392 |
| 86 | 338.66 | 804.30 | 2 318.54 | 76.565 | 305.375 | 1 042.146 |
| 87 | 252.24 | 552.06 | 1 514.24 | 61.574 | 228.810 | 736.771 |
| 88 | 183.31 | 368.75 | 962.18 | 48.329 | 167.236 | 507.961 |
| 89 | 129.65 | 239.100 | 593.425 | 36.852 | 118.907 | 340.725 |
| 90 | 89.018 | 150.082 | 354.325 | 27.292 | 82.055 | 221.818 |
| 91 | 59 133 | 90.949 | 204.243 | 19.511 | 54.763 | 139.763 |
| 92 | 37.901 | 53.048 | 113.294 | 13.375 | 35.252 | 85.000 |
| 93 | 23.422 | 29.626 | 60.246 | 8.9466 | 21.8765 | 49.7476 |
| 94 | 13.793 | 15.833 | 30.620 | 5.6097 | 12.9299 | 27.8711 |
| 95 | 7.781 | 8.052 | 14.787 | 3.3967 | 7.3202 | 14.9412 |
| 96 | 4.158 | 3.894 | 6.735 | 1.9332 | 3.9235 | 7.6210 |
| 97 | 2.104 | 1.790 | 2.841 | .9936 | 1.9903 | 3 6975 |
| 98 | 1.049 | .741 | 1.051 | .5359 | .9967 | 1.7072 |
| 99 | .482 | .259 | .310 | .2602 | .4608 | .7105 |
| 100 | .208 | .051 | .051 | .1515 | .2006 | .2497 |
| 101 | .051 | .... | .... | .0491 | .0491 | .0491 |

TABLE I.
H^M (KING & HARDY) JOINT LIFE ANNUITIES—EQUAL AGES,
FOUR AND ONE-HALF PER CENT.

| Age. | Two Lives a_{2x} | Three Lives a_{3x} | Four Lives a_{4x} | Age. | Two Lives a_{2x} | Three Lives a_{3x} | Four Lives a_{4x} |
|------|-----------------------|-------------------------|------------------------|------|-----------------------|-------------------------|------------------------|
| 0 | 11.952 | 9.165 | 7.106 | 51 | 9.053 | 7.512 | 6.453 |
| 1 | 14.868 | 12.714 | 10.986 | 52 | 8.784 | 7.256 | 6.211 |
| 2 | 15.686 | 13.788 | 12.243 | 53 | 8.512 | 6.998 | 5.970 |
| 3 | 16.132 | 14.394 | 12.973 | 54 | 8.237 | 6.740 | 5.729 |
| 4 | 16.399 | 14.761 | 13.427 | 55 | 7.962 | 6.482 | 5.488 |
| 5 | 16.569 | 15.024 | 13.763 | 56 | 7.685 | 6.224 | 5.249 |
| 6 | 16.674 | 15.193 | 13.988 | 57 | 7.407 | 5.967 | 5.012 |
| 7 | 16.717 | 15.278 | 14.113 | 58 | 7.129 | 5.711 | 4.776 |
| 8 | 16.707 | 15.292 | 14.151 | 59 | 6.852 | 5.457 | 4.544 |
| 9 | 16.653 | 15.248 | 14.119 | 60 | 6.575 | 5.206 | 4.316 |
| 10 | 16.564 | 15.157 | 14.029 | 61 | 6.300 | 4.957 | 4.091 |
| 11 | 16.452 | 15.035 | 13.903 | 62 | 6.027 | 4.712 | 3.870 |
| 12 | 16.321 | 14.887 | 13.746 | 63 | 5.756 | 4.471 | 3.654 |
| 13 | 16.174 | 14.720 | 13.566 | 64 | 5.489 | 4.235 | 3.442 |
| 14 | 16.018 | 14.542 | 13.372 | 65 | 5.225 | 4.003 | 3.237 |
| 15 | 15.854 | 14.353 | 13.167 | 66 | 4.965 | 3.777 | 3.037 |
| 16 | 15.689 | 14.165 | 12.962 | 67 | 4.709 | 3.556 | 2.843 |
| 17 | 15.525 | 13.978 | 12.761 | 68 | 4.459 | 3.341 | 2.656 |
| 18 | 15.366 | 13.800 | 12.570 | 69 | 4.214 | 3.133 | 2.475 |
| 19 | 15.212 | 13.630 | 12.390 | 70 | 3.975 | 2.932 | 2.301 |
| 20 | 15.065 | 13.470 | 12.224 | 71 | 3.742 | 2.737 | 2.134 |
| 21 | 14.925 | 13.320 | 12.070 | 72 | 3.516 | 2.549 | 1.974 |
| 22 | 14.788 | 13.177 | 11.925 | 73 | 3.296 | 2.369 | 1.822 |
| 23 | 14.653 | 13.039 | 11.787 | 74 | 3.084 | 2.196 | 1.676 |
| 24 | 14.520 | 12.902 | 11.652 | 75 | 2.879 | 2.031 | 1.538 |
| 25 | 14.385 | 12.766 | 11.518 | 76 | 2.682 | 1.873 | 1.406 |
| 26 | 14.247 | 12.628 | 11.383 | 77 | 2.493 | 1.723 | 1.283 |
| 27 | 14.105 | 12.485 | 11.244 | 78 | 2.312 | 1.580 | 1.165 |
| 28 | 13.958 | 12.338 | 11.101 | 79 | 2.138 | 1.445 | 1.055 |
| 29 | 13.806 | 12.186 | 10.953 | 80 | 1.973 | 1.317 | .952 |
| 30 | 13.649 | 12.029 | 10.800 | 81 | 1.815 | 1.197 | .855 |
| 31 | 13.486 | 11.865 | 10.640 | 82 | 1.666 | 1.084 | .765 |
| 32 | 13.317 | 11.696 | 10.476 | 83 | 1.525 | .978 | .682 |
| 33 | 13.142 | 11.522 | 10.307 | 84 | 1.391 | .879 | .604 |
| 34 | 12.961 | 11.341 | 10.132 | 85 | 1.265 | .786 | .532 |
| 35 | 12.776 | 11.155 | 9.950 | 86 | 1.146 | .700 | .466 |
| 36 | 12.583 | 10.964 | 9.765 | 87 | 1.036 | .621 | .406 |
| 37 | 12.385 | 10.767 | 9.573 | 88 | .932 | .547 | .350 |
| 38 | 12.181 | 10.564 | 9.377 | 89 | .835 | .480 | .300 |
| 39 | 11.972 | 10.357 | 9.175 | 90 | .744 | .417 | .255 |
| 40 | 11.756 | 10.143 | 8.969 | 91 | .661 | .361 | .214 |
| 41 | 11.536 | 9.925 | 8.757 | 92 | .585 | .311 | .180 |
| 42 | 11.309 | 9.701 | 8.541 | 93 | .510 | .261 | .145 |
| 43 | 11.077 | 9.473 | 8.322 | 94 | .449 | .222 | .119 |
| 44 | 10.840 | 9.240 | 8.098 | 95 | .389 | .184 | .094 |
| 45 | 10.598 | 9.003 | 7.871 | 96 | .342 | .155 | .076 |
| 46 | 10.351 | 8.763 | 7.640 | 97 | .317 | .144 | .070 |
| 47 | 10.099 | 8.519 | 7.407 | 98 | .258 | .110 | .050 |
| 48 | 9.844 | 8.271 | 7.171 | 99 | .200 | .085 | .037 |
| 49 | 9.584 | 8.021 | 6.933 | 100 | .160 | .015 | .004 |
| 50 | 9.320 | 7.768 | 6.694 | | | | |

HM (KING & HARDY) JOINT LIFE TABLE. 81

TABLE II.
HM (KING & HARDY) JOINT LIFE ANNUITIES—EQUAL AGES,
FOUR PER CENT.

| Age. | Two Lives 211 | Three Lives 2111 | Four Lives 21111 | Age. | Two Lives 211 | Three Lives 2111 | Four Lives 21111 |
|------|---------------------|------------------------|------------------------|------|---------------------|------------------------|------------------------|
| 0 | 12.938 | 9.850 | 7.594 | 51 | 9.407 | 7.764 | 6.644 |
| 1 | 16.095 | 13.669 | 11.747 | 52 | 9.117 | 7.492 | 6.389 |
| 2 | 16.978 | 14.824 | 13.093 | 53 | 8.826 | 7.219 | 6.135 |
| 3 | 17.453 | 15.470 | 13.871 | 54 | 8.533 | 6.945 | 5.882 |
| 4 | 17.725 | 15.859 | 14.353 | 55 | 8.238 | 6.673 | 5.630 |
| 5 | 17.908 | 16.134 | 14.705 | 56 | 7.944 | 6.401 | 5.380 |
| 6 | 18.012 | 16.305 | 14.936 | 57 | 7.649 | 6.131 | 5.132 |
| 7 | 18.047 | 16.380 | 15.060 | 58 | 7.354 | 5.862 | 4.887 |
| 8 | 18.024 | 16.391 | 15.091 | 59 | 7.061 | 5.597 | 4.646 |
| 9 | 17.953 | 16.332 | 15.045 | 60 | 6.769 | 5.334 | 4.408 |
| 10 | 17.844 | 16.222 | 14.940 | 61 | 6.479 | 5.075 | 4.175 |
| 11 | 17.711 | 16.079 | 14.794 | 62 | 6.193 | 4.820 | 3.946 |
| 12 | 17.557 | 15.910 | 14.616 | 63 | 5.909 | 4.569 | 3.723 |
| 13 | 17.386 | 15.720 | 14.414 | 64 | 5.629 | 4.324 | 3.505 |
| 14 | 17.207 | 15.518 | 14.197 | 65 | 5.353 | 4.084 | 3.293 |
| 15 | 17.018 | 15.305 | 13.969 | 66 | 5.082 | 3.850 | 3.088 |
| 16 | 16.829 | 15.093 | 13.742 | 67 | 4.816 | 3.622 | 2.888 |
| 17 | 16.641 | 14.884 | 13.519 | 68 | 4.556 | 3.401 | 2.696 |
| 18 | 16.458 | 14.683 | 13.308 | 69 | 4.302 | 3.186 | 2.511 |
| 19 | 16.281 | 14.492 | 13.108 | 70 | 4.054 | 2.979 | 2.333 |
| 20 | 16.112 | 14.312 | 12.923 | 71 | 3.814 | 2.779 | 2.163 |
| 21 | 15.950 | 14.142 | 12.751 | 72 | 3.580 | 2.587 | 1.999 |
| 22 | 15.791 | 13.979 | 12.589 | 73 | 3.354 | 2.402 | 1.844 |
| 23 | 15.637 | 13.823 | 12.435 | 74 | 3.136 | 2.226 | 1.695 |
| 24 | 15.481 | 13.668 | 12.283 | 75 | 2.925 | 2.057 | 1.555 |
| 25 | 15.325 | 13.513 | 12.134 | 76 | 2.723 | 1.896 | 1.421 |
| 26 | 15.166 | 13.356 | 11.982 | 77 | 2.530 | 1.743 | 1.295 |
| 27 | 15.002 | 13.194 | 11.827 | 78 | 2.344 | 1.598 | 1.177 |
| 28 | 14.833 | 13.028 | 11.666 | 79 | 2.166 | 1.460 | 1.065 |
| 29 | 14.659 | 12.857 | 11.502 | 80 | 1.998 | 1.331 | .960 |
| 30 | 14.479 | 12.681 | 11.332 | 81 | 1.837 | 1.208 | .862 |
| 31 | 14.293 | 12.497 | 11.156 | 82 | 1.685 | 1.094 | .771 |
| 32 | 14.102 | 12.309 | 10.975 | 83 | 1.541 | .987 | .687 |
| 33 | 13.905 | 12.114 | 10.788 | 84 | 1.406 | .886 | .608 |
| 34 | 13.701 | 11.914 | 10.595 | 85 | 1.278 | .793 | .536 |
| 35 | 13.491 | 11.708 | 10.397 | 86 | 1.157 | .706 | .469 |
| 36 | 13.276 | 11.497 | 10.194 | 87 | 1.045 | .626 | .408 |
| 37 | 13.054 | 11.280 | 9.985 | 88 | .940 | .551 | .353 |
| 38 | 12.827 | 11.057 | 9.772 | 89 | .842 | .483 | .302 |
| 39 | 12.594 | 10.829 | 9.552 | 90 | .750 | .420 | .256 |
| 40 | 12.355 | 10.596 | 9.329 | 91 | .666 | .363 | .216 |
| 41 | 12.111 | 10.358 | 9.101 | 92 | .590 | .313 | .181 |
| 42 | 11.860 | 10.115 | 8.868 | 93 | .514 | .263 | .146 |
| 43 | 11.606 | 9.868 | 8.633 | 94 | .452 | .224 | .120 |
| 44 | 11.346 | 9.616 | 8.393 | 95 | .392 | .185 | .095 |
| 45 | 11.082 | 9.360 | 8.150 | 96 | .345 | .156 | .076 |
| 46 | 10.812 | 9.101 | 7.904 | 97 | .319 | .145 | .070 |
| 47 | 10.538 | 8.839 | 7.655 | 98 | .259 | .111 | .050 |
| 48 | 10.260 | 8.573 | 7.404 | 99 | .201 | .086 | .038 |
| 49 | 9.979 | 8.305 | 7.152 | 100 | .060 | .015 | .004 |
| 50 | 9.695 | 8.036 | 6.899 | | | | |

TABLE III.
H^M (KING & HARDY) JOINT LIFE ANNUITIES—EQUAL AGES,
THREE AND ONE-HALF PER CENT.

| Age. | Two Lives a _{xx} | Three Lives a _{xxx} | Four Lives a _{xxxx} | Age. | Two Lives a _{xx} | Three Lives a _{xxx} | Four Lives a _{xxxx} |
|------|------------------------------|---------------------------------|---------------------------------|------|------------------------------|---------------------------------|---------------------------------|
| 0 | 14.079 | 10.633 | 8.146 | 51 | 9.785 | 8.030 | 6.845 |
| 1 | 17.513 | 14.760 | 12.608 | 52 | 9.474 | 7.740 | 6.577 |
| 2 | 18.467 | 16.004 | 14.053 | 53 | 9.161 | 7.451 | 6.309 |
| 3 | 18.974 | 16.696 | 14.885 | 54 | 8.847 | 7.161 | 6.043 |
| 4 | 19.260 | 17.107 | 15.396 | 55 | 8.532 | 6.873 | 5.779 |
| 5 | 19.447 | 17.393 | 15.765 | 56 | 8.218 | 6.587 | 5.517 |
| 6 | 19.546 | 17.567 | 16.003 | 57 | 7.904 | 6.303 | 5.258 |
| 7 | 19.570 | 17.642 | 16.124 | 58 | 7.592 | 6.021 | 5.002 |
| 8 | 19.530 | 17.633 | 16.145 | 59 | 7.282 | 5.742 | 4.751 |
| 9 | 19.439 | 17.555 | 16.084 | 60 | 6.973 | 5.468 | 4.504 |
| 10 | 19.307 | 17.424 | 15.958 | 61 | 6.668 | 5.197 | 4.262 |
| 11 | 19.146 | 17.257 | 15.789 | 62 | 6.366 | 4.921 | 4.025 |
| 12 | 18.964 | 17.060 | 15.586 | 63 | 6.068 | 4.671 | 3.794 |
| 13 | 18.765 | 16.843 | 15.358 | 64 | 5.775 | 4.416 | 3.570 |
| 14 | 18.555 | 16.612 | 15.115 | 65 | 5.486 | 4.167 | 3.351 |
| 15 | 18.337 | 16.372 | 14.860 | 66 | 5.204 | 3.925 | 3.140 |
| 16 | 18.118 | 16.132 | 14.608 | 67 | 4.927 | 3.690 | 2.935 |
| 17 | 17.901 | 15.895 | 14.359 | 68 | 4.656 | 3.462 | 2.738 |
| 18 | 17.690 | 15.669 | 14.124 | 69 | 4.393 | 3.241 | 2.548 |
| 19 | 17.486 | 15.452 | 13.901 | 70 | 4.136 | 3.028 | 2.366 |
| 20 | 17.289 | 15.248 | 13.694 | 71 | 3.887 | 2.823 | 2.191 |
| 21 | 17.101 | 15.055 | 13.502 | 72 | 3.646 | 2.626 | 2.025 |
| 22 | 16.917 | 14.870 | 13.320 | 73 | 3.413 | 2.437 | 1.866 |
| 23 | 16.736 | 14.691 | 13.146 | 74 | 3.189 | 2.256 | 1.715 |
| 24 | 16.555 | 14.514 | 12.976 | 75 | 2.973 | 2.083 | 1.572 |
| 25 | 16.374 | 14.337 | 12.808 | 76 | 2.765 | 1.919 | 1.436 |
| 26 | 16.189 | 14.159 | 12.637 | 77 | 2.567 | 1.764 | 1.308 |
| 27 | 16.000 | 13.976 | 12.464 | 78 | 2.377 | 1.616 | 1.188 |
| 28 | 15.805 | 13.787 | 12.284 | 79 | 2.195 | 1.476 | 1.075 |
| 29 | 15.605 | 13.593 | 12.100 | 80 | 2.023 | 1.344 | .969 |
| 30 | 15.399 | 13.394 | 11.912 | 81 | 1.859 | 1.220 | .869 |
| 31 | 15.187 | 13.189 | 11.716 | 82 | 1.705 | 1.104 | .777 |
| 32 | 14.968 | 12.978 | 11.515 | 83 | 1.558 | .995 | .692 |
| 33 | 14.744 | 12.761 | 11.309 | 84 | 1.420 | .894 | .613 |
| 34 | 14.513 | 12.538 | 11.097 | 85 | 1.290 | .799 | .540 |
| 35 | 14.277 | 12.309 | 10.879 | 86 | 1.168 | .711 | .472 |
| 36 | 14.035 | 12.075 | 10.656 | 87 | 1.055 | .630 | .411 |
| 37 | 13.787 | 11.836 | 10.428 | 88 | .948 | .555 | .355 |
| 38 | 13.532 | 11.590 | 10.195 | 89 | .849 | .486 | .304 |
| 39 | 13.272 | 11.339 | 9.958 | 90 | .756 | .423 | .258 |
| 40 | 13.007 | 11.084 | 9.715 | 91 | .671 | .366 | .217 |
| 41 | 12.736 | 10.824 | 9.468 | 92 | .594 | .315 | .182 |
| 42 | 12.459 | 10.559 | 9.217 | 93 | .517 | .264 | .147 |
| 43 | 12.179 | 10.291 | 8.964 | 94 | .455 | .225 | .121 |
| 44 | 11.893 | 10.018 | 8.706 | 95 | .394 | .186 | .095 |
| 45 | 11.603 | 9.742 | 8.446 | 96 | .347 | .157 | .076 |
| 46 | 11.308 | 9.462 | 8.183 | 97 | .321 | .145 | .071 |
| 47 | 11.010 | 9.180 | 7.918 | 98 | .261 | .112 | .050 |
| 48 | 10.709 | 8.895 | 7.651 | 99 | .202 | .086 | .038 |
| 49 | 10.404 | 8.608 | 7.383 | 100 | .060 | .015 | .004 |
| 50 | 10.096 | 8.320 | 7.114 | | | | |

TABLE IV.
H^M (KING & HARDY) JOINT LIFE ANNUITIES—EQUAL AGES,
THREE PER CENT.

| Age. | Two Lives a _{xx} | Three Lives a _{xxx} | Four Lives a _{xxxx} | Age. | Two Lives a _{xx} | Three Lives a _{xxx} | Four Lives a _{xxxx} |
|------|------------------------------|---------------------------------|---------------------------------|------|------------------------------|---------------------------------|---------------------------------|
| 0 | 15.406 | 11.534 | 8.774 | 51 | 10.190 | 8.312 | 7.057 |
| 1 | 19.161 | 16.013 | 13.587 | 52 | 9.854 | 8.004 | 6.774 |
| 2 | 20.197 | 17.358 | 15.143 | 53 | 9.517 | 7.696 | 6.491 |
| 3 | 20.740 | 18.100 | 16.035 | 54 | 9.180 | 7.389 | 6.211 |
| 4 | 21.038 | 18.534 | 16.577 | 55 | 8.844 | 7.085 | 5.934 |
| 5 | 21.227 | 18.833 | 16.965 | 56 | 8.509 | 6.783 | 5.660 |
| 6 | 21.318 | 19.006 | 17.208 | 57 | 8.175 | 6.483 | 5.389 |
| 7 | 21.327 | 19.072 | 17.325 | 58 | 7.843 | 6.187 | 5.122 |
| 8 | 21.265 | 19.046 | 17.333 | 59 | 7.514 | 5.895 | 4.861 |
| 9 | 21.147 | 18.946 | 17.253 | 60 | 7.188 | 5.607 | 4.604 |
| 10 | 20.984 | 18.787 | 17.103 | 61 | 6.866 | 5.325 | 4.353 |
| 11 | 20.791 | 18.589 | 16.906 | 62 | 6.548 | 5.048 | 4.107 |
| 12 | 20.575 | 18.361 | 16.674 | 63 | 6.235 | 4.777 | 3.869 |
| 13 | 20.339 | 18.110 | 16.414 | 64 | 5.928 | 4.512 | 3.636 |
| 14 | 20.094 | 17.846 | 16.141 | 65 | 5.626 | 4.254 | 3.411 |
| 15 | 19.839 | 17.572 | 15.854 | 66 | 5.331 | 4.004 | 3.193 |
| 16 | 19.583 | 17.300 | 15.571 | 67 | 5.042 | 3.760 | 2.983 |
| 17 | 19.332 | 17.030 | 15.293 | 68 | 4.761 | 3.525 | 2.780 |
| 18 | 19.087 | 16.773 | 15.029 | 69 | 4.487 | 3.297 | 2.586 |
| 19 | 18.848 | 16.520 | 14.780 | 70 | 4.221 | 3.078 | 2.399 |
| 20 | 18.619 | 16.293 | 14.548 | 71 | 3.964 | 2.868 | 2.221 |
| 21 | 18.398 | 16.073 | 14.331 | 72 | 3.715 | 2.665 | 2.051 |
| 22 | 18.183 | 15.861 | 14.126 | 73 | 3.475 | 2.472 | 1.889 |
| 23 | 17.972 | 15.656 | 13.930 | 74 | 3.243 | 2.287 | 1.735 |
| 24 | 17.761 | 15.453 | 13.738 | 75 | 3.021 | 2.111 | 1.589 |
| 25 | 17.549 | 15.251 | 13.548 | 76 | 2.808 | 1.943 | 1.451 |
| 26 | 17.334 | 15.046 | 13.356 | 77 | 2.605 | 1.784 | 1.322 |
| 27 | 17.114 | 14.837 | 13.160 | 78 | 2.410 | 1.634 | 1.199 |
| 28 | 16.888 | 14.623 | 12.959 | 79 | 2.225 | 1.492 | 1.084 |
| 29 | 16.657 | 14.404 | 12.754 | 80 | 2.049 | 1.358 | .977 |
| 30 | 16.420 | 14.179 | 12.543 | 81 | 1.882 | 1.232 | .877 |
| 31 | 16.176 | 13.947 | 12.325 | 82 | 1.724 | 1.114 | .784 |
| 32 | 15.927 | 13.710 | 12.102 | 83 | 1.576 | 1.004 | .697 |
| 33 | 15.671 | 13.467 | 11.874 | 84 | 1.435 | .901 | .617 |
| 34 | 15.410 | 13.218 | 11.640 | 85 | 1.303 | .806 | .543 |
| 35 | 15.142 | 12.964 | 11.400 | 86 | 1.179 | .717 | .475 |
| 36 | 14.869 | 12.704 | 11.156 | 87 | 1.064 | .635 | .414 |
| 37 | 14.589 | 12.439 | 10.906 | 88 | .956 | .559 | .357 |
| 38 | 14.304 | 12.167 | 10.652 | 89 | .856 | .490 | .306 |
| 39 | 14.013 | 11.892 | 10.392 | 90 | .762 | .425 | .259 |
| 40 | 13.718 | 11.612 | 10.130 | 91 | .676 | .368 | .218 |
| 41 | 13.417 | 11.327 | 9.862 | 92 | .598 | .317 | .183 |
| 42 | 13.110 | 11.037 | 9.590 | 93 | .521 | .266 | .147 |
| 43 | 12.800 | 10.746 | 9.317 | 94 | .458 | .225 | .121 |
| 44 | 12.485 | 10.449 | 9.040 | 95 | .397 | .187 | .096 |
| 45 | 12.167 | 10.150 | 8.761 | 96 | .349 | .157 | .077 |
| 46 | 11.844 | 9.847 | 8.479 | 97 | .303 | .126 | .071 |
| 47 | 11.518 | 9.543 | 8.196 | 98 | .262 | .112 | .051 |
| 48 | 11.189 | 9.237 | 7.912 | 99 | .223 | .087 | .038 |
| 49 | 10.858 | 8.930 | 7.627 | 100 | .061 | .015 | .004 |
| 50 | 10.525 | 8.621 | 7.342 | | | | |

H^m TABLE (KING AND HARDY).

FORCE OF MORTALITY.

| Age | μ_x | Age. | μ_x | Age. | μ_x | Age. | μ_x |
|-----|---------|------|---------|------|---------|------|---------|
| 0 | .15920 | 26 | .00716 | 52 | .01727 | 78 | .12523 |
| 1 | .07901 | 27 | .00729 | 53 | .01833 | 79 | .13062 |
| 2 | .02366 | 28 | .00742 | 54 | .01950 | 80 | .14909 |
| 3 | .01787 | 29 | .00755 | 55 | .02077 | 81 | .16275 |
| 4 | .01379 | 30 | .00768 | 56 | .02216 | 82 | .17772 |
| 5 | .01142 | 31 | .00782 | 57 | .02369 | 83 | .19412 |
| 6 | .00925 | 32 | .00798 | 58 | .02536 | 84 | .21209 |
| 7 | .00748 | 33 | .00815 | 59 | .02719 | 85 | .23177 |
| 8 | .00607 | 34 | .00833 | 60 | .02920 | 86 | .25343 |
| 9 | .00502 | 35 | .00854 | 61 | .03140 | 87 | .27697 |
| 10 | .00428 | 36 | .00876 | 62 | .03381 | 88 | .30286 |
| 11 | .00388 | 37 | .00901 | 63 | .03645 | 89 | .33123 |
| 12 | .00359 | 38 | .00928 | 64 | .03934 | 90 | .36230 |
| 13 | .00342 | 39 | .00957 | 65 | .04251 | 91 | .39635 |
| 14 | .00340 | 40 | .00990 | 66 | .04599 | 92 | .43366 |
| 15 | .00353 | 41 | .01025 | 67 | .04979 | 93 | .47453 |
| 16 | .00378 | 42 | .01064 | 68 | .05396 | 94 | .51930 |
| 17 | .00414 | 43 | .01106 | 69 | .05853 | 95 | .56836 |
| 18 | .00458 | 44 | .01153 | 70 | .06353 | 96 | .62211 |
| 19 | .00504 | 45 | .01204 | 71 | .06901 | 97 | .68100 |
| 20 | .00550 | 46 | .01260 | 72 | .07502 | 98 | .74552 |
| 21 | .00592 | 47 | .01321 | 73 | .08160 | 99 | .81621 |
| 22 | .00629 | 48 | .01388 | 74 | .08881 | 100 | .89366 |
| 23 | .00659 | 49 | .01462 | 75 | .09671 | 101 | .97851 |
| 24 | .00682 | 50 | .01542 | 76 | .10536 | 102 | ..... |
| 25 | .00701 | 51 | .01631 | 77 | .11485 | | |

TABLE I.
H^m (5) MORTALITY TABLE (WOOLHOUSE).

| $A_{x }$ | l_x | d_x | p_x | $(1-p_x)$ | $A_{x }$ | l_x | d_x | p_x | $(1-p_x)$ |
|----------|--------|-------|----------|-----------|----------|-------|-------|----------|-----------|
| 10 | 10 000 | 40 | .996 000 | .004 000 | 54 | 6 399 | 134 | .979 059 | .020 941 |
| 11 | 9 960 | 34 | .996 586 | .003 414 | 55 | 6 265 | 139 | .977 813 | .022 187 |
| 12 | 9 926 | 30 | .996 978 | .003 022 | 56 | 6 126 | 144 | .976 494 | .023 506 |
| 13 | 9 896 | 29 | .997 069 | .002 931 | 57 | 5 982 | 150 | .974 925 | .025 075 |
| 14 | 9 867 | 30 | .996 960 | .003 040 | 58 | 5 832 | 155 | .973 423 | .026 577 |
| 15 | 9 837 | 32 | .996 747 | .003 253 | 59 | 5 677 | 161 | .971 640 | .028 360 |
| 16 | 9 805 | 37 | .996 226 | .003 774 | 60 | 5 516 | 169 | .969 362 | .030 638 |
| 17 | 9 768 | 43 | .995 598 | .004 402 | 61 | 5 347 | 176 | .967 084 | .032 916 |
| 18 | 9 725 | 53 | .994 550 | .005 450 | 62 | 5 171 | 184 | .964 417 | .035 583 |
| 19 | 9 672 | 65 | .993 280 | .006 720 | 63 | 4 987 | 192 | .961 500 | .038 500 |
| 20 | 9 607 | 80 | .991 673 | .008 327 | 64 | 4 795 | 200 | .958 290 | .041 710 |
| 21 | 9 527 | 92 | .990 343 | .009 657 | 65 | 4 595 | 205 | .955 386 | .044 614 |
| 22 | 9 435 | 97 | .989 719 | .010 281 | 66 | 4 390 | 210 | .952 164 | .047 836 |
| 23 | 9 338 | 100 | .989 291 | .010 709 | 67 | 4 180 | 213 | .949 043 | .050 957 |
| 24 | 9 238 | 100 | .989 175 | .010 825 | 68 | 3 967 | 216 | .945 551 | .054 449 |
| 25 | 9 138 | 96 | .989 494 | .010 506 | 69 | 3 751 | 218 | .941 882 | .058 118 |
| 26 | 9 042 | 91 | .989 930 | .010 064 | 70 | 3 533 | 222 | .937 104 | .062 836 |
| 27 | 8 951 | 89 | .990 057 | .009 943 | 71 | 3 311 | 227 | .931 441 | .068 559 |
| 28 | 8 862 | 86 | .990 296 | .009 704 | 72 | 3 084 | 233 | .924 449 | .075 551 |
| 29 | 8 776 | 83 | .990 542 | .009 458 | 73 | 2 851 | 238 | .916 520 | .083 480 |
| 30 | 8 693 | 80 | .990 797 | .009 203 | 74 | 2 613 | 241 | .907 769 | .092 231 |
| 31 | 8 613 | 79 | .990 828 | .009 172 | 75 | 2 372 | 236 | .900 506 | .099 494 |
| 32 | 8 534 | 79 | .990 743 | .009 257 | 76 | 2 136 | 231 | .891 854 | .108 146 |
| 33 | 8 455 | 78 | .990 775 | .009 225 | 77 | 1 905 | 220 | .884 514 | .115 486 |
| 34 | 8 377 | 79 | .990 599 | .009 431 | 78 | 1 685 | 210 | .875 371 | .124 629 |
| 35 | 8 298 | 83 | .989 998 | .010 002 | 79 | 1 475 | 199 | .865 085 | .134 915 |
| 36 | 8 215 | 85 | .989 653 | .010 347 | 80 | 1 276 | 186 | .854 232 | .145 768 |
| 37 | 8 130 | 87 | .989 299 | .010 701 | 81 | 1 090 | 173 | .841 284 | .158 716 |
| 38 | 8 043 | 89 | .988 935 | .011 065 | 82 | 917 | 158 | .828 699 | .172 301 |
| 39 | 7 954 | 89 | .988 811 | .011 189 | 83 | 759 | 141 | .814 230 | .185 770 |
| 40 | 7 865 | 89 | .988 684 | .011 316 | 84 | 618 | 123 | .800 970 | .199 030 |
| 41 | 7 776 | 88 | .988 683 | .011 317 | 85 | 495 | 104 | .789 899 | .210 101 |
| 42 | 7 688 | 89 | .988 424 | .011 576 | 86 | 391 | 86 | .780 051 | .219 949 |
| 43 | 7 599 | 90 | .988 156 | .011 844 | 87 | 305 | 71 | .767 213 | .232 787 |
| 44 | 7 509 | 92 | .987 748 | .012 252 | 88 | 234 | 57 | .756 410 | .243 590 |
| 45 | 7 417 | 96 | .987 057 | .012 943 | 89 | 177 | 46 | .740 112 | .259 888 |
| 46 | 7 321 | 100 | .986 341 | .013 659 | 90 | 131 | 37 | .717 557 | .282 443 |
| 47 | 7 221 | 104 | .985 598 | .014 402 | 91 | 94 | 30 | .680 851 | .319 149 |
| 48 | 7 117 | 109 | .984 685 | .015 315 | 92 | 64 | 23 | .640 625 | .359 375 |
| 49 | 7 008 | 114 | .983 733 | .016 267 | 93 | 41 | 18 | .550 974 | .439 026 |
| 50 | 6 894 | 118 | .982 884 | .017 116 | 94 | 23 | 12 | .478 262 | .521 738 |
| 51 | 6 776 | 122 | .981 995 | .018 005 | 95 | 11 | 7 | .363 637 | .636 363 |
| 52 | 6 654 | 125 | .981 214 | .018 786 | 96 | 4 | 4 | .000 000 | 1.000 000 |
| 53 | 6 529 | 130 | .980 089 | .019 911 | | | | | |

TABLE II.
H^M (5) COMMUTATION COLUMNS,
FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 6 755.64 | 132 786.0 | 2 348 401 | 1 388 66 | 43 851.53 |
| 11 | 6 469.83 | 126 316.1 | 2 215 615 | 1 362.67 | 42 462.87 |
| 12 | 6 199 75 | 120 116.4 | 2 089 298 | 1 341.44 | 41 100.20 |
| 13 | 5 943.28 | 114 173.1 | 1 969 182 | 1 323.42 | 39 758 76 |
| 14 | 5 697.95 | 108 475.2 | 1 855 009 | 1 306.67 | 38 435.34 |
| 15 | 5 462.14 | 103 013.0 | 1 746 534 | 1 290.02 | 37 128.67 |
| 16 | 5 234.97 | 97 778.06 | 1 643 521 | 1 272.93 | 35 838 65 |
| 17 | 5 014.63 | 92 763.43 | 1 545 743 | 1 253 94 | 34 565.72 |
| 18 | 4 802.53 | 87 962.90 | 1 452 979 | 1 232.71 | 33 311 79 |
| 19 | 4 590.74 | 83 372.16 | 1 365 016 | 1 207.55 | 32 079.08 |
| 20 | 4 384.51 | 78 987.65 | 1 281 644 | 1 177.89 | 30 871.53 |
| 21 | 4 180.77 | 74 806.88 | 1 202 657 | 1 142.78 | 29 693.64 |
| 22 | 3 981.15 | 70 825.73 | 1 127 850 | 1 103.66 | 28 550.86 |
| 23 | 3 788.67 | 67 037.06 | 1 057 024 | 1 064.61 | 27 446.89 |
| 24 | 3 603.94 | 63 433.11 | 989 986.9 | 1 025.59 | 26 382.29 |
| 25 | 3 427.82 | 60 005 29 | 926 553 8 | 988 082 | 25 356.69 |
| 26 | 3 261.35 | 56 743.94 | 866 548.5 | 953.456 | 24 368.61 |
| 27 | 3 104 36 | 53 639.59 | 809 804.5 | 921.896 | 23 415.16 |
| 28 | 2 955 28 | 50 684 31 | 756 164.9 | 892.216 | 22 493.26 |
| 29 | 2 814.04 | 47 870.27 | 705 480.6 | 864.640 | 21 601.04 |
| 30 | 2 680.21 | 45 190.06 | 657 610.4 | 839.050 | 20 736.40 |
| 31 | 2 553.41 | 42 636.65 | 612 420.3 | 815.333 | 19 897.35 |
| 32 | 2 432 68 | 40 203 96 | 569 783.7 | 792.813 | 19 082.02 |
| 33 | 2 317.47 | 37 886.50 | 529 579.7 | 771.160 | 18 289.21 |
| 34 | 2 207.78 | 35 678.72 | 491 693.2 | 750.603 | 17 518.05 |
| 35 | 2 102.84 | 33 575.88 | 456 014.5 | 730 583 | 16 767.44 |
| 36 | 2 001.74 | 31 574.14 | 422 438.6 | 710 356 | 16 036.86 |
| 37 | 1 904 83 | 29 669.31 | 390 864.4 | 690.443 | 15 326.20 |
| 38 | 1 811.97 | 27 857.34 | 361 195 1 | 670.544 | 14 636.06 |
| 39 | 1 723.00 | 26 134.34 | 333 337.8 | 651.564 | 13 965.22 |
| 40 | 1 638.19 | 24 496.14 | 307 203 5 | 633.027 | 13 313.65 |
| 41 | 1 557 36 | 22 938.78 | 282 707.3 | 615.202 | 12 680 62 |
| 42 | 1 480.52 | 21 458.27 | 259 768.5 | 598.255 | 12 065.42 |
| 43 | 1 407.09 | 20 051.17 | 238 310.3 | 581.775 | 11 467.17 |
| 44 | 1 336.95 | 18 714.22 | 218 259.1 | 565.751 | 10 885.39 |
| 45 | 1 269.78 | 17 444.44 | 199 544.9 | 550.001 | 10 319.64 |
| 46 | 1 205.14 | 16 233.31 | 182 100.4 | 534 198 | 9 769.640 |
| 47 | 1 142 90 | 15 096.35 | 165 861.1 | 518.370 | 9 235.442 |
| 48 | 1 083.17 | 14 013.18 | 150 764.8 | 502.541 | 8 717.073 |
| 49 | 1 025 56 | 12 987.62 | 136 751.6 | 486.590 | 8 214.531 |
| 50 | 970.073 | 12 017.55 | 123 764.0 | 470.549 | 7 727 941 |
| 51 | 916 797 | 11 100.75 | 111 746.4 | 454 584 | 7 257 392 |
| 52 | 865.664 | 10 235.09 | 100 645 7 | 438.712 | 6 802.809 |
| 53 | 816.732 | 9 418 353 | 90 410.61 | 423.075 | 6 364 007 |
| 54 | 769 683 | 8 648.671 | 80 592 26 | 407.438 | 5 941.022 |

TABLE II.—Cont.
H^M (6) COMMUTATION TABLES,
FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 56 | 724.582 | 7 924.089 | 72 343.59 | 391.941 | 5 533.583 |
| 56 | 681.256 | 7 242.833 | 64 410.50 | 376.483 | 5 141.643 |
| 57 | 639.656 | 6 603.178 | 57 176.67 | 361.085 | 4 765.160 |
| 58 | 599.631 | 6 003.547 | 50 573.49 | 345.662 | 4 404.075 |
| 59 | 561.244 | 5 442.303 | 44 569.94 | 330.339 | 4 058.413 |
| 60 | 524.353 | 4 917.950 | 39 127.64 | 315.034 | 3 728.074 |
| 61 | 488.738 | 4 429.211 | 34 209.69 | 299.587 | 3 413.010 |
| 62 | 454.472 | 3 974.739 | 29 780.48 | 284.118 | 3 113.454 |
| 63 | 421.443 | 3 553.296 | 25 805.74 | 268.569 | 2 829.336 |
| 64 | 389.632 | 3 163.663 | 22 252.44 | 252.967 | 2 560.767 |
| 65 | 359.020 | 2 804.644 | 19 088.78 | 237.340 | 2 307.800 |
| 66 | 329.810 | 2 474.833 | 16 284.13 | 221.939 | 2 070.460 |
| 67 | 301.955 | 2 172.878 | 13 800.30 | 206.769 | 1 848.520 |
| 68 | 275.547 | 1 897.332 | 11 636.42 | 191.974 | 1 641.751 |
| 69 | 250.523 | 1 646.809 | 9 739.092 | 177.548 | 1 449.777 |
| 70 | 226.837 | 1 419.922 | 8 092.283 | 163.548 | 1 272.228 |
| 71 | 204.452 | 1 215.470 | 6 672.361 | 149.840 | 1 108.680 |
| 72 | 183.111 | 1 032.359 | 5 456.892 | 136.362 | 958.810 |
| 73 | 162.766 | 869.592 8 | 4 424.533 | 123.060 | 822.478 |
| 74 | 143.441 | 726.152 1 | 3 554.940 | 109.995 | 699.418 |
| 75 | 125.203 | 600.949 2 | 2 828.788 | 97.273 9 | 589.424 |
| 76 | 108.410 | 492.539 6 | 2 227.839 | 85.296 1 | 492.150 |
| 77 | 92.966 8 | 399.572 8 | 1 735.299 | 74.023 0 | 406.853 |
| 78 | 79.067 8 | 320.505 0 | 1 335.726 | 63.699 6 | 332.831 |
| 79 | 66.551 6 | 253.953 5 | 1 015.221 | 54.224 4 | 269.131 |
| 80 | 55.358 4 | 198.595 1 | 761.268 | 45.591 0 | 214.906 |
| 81 | 45.470 1 | 153.125 0 | 562.673 | 37.831 8 | 169.316 |
| 82 | 36.782 0 | 116.342 9 | 409.548 | 30.802 6 | 131.484 |
| 83 | 29.273 5 | 87.069 4 | 293.205 | 24.798 8 | 100.591 |
| 84 | 22.918 6 | 64.150 9 | 206.135 | 19.569 8 | 75.792 3 |
| 85 | 17.651 1 | 46.499 8 | 141.984 | 15.183 7 | 56.222 6 |
| 86 | 13.406 3 | 33.093 4 | 95.485 | 11.617 9 | 41.038 8 |
| 87 | 10.055 4 | 23.038 0 | 62.391 | 8.782 6 | 29.420 9 |
| 88 | 7.417 92 | 15.620 1 | 39.353 | 6.531 8 | 20.638 4 |
| 89 | 5.395 18 | 10.224 9 | 23.733 | 4.794 4 | 14.106 5 |
| 90 | 3.839 47 | 6.385 5 | 13.508 | 3.446 2 | 9.312 1 |
| 91 | 2.649 07 | 3.736 4 | 7.123 | 2.403 5 | 5.865 9 |
| 92 | 1.734 25 | 2.002 1 | 3.386 | 1.590 5 | 3.462 4 |
| 93 | 1.068 28 | .933 9 | 1.384 | .991 3 | 1.871 9 |
| 94 | .576 23 | .357 6 | .450 | .540 3 | .880 6 |
| 95 | .264 99 | .092 7 | .093 | .251 2 | .340 3 |
| 96 | .092 65 | .000 0 | .000 | .089 1 | .089 1 |

H^m (5) TABLE.

TABLE III.
H^m (5) COMMUTATION COLUMNS,
THREE AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 7 089.19 | 152 122.0 | 2 851 473.6 | I 705.23 | 57 400.61 |
| 11 | 6 822.06 | 145 300.0 | 2 699 351.6 | I 677.84 | 55 695.38 |
| 12 | 6 568.86 | 138 731.1 | 2 554 051.6 | I 655.34 | 54 017.54 |
| 13 | 6 327.54 | 132 403.6 | 2 415 320.5 | I 636.15 | 52 362.21 |
| 14 | 6 095.65 | 126 307.9 | 2 282 917.0 | I 618.24 | 50 726.06 |
| 15 | 5 871.61 | 120 436.3 | 2 156 609.1 | I 600.33 | 49 107.82 |
| 16 | 5 654.60 | 114 781.7 | 2 036 172.8 | I 581.88 | 47 507.49 |
| 17 | 5 442.77 | 109 338.9 | 1 921 391.1 | I 561.26 | 45 925.61 |
| 18 | 5 235.56 | 104 103.4 | 1 812 052.1 | I 538.11 | 44 364.35 |
| 19 | 5 030.95 | 99 072.42 | 1 707 948.8 | I 510.54 | 42 826.24 |
| 20 | 4 828.15 | 94 241.27 | 1 608 876.4 | I 477.88 | 41 315.70 |
| 21 | 4 626.03 | 89 618.24 | 1 514 632.1 | I 439.03 | 39 837.82 |
| 22 | 4 426.44 | 85 191.80 | 1 425 013.9 | I 395.87 | 38 398.79 |
| 23 | 4 232.78 | 80 959.02 | 1 339 822.1 | I 351.90 | 37 002.93 |
| 24 | 4 045.85 | 76 913.17 | 1 258 863.0 | I 308.10 | 35 651.03 |
| 25 | 3 866.72 | 73 046.45 | 1 181 949.9 | I 265.79 | 34 342.92 |
| 26 | 3 696.71 | 69 349.74 | 1 108 903.4 | I 226.54 | 33 077.13 |
| 27 | 3 535.76 | 65 813.99 | 1 039 553.7 | I 190.59 | 31 850.59 |
| 28 | 3 382.22 | 62 431.77 | 973 739.7 | I 156.63 | 30 660.00 |
| 29 | 3 236.13 | 59 195.63 | 911 307.9 | I 124.91 | 29 503.37 |
| 30 | 3 097.13 | 56 098.51 | 852 112.3 | I 995.34 | 28 378.46 |
| 31 | 2 964.86 | 53 133.65 | 796 013.8 | I 067.81 | 27 283.11 |
| 32 | 2 838.32 | 50 295.33 | 742 880.1 | I 041.53 | 26 215.31 |
| 33 | 2 716.95 | 47 578.38 | 692 584.8 | I 016.14 | 25 173.78 |
| 34 | 2 600.86 | 44 977.52 | 645 006.4 | 991 927 | 24 157.63 |
| 35 | 2 489.21 | 42 488.31 | 600 028.0 | 968.229 | 23 165.71 |
| 36 | 2 380.98 | 40 107.33 | 557 540.6 | 944.173 | 22 197.48 |
| 37 | 2 276.66 | 37 830.68 | 517 433.3 | 920.370 | 21 253.31 |
| 38 | 2 176.13 | 35 654.55 | 479 602.6 | 896.831 | 20 332.93 |
| 39 | 2 079.28 | 33 575.27 | 443 948.0 | 873.566 | 19 436.10 |
| 40 | 1 986.48 | 31 588.79 | 410 372.8 | 851.087 | 18 562.54 |
| 41 | 1 897.59 | 29 691.20 | 378 784.0 | 829 368 | 17 711.45 |
| 42 | 1 812.67 | 27 878.53 | 349 092.8 | 808 619 | 16 882.08 |
| 43 | 1 731.10 | 26 147.44 | 321 214.2 | 788 345 | 16 073.46 |
| 44 | 1 652.75 | 24 494.69 | 295 066.8 | 768 535 | 15 285.12 |
| 45 | 1 577.29 | 22 917.39 | 270 572.1 | 748 971 | 14 516.58 |
| 46 | 1 504.23 | 21 413.16 | 247 654.7 | 729 246 | 13 767.61 |
| 47 | 1 433.51 | 19 979.65 | 226 241.5 | 709 304 | 13 038.37 |
| 48 | 1 365.09 | 18 614.57 | 206 261.9 | 689 446 | 12 328.97 |
| 49 | 1 298.72 | 17 315.84 | 187 647.3 | 669 246 | 11 639.53 |
| 50 | 1 234.39 | 16 081.45 | 170 331.5 | 648 834 | 10 970.28 |
| 51 | 1 172.24 | 14 909.21 | 154 250.0 | 628 420 | 10 321.45 |
| 52 | 1 112.20 | 13 797.01 | 139 340.8 | 608.028 | 9 693.026 |
| 53 | 1 054.41 | 12 742.60 | 125 513.8 | 587.841 | 9 084.998 |
| 54 | 998.466 | 11 744.13 | 112 801.2 | 567 557 | 8 497.157 |

TABLE III.—Cont.
H^M (5) COMMUTATION COLUMNS,
THREE AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 56 | 944.500 | 10 799.634 | 101 057.09 | 547.355 | 7 929.600 |
| 56 | 892.313 | 9 907.321 | 90 257.45 | 527.108 | 7 382.245 |
| 57 | 841.873 | 9 065.448 | 80 350.13 | 506.843 | 6 855.137 |
| 58 | 793.007 | 8 272.441 | 71 284.68 | 486.446 | 6 348.294 |
| 59 | 745.827 | 7 526.614 | 63 012.24 | 466.083 | 5 861.848 |
| 60 | 700.170 | 6 826.444 | 55 485.63 | 445.646 | 5 395.765 |
| 61 | 655.766 | 6 170.678 | 48 659.19 | 424.920 | 4 950.118 |
| 62 | 612.735 | 5 557.943 | 42 488.51 | 404.065 | 4 525.198 |
| 63 | 570.949 | 4 986.994 | 36 930.57 | 382.999 | 4 121.133 |
| 64 | 530.403 | 4 456.590 | 31 943.57 | 361.761 | 3 738.134 |
| 65 | 491.092 | 3 965.499 | 27 486.98 | 340.386 | 3 376.373 |
| 66 | 453.316 | 3 512.182 | 23 521.48 | 319.217 | 3 035.987 |
| 67 | 417.035 | 3 095.147 | 20 009.30 | 298.266 | 2 710.770 |
| 68 | 382.400 | 2 712.746 | 16 914.15 | 277.734 | 2 418.504 |
| 69 | 349.352 | 2 363.395 | 14 201.41 | 257.616 | 2 140.770 |
| 70 | 317.921 | 2 045.474 | 11 838.01 | 237.999 | 1 883.154 |
| 71 | 287.869 | 1 757.605 | 9 792.539 | 218.698 | 1 645.154 |
| 72 | 259.065 | 1 498.540 | 8 034.934 | 199.629 | 1 426.456 |
| 73 | 231.394 | 1 267.146 | 6 536.395 | 180.719 | 1 226.827 |
| 74 | 204.905 | 1 062.240 | 5 269.249 | 162.055 | 1 046.108 |
| 75 | 179.717 | 882.523 8 | 4 207.008 | 143.796 | 884.053 3 |
| 76 | 156.363 | 726.160 5 | 3 324.485 | 126.519 | 740.257 8 |
| 77 | 134.737 | 591.423 2 | 2 598.324 | 110.181 | 613.738 3 |
| 78 | 115.147 | 476.276 2 | 2 006.901 | 95.147 2 | 503.557 1 |
| 79 | 97.387 8 | 378.888 4 | 1 530.625 | 81.281 8 | 408.409 9 |
| 80 | 81.399 7 | 297.488 7 | 1 151.736 | 68.587 0 | 327.128 1 |
| 81 | 67.182 8 | 230.305 9 | 854.248 | 57.122 8 | 258.541 1 |
| 82 | 54.628 6 | 175.697 4 | 623.942 | 46.820 4 | 201.418 3 |
| 83 | 43.671 0 | 132.026 4 | 448.244 | 37.729 5 | 154.597 9 |
| 84 | 34.355 7 | 97.670 7 | 316.218 | 29.891 1 | 116.868 4 |
| 85 | 26.587 4 | 71.083 3 | 218.547 | 23.284 5 | 86.977 3 |
| 86 | 20.291 2 | 50.792 2 | 147.464 | 17.887 4 | 63.692 8 |
| 87 | 15.292 9 | 35.490 3 | 96.672 | 13.575 3 | 45.805 5 |
| 88 | 11.336 1 | 24.163 1 | 61.173 | 10.135 7 | 32.230 2 |
| 89 | 8.284 8 | 15.878 3 | 37.009 | 7.467 7 | 22.094 5 |
| 90 | 5.924 3 | 9.954 0 | 21.131 | 5.387 4 | 14.626 8 |
| 91 | 4.107 3 | 5.846 7 | 11.177 | 3.770 7 | 9.239 4 |
| 92 | 2.701 9 | 3.144 8 | 5.330 | 2.504 2 | 5.468 7 |
| 93 | 1.672 4 | 1.472 4 | 2.186 | 1.566 0 | 2.964 6 |
| 94 | .906 4 | .566 0 | .713 | .856 6 | 1.398 5 |
| 95 | .418 9 | .147 2 | .147 | .399 7 | .541 9 |
| 96 | .147 2 | .000 0 | .000 | .142 2 | .142 2 |

TABLE IV.
H^m (5) COMMUTATION COLUMNS,
THREE PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 7 440.94 | 175 322.2 | 3 487 413.4 | 2 117.74 | 75 864.78 |
| 11 | 7 195.32 | 168 125.9 | 3 312 091.2 | 2 088.84 | 73 747.04 |
| 12 | 6 961.90 | 161 165.0 | 3 143 964.3 | 2 065.00 | 71 658.19 |
| 13 | 6 738.69 | 154 426.3 | 2 982 799.4 | 2 044.57 | 69 593.19 |
| 14 | 6 523.25 | 147 903.0 | 2 828 373.1 | 2 025.40 | 67 548.62 |
| 15 | 6 314.00 | 141 589.0 | 2 680 470.1 | 2 006.14 | 65 523.23 |
| 16 | 6 110.15 | 135 478.9 | 2 538 881.0 | 1 986.20 | 63 517.09 |
| 17 | 5 909.80 | 129 569.1 | 2 403 402.2 | 1 963.81 | 61 530.89 |
| 18 | 5 712.41 | 123 856.7 | 2 273 833.1 | 1 938.56 | 59 567.07 |
| 19 | 5 515.81 | 118 340.9 | 2 149 976.4 | 1 908.33 | 57 628.52 |
| 20 | 5 319.16 | 113 021.7 | 2 031 635.6 | 1 872.34 | 55 720.19 |
| 21 | 5 121.23 | 107 900.5 | 1 918 613.9 | 1 829.34 | 53 847.85 |
| 22 | 4 924.06 | 102 976.4 | 1 810 713.4 | 1 781.32 | 52 018.51 |
| 23 | 4 731.49 | 98 244.92 | 1 707 737.0 | 1 732.17 | 50 237.18 |
| 24 | 4 544.48 | 93 700.44 | 1 609 492.1 | 1 682.98 | 48 505.01 |
| 25 | 4 364.36 | 89 336.08 | 1 515 791.6 | 1 635.22 | 46 822.03 |
| 26 | 4 192.73 | 85 143.35 | 1 426 455.5 | 1 590.71 | 45 186.81 |
| 27 | 4 029.64 | 81 113.71 | 1 341 312.2 | 1 549.74 | 43 596.10 |
| 28 | 3 873.37 | 77 240.33 | 1 260 198.5 | 1 510.84 | 42 046.36 |
| 29 | 3 724.06 | 73 516.27 | 1 182 958.2 | 1 474.35 | 40 535.52 |
| 30 | 3 581.40 | 69 934.87 | 1 109 441.9 | 1 440.15 | 39 061.18 |
| 31 | 3 445.09 | 66 489.78 | 1 039 507.0 | 1 4 8.15 | 37 621.03 |
| 32 | 3 314.07 | 63 175.71 | 973 017.2 | 1 377.47 | 36 212.88 |
| 33 | 3 187.76 | 59 987.95 | 909 841.5 | 1 347.69 | 34 835.40 |
| 34 | 3 066.36 | 56 921.60 | 849 853.6 | 1 319.14 | 33 487.72 |
| 35 | 2 948.97 | 53 972.63 | 792 932.0 | 1 291.06 | 32 168.58 |
| 36 | 2 834.44 | 51 138.18 | 738 959.3 | 1 262.42 | 30 877.52 |
| 37 | 2 723.41 | 48 414.77 | 687 821.2 | 1 233.95 | 29 615.10 |
| 38 | 2 615.79 | 45 798.98 | 639 406.4 | 1 205.65 | 28 381.15 |
| 39 | 2 511.50 | 43 287.47 | 593 607.4 | 1 177.55 | 27 175.49 |
| 40 | 2 411.07 | 40 876.41 | 550 319.9 | 1 150.27 | 25 997.94 |
| 41 | 2 314.36 | 38 562.05 | 509 443.5 | 1 123.78 | 24 847.67 |
| 42 | 2 221.52 | 36 340.53 | 470 881.5 | 1 098.35 | 23 723.89 |
| 43 | 2 131.85 | 34 208.69 | 434 541.0 | 1 073.38 | 22 625.54 |
| 44 | 2 045.24 | 32 163.45 | 400 332.3 | 1 048.87 | 21 552.15 |
| 45 | 1 961.34 | 30 202.10 | 368 168.8 | 1 024.54 | 20 503.28 |
| 46 | 1 879.57 | 28 322.54 | 337 966.7 | 999.895 | 19 478.74 |
| 47 | 1 799.90 | 26 522.64 | 309 644.2 | 974.669 | 18 478.85 |
| 48 | 1 722.31 | 24 800.33 | 283 121.5 | 949.801 | 17 503.88 |
| 49 | 1 646.53 | 23 153.80 | 258 321.2 | 924.192 | 16 554.08 |
| 50 | 1 572.57 | 21 581.23 | 235 167.4 | 898.188 | 15 629.88 |
| 51 | 1 500.63 | 20 080.60 | 213 586.2 | 872.055 | 14 731.70 |
| 52 | 1 430.70 | 18 649.90 | 193 505.6 | 845.823 | 13 859.64 |
| 53 | 1 362.93 | 17 286.97 | 174 855.7 | 819.730 | 13 013.82 |
| 54 | 1 296.89 | 15 990.08 | 157 508.7 | 793.383 | 12 194.09 |

TABLE IV.—Cont.
H^M (5) COMMUTATION COLUMNS,
THREE PER CENT.

| Age. | D ₁ | N ₁ | S ₁ | M ₁ | R ₁ |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | I 232.75 | 14 757.34 | 141 578.6 | 767.016 | 11 400.71 |
| 56 | I 170.29 | 13 587.05 | 126 821.3 | 740.462 | 10 633.69 |
| 57 | I 109.49 | 12 477.50 | 113 234.2 | 713.754 | 9 893.228 |
| 58 | I 050.17 | 11 427.39 | 100 756.7 | 686.743 | 9 179.474 |
| 59 | 992.482 | 10 434.91 | 89 329.28 | 659.645 | 8 492.731 |
| 60 | 936.248 | 9 498.661 | 78 894.37 | 632.318 | 7 833.085 |
| 61 | 881.129 | 8 617.532 | 69 395.71 | 604.469 | 7 200.767 |
| 62 | 827.307 | 7 790.225 | 60 778.18 | 576.311 | 6 596.298 |
| 63 | 774.630 | 7 015.596 | 52 987.95 | 547.730 | 6 019.987 |
| 64 | 723.113 | 6 292.483 | 45 972.35 | 518.775 | 5 472.257 |
| 65 | 672.769 | 5 619.714 | 39 679.87 | 489.493 | 4 953.482 |
| 66 | 624.033 | 4 995.680 | 34 060.16 | 460.352 | 4 463.989 |
| 67 | 576.876 | 4 418.805 | 29 064.48 | 431.370 | 4 003.637 |
| 68 | 531.534 | 3 887.271 | 24 645.67 | 402.831 | 3 572.267 |
| 69 | 487.954 | 3 399.317 | 20 758.40 | 374.732 | 3 169.436 |
| 70 | 446.229 | 2 953.109 | 17 359.08 | 347.199 | 2 794.704 |
| 71 | 405.991 | 2 547.118 | 14 405.98 | 319.978 | 2 447.504 |
| 72 | 367.142 | 2 179.976 | 11 858.86 | 292.954 | 2 127.526 |
| 73 | 329.519 | 1 850.457 | 9 678.882 | 266.024 | 1 834.572 |
| 74 | 293.214 | 1 557.243 | 7 828.425 | 239.317 | 1 568.548 |
| 75 | 258.418 | I 298.825 | 6 271.181 | 213.061 | I 329.231 |
| 76 | 225.929 | I 072.896 | 4 972.356 | 188.099 | I 116.109 |
| 77 | 195.627 | 877.269 2 | 3 899.460 | 164.378 | 928.070 |
| 78 | 167.995 | 709.274 2 | 3 022.191 | 142.443 | 762.693 |
| 79 | 142.775 | 566.499 5 | 2 312.917 | 122.116 | 621.249 |
| 80 | 119.915 | 466.584 7 | I 746.417 | 103.415 | 499.133 |
| 81 | 99.451 5 | 347.133 2 | I 299.833 | 86.444 2 | 395.718 |
| 82 | 81.230 I | 265.903 I | 952.699 | 71.119 4 | 309.274 |
| 83 | 65.275 8 | 200.627 3 | 686.796 | 57.531 0 | 238.155 |
| 84 | 51.601 4 | 149.025 9 | 486.169 | 45.757 9 | 180.624 |
| 85 | 40.127 4 | 108.898 5 | 337.143 | 35.786 9 | 134.866 |
| 86 | 30.773 4 | 78.125 I | 228.245 | 27.601 6 | 99.079 |
| 87 | 23.305 7 | 54.819 4 | 150.120 | 21.030 2 | 71.477 |
| 88 | 17.359 6 | 37.459 8 | 95.300 | 15.762 9 | 50.447 |
| 89 | 12.748 5 | 24.711 3 | 57.840 | 11.657 5 | 34.684 |
| 90 | 9.160 5 | 15.550 7 | 33.129 | 8.440 8 | 23.027 |
| 91 | 6.381 8 | 9.169 0 | 17.578 | 5.928 8 | 14.586 |
| 92 | 4.218 5 | 4.950 5 | 8.409 | 3.951 4 | 8.657 |
| 93 | 2.623 8 | 2.326 8 | 3.459 | 2.479 6 | 4.706 |
| 94 | 1.429 0 | .897 8 | 1.132 | 1.361 2 | 2.226 |
| 95 | .663 5 | .234 3 | .234 | .637 4 | .865 |
| 96 | .234 3 | .000 0 | .000 | .227 4 | .227 |

TABLE I.
 INSTITUTE OF ACTUARIES' TABLES.
 FEMALE LIVES, H^r. WOOLHOUSE'S FORMULA.

| Age. | No. Living. | Decrement. | Probability of Surviving. | Probability of Dying. |
|------|-------------|------------|---------------------------|-----------------------|
| 10 | 100 000 | 314 | .996 860 0 | .003 140 0 |
| 11 | 99 686 | 420 | .995 786 8 | .004 213 2 |
| 12 | 99 266 | 510 | .994 862 3 | .005 137 7 |
| 13 | 98 756 | 581 | .994 116 8 | .005 883 2 |
| 14 | 98 175 | 632 | .993 562 5 | .006 437 5 |
| 15 | 97 543 | 667 | .993 162 0 | .006 838 0 |
| 16 | 96 876 | 683 | .992 949 8 | .007 050 2 |
| 17 | 96 193 | 680 | .992 430 9 | .007 069 1 |
| 18 | 95 513 | 659 | .993 100 4 | .006 899 6 |
| 19 | 94 854 | 635 | .993 305 5 | .006 694 5 |
| 20 | 94 219 | 648 | .993 122 4 | .006 877 6 |
| 21 | 93 571 | 682 | .992 711 4 | .007 288 6 |
| 22 | 92 889 | 736 | .992 076 6 | .007 923 4 |
| 23 | 92 153 | 813 | .991 177 7 | .008 822 3 |
| 24 | 91 340 | 899 | .990 157 7 | .009 842 3 |
| 25 | 90 441 | 978 | .989 186 3 | .010 813 7 |
| 26 | 89 463 | 1018 | .988 621 0 | .011 379 0 |
| 27 | 88 445 | 1045 | .988 184 7 | .011 815 3 |
| 28 | 87 400 | 1050 | .987 986 3 | .012 013 7 |
| 29 | 86 350 | 1032 | .988 048 6 | .011 951 4 |
| 30 | 85 318 | 1011 | .988 150 2 | .011 849 8 |
| 31 | 84 307 | 987 | .988 292 8 | .011 707 2 |
| 32 | 83 320 | 964 | .988 430 2 | .011 569 8 |
| 33 | 82 356 | 960 | .988 343 3 | .011 656 7 |
| 34 | 81 396 | 934 | .988 279 5 | .011 720 5 |
| 35 | 80 442 | 946 | .988 240 0 | .011 760 0 |
| 36 | 79 496 | 946 | .988 100 0 | .011 900 0 |
| 37 | 78 550 | 946 | .987 956 7 | .012 043 3 |
| 38 | 77 604 | 946 | .987 809 9 | .012 190 1 |
| 39 | 76 658 | 946 | .987 659 5 | .012 340 5 |
| 40 | 75 712 | 950 | .987 452 5 | .012 547 5 |
| 41 | 74 762 | 953 | .987 252 9 | .012 747 1 |
| 42 | 73 800 | 955 | .987 061 2 | .012 938 8 |
| 43 | 72 854 | 958 | .986 850 4 | .013 149 6 |
| 44 | 71 896 | 962 | .986 619 6 | .013 380 4 |
| 45 | 70 934 | 966 | .986 381 7 | .013 618 3 |
| 46 | 69 968 | 963 | .986 236 6 | .013 793 4 |
| 47 | 69 005 | 958 | .986 116 9 | .013 883 1 |
| 48 | 68 047 | 953 | .985 995 0 | .014 005 0 |
| 49 | 67 094 | 950 | .985 840 8 | .014 159 2 |
| 50 | 66 144 | 956 | .985 546 7 | .014 453 3 |
| 51 | 65 188 | 975 | .985 043 3 | .014 956 7 |
| 52 | 64 213 | 1003 | .984 380 1 | 0 5 610 9 |
| 53 | 63 210 | 1037 | .983 594 4 | .016 405 6 |
| 54 | 62 173 | 1081 | .982 613 0 | .017 387 0 |

TABLE I.—Cont.
 INSTITUTE OF ACTUARIES' TABLES.
 FEMALE LIVES, H^F WOOLHOUSE'S FORMULA.

| Age. | No. Living. | Decrement. | Probability of Surviving. | Probability of Dying. |
|------|-------------|------------|---------------------------|-----------------------|
| 55 | 61 092 | 1116 | .981 732 5 | .018 267 5 |
| 56 | 59 976 | 1144 | .980 925 7 | .019 074 3 |
| 57 | 58 832 | 1170 | .980 112 9 | .019 887 1 |
| 58 | 57 662 | 1196 | .979 258 4 | .020 741 6 |
| 59 | 56 466 | 1231 | .978 199 3 | .021 800 7 |
| 60 | 55 235 | 1308 | .976 310 4 | .023 680 6 |
| 61 | 53 927 | 1395 | .974 131 7 | .025 868 3 |
| 62 | 52 532 | 1495 | .971 541 2 | .028 458 8 |
| 63 | 51 037 | 1601 | .968 630 6 | .031 369 4 |
| 64 | 49 436 | 1706 | .965 490 7 | .034 509 3 |
| 65 | 47 730 | 1784 | .962 623 1 | .037 376 9 |
| 66 | 45 946 | 1846 | .959 822 4 | .040 177 6 |
| 67 | 44 100 | 1914 | .956 598 6 | .043 401 4 |
| 68 | 42 186 | 1982 | .953 017 6 | .046 982 4 |
| 69 | 40 204 | 2050 | .949 010 0 | .050 990 0 |
| 70 | 38 154 | 2123 | .944 357 1 | .055 642 9 |
| 71 | 36 031 | 2232 | .938 053 3 | .061 946 7 |
| 72 | 33 799 | 2338 | .930 826 4 | .069 173 6 |
| 73 | 31 461 | 2425 | .922 920 4 | .077 079 6 |
| 74 | 29 036 | 2490 | .914 244 4 | .085 755 6 |
| 75 | 26 546 | 2518 | .905 145 8 | .094 854 2 |
| 76 | 24 028 | 2500 | .895 954 7 | .104 045 3 |
| 77 | 21 528 | 2363 | .890 236 0 | .109 764 0 |
| 78 | 19 165 | 2205 | .884 946 5 | .115 053 5 |
| 79 | 16 960 | 2024 | .880 660.4 | .119 339 6 |
| 80 | 14 936 | 1819 | .878 213 7 | .121 786 3 |
| 81 | 13 117 | 1621 | .876 419 9 | .123 580 1 |
| 82 | 11 406 | 1514 | .868 302 0 | .131 698 0 |
| 83 | 9 982 | 1450 | .854 738 5 | .145 261 5 |
| 84 | 8 532 | 1389 | .837 201 1 | .162 798 9 |
| 85 | 7 143 | 1326 | .814 363 8 | .185 636 2 |
| 86 | 5 817 | 1234 | .787 863 2 | .212 136 8 |
| 87 | 4 583 | 1086 | .763 037 3 | .236 962 7 |
| 88 | 3 497 | 903 | .741 778 6 | .258 221 4 |
| 89 | 2 594 | 707 | .727 448 0 | .272 552 0 |
| 90 | 1 887 | 519 | .724 960 3 | .275 039 7 |
| 91 | 1 368 | 368 | .730 994 2 | .269 005 8 |
| 92 | 1 000 | 232 | .768 000 0 | .232 000 0 |
| 93 | 768 | 138 | .820 312 5 | .179 687 5 |
| 94 | 630 | 117 | .814 285 7 | .186 714 3 |
| 95 | 513 | 107 | .791 423 0 | .208 577 0 |
| 96 | 406 | 104 | .743 842 4 | .256 157 6 |
| 97 | 302 | 102 | .662 251 6 | .337 748 4 |
| 98 | 200 | 100 | .500 000 0 | .500 000 0 |
| 99 | 100 | 100 | .000 000 0 | 1.000 000 0 |

COMMUTATION COLUMNS, H^F.

TABLE XII.
COMMUTATION COLUMNS, H^F.
FOUR AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 64 392.8 | 1 148 675 | 19 196 516 | 12 155.4 | 334 185.9 |
| 11 | 61 426.4 | 1 087 248 | 18 047 842 | 11 961.9 | 322 030.4 |
| 12 | 58 533.6 | 1 028 715 | 16 960 594 | 11 714.3 | 310 068.5 |
| 13 | 55 725.2 | 972 989.5 | 15 931 879 | 11 426.5 | 298 354.2 |
| 14 | 53 011.8 | 919 977.7 | 14 958 889 | 11 112.8 | 286 927.8 |
| 15 | 50 402.5 | 869 575.2 | 14 038 912 | 10 786.2 | 275 815.0 |
| 16 | 47 902.2 | 821 673.0 | 13 169 336 | 10 456.4 | 265 028.8 |
| 17 | 45 516.3 | 776 156.7 | 12 347 663 | 10 133.2 | 254 572.4 |
| 18 | 43 248.3 | 732 908.4 | 11 571 507 | 9 825.30 | 244 439.2 |
| 19 | 41 100.4 | 691 808.0 | 10 838 598 | 9 539.76 | 234 613.9 |
| 20 | 39 067.2 | 652 740.8 | 10 146 760 | 9 276.46 | 225 074.1 |
| 21 | 37 127.8 | 615 613.0 | 9 494 050 | 9 019.34 | 215 797.7 |
| 22 | 35 270.0 | 580 342.9 | 8 878 437 | 8 760.39 | 206 778.3 |
| 23 | 33 483.8 | 546 859.1 | 8 298 094 | 8 492.96 | 198 017.9 |
| 24 | 31 759.2 | 515 099.9 | 7 751 234 | 8 210.28 | 189 525.0 |
| 25 | 30 092.5 | 485 007.4 | 7 236 135 | 7 911.15 | 181 314.7 |
| 26 | 28 485.2 | 456 522.2 | 6 751 127 | 7 599.76 | 173 403.5 |
| 27 | 26 948.4 | 429 573.8 | 6 294 605 | 7 289.58 | 165 803.8 |
| 28 | 25 483.3 | 404 090.5 | 5 865 031 | 6 984.89 | 158 514.2 |
| 29 | 24 092.9 | 379 997.5 | 5 460 941 | 6 691.92 | 151 529.3 |
| 30 | 22 779.9 | 357 217.6 | 5 080 943 | 6 416.38 | 144 837.4 |
| 31 | 21 540.6 | 335 677.0 | 4 723 726 | 6 158.07 | 138 421.0 |
| 32 | 20 371.7 | 315 305.2 | 4 388 049 | 5 916.74 | 132 263.0 |
| 33 | 19 268.9 | 296 036.3 | 4 072 743 | 5 691.20 | 126 346.2 |
| 34 | 18 224.2 | 277 812.1 | 3 776 707 | 5 476.26 | 120 655.0 |
| 35 | 17 235.1 | 260 577.0 | 3 498 895 | 5 271.86 | 115 178.8 |
| 36 | 16 298.9 | 244 278.1 | 3 238 318 | 5 077.90 | 109 906.9 |
| 37 | 15 411.5 | 228 866.7 | 2 994 040 | 4 892.30 | 104 829.0 |
| 38 | 14 570.2 | 214 296.5 | 2 765 173 | 4 714.68 | 99 936.71 |
| 39 | 13 772.8 | 200 523.7 | 2 550 877 | 4 544.72 | 95 222.03 |
| 40 | 13 017.1 | 187 506.6 | 2 350 353 | 4 382.08 | 90 677.31 |
| 41 | 12 300.2 | 175 206.4 | 2 162 846 | 4 225.78 | 86 295.24 |
| 42 | 11 620.5 | 163 585.9 | 1 987 640 | 4 075.74 | 82 069.46 |
| 43 | 10 976.2 | 152 609.7 | 1 824 054 | 3 931.86 | 77 993.72 |
| 44 | 10 365.4 | 142 244.2 | 1 671 445 | 3 793.74 | 74 061.87 |
| 45 | 9 786.37 | 132 457.8 | 1 529 200 | 3 651.02 | 70 268.13 |
| 46 | 9 237.41 | 123 220.4 | 1 396 743 | 3 513.48 | 66 607.12 |
| 47 | 8 717.96 | 114 502.5 | 1 273 522 | 3 411.82 | 63 073.63 |
| 48 | 8 226.73 | 106 275.8 | 1 159 020 | 3 295.00 | 59 661.82 |
| 49 | 7 762.21 | 98 513.54 | 1 052 744 | 3 183.74 | 56 365.82 |
| 50 | 7 322.78 | 91 190.76 | 954 230.3 | 3 080.57 | 53 180.07 |
| 51 | 6 906.16 | 84 284.60 | 863 039.5 | 2 979.29 | 50 099.51 |
| 52 | 6 509.92 | 77 774.67 | 778 754.9 | 2 880.44 | 47 120.22 |
| 53 | 6 132.29 | 71 642.33 | 700 980.3 | 2 783.14 | 44 239.77 |
| 54 | 5 771.94 | 65 870.44 | 629 337.9 | 2 686.87 | 41 450.64 |

TABLE XII.—Cont.
COMMUTATION COLUMNS, H^F.
FOUR AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 56 | 5 427.36 | 60 443.09 | 563 467.4 | 2 590.83 | 38 769.77 |
| 56 | 5 098.77 | 55 344.32 | 503 024.4 | 2 495.96 | 36 178.94 |
| 57 | 4 786.14 | 50 558.18 | 447 680.0 | 2 402.89 | 33 682.98 |
| 58 | 4 488.95 | 45 069.23 | 397 121.9 | 2 311.80 | 31 280.10 |
| 59 | 4 206.55 | 41 862.68 | 351 052.6 | 2 222.71 | 28 968.29 |
| 60 | 3 937.65 | 37 925.03 | 309 189.9 | 2 134.95 | 26 745.59 |
| 61 | 3 678.85 | 34 246.18 | 271 264.9 | 2 045.72 | 24 610.64 |
| 62 | 3 429.37 | 30 816.81 | 237 018.7 | 1 954.65 | 22 564.92 |
| 63 | 3 188.30 | 27 628.52 | 206 201.9 | 1 861.26 | 20 610.27 |
| 64 | 2 955.29 | 24 673.22 | 178 573.4 | 1 765.55 | 18 749.01 |
| 65 | 2 730.44 | 21 942.78 | 153 900.2 | 1 667.96 | 16 983.46 |
| 66 | 2 515.20 | 19 427.58 | 131 957.4 | 1 570.30 | 15 315.50 |
| 67 | 2 310.19 | 17 117.40 | 112 529.8 | 1 473.59 | 13 745.21 |
| 68 | 2 114.76 | 15 002.64 | 95 412.42 | 1 377.64 | 12 271.62 |
| 69 | 1 928.61 | 13 074.02 | 80 409.78 | 1 282.57 | 10 893.97 |
| 70 | 1 751.46 | 11 322.57 | 67 335.76 | 1 188.46 | 9 611.403 |
| 71 | 1 582.78 | 9 739.789 | 56 013.19 | 1 095.20 | 8 422.941 |
| 72 | 1 420.79 | 8 318.996 | 46 273.40 | 1 001.38 | 7 327.739 |
| 73 | 1 265.56 | 7 053.431 | 37 954.41 | 907.327 | 6 326.302 |
| 74 | 1 117.72 | 5 935.719 | 30 900.97 | 813.979 | 5 419.035 |
| 75 | 977.861 | 4 957.858 | 24 965.25 | 722.256 | 4 605.056 |
| 76 | 846.992 | 4 110.866 | 20 007.39 | 633.496 | 3 882.800 |
| 77 | 726.188 | 3 384.677 | 15 896.53 | 549.166 | 3 249.303 |
| 78 | 618.640 | 2 766.037 | 12 511.85 | 472.889 | 2 700.138 |
| 79 | 523.889 | 2 242.148 | 9 745.815 | 404.777 | 2 227.249 |
| 80 | 441.500 | 1 800.648 | 7 503.667 | 344.949 | 1 822.472 |
| 81 | 371.035 | 1 429.613 | 5 703.019 | 293.495 | 1 477.524 |
| 82 | 311.180 | 1 118.433 | 4 273.406 | 249.617 | 1 184.028 |
| 83 | 258.563 | 859.871 | 3 154.973 | 210.400 | 934.411 |
| 84 | 211.486 | 648.384 | 2 295.102 | 174.458 | 724.011 |
| 85 | 169.432 | 478.952 | 1 646.718 | 141.511 | 549.552 |
| 86 | 132.038 | 346.915 | 1 167.766 | 111.413 | 408.041 |
| 87 | 99.548 0 | 247.367 | 820.851 | 84.609 1 | 296.628 |
| 88 | 72.687 9 | 174.679 | 573.485 | 62.035 8 | 212.019 |
| 89 | 51.596 5 | 123.082 | 398.806 | 44.074 4 | 149.983 |
| 90 | 35.917 5 | 87.165 | 275.724 | 30.617 3 | 105.909 |
| 91 | 24.917 5 | 62.247 | 188.559 | 21.164 0 | 75.291 |
| 92 | 17.430 2 | 44.817 | 126.312 | 14.719 7 | 54.127 |
| 93 | 12.809 9 | 32.007 | 81.495 | 10.880 0 | 39.378 |
| 94 | 10.055 6 | 21.952 | 49.488 | 8.677 3 | 28.498 |
| 95 | 7.835 6 | 14.116 | 27.536 | 6.890 3 | 19.820 |
| 96 | 5.934 2 | 8.182 | 13.420 | 5.326 3 | 12.930 |
| 97 | 4.224 0 | 3.958 | 5.239 | 3.871 7 | 7.604 |
| 98 | 2.676 0 | 1.281 | 1.281 | 2.506 5 | 3.732 |
| 99 | 1.280 8 | .000 | .000 | 1.225 7 | 1.226 |

TABLE III.
COMMUTATION COLUMNS, H^F.
FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 67 556.4 | 1 308 776 | 23 182 517 | 14 620.6 | 431 760.9 |
| 11 | 64 754.1 | 1 244 021 | 21 873 741 | 14 416.6 | 417 140.3 |
| 12 | 62 001.2 | 1 182 020 | 20 629 720 | 14 154.3 | 402 723.7 |
| 13 | 59 310.3 | 1 122 710 | 19 447 700 | 13 848.0 | 388 569.4 |
| 14 | 56 693.6 | 1 066 016 | 18 324 990 | 13 512.5 | 374 721.5 |
| 15 | 54 162.2 | 1 011 854 | 17 258 973 | 13 161.5 | 361 209.0 |
| 16 | 51 722.9 | 960 131.2 | 16 247 119 | 12 805.4 | 348 047.5 |
| 17 | 49 382.9 | 910 748.3 | 15 286 988 | 12 454.8 | 335 242.0 |
| 18 | 47 147.9 | 863 603.4 | 14 376 240 | 12 119.1 | 322 787.2 |
| 19 | 45 021.7 | 818 578.7 | 13 512 639 | 11 806.3 | 310 668.1 |
| 20 | 43 000.3 | 775 578.4 | 12 694 061 | 11 516.5 | 298 861.8 |
| 21 | 41 062.1 | 734 516.3 | 11 918 482 | 11 232.2 | 287 345.3 |
| 22 | 39 195.0 | 695 321.3 | 11 183 966 | 10 944.4 | 276 113.1 |
| 23 | 37 388.9 | 657 932.4 | 10 488 645 | 10 644.8 | 265 168.7 |
| 24 | 35 633.7 | 622 298.7 | 9 830 712 | 10 328.6 | 254 522.9 |
| 25 | 33 925.9 | 588 372.7 | 9 208 414 | 9 991.38 | 244 194.3 |
| 26 | 32 268.4 | 556 104.4 | 8 620 041 | 9 638.62 | 234 202.9 |
| 27 | 30 674.2 | 525 430.2 | 8 063 937 | 9 285.56 | 224 564.3 |
| 28 | 29 145.9 | 496 284.2 | 7 538 507 | 8 937.08 | 215 278.7 |
| 29 | 27 688.3 | 468 596.0 | 7 042 222 | 8 600.40 | 206 341.7 |
| 30 | 26 305.1 | 442 290.9 | 6 573 626 | 8 282.21 | 197 741.3 |
| 31 | 24 993.7 | 417 297.2 | 6 131 335 | 7 982.49 | 189 459.1 |
| 32 | 23 751.0 | 393 546.2 | 5 714 038 | 7 701.14 | 181 476.6 |
| 33 | 22 573.3 | 370 972.9 | 5 320 492 | 7 436.91 | 173 775.4 |
| 34 | 21 452.1 | 349 520.8 | 4 949 519 | 7 183.90 | 166 338.5 |
| 35 | 20 385.3 | 329 135.5 | 4 599 998 | 6 942.14 | 159 154.6 |
| 36 | 19 370.7 | 309 764.8 | 4 270 863 | 6 711.63 | 152 212.5 |
| 37 | 18 404.0 | 291 360.8 | 3 961 098 | 6 489.99 | 145 500.9 |
| 38 | 17 483.1 | 273 877.8 | 3 669 737 | 6 276.87 | 139 010.9 |
| 39 | 16 605.7 | 257 272.1 | 3 395 860 | 6 071.94 | 132 734.0 |
| 40 | 15 770.0 | 241 502.1 | 3 138 588 | 5 874.90 | 126 662.1 |
| 41 | 14 973.2 | 226 528.9 | 2 897 085 | 5 684.64 | 120 787.2 |
| 42 | 14 213.8 | 212 315.1 | 2 670 557 | 5 501.11 | 115 102.5 |
| 43 | 13 490.3 | 198 824.9 | 2 458 241 | 5 324.28 | 109 601.4 |
| 44 | 12 800.8 | 186 024.1 | 2 259 417 | 5 153.71 | 104 277.1 |
| 45 | 12 143.8 | 173 880.3 | 2 073 392 | 4 989.02 | 99 123.41 |
| 46 | 11 517.7 | 162 362.6 | 1 899 512 | 4 830.00 | 94 134.40 |
| 47 | 10 922.3 | 151 440.3 | 1 737 150 | 4 677.57 | 89 304.40 |
| 48 | 10 356.4 | 141 083.9 | 1 585 709 | 4 531.77 | 84 626.82 |
| 49 | 9 818.61 | 131 265.3 | 1 444 625 | 4 392.31 | 80 095.05 |
| 50 | 9 307.30 | 121 958.0 | 1 313 360 | 4 258.63 | 75 702.74 |
| 51 | 8 819.98 | 113 138.0 | 1 191 402 | 4 129.28 | 71 444.11 |
| 52 | 8 353.90 | 104 784.1 | 1 078 264 | 4 002.44 | 67 314.83 |
| 53 | 7 907.13 | 96 876.96 | 973 480.2 | 3 876.97 | 63 312.39 |
| 54 | 7 478.28 | 89 398.69 | 876 603.2 | 3 752.24 | 59 435.42 |

H^F (WOOLHOUSE) TABLE.

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TABLE III.—Cont.
COMMUTATION COLUMNS. H^F.
FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 7 065.63 | 82 333.06 | 787 204.5 | 3 627.22 | 55 683.18 |
| 56 | 6 669.77 | 75 663.30 | 704 871.5 | 3 503.11 | 52 055.96 |
| 57 | 6 290.91 | 69 372.39 | 629 208.2 | 3 380.78 | 48 552.85 |
| 58 | 5 928.65 | 63 443.74 | 559 835.8 | 3 260.48 | 45 172.07 |
| 59 | 5 582.39 | 57 861.35 | 496 392.0 | 3 142.24 | 41 911.59 |
| 60 | 5 250.66 | 52 610.69 | 438 530.7 | 3 025.22 | 38 769.35 |
| 61 | 4 929.16 | 47 681.53 | 385 920.0 | 2 905.67 | 35 744.12 |
| 62 | 4 616.97 | 43 064.56 | 338 238.5 | 2 783.06 | 32 838.45 |
| 63 | 4 313.05 | 38 751.51 | 295 173.0 | 2 656.72 | 30 055.39 |
| 64 | 4 017.07 | 34 734.44 | 256 422.4 | 2 526.63 | 27 398.67 |
| 65 | 3 729.27 | 31 005.16 | 221 688.0 | 2 393.33 | 24 872.04 |
| 66 | 2 451.81 | 27 553.35 | 190 682.8 | 2 259.31 | 22 478.70 |
| 67 | 3 185.70 | 24 367.65 | 163 129.5 | 2 125.96 | 20 219.40 |
| 68 | 2 920.23 | 21 437.42 | 138 761.8 | 1 993.01 | 18 093.44 |
| 69 | 2 685.15 | 18 752.27 | 117 324.4 | 1 860.64 | 16 100.43 |
| 70 | 2 450.23 | 16 302.05 | 98 572.11 | 1 728.99 | 14 239.80 |
| 71 | 2 224.89 | 14 077.15 | 82 270.07 | 1 597.89 | 12 510.81 |
| 72 | 2 006.80 | 12 070.36 | 68 192.92 | 1 465.37 | 10 912.92 |
| 73 | 1 796.13 | 10 274.22 | 56 122.56 | 1 331.89 | 9 447.551 |
| 74 | 1 593.93 | 8 680.290 | 45 848.34 | 1 198.77 | 8 115.662 |
| 75 | 1 401.20 | 7 279.095 | 37 168.05 | 1 067.34 | 6 916.893 |
| 76 | 1 219.51 | 6 059.589 | 29 888.96 | 939.541 | 5 849.555 |
| 77 | 1 050.60 | 5 008.991 | 23 829.37 | 817.537 | 4 910.014 |
| 78 | 899.308 | 4 109.684 | 18 820.38 | 706.654 | 4 092.477 |
| 79 | 765.230 | 3 344.454 | 14 710.69 | 607.165 | 3 385.823 |
| 80 | 647.988 | 2 696.465 | 11 366.24 | 519.355 | 2 778.658 |
| 81 | 547.185 | 2 119.281 | 8 609.773 | 443.475 | 2 259.302 |
| 82 | 461.119 | 1 688.162 | 6 520.493 | 378.454 | 1 815.828 |
| 83 | 384.991 | 1 303.171 | 4 832.331 | 320.062 | 1 437.373 |
| 84 | 316.210 | 986.761 | 3 529.161 | 266.288 | 1 117.312 |
| 85 | 254.711 | 732.050 | 2 542.400 | 216.758 | 851.024 |
| 86 | 199.449 | 532.601 | 1 810.350 | 171.293 | 634.265 |
| 87 | 151.095 | 381.506 | 1 277.749 | 130.610 | 462.972 |
| 88 | 110.857 | 270.650 | 896.243 | 96.183 4 | 332.362 |
| 89 | 76.068 4 | 191.581 | 625.593 | 68.658 8 | 236.179 |
| 90 | 55.305 9 | 136.275 | 434.012 | 47.937 4 | 167.520 |
| 91 | 38.552 5 | 97.723 | 297.737 | 33.311 1 | 119.583 |
| 92 | 27.197 7 | 70.625 | 200.014 | 23.339 1 | 86.271 |
| 93 | 20.010 6 | 50.615 | 129.389 | 17.294 3 | 62.932 |
| 94 | 15.783 6 | 34.831 | 78.774 | 13.836 9 | 45.638 |
| 95 | 12.358 1 | 22.473 | 43.943 | 11.018 4 | 31.801 |
| 96 | 9.404 3 | 13.069 | 21.470 | 8.539 9 | 20.783 |
| 97 | 6.726 3 | 6.342 | 8.402 | 6.223 6 | 12.243 |
| 98 | 4.283 1 | 2.059 | 2.059 | 4.039 2 | 6.019 |
| 99 | 2.059 2 | .000 | .000 | 1.980 0 | 1.980 |

H^F (WOOLHOUSE) TABLE.

TABLE IV.
COMMUTATION COLUMNS, H^F.
THREE AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 70 891.9 | I 499 667 | 28 199 634 | 17 781.2 | 563 837.1 |
| 11 | 68 279.5 | I 431 387 | 26 699 967 | 17 566.1 | 546 055.9 |
| 12 | 65 692.6 | I 365 695 | 25 268 580 | 17 288.2 | 528 489.8 |
| 13 | 63 145.0 | I 302 550 | 23 902 885 | 16 962.1 | 511 201.6 |
| 14 | 60 650.7 | I 241 899 | 22 600 335 | 16 603.1 | 494 239.6 |
| 15 | 58 222.5 | I 183 677 | 21 358 436 | 16 225 9 | 477 636.4 |
| 16 | 55 869.0 | I 127 808 | 20 174 759 | 15 841.3 | 461 410.5 |
| 17 | 53 599.1 | I 074 208 | 19 046 952 | 15 400.7 | 445 569.2 |
| 18 | 51 420.5 | I 022 788 | 17 972 743 | 15 094.6 | 430 108.6 |
| 19 | 49 338.9 | 973 449.1 | 16 949 955 | 14 751.8 | 415 014.0 |
| 20 | 47 351.3 | 926 097.9 | 15 976 506 | 14 432.7 | 400 262.2 |
| 21 | 45 435.4 | 880 662.5 | 15 050 408 | 14 118.0 | 385 820.5 |
| 22 | 43 578.9 | 837 083.6 | 14 169 746 | 13 798.1 | 371 711.4 |
| 23 | 41 771.6 | 795 312.0 | 13 332 662 | 13 464 5 | 357 913.4 |
| 24 | 40 003.0 | 755 309.0 | 12 537 350 | 13 108.4 | 344 448.9 |
| 25 | 38 269.8 | 717 039.1 | 11 782 041 | 12 728.0 | 331 340 5 |
| 26 | 36 575.9 | 680 463.3 | 11 065 002 | 12 328.1 | 318 612.5 |
| 27 | 34 936.9 | 645 526.4 | 10 384 539 | 11 926.0 | 306 284.4 |
| 28 | 33 356.6 | 612 169.8 | 9 739 012 | 11 527.2 | 294 358.4 |
| 29 | 31 841.4 | 580 328.4 | 9 126 843 | 11 140.0 | 282 831.2 |
| 30 | 30 397.0 | 549 931.5 | 8 546 514 | 10 772.3 | 271 691.2 |
| 31 | 29 021.0 | 520 910.4 | 7 996 583 | 10 424.3 | 260 918.9 |
| 32 | 27 711.4 | 493 199.1 | 7 475 672 | 10 096.0 | 250 494.5 |
| 33 | 26 464.5 | 466 734.6 | 6 982 473 | 9 786.27 | 240 308.5 |
| 34 | 25 271.5 | 441 463.1 | 6 515 739 | 9 488.21 | 230 612.2 |
| 35 | 24 130 7 | 417 332.3 | 6 074 276 | 9 202.03 | 221 124.0 |
| 36 | 23 040.5 | 394 291 8 | 5 656 943 | 8 927.85 | 211 922.0 |
| 37 | 21 996.5 | 372 295 3 | 5 262 651 | 8 662.94 | 202 994 1 |
| 38 | 20 996.7 | 351 298.6 | 4 890 356 | 8 406 99 | 194 331.2 |
| 39 | 20 039.4 | 331 259.2 | 4 539 058 | 8 159.70 | 185 924.2 |
| 40 | 19 122.8 | 312 136.5 | 4 207 798 | 7 920 76 | 177 764.5 |
| 41 | 18 244.3 | 293 892.2 | 3 895 662 | 7 688.93 | 169 843.7 |
| 42 | 17 402.6 | 276 489.6 | 3 601 770 | 7 464.24 | 162 154.8 |
| 43 | 16 596.6 | 259 893.0 | 3 325 280 | 7 246.68 | 154 690.6 |
| 44 | 15 824.5 | 244 068.5 | 3 065 387 | 7 035.82 | 147 443.9 |
| 45 | 15 084.8 | 228 983.8 | 2 821 319 | 6 831.24 | 140 408 1 |
| 46 | 14 376.2 | 214 607.6 | 2 592 335 | 6 632.76 | 133 576.8 |
| 47 | 13 698.9 | 200 908.7 | 2 377 727 | 6 441.59 | 126 944.1 |
| 48 | 13 051.9 | 187 856.9 | 2 176 818 | 6 257.84 | 120 502.5 |
| 49 | 12 433.9 | 175 423.0 | 1 988 962 | 6 081.23 | 114 244.6 |
| 50 | 11 843.3 | 163 579.7 | 1 813 539 | 5 911.13 | 108 163.4 |
| 51 | 11 277.4 | 152 302.3 | 1 649 959 | 5 745.74 | 102 252.3 |
| 52 | 10 733 1 | 141 569.2 | 1 497 657 | 5 582.77 | 96 506.54 |
| 53 | 10 208.2 | 131 361.0 | 1 356 087 | 5 420.79 | 90 923.76 |
| 54 | 9 701.14 | 121 659.9 | 1 224 726 | 5 258.98 | 85 502.97 |

H^F (WOOLHOUSE) TABLE.

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TABLE I J.—Cont.
COMMUTATION COLUMNS, H^F.
THREE AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 9 210.12 | 112 449.8 | I 103 067. | 5 096.01 | 80 243.99 |
| 56 | 8 736.11 | 103 713.7 | 990 616.8 | 4 933.46 | 75 147.98 |
| 57 | 8 279.68 | 95 433.97 | 886 903.1 | 4 772.46 | 70 214.52 |
| 58 | 7 840.60 | 87 593.37 | 791 469.1 | 4 613.37 | 65 442.07 |
| 59 | 7 418.33 | 80 175.04 | 703 875.8 | 4 456.24 | 60 828.70 |
| 60 | 7 011.22 | 73 163.82 | 623 700.7 | 4 299.98 | 56 372.46 |
| 61 | 6 613.71 | 66 550.11 | 550 536.9 | 4 139.57 | 52 072.48 |
| 62 | 6 224.75 | 60 325.36 | 483 986.8 | 3 974.27 | 47 932.91 |
| 63 | 5 843.10 | 54 482.26 | 423 651.4 | 3 803.11 | 43 958.65 |
| 64 | 5 468.41 | 49 013.85 | 369 179.2 | 3 626.01 | 40 155.54 |
| 65 | 5 101.16 | 43 912.70 | 320 165.3 | 3 443.68 | 36 529.53 |
| 66 | 4 744.44 | 39 168.26 | 276 252.6 | 3 259.47 | 33 085.84 |
| 67 | 4 399.82 | 34 768.44 | 237 084.4 | 3 075.29 | 29 826.38 |
| 68 | 4 066.54 | 30 701.90 | 202 315.9 | 2 890.79 | 26 751.09 |
| 69 | 3 744.43 | 26 957.48 | 171 614.0 | 2 706.20 | 23 860.30 |
| 70 | 3 433.33 | 23 524.15 | 144 656.5 | 2 521.72 | 21 154.10 |
| 71 | 3 132.65 | 20 391.50 | 121 132.4 | 2 337.14 | 18 632.38 |
| 72 | 2 839.22 | 17 552.28 | 100 740.9 | 2 149.65 | 16 295.23 |
| 73 | 2 553.45 | 14 998.83 | 83 188.62 | 1 959.89 | 14 145.58 |
| 74 | 2 276.94 | 12 721.90 | 68 189.79 | 1 769.73 | 12 185.69 |
| 75 | 2 011.28 | 10 710.62 | 55 467.89 | 1 581.07 | 10 415.96 |
| 76 | I 758.94 | 8 951.676 | 44 757.28 | I 396.75 | 8 834.888 |
| 77 | I 522.64 | 7 429.037 | 35 805.60 | I 219.92 | 7 438.143 |
| 78 | I 309.67 | 6 110.368 | 28 376.56 | I 058.45 | 6 218.219 |
| 79 | I 119.79 | 4 999.574 | 22 257.19 | 912.859 | 5 159.774 |
| 80 | 952 810 | 4 046 764 | 17 257.62 | 783.742 | 4 246.915 |
| 81 | 808.474 | 3 238.290 | 13 210.86 | 671.627 | 3 463.172 |
| 82 | 684.602 | 2 553.688 | 9 972.568 | 575.094 | 2 791.545 |
| 83 | 574 339 | I 979.348 | 7 418.880 | 487.983 | 2 216.451 |
| 84 | 474.309 | I 505.039 | 5 439.532 | 407.375 | I 728.468 |
| 85 | 383.664 | I 121.375 | 3 934.493 | 332.769 | I 321.094 |
| 86 | 301.876 | 819.499 | 2 813.117 | 263.955 | 988.325 |
| 87 | 229.794 | 589.705 | I 993.618 | 202.082 | 724.360 |
| 88 | 169.412 | 420.292 | I 403.914 | 149.471 | 522.288 |
| 89 | 121.417 | 298.876 | 983.621 | 107.204 | 372.817 |
| 90 | 85.337 6 | 213 538 | 684 746 | 75.230 7 | 265 613 |
| 91 | 59 774 3 | 153.764 | 471 208 | 52.553 2 | 190.382 |
| 92 | 42.217 0 | 111.547 | 317.444 | 37.017 3 | 137.629 |
| 93 | 31.326 3 | 80.220 | 205 898 | 27.554 2 | 100.812 |
| 94 | 24.828 3 | 55.392 | 125 667 | 22.115 6 | 73.258 |
| 95 | 19.533 7 | 35.858 | 70.285 | 17.660 5 | 51.142 |
| 96 | 14.936 6 | 20.922 | 34.427 | 13.724 0 | 33.482 |
| 97 | 10.734 8 | 10.187 | 13.505 | 10.027 3 | 19.758 |
| 98 | 6.868 7 | 3.318 | 3.318 | 6.524 2 | 9.730 |
| 99 | 3.318 2 | .000 | .000 | 3 206 0 | 3.266 |

H^F (WOOLHOUSE.) TABLE.

TABLE V.
COMMUTATION COLUMNS, H^F.
THREE PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 10 | 74 409.4 | I 729 035. | 34 562 827. | 21 881.9 | 744 232.8 |
| 11 | 72 015.3 | I 657 020. | 32 833 792. | 21 655.0 | 722 350.9 |
| 12 | 69 623.2 | I 587 397. | 31 176 772. | 21 360.5 | 700 695.9 |
| 13 | 67 248.0 | I 520 149. | 29 589 375. | 21 013.2 | 679 335.4 |
| 14 | 64 905.2 | I 455 244. | 28 069 226. | 20 629.1 | 658 322.3 |
| 15 | 62 609.1 | I 392 634. | 26 613 982. | 20 223.4 | 637 693.2 |
| 16 | 60 369.9 | I 332 265. | 25 221 348. | 19 807.7 | 617 469.8 |
| 17 | 58 198.4 | I 274 066. | 23 889 083. | 19 394.5 | 597 662.1 |
| 18 | 56 103.8 | I 217 962. | 22 615 017. | 18 995.1 | 578 267.5 |
| 19 | 54 093.9 | I 163 868. | 21 397 055. | 18 619.3 | 559 272.4 |
| 20 | 52 166.8 | I 111 702. | 20 233 186. | 18 267.7 | 540 653.2 |
| 21 | 50 299.0 | I 061 403. | 19 121 484. | 17 919.4 | 522 385.5 |
| 22 | 48 478.1 | I 012 925. | 18 060 082. | 17 563.4 | 504 466.1 |
| 23 | 46 693.2 | 966 231.4 | 17 047 157. | 17 190.5 | 486 902.7 |
| 24 | 44 933.2 | 921 298.2 | 16 080 926. | 16 790.6 | 469 712.2 |
| 25 | 43 195.1 | 878 103.1 | 15 159 628. | 16 361.2 | 452 921.6 |
| 26 | 41 483.5 | 836 619.6 | 14 281 524. | 15 907.7 | 436 560.4 |
| 27 | 39 817.0 | 796 802.6 | 13 444 905. | 15 449.4 | 420 652.7 |
| 28 | 38 200.5 | 758 602.1 | 12 648 102. | 14 992.7 | 405 203.3 |
| 29 | 36 642.3 | 721 959.8 | 11 889 500. | 14 547.1 | 390 210.7 |
| 30 | 35 149.9 | 686 809.9 | 11 167 540. | 14 121.9 | 375 663.6 |
| 31 | 33 721.7 | 6 3 088.2 | 10 480 731. | 13 717.5 | 361 541.6 |
| 32 | 32 356.3 | 620 731.9 | 9 827 642. | 13 334.3 | 347 824.1 |
| 33 | 31 050.4 | 589 681.6 | 9 206 910. | 12 970.8 | 334 489.8 |
| 34 | 29 794.6 | 559 887.0 | 8 617 229. | 12 619.4 | 321 519.0 |
| 35 | 28 587.8 | 531 299.2 | 8 057 342. | 12 280.4 | 308 899.6 |
| 36 | 27 428.7 | 503 870.5 | 7 526 043. | 11 954.0 | 296 619.3 |
| 37 | 26 312.9 | 477 557.6 | 7 022 172. | 11 637.1 | 284 065.3 |
| 38 | 25 238.9 | 452 318.7 | 6 544 615. | 11 329.4 | 273 028.2 |
| 39 | 24 205.0 | 428 113.7 | 6 092 296. | 11 030.7 | 261 698.8 |
| 40 | 23 210.0 | 404 903.7 | 5 664 182. | 10 740.7 | 250 668.1 |
| 41 | 22 251.3 | 382 652.4 | 5 259 279. | 10 458.0 | 239 927.4 |
| 42 | 21 327.8 | 361 321.6 | 4 876 626. | 10 182.6 | 229 460.5 |
| 43 | 20 438.7 | 340 886.0 | 4 515 302. | 9 914.65 | 219 286.9 |
| 44 | 19 582.4 | 321 303.5 | 4 174 416. | 9 653.72 | 209 372.3 |
| 45 | 18 757.7 | 302 545.8 | 3 853 112. | 9 399.33 | 199 718.5 |
| 46 | 17 963.3 | 284 582.5 | 3 550 566. | 9 151.33 | 190 319.2 |
| 47 | 17 200.1 | 267 382.4 | 3 265 984. | 8 911.29 | 181 167.9 |
| 48 | 16 467.3 | 250 915.1 | 2 998 601. | 8 679.45 | 172 256.6 |
| 49 | 15 763.8 | 235 151.3 | 2 747 686. | 8 455.55 | 163 577.1 |
| 50 | 15 087.9 | 220 063.4 | 2 512 535. | 8 238.85 | 155 121.6 |
| 51 | 14 436.7 | 205 626.7 | 2 292 472. | 8 027.13 | 146 882.7 |
| 52 | 13 806.6 | 191 820.1 | 2 086 845. | 7 817.49 | 138 855.6 |
| 53 | 13 195.1 | 178 624.9 | 1 895 025. | 7 608.11 | 131 038.1 |
| 54 | 12 600.6 | 166 024.3 | 1 716 400. | 7 397.94 | 123 430.0 |

H^F (WOOLHOUSE) TABLE.

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TABLE V.—Cont.
COMMUTATION COLUMNS. H^F.
THREE PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 12 020.9 | 154 003.4 | I 550 376. | 7 185.24 | 116 032.1 |
| 56 | 11 457.6 | 142 545.9 | I 396 372. | 6 972.04 | 108 846.8 |
| 57 | 10 911.7 | 131 634.2 | I 253 826. | 6 759.86 | 101 874.8 |
| 58 | 10 383.2 | 121 251.0 | I 122 192. | 6 549.18 | 95 114.93 |
| 59 | 9 871.67 | 111 379.3 | I 000 941. | 6 340.09 | 88 505.75 |
| 60 | 9 375.21 | 102 004.1 | 889 561.8 | 6 131.15 | 82 225.66 |
| 61 | 8 886.60 | 93 117.50 | 787 557.7 | 5 915.60 | 76 094.51 |
| 62 | 8 404.58 | 84 712.02 | 694 440.2 | 5 692.42 | 70 178.91 |
| 63 | 7 927.57 | 76 785.35 | 609 727.3 | 5 460.20 | 64 486.49 |
| 64 | 7 455.23 | 69 330.12 | 532 942.0 | 5 218.76 | 59 026.29 |
| 65 | 6 988.31 | 62 341.82 | 463 611.8 | 4 968.98 | 53 807.53 |
| 66 | 6 531.17 | 55 810.65 | 401 270.0 | 4 715.39 | 48 838.55 |
| 67 | 6 086.18 | 49 724.47 | 345 459.4 | 4 460.62 | 44 123.16 |
| 68 | 5 652.45 | 44 072.02 | 295 734.9 | 4 204.17 | 39 662.54 |
| 69 | 5 229.99 | 38 842.03 | 251 662.9 | 3 946.34 | 35 458.37 |
| 70 | 4 818.75 | 34 023.28 | 212 820.9 | 3 687.43 | 31 512.04 |
| 71 | 4 418.08 | 29 605.20 | 178 797.6 | 3 427.11 | 27 824.61 |
| 72 | 4 023.68 | 25 581.52 | 149 192.4 | 3 161.39 | 24 397.50 |
| 73 | 3 636.26 | 21 945.26 | 123 610.9 | 2 891.17 | 21 236.11 |
| 74 | 3 258.23 | 18 687.03 | 101 665.6 | 2 619.05 | 18 344.94 |
| 75 | 2 892.06 | 15 794.97 | 82 978.57 | 2 347.78 | 15 725.89 |
| 76 | 2 541.49 | 13 253.48 | 67 183.61 | 2 081.44 | 13 378.11 |
| 77 | 2 210.74 | 11 042.74 | 53 930.13 | 1 824.71 | 11 296.67 |
| 78 | 1 910.76 | 9 131.980 | 42 887.40 | 1 589.12 | 9 471.955 |
| 79 | 1 641.67 | 7 490.313 | 33 755.42 | 1 375.69 | 7 882.832 |
| 80 | 1 403.64 | 6 086.671 | 26 265.10 | 1 185.48 | 6 507.145 |
| 81 | 1 196.79 | 4 889.877 | 20 178.43 | 1 019.51 | 5 321.668 |
| 82 | 1 018.34 | 3 871.533 | 15 288.55 | 875.920 | 4 302.156 |
| 83 | 858.476 | 3 013.058 | 11 417.02 | 745.713 | 3 426.236 |
| 84 | 712.400 | 2 300.658 | 8 403.964 | 624.641 | 2 680.523 |
| 85 | 579.051 | 1 721.607 | 6 103.307 | 512.041 | 2 055.882 |
| 86 | 457.823 | 1 263.784 | 4 381.700 | 407.679 | 1 543.841 |
| 87 | 350.196 | 913.588 | 3 117.916 | 313.387 | 1 136.161 |
| 88 | 259.430 | 654.158 | 2 204.329 | 232.820 | 822.774 |
| 89 | 186.835 | 467.323 | 1 550.171 | 167.781 | 589.954 |
| 90 | 131.954 | 335.370 | 1 082.848 | 118.342 | 422.173 |
| 91 | 92.875 0 | 242.495 | 747.478 | 83.106 9 | 303.830 |
| 92 | 65.913 6 | 176.581 | 504.984 | 58.850 7 | 220.723 |
| 93 | 49.147 3 | 127.434 | 328.403 | 44.004 1 | 161.873 |
| 94 | 39.141 9 | 88.292 | 200.969 | 35.430 2 | 117.869 |
| 95 | 30.944 3 | 57.347 | 112.677 | 28.372 7 | 82.438 |
| 96 | 23.776 7 | 33.571 | 55.330 | 22.106 4 | 54.066 |
| 97 | 17.171 0 | 16.400 | 21.759 | 16.193 2 | 31.959 |
| 98 | 11.040 3 | 5.359 | 5.359 | 10.562 7 | 15.766 |
| 99 | 5.359 4 | .000 | .000 | 5.203 3 | 5.203 |

SPRAGUE'S SELECT LIFE TABLES.
INTRODUCTION.

THESE tables were deduced by Dr. Thomas Bond Sprague from the experience embraced in the investigation of the mortality experience of the 20 British offices, on which the H^m Table is based.

It accepts the H^{m(s)} Table as an ultimate table, correctly representing the experience of the companies after five policy years have elapsed; the data really embraced the experience after five calendar years, including the year of admission, had elapsed—an average of about 4½ policy years.

In like manner the select data embraced calendar years; and the author of the table, by an adroit process, graduated this into policy years.

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SPRAGUE'S SELECT LIFE TABLES.

 SPRAGUE'S SELECT LIFE TABLES.
 YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 l_x | 1 $l_{[x-1]} + 1$ | 2 $l_{[x-2]} + 2$ | 3 $l_{[x-3]} + 3$ | 4 $l_{[x-4]} + 4$ | 5 or More. l_x |
|------|------------|----------------------|----------------------|----------------------|----------------------|---------------------|
| 15 | 983452 | ..... | ..... | ..... | ..... | 983700 |
| 16 | 970428 | 980500 | ..... | ..... | ..... | 980500 |
| 17 | 976700 | 976800 | 976800 | ..... | ..... | 976800 |
| 18 | 971650 | 972500 | 972500 | 972500 | ..... | 972500 |
| 19 | 965015 | 967084 | 967200 | 967200 | 967200 | 967200 |
| 20 | 956418 | 960190 | 960700 | 960700 | 960700 | 960700 |
| 21 | 945306 | 951636 | 952700 | 952700 | 952700 | 952700 |
| 22 | 934548 | 940704 | 943500 | 943500 | 943500 | 943500 |
| 23 | 924270 | 930110 | 932948 | 933800 | 933800 | 933800 |
| 24 | 914390 | 919975 | 922694 | 923598 | 923800 | 923800 |
| 25 | 904880 | 910218 | 912860 | 913698 | 913800 | 913800 |
| 26 | 895828 | 900808 | 903360 | 904200 | 904200 | 904200 |
| 27 | 887214 | 891834 | 894168 | 895010 | 895100 | 895100 |
| 28 | 878918 | 883276 | 885368 | 886094 | 886200 | 886200 |
| 29 | 870746 | 875014 | 876946 | 877530 | 877600 | 877600 |
| 30 | 862820 | 866862 | 868784 | 869300 | 869300 | 869300 |
| 31 | 854970 | 858936 | 860700 | 861290 | 861300 | 861300 |
| 32 | 846500 | 851076 | 852814 | 853316 | 853400 | 853400 |
| 33 | 838098 | 842586 | 844970 | 845500 | 845500 | 845500 |
| 34 | 829492 | 834154 | 836478 | 837700 | 837700 | 837700 |
| 35 | 820928 | 825510 | 828026 | 829222 | 829800 | 829800 |
| 36 | 812338 | 816906 | 819352 | 820756 | 821338 | 821500 |
| 37 | 803767 | 808273 | 810710 | 812050 | 812768 | 813000 |
| 38 | 795196 | 799656 | 802030 | 803368 | 803960 | 804300 |
| 39 | 786668 | 791034 | 793362 | 794634 | 795194 | 795400 |
| 40 | 777995 | 782390 | 784677 | 785900 | 786388 | 786500 |
| 41 | 769147 | 773717 | 775962 | 777134 | 777600 | 777600 |
| 42 | 760067 | 764802 | 767206 | 768325 | 768778 | 768800 |
| 43 | 750725 | 755650 | 758198 | 759458 | 759878 | 759900 |
| 44 | 740943 | 746230 | 748942 | 750324 | 750867 | 750900 |
| 45 | 730692 | 736363 | 739403 | 740925 | 741538 | 741700 |
| 46 | 720100 | 726015 | 729102 | 731220 | 731895 | 732100 |
| 47 | 709190 | 715320 | 718906 | 721033 | 721908 | 722100 |
| 48 | 698088 | 704292 | 708042 | 710325 | 711423 | 711700 |
| 49 | 686620 | 693058 | 696823 | 699220 | 700413 | 700800 |
| 50 | 674923 | 681445 | 685377 | 687728 | 688992 | 689400 |
| 51 | 662891 | 669590 | 673524 | 675970 | 677166 | 677600 |
| 52 | 650511 | 657386 | 661401 | 663773 | 665048 | 665400 |
| 53 | 637720 | 644817 | 648902 | 651267 | 652457 | 652900 |
| 54 | 624683 | 631821 | 636009 | 638341 | 639514 | 639900 |
| 55 | 611313 | 618563 | 622660 | 624979 | 626110 | 626500 |
| 56 | 597374 | 604956 | 609016 | 611114 | 612234 | 612600 |
| 57 | 582890 | 590766 | 594990 | 596901 | 597809 | 598200 |
| 58 | 567710 | 576027 | 580353 | 582258 | 582958 | 583200 |
| 59 | 551749 | 560566 | 565140 | 566957 | 567588 | 567700 |

SPRAGUE'S SELECT LIFE TABLES—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $l_{[x]}$ | 1 $l_{[x-1]}+1$ | 2 $l_{[x-2]}+2$ | 3 $l_{[x-3]}+3$ | 4 $l_{[x-4]}+4$ | 5 or More l_x |
|------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 60 | 534963 | 544326 | 549181 | 551043 | 551490 | 551600 |
| 61 | 517324 | 527259 | 532422 | 534338 | 534700 | 534700 |
| 62 | 499149 | 509341 | 514823 | 516773 | 517100 | 517100 |
| 63 | 480989 | 490886 | 496363 | 498308 | 498700 | 498700 |
| 64 | 462493 | 472441 | 477358 | 478943 | 479500 | 479500 |
| 65 | 442251 | 453668 | 458346 | 458983 | 459500 | 459500 |
| 66 | 421668 | 433185 | 439000 | 439000 | 439000 | 439000 |
| 67 | 400726 | 412381 | 418000 | 418000 | 418000 | 418000 |
| 68 | 379511 | 391245 | 396700 | 396700 | 396700 | 396700 |
| 69 | 357779 | 369864 | 375100 | 375100 | 375100 | 375100 |
| 70 | 335398 | 348013 | 353300 | 353300 | 353300 | 353300 |
| 71 | 312219 | 325571 | 331100 | 331100 | 331100 | 331100 |
| 72 | 288309 | 302404 | 308400 | 308400 | 308400 | 308400 |
| 73 | 263844 | 278589 | 285100 | 285100 | 285100 | 285100 |
| 74 | 239674 | 254313 | 261300 | 261300 | 261300 | 261300 |
| 75 | 215772 | 230402 | 237200 | 237200 | 237200 | 237200 |
| 76 | ..... | 206838 | 213600 | 213600 | 213600 | 213600 |

SPRAGUE'S SELECT LIFE TABLES.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $d_{[x]}$ | 1 $d_{[x-1]+1}$ | 2 $d_{[x-2]+2}$ | 3 $d_{[x-3]+3}$ | 4 $d_{[x-4]+4}$ | 5 or More. d_x |
|------|----------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| 16 | 2952 | .... | .... | .... | .... | 3200 |
| 16 | 3628 | 3700 | .... | .... | .... | 3700 |
| 17 | 4200 | 4300 | 4300 | .... | .... | 4300 |
| 18 | 4566 | 5300 | 5300 | 5300 | .... | 5300 |
| 19 | 4825 | 6384 | 6500 | 6500 | 6500 | 6500 |
| 20 | 4782 | 7490 | 8000 | 8000 | 8000 | 8000 |
| 21 | 4602 | 8136 | 9200 | 9200 | 9200 | 9200 |
| 22 | 4438 | 7756 | 9700 | 9700 | 9700 | 9700 |
| 23 | 4295 | 7416 | 9350 | 10000 | 10000 | 10000 |
| 24 | 4172 | 7115 | 8996 | 9798 | 10000 | 10000 |
| 25 | 4072 | 6858 | 8660 | 9498 | 9600 | 9600 |
| 26 | 3994 | 6640 | 8350 | 9100 | 9100 | 9100 |
| 27 | 3938 | 6466 | 8074 | 8810 | 8900 | 8900 |
| 28 | 3904 | 6330 | 7838 | 8494 | 8600 | 8600 |
| 29 | 3884 | 6230 | 7646 | 8230 | 8300 | 8300 |
| 30 | 3884 | 6162 | 7494 | 8000 | 8000 | 8000 |
| 31 | 3894 | 6122 | 7384 | 7890 | 7900 | 7900 |
| 32 | 3914 | 6106 | 7314 | 7816 | 7900 | 7900 |
| 33 | 3944 | 6108 | 7270 | 7800 | 7800 | 7800 |
| 34 | 3982 | 6128 | 7256 | 7900 | 7900 | 7900 |
| 35 | 4022 | 6158 | 7270 | 7884 | 8300 | 8300 |
| 36 | 4065 | 6190 | 7302 | 7988 | 8338 | 8500 |
| 37 | 4111 | 6243 | 7342 | 8060 | 8468 | 8700 |
| 38 | 4162 | 6294 | 7396 | 8174 | 8560 | 8900 |
| 39 | 4218 | 6357 | 7462 | 8246 | 8694 | 8900 |
| 40 | 4278 | 6428 | 7543 | 8300 | 8788 | 8900 |
| 41 | 4345 | 6511 | 7637 | 8356 | 8800 | 8800 |
| 42 | 4417 | 6604 | 7748 | 8447 | 8878 | 8900 |
| 43 | 4495 | 6708 | 7874 | 8591 | 8978 | 9000 |
| 44 | 4580 | 6827 | 8017 | 8786 | 9167 | 9200 |
| 45 | 4677 | 6961 | 8183 | 9030 | 9438 | 9600 |
| 46 | 4780 | 7109 | 8369 | 9312 | 9795 | 10000 |
| 47 | 4898 | 7278 | 8581 | 9610 | 10208 | 10400 |
| 48 | 5030 | 7469 | 8822 | 9912 | 10623 | 10900 |
| 49 | 5175 | 7681 | 9095 | 10228 | 11013 | 11400 |
| 50 | 5333 | 7921 | 9407 | 10562 | 11392 | 11800 |
| 51 | 5505 | 8189 | 9751 | 10922 | 11766 | 12200 |
| 52 | 5694 | 8484 | 10134 | 11316 | 12148 | 12500 |
| 53 | 5899 | 8808 | 10561 | 11753 | 12557 | 13000 |
| 54 | 6120 | 9161 | 11030 | 12231 | 13014 | 13400 |
| 55 | 6357 | 9547 | 11546 | 12745 | 13510 | 13900 |
| 56 | 6608 | 9966 | 12115 | 13305 | 14034 | 14400 |
| 57 | 6872 | 10413 | 12732 | 13943 | 14609 | 15000 |
| 58 | 7144 | 10887 | 13396 | 14670 | 15258 | 15500 |
| 59 | 7423 | 11385 | 14097 | 15467 | 15988 | 16100 |

SPRAGUE'S SELECT LIFE TABLES—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $d_{[x]}$ | 1 $d_{[x-1]+1}$ | 2 $d_{[x-2]+2}$ | 3 $d_{[x-3]+3}$ | 4 $d_{[x-4]+4}$ | 5 or More. d_x |
|------|----------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| 60 | 7704 | 11904 | 14843 | 16343 | 16790 | 16900 |
| 61 | 7983 | 12436 | 15640 | 17238 | 17600 | 17600 |
| 62 | 8263 | 12977 | 16515 | 18073 | 18400 | 18400 |
| 63 | 8548 | 13528 | 17421 | 18808 | 19200 | 19200 |
| 64 | 8825 | 14095 | 18375 | 19443 | 20000 | 20000 |
| 65 | 9066 | 14668 | 19346 | 19983 | 20500 | 20500 |
| 66 | 9287 | 15185 | 21000 | 21000 | 21000 | 21000 |
| 67 | 9481 | 15681 | 21300 | 21300 | 21300 | 21300 |
| 68 | 9647 | 16145 | 21600 | 21600 | 21600 | 21600 |
| 69 | 9766 | 16564 | 21800 | 21800 | 21800 | 21800 |
| 70 | 9827 | 16913 | 22200 | 22200 | 22200 | 22200 |
| 71 | 9815 | 17171 | 22700 | 22700 | 22700 | 22700 |
| 72 | 9720 | 17304 | 23300 | 23300 | 23300 | 23300 |
| 73 | 9531 | 17289 | 23800 | 23800 | 23800 | 23800 |
| 74 | 9272 | 17113 | 24100 | 24100 | 24100 | 24100 |
| 75 | 8934 | 16802 | 23600 | 23600 | 23600 | 23600 |
| 76 | ..... | 16338 | 23100 | 23100 | 23100 | 23100 |

SPRAGUE'S SELECT LIFE TABLES.

 SPRAGUE'S SELECT LIFE TABLES.
 YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $p_{[x]}$ | 1 $p_{[x-1]} +_1$ | 2 $p_{[x-2]} +_2$ | 3 $p_{[x-3]} +_3$ | 4 $p_{[x-4]} +_4$ | 5 or More. p_x |
|------|----------------|----------------------|----------------------|----------------------|----------------------|---------------------|
| 15 | .997000 | ..... | ..... | ..... | ..... | .996747 |
| 16 | .996300 | .996226 | ..... | ..... | ..... | .996226 |
| 17 | .995700 | .995598 | .995598 | ..... | ..... | .995598 |
| 18 | .995300 | .994550 | .994550 | .994550 | ..... | .994550 |
| 19 | .995000 | .993400 | .993280 | .993280 | .993280 | .993280 |
| 20 | .995000 | .992200 | .991673 | .991673 | .991673 | .991673 |
| 21 | .995131 | .991450 | .990343 | .990343 | .990343 | .990343 |
| 22 | .995250 | .991754 | .989719 | .989719 | .989719 | .989719 |
| 23 | .995353 | .992028 | .989980 | .989291 | .989291 | .989291 |
| 24 | .995437 | .992266 | .990251 | .989389 | .989175 | .989175 |
| 25 | .995500 | .992467 | .990515 | .989604 | .989494 | .989494 |
| 26 | .995541 | .992629 | .990758 | .989936 | .989936 | .989936 |
| 27 | .995561 | .992751 | .990971 | .990158 | .990057 | .990057 |
| 28 | .995560 | .992834 | .991147 | .990415 | .990296 | .990296 |
| 29 | .995539 | .992880 | .991281 | .990623 | .990542 | .990542 |
| 30 | .995500 | .992892 | .991372 | .990797 | .990797 | .990797 |
| 31 | .995446 | .992872 | .991419 | .990840 | .990828 | .990828 |
| 32 | .995376 | .992826 | .991425 | .990811 | .990743 | .990743 |
| 33 | .995292 | .992752 | .991397 | .990775 | .990775 | .990775 |
| 34 | .995199 | .992654 | .991326 | .990569 | .990569 | .990569 |
| 35 | .995100 | .992540 | .991219 | .990493 | .989998 | .989998 |
| 36 | .994995 | .992415 | .991089 | .990267 | .989850 | .989853 |
| 37 | .994884 | .992277 | .990943 | .990036 | .989579 | .989299 |
| 38 | .994765 | .992128 | .990778 | .989823 | .989355 | .988935 |
| 39 | .994638 | .991964 | .990594 | .989624 | .989067 | .988811 |
| 40 | .994500 | .991784 | .990388 | .989440 | .988824 | .988684 |
| 41 | .994351 | .991585 | .990159 | .989218 | .988683 | .988683 |
| 42 | .994189 | .991365 | .989902 | .989006 | .988449 | .988421 |
| 43 | .994012 | .991122 | .989615 | .988687 | .988184 | .988156 |
| 44 | .993817 | .990851 | .989294 | .988292 | .987789 | .987748 |
| 45 | .993600 | .990548 | .988933 | .987814 | .987270 | .987057 |
| 46 | .993359 | .990208 | .988526 | .987266 | .986615 | .986341 |
| 47 | .993092 | .989826 | .988064 | .986672 | .985860 | .985598 |
| 48 | .992795 | .989396 | .987541 | .986045 | .985068 | .984685 |
| 49 | .992466 | .988915 | .986947 | .985372 | .984276 | .983733 |
| 50 | .992100 | .988375 | .986276 | .984642 | .983465 | .982884 |
| 51 | .991695 | .987771 | .985523 | .983843 | .982626 | .981995 |
| 52 | .991246 | .987096 | .984677 | .982952 | .981736 | .981214 |
| 53 | .990750 | .986341 | .983726 | .981953 | .980754 | .980089 |
| 54 | .990203 | .985500 | .982657 | .980839 | .979649 | .979059 |
| 55 | .989600 | .984565 | .981455 | .979610 | .978421 | .977813 |
| 56 | .988938 | .983526 | .980108 | .978227 | .977074 | .976494 |
| 57 | .988211 | .982374 | .978600 | .976637 | .975564 | .974925 |
| 58 | .987416 | .981099 | .976918 | .974806 | .973828 | .973423 |
| 59 | .986547 | .979689 | .975056 | .972720 | .971832 | .971640 |

SPRAGUE'S SELECT LIFE TABLES—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $p[x]$ | 1 $p[x-1]+_1$ | 2 $p[x-2]+_2$ | 3 $p[x-3]+_3$ | 4 $p[x-4]+_4$ | 5 or More. p_x |
|------|-------------|------------------|------------------|------------------|------------------|---------------------|
| 60 | .985600 | .978131 | .972972 | .970342 | .969553 | .969362 |
| 61 | .984567 | .976413 | .970607 | .967739 | .967084 | .967084 |
| 62 | .983446 | .974522 | .967922 | .965025 | .964417 | .964417 |
| 63 | .982230 | .972443 | .964901 | .962258 | .961500 | .961500 |
| 64 | .980917 | .970164 | .961508 | .959404 | .958290 | .958290 |
| 65 | .979500 | .967670 | .957794 | .956463 | .955386 | .955386 |
| 66 | .977975 | .964945 | .952164 | .952164 | .952164 | .952164 |
| 67 | .976338 | .961973 | .949043 | .949043 | .949043 | .949043 |
| 68 | .974582 | .958736 | .945551 | .945551 | .945551 | .945551 |
| 69 | .972705 | .955218 | .941882 | .941882 | .941882 | .941882 |
| 70 | .970700 | .951399 | .937164 | .937164 | .937164 | .937164 |
| 71 | .968563 | .947260 | .931441 | .931441 | .931441 | .931441 |
| 72 | .966200 | .942780 | .924449 | .924449 | .924449 | .924449 |
| 73 | .963874 | .937938 | .916520 | .916520 | .916520 | .916520 |
| 74 | .961313 | .932711 | .907769 | .907769 | .907769 | .907769 |
| 75 | .958600 | .927076 | .900506 | .900506 | .900506 | .900506 |
| 76 | ..... | .921000 | .891854 | .891854 | .891854 | .891854 |

SPRAGUE'S SELECT LIFE TABLES.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $q[x]$ | 1 $q[x-1]+_1$ | 2 $q[x-2]+_2$ | 3 $q[x-3]+_3$ | 4 $q[x-4]+_4$ | 5 or More. q_x |
|------|-------------|------------------|------------------|------------------|------------------|---------------------|
| 15 | .003000 | ..... | ..... | ..... | ..... | .003253 |
| 16 | .003700 | .003774 | ..... | ..... | ..... | .003774 |
| 17 | .004300 | .004402 | .004402 | ..... | ..... | .004402 |
| 18 | .004700 | .005450 | .005450 | .005450 | ..... | .005450 |
| 19 | .005000 | .006600 | .006720 | .006720 | .006720 | .006720 |
| 20 | .005000 | .007800 | .008327 | .008327 | .008327 | .008327 |
| 21 | .004869 | .008530 | .009657 | .009657 | .009657 | .009657 |
| 22 | .004750 | .008246 | .010281 | .010281 | .010281 | .010281 |
| 23 | .004647 | .007972 | .010020 | .010709 | .010709 | .010709 |
| 24 | .004563 | .007734 | .009749 | .010611 | .010825 | .010825 |
| 25 | .004500 | .007533 | .009485 | .010396 | .010506 | .010506 |
| 26 | .004459 | .007371 | .009242 | .010064 | .010064 | .010064 |
| 27 | .004439 | .007249 | .009029 | .009842 | .009943 | .009943 |
| 28 | .004440 | .007166 | .008853 | .009585 | .009704 | .009704 |
| 29 | .004461 | .007120 | .008719 | .009377 | .009458 | .009458 |
| 30 | .004500 | .007108 | .008628 | .009203 | .009203 | .009203 |
| 31 | .004554 | .007128 | .008581 | .009160 | .009172 | .009172 |
| 32 | .004624 | .007174 | .008575 | .009159 | .009257 | .009257 |
| 33 | .004708 | .007248 | .008603 | .009225 | .009225 | .009225 |
| 34 | .004801 | .007346 | .008674 | .009431 | .009431 | .009431 |
| 35 | .004900 | .007460 | .008781 | .009507 | .010002 | .010002 |
| 36 | .005005 | .007585 | .008911 | .009733 | .010150 | .010347 |
| 37 | .005116 | .007723 | .009057 | .009924 | .010421 | .010701 |
| 38 | .005235 | .007872 | .009222 | .010177 | .010645 | .011065 |
| 39 | .005362 | .008036 | .009406 | .010376 | .010933 | .011189 |
| 40 | .005500 | .008216 | .009612 | .010560 | .011176 | .011316 |
| 41 | .005649 | .008415 | .009841 | .010752 | .011317 | .011317 |
| 42 | .005811 | .008635 | .010098 | .010994 | .011551 | .011576 |
| 43 | .005988 | .008878 | .010385 | .011313 | .011816 | .011844 |
| 44 | .006183 | .009149 | .010706 | .011708 | .012211 | .012252 |
| 45 | .006400 | .009452 | .011067 | .012186 | .012730 | .012943 |
| 46 | .006641 | .009792 | .011474 | .012734 | .013385 | .013659 |
| 47 | .006908 | .010174 | .011936 | .013328 | .014140 | .014402 |
| 48 | .007205 | .010604 | .012459 | .013955 | .014932 | .015315 |
| 49 | .007534 | .011085 | .013053 | .014628 | .015724 | .016267 |
| 50 | .007900 | .011625 | .013724 | .015358 | .016535 | .017116 |
| 51 | .008305 | .012229 | .014477 | .016157 | .017374 | .018005 |
| 52 | .008754 | .012904 | .015323 | .017048 | .018264 | .018786 |
| 53 | .009250 | .013659 | .016274 | .018047 | .019246 | .019911 |
| 54 | .009797 | .014500 | .017343 | .019161 | .020351 | .020941 |
| 55 | .010400 | .015435 | .018545 | .020390 | .021579 | .022187 |
| 56 | .011062 | .016474 | .019892 | .021773 | .022926 | .023506 |
| 57 | .011789 | .017626 | .021400 | .023363 | .024436 | .025075 |
| 58 | .012584 | .018901 | .023082 | .025104 | .026172 | .026577 |
| 59 | .013453 | .020311 | .024944 | .027280 | .028168 | .028560 |

SPRAGUE'S SELECT LIFE TABLES.

SPRAGUE'S SELECT LIFE TABLES—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $q[x]$ | 1 $q[x-1]+_1$ | 2 $q[x-2]+_2$ | 3 $q[x-3]+_3$ | 4 $q[x-4]+_4$ | 5 or More. q_x |
|------|-------------|------------------|------------------|------------------|------------------|---------------------|
| 60 | .014400 | .021869 | .027028 | .029658 | .030447 | .030638 |
| 61 | .015433 | .023587 | .029393 | .032261 | .032916 | .032916 |
| 62 | .016554 | .025478 | .032078 | .034975 | .035583 | .035583 |
| 63 | .017770 | .027557 | .035099 | .037742 | .038500 | .038500 |
| 64 | .019083 | .029836 | .038492 | .040596 | .041710 | .041710 |
| 65 | .020500 | .032330 | .042206 | .043537 | .044614 | .044614 |
| 66 | .022025 | .035055 | .047836 | .047836 | .047836 | .047836 |
| 67 | .023662 | .038027 | .050957 | .050957 | .050957 | .050957 |
| 68 | .025418 | .041264 | .054449 | .054449 | .054449 | .054449 |
| 69 | .027295 | .044782 | .058118 | .058118 | .058118 | .058118 |
| 70 | .029300 | .048601 | .062836 | .062836 | .062836 | .062836 |
| 71 | .031437 | .052740 | .068559 | .068559 | .068559 | .068559 |
| 72 | .033710 | .057220 | .075551 | .075551 | .075551 | .075551 |
| 73 | .036126 | .062062 | .083480 | .083480 | .083480 | .083480 |
| 74 | .038687 | .067289 | .092231 | .092231 | .092231 | .092231 |
| 75 | .041400 | .072924 | .099494 | .099494 | .099494 | .099494 |
| 76 | ..... | .078991 | .108146 | .108146 | .108146 | .108146 |

SPRAGUE'S SELECT LIFE TABLES, FOUR PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 D _[x] | 1 D _{[x-1]+1} | 2 D _{[x-2]+2} | 3 D _{[x-3]+3} | 4 D _{[x-4]+4} | 5 or More. D _x |
|------|-----------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------------|
| 16 | 546075 | ..... | ..... | ..... | ..... | 546214 |
| 16 | 523458 | 523497 | ..... | ..... | ..... | 523497 |
| 17 | 501411 | 501463 | 501463 | ..... | ..... | 501463 |
| 18 | 479633 | 480053 | 480053 | 480053 | ..... | 480053 |
| 19 | 458037 | 459018 | 459074 | 459074 | 459074 | 459074 |
| 20 | 436496 | 438218 | 438451 | 438451 | 438451 | 438451 |
| 21 | 414832 | 417609 | 418077 | 418077 | 418077 | 418077 |
| 22 | 394336 | 396935 | 398115 | 398115 | 398115 | 398115 |
| 23 | 375000 | 377369 | 378521 | 378867 | 378867 | 378867 |
| 24 | 356722 | 358902 | 359963 | 360316 | 360394 | 360394 |
| 25 | 339435 | 341437 | 342428 | 342743 | 342782 | 342782 |
| 26 | 323115 | 324911 | 325832 | 326135 | 326135 | 326135 |
| 27 | 307700 | 309302 | 310111 | 310404 | 310436 | 310436 |
| 28 | 293098 | 294552 | 295250 | 295492 | 295528 | 295528 |
| 29 | 279204 | 280574 | 281194 | 281381 | 281404 | 281404 |
| 30 | 266022 | 267269 | 267862 | 268021 | 268021 | 268021 |
| 31 | 253464 | 254639 | 255162 | 255338 | 255341 | 255341 |
| 32 | 241301 | 242605 | 243101 | 243244 | 243268 | 243268 |
| 33 | 229717 | 230947 | 231601 | 231747 | 231747 | 231747 |
| 34 | 218613 | 219842 | 220455 | 220778 | 220778 | 220778 |
| 35 | 208035 | 209196 | 209834 | 210137 | 210284 | 210284 |
| 36 | 197940 | 199054 | 199650 | 199992 | 200134 | 200174 |
| 37 | 188320 | 189375 | 189947 | 190260 | 190429 | 190483 |
| 38 | 179145 | 180150 | 180685 | 180987 | 181120 | 181197 |
| 39 | 170395 | 171354 | 171858 | 172134 | 172255 | 172300 |
| 40 | 162047 | 162963 | 163440 | 163694 | 163796 | 163819 |
| 41 | 154043 | 154958 | 155408 | 155643 | 155736 | 155736 |
| 42 | 146309 | 147281 | 147744 | 147960 | 148048 | 148052 |
| 43 | 139010 | 139922 | 140394 | 140627 | 140705 | 140709 |
| 44 | 131922 | 132863 | 133346 | 133593 | 133689 | 133695 |
| 45 | 125093 | 126064 | 126584 | 126845 | 126950 | 126978 |
| 46 | 118538 | 119512 | 120069 | 120369 | 120480 | 120514 |
| 47 | 112252 | 113222 | 113790 | 114127 | 114266 | 114296 |
| 48 | 106245 | 107189 | 107760 | 108108 | 108275 | 108317 |
| 49 | 100480 | 101423 | 101974 | 102325 | 102499 | 102556 |
| 50 | 94969.8 | 95887.8 | 96440.8 | 96771.8 | 96949.8 | 97007.3 |
| 51 | 89689.2 | 90595.6 | 91128.0 | 91459.0 | 91620.8 | 91679.7 |
| 52 | 84629.2 | 85523.4 | 86045.8 | 86354.8 | 86520.4 | 86566.4 |
| 53 | 79774.0 | 80661.8 | 81172.8 | 81468.8 | 81617.8 | 81673.2 |
| 54 | 75137.7 | 75996.2 | 76500.2 | 76780.7 | 76921.7 | 76968.3 |
| 55 | 70701.5 | 71540.0 | 72013.8 | 72282.2 | 72413.0 | 72458.2 |
| 56 | 66432.1 | 67275.3 | 67726.9 | 67960.1 | 68085.0 | 68125.6 |
| 57 | 62329.3 | 63170.4 | 63622.3 | 63826.7 | 63923.6 | 63965.6 |
| 58 | 58379.3 | 59225.6 | 59670.3 | 59866.1 | 59938.1 | 59963.1 |
| 59 | 54547.3 | 55419.0 | 55871.4 | 56051.0 | 56113.4 | 56124.4 |

SPRAGUE'S SELECT LIFE TABLES, FOUR PER CENT.—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 D[₁] | 1 D[₁₋₁]+ ₁ | 2 D[₁₋₂]+ ₂ | 3 D[₁₋₃]+ ₃ | 4 D[₁₋₄]+ ₄ | 5 or More. D ₅ |
|------|------------------------|----------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|------------------------------|
| 60 | 50853.5 | 51743.8 | 52205.4 | 52382.4 | 52425.0 | 52435.3 |
| 61 | 47285.4 | 48193.6 | 48665.6 | 48840.7 | 48873.8 | 48873.8 |
| 62 | 43869.3 | 44765.1 | 45247.0 | 45418.5 | 45447.2 | 45447.2 |
| 63 | 40647.5 | 41483.7 | 41946.8 | 42111.1 | 42144.3 | 42144.3 |
| 64 | 37581.2 | 38389.5 | 38789.0 | 38917.8 | 38963.2 | 38963.2 |
| 65 | 34554.3 | 35446.3 | 35811.7 | 35861.5 | 35902.0 | 35902.0 |
| 66 | 31678.9 | 32544.2 | 32981.0 | 32981.0 | 32981.0 | 32981.0 |
| 67 | 28947.7 | 29789.6 | 30195.5 | 30195.5 | 30195.5 | 30195.5 |
| 68 | 26360.6 | 27175.7 | 27554.7 | 27554.7 | 27554.7 | 27554.7 |
| 69 | 23895.4 | 24702.5 | 25052.3 | 25052.3 | 25052.3 | 25052.3 |
| 70 | 21539.0 | 22349.2 | 22688.7 | 22688.7 | 22688.7 | 22688.7 |
| 71 | 19279.3 | 20103.8 | 20445.2 | 20445.2 | 20445.2 | 20445.2 |
| 72 | 17118.2 | 17955.0 | 18311.1 | 18311.1 | 18311.1 | 18311.1 |
| 73 | 15063.1 | 15904.9 | 16276.6 | 16276.6 | 16276.6 | 16276.6 |
| 74 | 13156.9 | 13960.5 | 14344.1 | 14344.1 | 14344.1 | 14344.1 |
| 75 | 11389.2 | 12161.4 | 12520.3 | 12520.3 | 12520.3 | 12520.3 |
| 76 | ..... | 10497.8 | 10841.0 | 10841.0 | 10841.0 | 10841.0 |

SPRAGUE'S SELECT LIFE TABLES, FOUR PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | $N_{[x]}^0$ | $N_{[x-1]+1}^1$ | $N_{[x-2]+2}^2$ | $N_{[x-3]+3}^3$ | $N_{[x-4]+4}^4$ | 5 or More. N_x |
|------|-------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 15 | 10847378 | ..... | ..... | ..... | ..... | 10847517 |
| 16 | 10301264 | 10301303 | ..... | ..... | ..... | 10301303 |
| 17 | 9777754 | 9777806 | 9777806 | ..... | ..... | 9777806 |
| 18 | 9275867 | 9276343 | 9276343 | 9276343 | ..... | 9276343 |
| 19 | 8795020 | 8796234 | 8796290 | 8796290 | 8796290 | 8796290 |
| 20 | 8334793 | 8336983 | 8337216 | 8337216 | 8337216 | 8337216 |
| 21 | 7893915 | 7898297 | 7898765 | 7898765 | 7898765 | 7898765 |
| 22 | 7474940 | 7470083 | 7480688 | 7480688 | 7480688 | 7480688 |
| 23 | 7075859 | 7080604 | 7082148 | 7082573 | 7082573 | 7082573 |
| 24 | 6658354 | 6701859 | 6703235 | 6703627 | 6703706 | 6703706 |
| 25 | 6338380 | 6341632 | 6342957 | 6343272 | 6343311 | 6343311 |
| 26 | 5996075 | 5998945 | 6000195 | 6000529 | 6000529 | 6000529 |
| 27 | 5670473 | 5672960 | 5674034 | 5674394 | 5674394 | 5674394 |
| 28 | 5360537 | 5362773 | 5363658 | 5363923 | 5363959 | 5363959 |
| 29 | 5065275 | 5067439 | 5068221 | 5068408 | 5068431 | 5068431 |
| 30 | 4784158 | 4786071 | 4786865 | 4787027 | 4787027 | 4787027 |
| 31 | 4516320 | 4518136 | 4518802 | 4519003 | 4519006 | 4519006 |
| 32 | 4260388 | 4262856 | 4263497 | 4263640 | 4263665 | 4263665 |
| 33 | 4016745 | 4019087 | 4020251 | 4020396 | 4020396 | 4020396 |
| 34 | 3784573 | 3787028 | 3788140 | 3788650 | 3788650 | 3788650 |
| 35 | 3563712 | 3565960 | 3567186 | 3567685 | 3567872 | 3567872 |
| 36 | 3353544 | 3355677 | 3356764 | 3357352 | 3357548 | 3357588 |
| 37 | 3153636 | 3155604 | 3156623 | 3157114 | 3157300 | 3157414 |
| 38 | 2963457 | 2965316 | 2966229 | 2966676 | 2966854 | 2966931 |
| 39 | 2782548 | 2784312 | 2785166 | 2785544 | 2785689 | 2785734 |
| 40 | 2610487 | 2612153 | 2612958 | 2613308 | 2613410 | 2613434 |
| 41 | 2446705 | 2448440 | 2449190 | 2449518 | 2449614 | 2449614 |
| 42 | 2290893 | 2292662 | 2293482 | 2293782 | 2293875 | 2293878 |
| 43 | 2142727 | 2144524 | 2145381 | 2145738 | 2145822 | 2145827 |
| 44 | 2001775 | 2003717 | 2004602 | 2004987 | 2005111 | 2005117 |
| 45 | 1867764 | 1869853 | 1870854 | 1871256 | 1871394 | 1871422 |
| 46 | 1740550 | 1742671 | 1743789 | 1744279 | 1744411 | 1744444 |
| 47 | 1619883 | 1622012 | 1623159 | 1623720 | 1623901 | 1623931 |
| 48 | 1505597 | 1507631 | 1508790 | 1509369 | 1509593 | 1509635 |
| 49 | 1397394 | 1399352 | 1400442 | 1401030 | 1401261 | 1401318 |
| 50 | 1291869 | 1293824 | 1294929 | 1298468 | 1298705 | 1298762 |
| 51 | 1197988 | 1199899 | 1200936 | 1201488 | 1201696 | 1201755 |
| 52 | 1106442 | 1108299 | 1109303 | 1109808 | 1110029 | 1110075 |
| 53 | 1019986 | 1021813 | 1022775 | 1023258 | 1023453 | 1023509 |
| 54 | 938524.1 | 940211.5 | 941150.7 | 941602.6 | 941788.8 | 941835.3 |
| 55 | 861808.9 | 863386.4 | 864215.3 | 864650.5 | 864821.9 | 864867.1 |
| 56 | 789543.8 | 791107.4 | 791846.4 | 792201.5 | 792368.3 | 792408.9 |
| 57 | 721602.7 | 723111.7 | 723832.1 | 724119.5 | 724241.4 | 724283.3 |
| 58 | 657756.5 | 659274.4 | 659941.3 | 660209.8 | 660292.8 | 660317.8 |
| 59 | 597849.1 | 599386.2 | 600048.8 | 600271.0 | 600343.7 | 600354.7 |

SPRAGUE'S SELECT LIFE TABLES, FOUR PER CENT.—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | $N_{[x]}^0$ | $N_{[x-1]+1}^1$ | $N_{[x-2]+2}^2$ | $N_{[x-3]+3}^3$ | $N_{[x-4]+4}^4$ | 5 or More. N_x |
|------|-------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 60 | 541734.8 | 543371.8 | 543967.2 | 544177.4 | 544220.0 | 544230.3 |
| 61 | 489281.4 | 490881.3 | 491558.0 | 491761.8 | 491795.0 | 491745.0 |
| 62 | 440467.9 | 441966.0 | 442687.7 | 442892.4 | 442921.1 | 442921.1 |
| 63 | 395313.1 | 396598.6 | 397230.9 | 397440.7 | 397473.9 | 397473.9 |
| 64 | 353491.9 | 354665.6 | 355114.9 | 355284.1 | 355329.6 | 355329.6 |
| 65 | 314581.8 | 315910.7 | 316276.1 | 316325.9 | 316366.3 | 316366.3 |
| 66 | 278756.3 | 280027.5 | 280464.4 | 280464.4 | 280464.4 | 280464.4 |
| 67 | 245856.6 | 247077.4 | 247483.3 | 247483.3 | 247483.3 | 247483.3 |
| 68 | 215744.0 | 216908.9 | 217287.8 | 217287.8 | 217287.8 | 217287.8 |
| 69 | 188236.8 | 189383.4 | 189733.2 | 189733.2 | 189733.2 | 189733.2 |
| 70 | 163189.8 | 164341.4 | 164680.9 | 164680.9 | 164680.9 | 164680.9 |
| 71 | 140470.2 | 141650.8 | 141992.2 | 141992.2 | 141992.2 | 141992.2 |
| 72 | 119982.4 | 121190.9 | 121547.0 | 121547.0 | 121547.0 | 121547.0 |
| 73 | 101638.8 | 102864.2 | 103235.9 | 103235.9 | 103235.9 | 103235.9 |
| 74 | 85413.22 | 86575.71 | 86959.28 | 86959.28 | 86959.28 | 86959.28 |
| 75 | 71140.96 | 72256.32 | 72615.21 | 72615.21 | 72615.21 | 72615.21 |
| 76 | ..... | 59751.76 | 60094.92 | 60094.92 | 60094.92 | 60094.92 |

FOUR PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 C_x | 1 $C_{[x-1]+1}$ | 2 $C_{[x-2]+2}$ | 3 $C_{[x-3]+3}$ | 4 $C_{[x-4]+4}$ | 5 or More. C_x |
|------|------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| 15 | 1575.7 | ..... | ..... | ..... | ..... | 1708.5 |
| 16 | 1862.9 | 1899.5 | ..... | ..... | ..... | 1899.5 |
| 17 | 2073.6 | 2122.6 | 2122.6 | ..... | ..... | 2122.6 |
| 18 | 2167.4 | 2515.6 | 2515.6 | 2515.6 | ..... | 2515.6 |
| 19 | 2202.1 | 2913.8 | 2966.5 | 2966.5 | 2966.5 | 2966.5 |
| 20 | 2098.2 | 3286.9 | 3510.7 | 3510.7 | 3510.7 | 3510.7 |
| 21 | 1941.8 | 3432.6 | 3882.0 | 3882.0 | 3882.0 | 3882.0 |
| 22 | 1800.6 | 3146.8 | 3935.5 | 3935.5 | 3935.5 | 3935.5 |
| 23 | 1675.6 | 2893.1 | 3647.6 | 3901.2 | 3901.2 | 3901.2 |
| 24 | 1565.0 | 2668.9 | 3374.5 | 3675.4 | 3751.2 | 3751.2 |
| 25 | 1468.7 | 2473.6 | 3123.5 | 3425.8 | 3462.6 | 3462.6 |
| 26 | 1385.2 | 2302.8 | 2895.9 | 3156.0 | 3156.0 | 3156.0 |
| 27 | 1313.2 | 2156.3 | 2692.4 | 2937.9 | 2967.9 | 2967.9 |
| 28 | 1251.8 | 2029.7 | 2513.3 | 2723.6 | 2757.6 | 2757.6 |
| 29 | 1197.3 | 1920.8 | 2357.4 | 2537.5 | 2559.0 | 2559.0 |
| 30 | 1151.4 | 1826.4 | 2221.6 | 2371.7 | 2371.7 | 2371.7 |
| 31 | 1110.0 | 1745.1 | 2104.9 | 2249.1 | 2252.0 | 2252.0 |
| 32 | 1072.8 | 1673.6 | 2004.7 | 2142.3 | 2165.3 | 2165.3 |
| 33 | 1039.5 | 1609.7 | 1916.0 | 2055.7 | 2055.7 | 2055.7 |
| 34 | 1009.1 | 1553.0 | 1838.7 | 2002.0 | 2002.0 | 2002.0 |
| 35 | 980.0 | 1500.4 | 1771.5 | 1921.0 | 2022.5 | 2022.5 |
| 36 | 952.4 | 1451.7 | 1710.8 | 1871.6 | 1953.5 | 1991.5 |
| 37 | 926.2 | 1406.5 | 1654.1 | 1822.5 | 1907.8 | 1960.0 |
| 38 | 901.6 | 1363.4 | 1602.2 | 1770.7 | 1854.2 | 1927.9 |
| 39 | 878.5 | 1324.1 | 1554.3 | 1717.6 | 1810.9 | 1853.8 |
| 40 | 856.8 | 1287.4 | 1510.7 | 1662.3 | 1760.1 | 1782.5 |
| 41 | 836.7 | 1253.9 | 1470.7 | 1609.1 | 1694.7 | 1694.7 |
| 42 | 817.93 | 1222.8 | 1434.7 | 1564.1 | 1643.9 | 1648.0 |
| 43 | 800.31 | 1194.39 | 1401.9 | 1529.6 | 1598.5 | 1602.4 |
| 44 | 784.07 | 1168.76 | 1372.56 | 1504.1 | 1569.4 | 1575.0 |
| 45 | 769.87 | 1145.86 | 1347.02 | 1486.53 | 1553.6 | 1580.3 |
| 46 | 756.60 | 1125.19 | 1324.64 | 1473.91 | 1550.45 | 1582.8 |
| 47 | 745.47 | 1107.68 | 1305.94 | 1462.56 | 1553.59 | 1582.83 |
| 48 | 736.11 | 1093.04 | 1291.04 | 1451.49 | 1554.55 | 1595.12 |
| 49 | 728.15 | 1080.84 | 1279.81 | 1439.23 | 1549.62 | 1604.12 |
| 50 | 721.57 | 1071.66 | 1272.80 | 1429.07 | 1541.36 | 1596.55 |
| 51 | 716.16 | 1065.37 | 1268.50 | 1420.95 | 1530.75 | 1587.18 |
| 52 | 712.30 | 1061.29 | 1267.71 | 1415.47 | 1519.67 | 1563.66 |
| 53 | 709.50 | 1059.47 | 1270.30 | 1413.69 | 1510.30 | 1563.66 |
| 54 | 707.82 | 1059.47 | 1275.71 | 1414.59 | 1505.16 | 1549.78 |
| 55 | 706.93 | 1061.71 | 1283.94 | 1417.37 | 1502.41 | 1545.78 |
| 56 | 706.62 | 1065.64 | 1295.48 | 1422.63 | 1500.69 | 1539.79 |
| 57 | 706.59 | 1070.67 | 1309.04 | 1433.60 | 1501.98 | 1542.26 |
| 58 | 706.25 | 1076.36 | 1324.41 | 1450.28 | 1508.48 | 1532.37 |
| 59 | 705.65 | 1082.22 | 1340.12 | 1470.35 | 1519.79 | 1530.47 |

FOUR PER CENT.—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $C[x]$ | 1 $C[x-1] +_1$ | 2 $C[x-2] +_2$ | 3 $C[x-3] +_3$ | 4 $C[x-4] +_4$ | 5 or More. C_x |
|------|-------------|-------------------|-------------------|-------------------|-------------------|---------------------|
| 60 | 704.20 | 1088.11 | 1356.66 | 1493.87 | 1534.73 | 1544.73 |
| 61 | 701.61 | 1093.02 | 1375.41 | 1514.97 | 1546.84 | 1546.84 |
| 62 | 698.29 | 1096.65 | 1395.70 | 1527.36 | 1554.95 | 1554.95 |
| 63 | 694.59 | 1099.26 | 1415.58 | 1528.35 | 1560.15 | 1560.15 |
| 64 | 689.52 | 1101.28 | 1435.69 | 1519.12 | 1562.65 | 1562.65 |
| 65 | 681.11 | 1101.97 | 1453.42 | 1501.28 | 1540.12 | 1540.12 |
| 66 | 670.86 | 1096.94 | 1517.00 | 1517.00 | 1517.00 | 1517.00 |
| 67 | 658.56 | 1089.18 | 1479.49 | 1479.49 | 1479.49 | 1479.49 |
| 68 | 644.29 | 1078.31 | 1442.62 | 1442.62 | 1442.62 | 1442.62 |
| 69 | 627.17 | 1063.70 | 1399.98 | 1399.98 | 1399.98 | 1399.98 |
| 70 | 606.80 | 1044.37 | 1370.84 | 1370.84 | 1370.84 | 1370.84 |
| 71 | 582.76 | 1019.51 | 1347.80 | 1347.80 | 1347.80 | 1347.80 |
| 72 | 554.93 | 987.50 | 1330.22 | 1330.22 | 1330.22 | 1330.22 |
| 73 | 523.20 | 949.10 | 1306.50 | 1306.50 | 1306.50 | 1306.50 |
| 74 | 489.41 | 903.28 | 1272.09 | 1272.09 | 1272.09 | 1272.09 |
| 75 | 453.43 | 852.76 | 1197.78 | 1197.78 | 1197.78 | 1197.78 |
| 76 | ..... | 797.32 | 1127.31 | 1127.31 | 1127.31 | 1127.31 |

FOUR PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 M _[x] | 1 M _{[x-1]+1} | 2 M _{[x-2]+2} | 3 M _{[x-3]+3} | 4 M _{[x-4]+4} | 5 or More. M _x |
|------|-----------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------------|
| 16 | 128869 | ..... | ..... | ..... | ..... | 129002 |
| 16 | 127257 | 127293 | ..... | ..... | ..... | 127293 |
| 17 | 125345 | 125394 | 125394 | ..... | ..... | 125394 |
| 18 | 122870 | 123271 | 123271 | 123271 | ..... | 123271 |
| 19 | 119767 | 120703 | 120755 | 120755 | 120755 | 120755 |
| 20 | 115927 | 117565 | 117789 | 117789 | 117789 | 117789 |
| 21 | 111220 | 113829 | 114278 | 114278 | 114278 | 114278 |
| 22 | 106840 | 109278 | 110396 | 110396 | 110396 | 110396 |
| 23 | 102814 | 105039 | 106131 | 106461 | 106461 | 106461 |
| 24 | 99094.0 | 101138 | 102146 | 102484 | 102559 | 102599 |
| 25 | 95651.5 | 97529.0 | 98169.1 | 98771.4 | 98808.2 | 98808.2 |
| 26 | 92497.3 | 94182.8 | 95055.4 | 95345.6 | 95345.6 | 95345.6 |
| 27 | 89005.3 | 91112.1 | 91880.0 | 92159.5 | 92189.6 | 92189.6 |
| 28 | 85924.6 | 88292.1 | 88955.8 | 89187.6 | 89221.6 | 89221.6 |
| 29 | 83386.9 | 85672.8 | 86262.4 | 86442.5 | 86464.0 | 86464.0 |
| 30 | 82017.2 | 83189.6 | 83752.0 | 83905.0 | 83905.0 | 83905.0 |
| 31 | 79759.9 | 80865.8 | 81363.2 | 81530.4 | 81533.3 | 81533.3 |
| 32 | 77440.0 | 78649.9 | 79120.7 | 79258.3 | 79281.3 | 79281.3 |
| 33 | 75227.8 | 76367.2 | 76976.3 | 77116.0 | 77116.0 | 77116.0 |
| 34 | 73053.4 | 74188.3 | 74757.5 | 75060.3 | 75060.3 | 75060.3 |
| 35 | 70970.1 | 72044.3 | 72635.3 | 72918.8 | 73058.3 | 73058.3 |
| 36 | 69059.0 | 69990.1 | 70543.9 | 70863.8 | 70997.8 | 71035.9 |
| 37 | 67264.4 | 68006.6 | 68538.4 | 68843.1 | 68992.2 | 69044.3 |
| 38 | 65166.9 | 66100.2 | 66600.1 | 66884.3 | 67010.6 | 67084.4 |
| 39 | 63374.3 | 64265.3 | 64736.8 | 64997.9 | 65113.6 | 65159.4 |
| 40 | 61644.5 | 62495.8 | 62941.2 | 63182.5 | 63280.3 | 63302.7 |
| 41 | 59938.9 | 60787.7 | 61208.4 | 61430.5 | 61520.2 | 61520.2 |
| 42 | 58258.9 | 59102.2 | 59533.8 | 59737.7 | 59821.4 | 59825.5 |
| 43 | 56597.7 | 57440.9 | 57879.4 | 58099.1 | 58173.6 | 58177.5 |
| 44 | 54930.7 | 55797.4 | 56246.5 | 56477.5 | 56569.5 | 56575.1 |
| 45 | 53256.0 | 54146.6 | 54628.6 | 54874.0 | 54973.4 | 55000.1 |
| 46 | 51594.3 | 52480.1 | 53000.8 | 53281.6 | 53387.5 | 53419.8 |
| 47 | 49949.3 | 50837.7 | 51361.0 | 51676.1 | 51807.7 | 51837.0 |
| 48 | 48337.9 | 49203.9 | 49730.0 | 50055.0 | 50213.6 | 50254.1 |
| 49 | 46737.9 | 47601.8 | 48110.8 | 48439.0 | 48604.5 | 48659.0 |
| 50 | 45167.6 | 46009.7 | 46520.9 | 46831.0 | 46999.8 | 47054.9 |
| 51 | 43613.1 | 44446.0 | 44938.1 | 45248.1 | 45402.0 | 45458.4 |
| 52 | 42074.0 | 42896.9 | 43380.7 | 43669.6 | 43827.2 | 43871.2 |
| 53 | 40543.7 | 41361.7 | 41835.6 | 42113.0 | 42254.1 | 42307.5 |
| 54 | 39041.0 | 39834.2 | 40302.3 | 40595.3 | 40699.3 | 40743.8 |
| 55 | 37555.1 | 38333.2 | 38774.8 | 39026.6 | 39150.7 | 39194.1 |
| 56 | 36065.5 | 36848.2 | 37271.5 | 37490.8 | 37609.2 | 37648.3 |
| 57 | 34575.6 | 35358.9 | 35782.5 | 35976.0 | 36068.2 | 36103.5 |
| 58 | 33071.9 | 33869.1 | 34238.2 | 34473.5 | 34542.4 | 34566.2 |
| 59 | 31553.4 | 32365.7 | 32792.7 | 32993.8 | 33023.2 | 33033.9 |

FOUR PER CENT.—*Cont.*
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $M[x]$ | 1 $M[x-1] +_1$ | 2 $M[x-2] +_2$ | 3 $M[x-3] +_3$ | 4 $M[x-4] +_4$ | 5 or More. M_x |
|------|-------------|-------------------|-------------------|-------------------|-------------------|---------------------|
| 60 | 30018.0 | 30847.8 | 31283.4 | 31452.6 | 31493.4 | 31593.4 |
| 61 | 28467.0 | 29313.8 | 29759.7 | 29926.8 | 29958.7 | 29958.7 |
| 62 | 26928.4 | 27765.4 | 28220.8 | 28384.3 | 28411.8 | 28411.8 |
| 63 | 25443.2 | 26230.1 | 26668.7 | 26825.1 | 26856.9 | 26856.9 |
| 64 | 23985.4 | 24748.6 | 25130.9 | 25253.1 | 25296.7 | 25296.7 |
| 65 | 22455.0 | 23295.9 | 23647.3 | 23695.2 | 23734.0 | 23734.0 |
| 66 | 20957.4 | 21773.8 | 22193.9 | 22193.9 | 22193.9 | 22193.9 |
| 67 | 19491.7 | 20286.6 | 20676.9 | 20676.9 | 20676.9 | 20676.9 |
| 68 | 18062.8 | 18833.1 | 19197.4 | 19197.4 | 19197.4 | 19197.4 |
| 69 | 16655.5 | 17418.5 | 17754.8 | 17754.8 | 17754.8 | 17754.8 |
| 70 | 15262.5 | 16028.4 | 16354.8 | 16354.8 | 16354.8 | 16354.8 |
| 71 | 13876.7 | 14655.7 | 14984.0 | 14984.0 | 14984.0 | 14984.0 |
| 72 | 12503.5 | 13293.9 | 13636.2 | 13636.2 | 13636.2 | 13636.2 |
| 73 | 11153.9 | 11948.6 | 12306.0 | 12306.0 | 12306.0 | 12306.0 |
| 74 | 9871.78 | 10630.7 | 10999.5 | 10999.5 | 10999.5 | 10999.5 |
| 75 | 8653.05 | 9382.37 | 9727.39 | 9727.39 | 9727.39 | 9727.39 |
| 76 | ..... | 8199.62 | 8529.61 | 8529.61 | 8529.61 | 8529.61 |

SPRAGUE'S SELECT LIFE TABLES.

FOUR PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 R _[x] | 1 R _{[x-1]+1} | 2 R _{[x-2]+2} | 3 R _{[x-3]+3} | 4 R _{[x-4]+4} | 5 or More. B _x |
|------|-----------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------------|
| 15 | 3712734 | ..... | ..... | ..... | ..... | 3712867 |
| 16 | 3583829 | 3583865 | ..... | ..... | ..... | 3583865 |
| 17 | 3456524 | 3456572 | 3456572 | ..... | ..... | 3456572 |
| 18 | 3330726 | 3331179 | 3331179 | 3331179 | ..... | 3331179 |
| 19 | 3206696 | 3207856 | 3207908 | 3207908 | 3207908 | 3207908 |
| 20 | 3084842 | 3086929 | 3087153 | 3087153 | 3087153 | 3087153 |
| 21 | 2964782 | 2968915 | 2969364 | 2969364 | 2969364 | 2969364 |
| 22 | 2849657 | 2853562 | 2855086 | 2855086 | 2855086 | 2855086 |
| 23 | 2739282 | 2742817 | 2744284 | 2744689 | 2744689 | 2744689 |
| 24 | 2633164 | 2636468 | 2637778 | 2638153 | 2638229 | 2638229 |
| 25 | 2531006 | 2534070 | 2535330 | 2535632 | 2535669 | 2535669 |
| 26 | 2432648 | 2435354 | 2436541 | 2436861 | 2436861 | 2436861 |
| 27 | 2337800 | 2340150 | 2341172 | 2341486 | 2341516 | 2341516 |
| 28 | 2246082 | 2248105 | 2249038 | 2249292 | 2249326 | 2249326 |
| 29 | 2157119 | 2159157 | 2159902 | 2160083 | 2160104 | 2160104 |
| 30 | 2070925 | 2072732 | 2073484 | 2073640 | 2073640 | 2073640 |
| 31 | 1987191 | 1988908 | 1989543 | 1989732 | 1989735 | 1989735 |
| 32 | 1905131 | 1907431 | 1908042 | 1908179 | 1908202 | 1908202 |
| 33 | 1825513 | 1827691 | 1828221 | 1828221 | 1828221 | 1828221 |
| 34 | 1748007 | 1750286 | 1751324 | 1751805 | 1751805 | 1751805 |
| 35 | 1672862 | 1674954 | 1676097 | 1676567 | 1676744 | 1676744 |
| 36 | 1599906 | 1601891 | 1602910 | 1603462 | 1603648 | 1603686 |
| 37 | 1529108 | 1530917 | 1531901 | 1532366 | 1532598 | 1532650 |
| 38 | 1460342 | 1462082 | 1462940 | 1463363 | 1463533 | 1463606 |
| 39 | 1393529 | 1395175 | 1395981 | 1396340 | 1396479 | 1396522 |
| 40 | 1328599 | 1330155 | 1330910 | 1331245 | 1331322 | 1331365 |
| 41 | 1265335 | 1266954 | 1267659 | 1267469 | 1268062 | 1268062 |
| 42 | 1203752 | 1205397 | 1206166 | 1206450 | 1206538 | 1206542 |
| 43 | 1143820 | 1145493 | 1146294 | 1146633 | 1146713 | 1146717 |
| 44 | 1085421 | 1087223 | 1088052 | 1088415 | 1088534 | 1088539 |
| 45 | 1028557 | 1030490 | 1031425 | 1031806 | 1031937 | 1031964 |
| 46 | 973349.0 | 975300.7 | 976343.6 | 977066.6 | 976931.7 | 976664.0 |
| 47 | 919777.9 | 921745.7 | 922814.6 | 923342.8 | 923351.5 | 923344.2 |
| 48 | 867945.6 | 869828.6 | 870908.0 | 871453.6 | 871666.7 | 871707.3 |
| 49 | 817711.6 | 819607.7 | 820624.7 | 821178.0 | 821398.6 | 821453.1 |
| 50 | 769164.9 | 770973.7 | 772005.9 | 772513.9 | 772739.0 | 772794.1 |
| 51 | 722225.9 | 723997.3 | 724964.0 | 725485.0 | 725682.9 | 725739.2 |
| 52 | 678889.8 | 679861.2 | 679551.3 | 680025.9 | 680236.9 | 680280.9 |
| 53 | 633119.2 | 634815.8 | 635715.9 | 636170.6 | 636356.3 | 636409.7 |
| 54 | 591005.4 | 592575.5 | 593454.1 | 593880.3 | 594057.6 | 594102.2 |
| 55 | 550489.9 | 551964.4 | 552741.3 | 553151.8 | 553315.0 | 553358.3 |
| 56 | 511473.8 | 512934.8 | 513631.2 | 513966.5 | 514125.2 | 514164.3 |
| 57 | 473994.0 | 475408.3 | 476086.6 | 476359.7 | 476475.7 | 476516.0 |
| 58 | 437993.2 | 439418.4 | 440049.4 | 440304.1 | 440383.7 | 440407.5 |
| 59 | 403478.8 | 404921.3 | 405549.3 | 405761.2 | 405830.6 | 405841.3 |

SPRAGUE'S SELECT LIFE TABLES.

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FOUR PER CENT—*Cont.*
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $R[0]$ | 1 $R[1-1] + 1$ | 2 $R[2-2] + 1$ | 3 $R[3-3] + 1$ | 4 $R[4-4] + 1$ | 5 or More. R_5 |
|------|-------------|-------------------|-------------------|-------------------|-------------------|---------------------|
| 60 | 370454.4 | 371925.4 | 372555.6 | 372756.6 | 372797.4 | 372807.4 |
| 61 | 338931.2 | 340436.4 | 341077.6 | 341272.2 | 341304.0 | 341304.0 |
| 62 | 309030.6 | 310467.2 | 311122.6 | 311317.9 | 311345.4 | 311345.4 |
| 63 | 280885.1 | 282102.2 | 282701.8 | 282901.8 | 282933.6 | 282933.6 |
| 64 | 254327.3 | 255441.9 | 255872.1 | 256033.1 | 256076.7 | 256076.7 |
| 65 | 229080.8 | 230341.0 | 230693.3 | 230741.2 | 230780.0 | 230780.0 |
| 66 | 205419.1 | 206625.8 | 207046.0 | 207046.0 | 207046.0 | 207046.0 |
| 67 | 183302.5 | 184461.7 | 184852.0 | 184852.0 | 184852.0 | 184852.0 |
| 68 | 162704.1 | 163810.8 | 164175.1 | 164175.1 | 164175.1 | 164175.1 |
| 69 | 143551.9 | 144641.3 | 144977.7 | 144977.7 | 144977.7 | 144977.7 |
| 70 | 125802.2 | 126896.4 | 127222.8 | 127222.8 | 127222.8 | 127222.8 |
| 71 | 109418.4 | 110539.7 | 110868.0 | 110868.0 | 110868.0 | 110868.0 |
| 72 | 94393.9 | 95541.7 | 95884.0 | 95884.0 | 95884.0 | 95884.0 |
| 73 | 80727.0 | 81890.4 | 82247.8 | 82247.8 | 82247.8 | 82247.8 |
| 74 | 68469.2 | 69573.1 | 69941.8 | 69941.8 | 69941.8 | 69941.8 |
| 75 | 57538.0 | 58597.4 | 58942.4 | 58942.4 | 58942.4 | 58942.4 |
| 76 | ..... | 48884.9 | 49215.0 | 49215.0 | 49215.0 | 49215.0 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 D _[x] | 1 D _{[x-1] + 1} | 2 D _{[x-2] + 2} | 3 D _{[x-3] + 3} | 4 D _{[x-4] + 4} | 5 or More. D ₅ |
|------|-----------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|
| 16 | 587013 | ..... | ..... | ..... | ..... | 587161 |
| 16 | 565419 | 565460 | ..... | ..... | ..... | 565460 |
| 17 | 544220 | 544277 | 544277 | ..... | ..... | 544277 |
| 18 | 523098 | 523556 | 523556 | 523556 | ..... | 523556 |
| 18 | 501958 | 503033 | 503095 | 503095 | 503095 | 503095 |
| 20 | 480662 | 482559 | 482815 | 482815 | 482815 | 482815 |
| 21 | 459013 | 462086 | 462603 | 462603 | 462603 | 462603 |
| 22 | 438442 | 441332 | 442644 | 442644 | 442644 | 442644 |
| 23 | 418956 | 421603 | 422892 | 423278 | 423278 | 423278 |
| 24 | 400462 | 402908 | 404099 | 404496 | 404585 | 404585 |
| 26 | 382896 | 385155 | 386273 | 386628 | 386672 | 386672 |
| 26 | 366247 | 368283 | 369327 | 369671 | 369671 | 369671 |
| 27 | 350459 | 352284 | 353207 | 353539 | 353576 | 353576 |
| 28 | 335441 | 337105 | 337904 | 338182 | 338222 | 338222 |
| 29 | 321084 | 322658 | 323372 | 323587 | 323613 | 323613 |
| 30 | 307403 | 308843 | 309528 | 309713 | 309713 | 309713 |
| 31 | 294306 | 295671 | 296279 | 296481 | 296486 | 296486 |
| 32 | 281536 | 283058 | 283637 | 283804 | 283832 | 283832 |
| 33 | 269316 | 270758 | 271524 | 271695 | 271695 | 271695 |
| 34 | 257536 | 258984 | 259706 | 260086 | 260086 | 260086 |
| 35 | 246258 | 247633 | 248388 | 248747 | 248921 | 248921 |
| 36 | 235442 | 236765 | 237474 | 237882 | 238051 | 238098 |
| 37 | 225079 | 226342 | 227024 | 227399 | 227601 | 227666 |
| 38 | 215149 | 216356 | 216999 | 217361 | 217521 | 217613 |
| 39 | 205629 | 206785 | 207394 | 207727 | 207873 | 207928 |
| 40 | 196500 | 197610 | 198187 | 198496 | 198620 | 198648 |
| 41 | 187695 | 188811 | 189359 | 189645 | 189759 | 189759 |
| 42 | 179208 | 180324 | 180891 | 181155 | 181262 | 181267 |
| 43 | 171019 | 172141 | 172722 | 173009 | 173105 | 173110 |
| 44 | 163083 | 164247 | 164843 | 165148 | 165268 | 165275 |
| 45 | 155388 | 156594 | 157240 | 157564 | 157695 | 157729 |
| 46 | 147957 | 149173 | 149868 | 150242 | 150381 | 150423 |
| 47 | 140788 | 142005 | 142717 | 143139 | 143313 | 143351 |
| 48 | 133897 | 135088 | 135807 | 136245 | 136455 | 136509 |
| 49 | 127244 | 128437 | 129135 | 129580 | 129801 | 129872 |
| 50 | 120847 | 122015 | 122719 | 123140 | 123366 | 123439 |
| 51 | 114678 | 115828 | 116518 | 116941 | 117149 | 117224 |
| 52 | 108732 | 109880 | 110552 | 110948 | 111161 | 111220 |
| 53 | 102989 | 104135 | 104795 | 105369 | 105851 | 105941 |
| 54 | 97471.8 | 98585.5 | 99239.4 | 99603.2 | 99786.3 | 99846.6 |
| 55 | 92160.2 | 93253.0 | 93870.8 | 94220.6 | 94391.0 | 94450.0 |
| 56 | 87013.2 | 88117.6 | 88709.0 | 89014.6 | 89178.2 | 89231.3 |
| 57 | 82033.6 | 83140.8 | 83735.4 | 84004.4 | 84132.0 | 84187.3 |
| 58 | 77194.2 | 78325.3 | 78913.4 | 79172.4 | 79267.7 | 79300.7 |
| 59 | 72486.8 | 73645.3 | 74240.3 | 74485.0 | 74568.0 | 74582.7 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.—*Cont.*
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $D[x]$ | 1 $D[x-1]+1$ | 2 $D[x-2]+2$ | 3 $D[x-3]+3$ | 4 $D[x-4]+4$ | 5 or More. D_x |
|------|-------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 60 | 67904.7 | 69093.5 | 69709.8 | 69946.2 | 70003.0 | 70017.0 |
| 61 | 63445.4 | 64663.7 | 65297.1 | 65532.1 | 65576.6 | 65576.6 |
| 62 | 59146.1 | 60354.0 | 61003.6 | 61234.7 | 61273.5 | 61273.5 |
| 63 | 55067.0 | 56200.0 | 56827.4 | 57049.9 | 57094.9 | 57094.9 |
| 64 | 51158.9 | 52259.4 | 52803.1 | 52978.6 | 53040.3 | 53040.3 |
| 65 | 47265.7 | 48485.8 | 48985.7 | 49053.9 | 49109.2 | 49109.2 |
| 66 | 43541.9 | 44731.1 | 45331.6 | 45331.6 | 45331.6 | 45331.6 |
| 67 | 39980.1 | 41142.9 | 41703.5 | 41703.5 | 41703.5 | 41703.5 |
| 68 | 37583.0 | 37714.1 | 38240.0 | 38240.0 | 38240.0 | 38240.0 |
| 69 | 33321.9 | 34447.5 | 34937.2 | 34935.2 | 34935.2 | 34935.2 |
| 70 | 30181.1 | 31316.4 | 31792.1 | 31792.1 | 31792.1 | 31792.1 |
| 71 | 27145.3 | 28305.1 | 28786.9 | 28786.9 | 28786.9 | 28786.9 |
| 72 | 24218.8 | 25402.8 | 25906.5 | 25906.5 | 25906.5 | 25906.5 |
| 73 | 21414.2 | 22611.0 | 23139.4 | 23139.4 | 23139.4 | 23139.4 |
| 74 | 18794.7 | 19942.6 | 20490.5 | 20490.5 | 20490.5 | 20490.5 |
| 75 | 16348.1 | 17456.6 | 17971.7 | 17971.7 | 17971.7 | 17971.7 |
| 76 | ..... | 15141.3 | 15636.3 | 15636.3 | 15636.3 | 15636.3 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | $N_{(x)}^0$ | $N_{(x-1)+1}^1$ | $N_{(x-2)+2}^2$ | $N_{(x-3)+3}^3$ | $N_{(x-4)+4}^4$ | 5 or More. N_x |
|------|-------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 16 | 12630643 | ..... | ..... | ..... | ..... | 12630791 |
| 16 | 12043589 | 12043630 | ..... | ..... | ..... | 12043630 |
| 17 | 11478113 | 11478170 | 11478170 | ..... | ..... | 11478170 |
| 18 | 10933373 | 10933893 | 10933893 | 10933893 | ..... | 10933893 |
| 19 | 10408944 | 10410275 | 10410337 | 10410337 | 10410337 | 10410337 |
| 20 | 9904572 | 9906986 | 9907242 | 9907242 | 9907242 | 9907242 |
| 21 | 9419050 | 9423910 | 9424427 | 9424427 | 9424427 | 9424427 |
| 22 | 895417 | 8960037 | 8961824 | 8961824 | 8961824 | 8961824 |
| 23 | 8512782 | 8516975 | 8518705 | 8519180 | 8519180 | 8519180 |
| 24 | 8089882 | 8093826 | 8095372 | 8095813 | 8095902 | 8095902 |
| 25 | 7685745 | 7689420 | 7690918 | 7691273 | 7691317 | 7691317 |
| 26 | 7299585 | 7302849 | 7304265 | 7304645 | 7304645 | 7304645 |
| 27 | 6930499 | 6933338 | 6934566 | 6934938 | 6934974 | 6934974 |
| 28 | 6577473 | 6580040 | 6581054 | 6581359 | 6581399 | 6581399 |
| 29 | 6239543 | 6242032 | 6242935 | 6243150 | 6243177 | 6243177 |
| 30 | 5916244 | 5918459 | 5919374 | 5919563 | 5919563 | 5919563 |
| 31 | 5609726 | 5609841 | 5609916 | 5609846 | 5609851 | 5609851 |
| 32 | 5309531 | 5312420 | 5313170 | 5313337 | 5313365 | 5313365 |
| 33 | 5025239 | 5027995 | 5029362 | 5029533 | 5029533 | 5029533 |
| 34 | 4753918 | 4755923 | 4757237 | 4757838 | 4757838 | 4757838 |
| 35 | 4492808 | 4495482 | 4496939 | 4497531 | 4497722 | 4497752 |
| 36 | 4244009 | 4246550 | 4247849 | 4248551 | 4248784 | 4248831 |
| 37 | 4008204 | 4008567 | 4009785 | 4010375 | 4010669 | 4010733 |
| 38 | 3778881 | 3781125 | 3782225 | 3782761 | 3782976 | 3783068 |
| 39 | 3561602 | 3563732 | 3564769 | 3565226 | 3565400 | 3565455 |
| 40 | 3353948 | 3355973 | 3356947 | 3357375 | 3357499 | 3357527 |
| 41 | 3155323 | 3157448 | 3158363 | 3158760 | 3158879 | 3158879 |
| 42 | 2965453 | 2967628 | 2968637 | 2969004 | 2969115 | 2969120 |
| 43 | 2784026 | 2786245 | 2787304 | 2787746 | 2787849 | 2787853 |
| 44 | 2610596 | 2613007 | 2614104 | 2614582 | 2614737 | 2614744 |
| 45 | 2444908 | 2447513 | 2448760 | 2449261 | 2449434 | 2449469 |
| 46 | 2286860 | 2289520 | 2290919 | 2291520 | 2291697 | 2291739 |
| 47 | 2136221 | 2138903 | 2140347 | 2141051 | 2141278 | 2141316 |
| 48 | 1992856 | 1995433 | 1996898 | 1997630 | 1997912 | 1997965 |
| 49 | 1856354 | 1858959 | 1860345 | 1861091 | 1861385 | 1861457 |
| 50 | 1726613 | 1729110 | 1730522 | 1731210 | 1731511 | 1731584 |
| 51 | 1603311 | 1605760 | 1607095 | 1607803 | 1608070 | 1608145 |
| 52 | 1486237 | 1488633 | 1489928 | 1490577 | 1490862 | 1490921 |
| 53 | 1375137 | 1377505 | 1378753 | 1379376 | 1379629 | 1379701 |
| 54 | 1269950 | 1272148 | 1273370 | 1273958 | 1274199 | 1274260 |
| 55 | 1170415 | 1172478 | 1173562 | 1174131 | 1174354 | 1174413 |
| 56 | 1076200 | 1078255 | 1079225 | 1079691 | 1079910 | 1079963 |
| 57 | 987195.8 | 989186.6 | 990137.2 | 990516.2 | 990676.8 | 990732.1 |
| 58 | 903149.2 | 905162.2 | 906045.8 | 906501.8 | 906511.8 | 906544.8 |
| 59 | 82306.4 | 825055.0 | 826836.9 | 827132.4 | 82729.4 | 827244.1 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.—*Cont.*
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | $N_{(x)}^0$ | $N_{(x-1)+1}^1$ | $N_{(x-2)+2}^2$ | $N_{(x-3)+3}^3$ | $N_{(x-4)+4}^4$ | 5 or More. N_x |
|------|-------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 60 | 749321.3 | 751419.6 | 752309.7 | 752590.6 | 752647.4 | 752661.4 |
| 61 | 679264.4 | 681416.6 | 682326.1 | 682599.9 | 682644.4 | 682644.4 |
| 62 | 613753.0 | 615819.0 | 616752.9 | 617029.0 | 617067.8 | 617067.8 |
| 63 | 552862.0 | 554606.9 | 555465.0 | 555749.3 | 555794.3 | 555794.3 |
| 64 | 496194.6 | 497795.0 | 498406.9 | 498637.6 | 498699.4 | 498699.4 |
| 65 | 443215.0 | 445035.7 | 445535.6 | 445603.8 | 445659.0 | 445659.0 |
| 66 | 394199.5 | 395949.3 | 396549.9 | 396549.9 | 396549.9 | 396549.9 |
| 67 | 348968.8 | 350657.6 | 351218.2 | 351218.2 | 351218.2 | 351218.2 |
| 68 | 307370.0 | 308988.7 | 309514.7 | 309514.7 | 309514.7 | 309514.7 |
| 69 | 269185.7 | 270787.0 | 271274.6 | 271274.6 | 271274.6 | 271274.6 |
| 70 | 234247.7 | 235863.8 | 236339.5 | 236339.5 | 236339.5 | 236339.5 |
| 71 | 202402.1 | 204066.6 | 204547.4 | 204547.4 | 204517.4 | 204547.4 |
| 72 | 173544.4 | 175256.8 | 175760.5 | 175760.5 | 175760.5 | 175760.5 |
| 73 | 147580.8 | 149325.6 | 149854.0 | 149854.0 | 149854.0 | 149854.0 |
| 74 | 124503.7 | 126166.6 | 126714.6 | 126714.6 | 126714.6 | 126714.6 |
| 75 | 104105.5 | 105709.0 | 106224.0 | 106224.0 | 106224.0 | 106224.0 |
| 76 | ..... | 87757.35 | 88252.38 | 88252.38 | 83252.38 | 88252.38 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $C_{[1]}$ | 1 $C_{[1-1]+1}$ | 2 $C_{[1-2]+2}$ | 3 $C_{[1-3]+3}$ | 4 $C_{[1-4]+4}$ | 5 or More. C_x |
|------|----------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| 15 | 1702.7 | ..... | ..... | ..... | ..... | 1845.5 |
| 16 | 2021.6 | 2001.7 | ..... | ..... | ..... | 2061.7 |
| 17 | 2261.3 | 2315.0 | 2315.0 | ..... | ..... | 2315.0 |
| 18 | 2375.3 | 2756.8 | 2756.8 | 2756.8 | ..... | 2756.8 |
| 19 | 2424.8 | 3208.7 | 3206.7 | 3266.7 | 3266.7 | 3266.7 |
| 20 | 2322.1 | 3636.8 | 3884.6 | 3884.6 | 3884.6 | 3884.6 |
| 21 | 2159.1 | 3817.1 | 4316.2 | 4316.2 | 4316.2 | 4316.2 |
| 22 | 2011.9 | 3515.8 | 4316.9 | 4396.9 | 4396.9 | 4396.9 |
| 23 | 1881.2 | 3248.2 | 4095.1 | 4379.6 | 4379.6 | 4379.6 |
| 24 | 1765.8 | 3011.0 | 3807.0 | 4146.2 | 4231.5 | 4231.5 |
| 25 | 1664.7 | 2804.5 | 3540.9 | 3883.6 | 3924.8 | 3924.8 |
| 26 | 1577.2 | 2622.8 | 3299.1 | 3594.6 | 3594.6 | 3594.6 |
| 27 | 1502.5 | 2467.0 | 3081.4 | 3363.2 | 3396.7 | 3396.7 |
| 28 | 1439.8 | 2333.5 | 2889.4 | 3132.0 | 3171.2 | 3171.2 |
| 29 | 1383.4 | 2220.0 | 2723.3 | 2931.3 | 2957.1 | 2957.1 |
| 30 | 1336.6 | 2120.5 | 2580.1 | 2753.8 | 2753.8 | 2753.8 |
| 31 | 1295.1 | 2035.5 | 2455.1 | 2624.5 | 2627.5 | 2627.5 |
| 32 | 1257.7 | 1952.1 | 2349.6 | 2510.9 | 2538.6 | 2538.6 |
| 33 | 1224.5 | 1866.4 | 2257.1 | 2421.7 | 2421.7 | 2421.7 |
| 34 | 1194.5 | 1838.2 | 2176.6 | 2309.8 | 2369.8 | 2369.8 |
| 35 | 1165.7 | 1784.8 | 2107.0 | 2285.1 | 2405.6 | 2405.6 |
| 36 | 1138.3 | 1735.1 | 2044.8 | 2236.8 | 2334.9 | 2380.3 |
| 37 | 1112.3 | 1689.1 | 1986.5 | 2188.9 | 2291.0 | 2353.9 |
| 38 | 1088.0 | 1645.4 | 1933.4 | 2136.8 | 2237.7 | 2326.6 |
| 39 | 1065.3 | 1605.7 | 1884.7 | 2082.7 | 2195.9 | 2247.9 |
| 40 | 1044.0 | 1568.6 | 1840.8 | 2025.5 | 2144.6 | 2171.0 |
| 41 | 1024.5 | 1535.2 | 1800.6 | 1970.2 | 2074.9 | 2074.9 |
| 42 | 1006.2 | 1504.4 | 1765.0 | 1924.2 | 2022.5 | 2027.5 |
| 43 | 989.4 | 1476.5 | 1733.1 | 1860.9 | 1976.0 | 1980.9 |
| 44 | 974.0 | 1451.8 | 1704.9 | 1868.4 | 1949.5 | 1956.5 |
| 45 | 961.0 | 1430.3 | 1681.4 | 1855.4 | 1939.2 | 1972.5 |
| 46 | 948.9 | 1411.3 | 1661.4 | 1848.6 | 1944.5 | 1965.2 |
| 47 | 939.5 | 1396.0 | 1645.9 | 1843.3 | 1958.0 | 1964.8 |
| 48 | 932.1 | 1384.2 | 1634.9 | 1836.9 | 1968.6 | 2020.0 |
| 49 | 926.6 | 1375.3 | 1628.5 | 1831.4 | 1971.9 | 2041.2 |
| 50 | 922.6 | 1370.3 | 1627.4 | 1827.2 | 1970.8 | 2041.4 |
| 51 | 920.1 | 1368.8 | 1629.9 | 1825.5 | 1960.7 | 2039.2 |
| 52 | 919.6 | 1370.1 | 1636.5 | 1827.5 | 1961.8 | 2018.7 |
| 53 | 920.4 | 1374.4 | 1647.8 | 1833.9 | 1959.4 | 2028.5 |
| 54 | 922.7 | 1381.1 | 1662.9 | 1843.9 | 1952.0 | 2020.2 |
| 55 | 925.9 | 1390.7 | 1681.8 | 1856.5 | 1967.8 | 2024.7 |
| 56 | 930.0 | 1402.5 | 1705.0 | 1872.4 | 1975.1 | 2026.6 |
| 57 | 934.4 | 1415.9 | 1731.2 | 1860.0 | 1986.4 | 2039.6 |
| 58 | 938.6 | 1430.3 | 1759.9 | 1927.3 | 2004.6 | 2036.3 |
| 59 | 942.2 | 1445.2 | 1789.4 | 1963.3 | 2029.4 | 2043.6 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.—*Cont.*
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $C_{[x]}$ | 1 $C_{[x-1]+1}$ | 2 $C_{[x-2]+2}$ | 3 $C_{[x-3]+3}$ | 4 $C_{[x-4]+4}$ | 5 or More. C_x |
|------|----------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| 60 | 944.8 | 1459.9 | 1820.4 | 2004.3 | 2059.2 | 2072.6 |
| 61 | 946.0 | 1473.6 | 1854.3 | 2042.6 | 2085.5 | 2085.5 |
| 62 | 946.0 | 1485.7 | 1850.8 | 2069.1 | 2106.6 | 2106.6 |
| 63 | 945.5 | 1496.4 | 1927.1 | 2080.5 | 2123.8 | 2123.8 |
| 64 | 943.2 | 1506.4 | 1963.8 | 2078.0 | 2137.5 | 2137.5 |
| 65 | 936.2 | 1514.6 | 1997.6 | 2063.4 | 2116.9 | 2116.9 |
| 66 | 926.6 | 1515.0 | 2095.2 | 2095.2 | 2095.2 | 2095.2 |
| 67 | 913.9 | 1511.6 | 2053.2 | 2053.2 | 2053.2 | 2053.2 |
| 68 | 898.5 | 1503.7 | 2011.7 | 2011.7 | 2011.7 | 2011.7 |
| 69 | 878.8 | 1490.5 | 1961.7 | 1961.7 | 1961.7 | 1961.7 |
| 70 | 854.4 | 1470.5 | 1930.1 | 1930.1 | 1930.1 | 1930.1 |
| 71 | 824.5 | 1442.4 | 1906.9 | 1906.9 | 1906.9 | 1906.9 |
| 72 | 788.9 | 1404.5 | 1891.1 | 1891.1 | 1891.1 | 1891.1 |
| 73 | 747.4 | 1355.7 | 1866.3 | 1866.3 | 1866.3 | 1866.3 |
| 74 | 702.5 | 1296.6 | 1826.0 | 1826.0 | 1826.0 | 1826.0 |
| 75 | 654.0 | 1230.0 | 1727.6 | 1727.6 | 1727.6 | 1727.6 |
| 76 | ..... | 1155.6 | 1633.8 | 1633.8 | 1633.8 | 1633.8 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $M_{[x]}$ | 1 $M_{[x-1]} +_1$ | 2 $M_{[x-2]} +_2$ | 3 $M_{[x-3]} +_3$ | 4 $M_{[x-4]} +_4$ | 5 or More. M_x |
|------|----------------|----------------------|----------------------|----------------------|----------------------|---------------------|
| 15 | 159891 | ..... | ..... | ..... | ..... | 160033 |
| 16 | 158148 | 158188 | ..... | ..... | ..... | 158188 |
| 17 | 156072 | 156126 | 156126 | ..... | ..... | 156126 |
| 18 | 153372 | 153811 | 153811 | 153811 | ..... | 153811 |
| 19 | 149965 | 150997 | 151054 | 151054 | 151054 | 151054 |
| 20 | 145726 | 147540 | 147788 | 147788 | 147788 | 147788 |
| 21 | 140495 | 143404 | 143903 | 143903 | 143903 | 143903 |
| 22 | 135005 | 138336 | 139587 | 139587 | 139587 | 139587 |
| 23 | 131087 | 133593 | 134820 | 135190 | 135190 | 135190 |
| 24 | 126896 | 129206 | 130345 | 130725 | 130810 | 130810 |
| 25 | 122992 | 125130 | 126195 | 126538 | 126579 | 126579 |
| 26 | 119398 | 121327 | 122325 | 122654 | 122654 | 122654 |
| 27 | 116094 | 117821 | 118704 | 119026 | 119059 | 119059 |
| 28 | 113018 | 114591 | 115354 | 115623 | 115663 | 115663 |
| 29 | 110084 | 111578 | 112257 | 112465 | 112491 | 112491 |
| 30 | 107337 | 108701 | 109358 | 109534 | 109534 | 109534 |
| 31 | 104707 | 106000 | 106580 | 106778 | 106781 | 106781 |
| 32 | 101988 | 103112 | 103964 | 104125 | 104153 | 104153 |
| 33 | 99380.6 | 100730 | 101450 | 101614 | 101614 | 101614 |
| 34 | 96807.3 | 98156.1 | 98833.6 | 99192.7 | 99192.7 | 99192.7 |
| 35 | 94328.7 | 95612.8 | 96317.9 | 96657.0 | 96822.9 | 96822.9 |
| 36 | 91924.9 | 93163.0 | 93828.0 | 94210.9 | 94371.9 | 94417.3 |
| 37 | 89604.7 | 90786.6 | 91427.9 | 91783.2 | 91974.1 | 92037.0 |
| 38 | 87361.7 | 88492.4 | 89097.5 | 89441.4 | 89594.3 | 89583.1 |
| 39 | 85188.2 | 86273.7 | 86847.0 | 87164.1 | 87304.6 | 87356.6 |
| 40 | 83081.7 | 84122.9 | 84668.0 | 84962.3 | 85081.4 | 85108.7 |
| 41 | 80994.2 | 82037.7 | 82554.3 | 82827.2 | 82936.8 | 82936.8 |
| 42 | 78926.9 | 79969.7 | 80502.5 | 80753.7 | 80857.0 | 80861.9 |
| 43 | 76873.8 | 77920.7 | 78465.3 | 78737.5 | 78829.5 | 78834.5 |
| 44 | 74802.2 | 75884.4 | 76444.2 | 76732.2 | 76846.6 | 76853.5 |
| 45 | 72710.4 | 73828.2 | 74432.6 | 74739.3 | 74863.8 | 74897.1 |
| 46 | 70624.0 | 71749.4 | 72397.9 | 72751.2 | 72883.9 | 72924.6 |
| 47 | 68548.9 | 69675.1 | 70338.1 | 70736.5 | 70902.6 | 70939.4 |
| 48 | 66506.2 | 67609.4 | 68279.1 | 68692.2 | 68893.2 | 68944.6 |
| 49 | 64469.4 | 65574.1 | 66225.2 | 66644.2 | 66855.3 | 66924.6 |
| 50 | 62459.4 | 63542.8 | 64198.8 | 64596.7 | 64812.8 | 64883.4 |
| 51 | 60460.5 | 61536.8 | 62172.5 | 62571.4 | 62769.5 | 62842.0 |
| 52 | 58472.8 | 59540.4 | 60168.0 | 60542.6 | 60745.9 | 60802.8 |
| 53 | 56486.7 | 57553.2 | 58170.3 | 58531.4 | 58715.1 | 58784.1 |
| 54 | 54527.3 | 55560.3 | 56178.8 | 56522.5 | 56697.5 | 56755.7 |
| 55 | 52580.9 | 53604.6 | 54185.2 | 54515.9 | 54678.6 | 54735.5 |
| 56 | 50620.3 | 51655.0 | 52213.9 | 52503.4 | 52659.4 | 52710.8 |
| 57 | 48650.4 | 49690.3 | 50252.5 | 50508.9 | 50631.0 | 50684.3 |
| 58 | 46653.3 | 47716.0 | 48274.4 | 48521.3 | 48612.9 | 48664.6 |
| 59 | 44625.4 | 45714.7 | 46285.7 | 46514.5 | 46594.0 | 46608.3 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $M_{[x]}$ | 1 $M_{[x-1]+1}$ | 2 $M_{[x-2]+2}$ | 3 $M_{[x-3]+3}$ | 4 $M_{[x-4]+4}$ | 5 or More M_x |
|------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 60 | 42565.8 | 43683.2 | 44269.5 | 44496.3 | 44551.2 | 44564.6 |
| 61 | 40475.4 | 41621.0 | 42223.3 | 42449.1 | 42492.0 | 42492.0 |
| 62 | 38391.3 | 39529.4 | 40147.4 | 40369.0 | 40406.5 | 40406.5 |
| 63 | 36371.2 | 37445.3 | 38043.7 | 38256.6 | 38299.9 | 38299.9 |
| 64 | 34379.5 | 35425.7 | 35948.9 | 36116.6 | 36176.1 | 36176.1 |
| 65 | 32277.8 | 33436.3 | 33919.3 | 33985.1 | 34038.6 | 34038.6 |
| 66 | 30211.6 | 31341.6 | 31921.7 | 31921.7 | 31921.7 | 31921.7 |
| 67 | 28179.2 | 29285.0 | 29826.6 | 29826.6 | 29826.6 | 29826.6 |
| 68 | 26188.9 | 27265.3 | 27773.4 | 27773.4 | 27773.4 | 27773.4 |
| 69 | 24219.1 | 25290.4 | 25761.6 | 25761.6 | 25761.6 | 25761.6 |
| 70 | 22259.7 | 23340.3 | 23799.9 | 23799.9 | 23799.9 | 23799.9 |
| 71 | 20300.9 | 21405.3 | 21869.8 | 21869.8 | 21869.8 | 21869.8 |
| 72 | 18350.1 | 19476.4 | 19962.9 | 19962.9 | 19962.9 | 19962.9 |
| 73 | 16423.6 | 17561.2 | 18071.9 | 18071.9 | 18071.9 | 18071.9 |
| 74 | 14584.4 | 15676.2 | 16205.5 | 16205.5 | 16205.5 | 16205.5 |
| 75 | 12827.7 | 13881.9 | 14379.6 | 14379.6 | 14379.6 | 14379.6 |
| 76 | ..... | 12173.7 | 12651.9 | 12651.9 | 12651.9 | 12651.9 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 R _[x] | 1 R _{[x-1]+1} | 2 R _{[x-2]+2} | 3 R _{[x-3]+3} | 4 R _{[x-4]+4} | 5 or More. R _x |
|------|-----------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------------|
| 16 | 4910640 | ..... | ..... | ..... | ..... | 4910782 |
| 16 | 4750709 | 4750749 | ..... | ..... | ..... | 4750749 |
| 17 | 4592507 | 4592561 | 4592561 | ..... | ..... | 4592561 |
| 18 | 4435939 | 4436435 | 4436435 | 4436435 | ..... | 4436435 |
| 19 | 4281287 | 4282567 | 4282624 | 4282624 | 4282624 | 4282624 |
| 20 | 4129009 | 4131322 | 4131570 | 4131570 | 4131570 | 4131570 |
| 21 | 3978668 | 3983283 | 3983782 | 3983782 | 3983782 | 3983782 |
| 22 | 3833794 | 3838173 | 3839879 | 3839879 | 3839879 | 3839879 |
| 23 | 3694201 | 3698189 | 3699837 | 3700293 | 3700293 | 3700293 |
| 24 | 3559377 | 3563114 | 3564596 | 3565017 | 3565103 | 3565103 |
| 25 | 3428883 | 3432481 | 3433908 | 3434251 | 3434292 | 3434292 |
| 26 | 3302884 | 3305991 | 3307351 | 3307713 | 3307713 | 3307713 |
| 27 | 3180788 | 3183486 | 3184664 | 3185026 | 3185059 | 3185059 |
| 28 | 3062263 | 3064694 | 3065665 | 3065960 | 3066000 | 3066000 |
| 29 | 2946868 | 2949245 | 2950103 | 2950311 | 2950337 | 2950337 |
| 30 | 2834679 | 2836784 | 2837667 | 2837846 | 2837846 | 2837846 |
| 31 | 2725332 | 2727342 | 2728083 | 2728309 | 2728311 | 2728311 |
| 32 | 2617912 | 2620625 | 2621342 | 2621503 | 2621531 | 2621531 |
| 33 | 2513333 | 2515924 | 2517213 | 2517378 | 2517378 | 2517378 |
| 34 | 2411235 | 2413952 | 2415194 | 2415763 | 2415763 | 2415763 |
| 35 | 2311920 | 2314428 | 2315796 | 2316360 | 2316571 | 2316571 |
| 36 | 2215200 | 2217591 | 2218816 | 2219478 | 2219703 | 2219748 |
| 37 | 2121051 | 2123275 | 2124428 | 2124988 | 2125267 | 2125331 |
| 38 | 2029334 | 2031447 | 2032488 | 2033000 | 2033204 | 2033293 |
| 39 | 1939961 | 1941972 | 1942954 | 1943391 | 1943559 | 1943610 |
| 40 | 1852864 | 1854772 | 1855698 | 1856107 | 1856226 | 1856256 |
| 41 | 1767786 | 1769782 | 1770650 | 1771030 | 1771145 | 1771145 |
| 42 | 1684752 | 1686792 | 1687745 | 1688095 | 1688203 | 1688208 |
| 43 | 1603742 | 1605825 | 1606822 | 1607242 | 1607342 | 1607346 |
| 44 | 1524611 | 1526868 | 1527904 | 1528357 | 1528505 | 1528512 |
| 45 | 1447373 | 1449809 | 1450983 | 1451460 | 1451625 | 1451658 |
| 46 | 1372180 | 1374663 | 1375981 | 1376551 | 1376721 | 1376761 |
| 47 | 1299052 | 1301556 | 1302914 | 1303583 | 1303800 | 1303837 |
| 48 | 1228096 | 1230593 | 1231881 | 1232576 | 1232846 | 1232897 |
| 49 | 1159158 | 1161590 | 1162894 | 1163602 | 1163883 | 1163953 |
| 50 | 1092353 | 1094689 | 1096016 | 1096669 | 1096958 | 1097028 |
| 51 | 1027597 | 1029894 | 1031146 | 1031817 | 1032072 | 1032145 |
| 52 | 964893.8 | 967136.3 | 968356.9 | 968973.4 | 969245.7 | 969302.6 |
| 53 | 904202.0 | 906421.0 | 907595.9 | 908188.9 | 908430.8 | 908499.8 |
| 54 | 845652.4 | 847715.3 | 848867.8 | 849425.6 | 849657.5 | 849715.7 |
| 55 | 789180.2 | 791125.1 | 792149.0 | 792689.0 | 792993.1 | 792960.0 |
| 56 | 734662.5 | 736599.3 | 737520.5 | 737963.8 | 738173.1 | 738224.5 |
| 57 | 682160.2 | 684042.2 | 684944.3 | 685306.6 | 685460.4 | 685513.7 |
| 58 | 631606.4 | 633509.8 | 634351.9 | 634691.8 | 634797.7 | 634829.4 |
| 59 | 583014.2 | 584953.1 | 585793.8 | 586077.5 | 586170.5 | 586184.8 |

SPRAGUE'S SELECT LIFE TABLES, THREE AND ONE-HALF PER CENT.—*Cont.*
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $R[x]$ | 1 $R[x-1]+1$ | 2 $R[x-2]+2$ | 3 $R[x-3]+3$ | 4 $R[x-4]+4$ | 5 or More. R_x |
|------|-------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 60 | 536404.2 | 538388.8 | 539238.4 | 539508.1 | 539563.0 | 539576.5 |
| 61 | 491802.4 | 493838.4 | 494705.6 | 494968.9 | 495011.8 | 495011.8 |
| 62 | 449369.3 | 451327.0 | 452217.4 | 452482.3 | 452519.8 | 452519.8 |
| 63 | 409314.9 | 410978.0 | 411797.6 | 412070.0 | 412113.3 | 412113.3 |
| 64 | 371414.5 | 372943.7 | 373522.7 | 373753.9 | 373813.4 | 373813.4 |
| 65 | 335206.4 | 337035.0 | 337518.0 | 337583.8 | 337637.3 | 337637.3 |
| 66 | 301347.0 | 303018.6 | 303598.7 | 303598.7 | 303598.7 | 303598.7 |
| 67 | 269521.5 | 271135.4 | 271677.0 | 271677.0 | 271677.0 | 271677.0 |
| 68 | 239794.7 | 241312.3 | 241850.4 | 241850.4 | 241850.4 | 241850.4 |
| 69 | 212074.8 | 213605.8 | 214077.0 | 214077.0 | 214077.0 | 214077.0 |
| 70 | 186310.6 | 187855.7 | 188315.4 | 188315.4 | 188315.4 | 188315.4 |
| 71 | 162460.0 | 164050.9 | 164515.4 | 164515.4 | 164515.4 | 164515.4 |
| 72 | 140522.1 | 142159.1 | 142645.6 | 142645.6 | 142645.6 | 142645.6 |
| 73 | 120505.1 | 122172.0 | 122682.7 | 122682.7 | 122682.7 | 122682.7 |
| 74 | 102492.1 | 104081.5 | 104610.8 | 104610.8 | 104610.8 | 104610.8 |
| 75 | 86375.23 | 87907.68 | 88405.33 | 88405.33 | 88405.33 | 88405.33 |
| 76 | ..... | 73547.53 | 74025.78 | 74025.78 | 74025.78 | 74025.78 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $D[x]$ | 1 $D[x-1] + 1$ | 2 $D[x-2] + 2$ | 3 $D[x-3] + 3$ | 4 $D[x-4] + 4$ | 5 or More. D_x |
|------|-------------|-------------------|-------------------|-------------------|-------------------|---------------------|
| 15 | 631239 | ..... | ..... | ..... | ..... | 631400 |
| 16 | 610970 | 611015 | ..... | ..... | ..... | 611015 |
| 17 | 590919 | 590980 | 590980 | ..... | ..... | 590980 |
| 18 | 570741 | 571241 | 571241 | 571241 | ..... | 571241 |
| 19 | 559335 | 551514 | 551581 | 551581 | 551581 | 551581 |
| 20 | 529545 | 531634 | 531916 | 531916 | 531916 | 531916 |
| 21 | 508149 | 511551 | 512123 | 512123 | 512123 | 512123 |
| 22 | 487733 | 490947 | 492406 | 492406 | 492406 | 492406 |
| 23 | 468319 | 471278 | 472717 | 473149 | 473149 | 473149 |
| 24 | 449817 | 452566 | 453904 | 454349 | 454448 | 454448 |
| 25 | 432174 | 434723 | 435986 | 436387 | 436436 | 436436 |
| 26 | 415390 | 417699 | 418882 | 419273 | 419273 | 419273 |
| 27 | 399413 | 401493 | 402544 | 402923 | 402964 | 402964 |
| 28 | 384153 | 386058 | 386973 | 387291 | 387337 | 387337 |
| 29 | 379496 | 371308 | 372128 | 372376 | 372406 | 372406 |
| 30 | 355469 | 357135 | 357927 | 358140 | 358140 | 358140 |
| 31 | 341976 | 343563 | 344268 | 344504 | 344509 | 344509 |
| 32 | 328726 | 330594 | 331178 | 331374 | 331407 | 331407 |
| 33 | 315985 | 317676 | 318575 | 318776 | 318776 | 318776 |
| 34 | 303630 | 305337 | 306183 | 306636 | 306636 | 306636 |
| 35 | 291743 | 293371 | 294267 | 294691 | 294897 | 294897 |
| 36 | 280283 | 281859 | 282702 | 283187 | 283388 | 283444 |
| 37 | 269248 | 270757 | 271574 | 272023 | 272264 | 272341 |
| 38 | 258618 | 260069 | 260841 | 261276 | 261468 | 261570 |
| 39 | 248373 | 249772 | 250506 | 250908 | 251085 | 251150 |
| 40 | 238499 | 239846 | 240548 | 240923 | 241073 | 241107 |
| 41 | 228919 | 230279 | 230947 | 231297 | 231436 | 231436 |
| 42 | 219628 | 220996 | 221691 | 222014 | 222146 | 222152 |
| 43 | 210610 | 211992 | 212707 | 213061 | 213179 | 213185 |
| 44 | 201811 | 203251 | 203990 | 204367 | 204515 | 204524 |
| 45 | 193223 | 194722 | 195526 | 195929 | 196092 | 196134 |
| 46 | 184876 | 186394 | 187264 | 187730 | 187904 | 187957 |
| 47 | 176771 | 178300 | 179193 | 179724 | 179942 | 179990 |
| 48 | 168936 | 170437 | 171345 | 171898 | 172164 | 172231 |
| 49 | 161321 | 162834 | 163719 | 164282 | 164562 | 164653 |
| 50 | 153954 | 155442 | 156339 | 156875 | 157164 | 157257 |
| 51 | 146805 | 148289 | 149161 | 149702 | 149967 | 150063 |
| 52 | 139868 | 141346 | 142210 | 142720 | 142994 | 143170 |
| 53 | 133124 | 134606 | 135458 | 135952 | 136201 | 136293 |
| 54 | 126604 | 128051 | 128900 | 129372 | 129610 | 129689 |
| 55 | 120286 | 121713 | 122519 | 122975 | 123198 | 123275 |
| 56 | 114120 | 115568 | 116344 | 116745 | 116959 | 117029 |
| 57 | 108111 | 109570 | 110354 | 110768 | 110877 | 110949 |
| 58 | 102227 | 103725 | 104504 | 104847 | 104973 | 105017 |
| 59 | 96459.3 | 98000.8 | 98800.8 | 99118.3 | 99228.6 | 99248.2 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT.—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $D[1]$ | 1 $D[1-1]+1$ | 2 $D[1-2]+2$ | 3 $D[1-3]+3$ | 4 $D[1-4]+4$ | 5 or More. D_5 |
|------|-------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 60 | 90800.4 | 92390.0 | 93214.2 | 93530.2 | 93606.3 | 93624.8 |
| 61 | 85249.4 | 86886.4 | 87737.4 | 88053.2 | 88112.9 | 88112.9 |
| 62 | 79858.5 | 81489.2 | 82366.2 | 82678.4 | 82730.7 | 82730.7 |
| 63 | 74711.8 | 76245.0 | 77100.2 | 77402.0 | 77463.0 | 77463.0 |
| 64 | 69746.4 | 71246.7 | 71988.2 | 72227.2 | 72311.3 | 72311.3 |
| 65 | 64751.4 | 66423.0 | 67107.8 | 67201.2 | 67276.9 | 67276.9 |
| 66 | 59939.6 | 61576.6 | 62403.3 | 62403.3 | 62403.3 | 62403.3 |
| 67 | 55303.6 | 56912.1 | 57687.6 | 57687.6 | 57687.6 | 57687.6 |
| 68 | 50850.1 | 52422.4 | 53153.4 | 53153.4 | 53153.4 | 53153.4 |
| 69 | 46542.1 | 48114.2 | 48795.4 | 48795.4 | 48795.4 | 48795.4 |
| 70 | 42359.8 | 43953.1 | 44620.9 | 44620.9 | 44620.9 | 44620.9 |
| 71 | 38283.9 | 39921.1 | 40599.1 | 40599.1 | 40599.1 | 40599.1 |
| 72 | 34322.4 | 36000.3 | 36714.2 | 36714.2 | 36714.2 | 36714.2 |
| 73 | 30495.1 | 32199.4 | 32951.9 | 32951.9 | 32951.9 | 32951.9 |
| 74 | 26894.6 | 28537.3 | 29321.4 | 29321.4 | 29321.4 | 29321.4 |
| 75 | 23597.3 | 25101.2 | 25841.8 | 25841.8 | 25841.8 | 25841.8 |
| 76 | ..... | 21877.7 | 22592.9 | 22592.9 | 22592.9 | 22592.9 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | $N_{[x]}^0$ | $N_{[x-1]+1}^1$ | $N_{[x-2]+2}^2$ | $N_{[x-3]+3}^3$ | $N_{[x-4]+4}^4$ | 5 or More N_x |
|------|-------------|-----------------|-----------------|-----------------|-----------------|--------------------|
| 15 | 14790142 | ..... | ..... | ..... | ..... | 14790303 |
| 16 | 14158858 | 14158903 | ..... | ..... | ..... | 14158903 |
| 17 | 13547827 | 13547888 | 13547888 | ..... | ..... | 13547888 |
| 18 | 12956341 | 12956908 | 12956908 | 12956908 | ..... | 12956908 |
| 19 | 12384139 | 12385600 | 12385667 | 12385667 | 12385667 | 12385667 |
| 20 | 11831143 | 11833804 | 11834086 | 11834086 | 11834086 | 11834086 |
| 21 | 11296206 | 11301598 | 11302170 | 11302170 | 11302170 | 11302170 |
| 22 | 10782910 | 10788057 | 10790047 | 10790047 | 10790047 | 10790047 |
| 23 | 10290479 | 10295177 | 10297110 | 10297641 | 10297641 | 10297641 |
| 24 | 9817716 | 9822160 | 9823899 | 9824393 | 9824492 | 9824492 |
| 25 | 9363741 | 9367899 | 9369594 | 9369995 | 9370044 | 9370044 |
| 26 | 8927859 | 8931567 | 8933176 | 8933608 | 8933608 | 8933608 |
| 27 | 8509226 | 8512469 | 8513868 | 8514294 | 8514335 | 8514335 |
| 28 | 8106870 | 8109813 | 8110976 | 8111324 | 8111371 | 8111371 |
| 29 | 7719844 | 7722717 | 7723755 | 7724003 | 7724033 | 7724033 |
| 30 | 7347781 | 7350348 | 7351409 | 7351627 | 7351627 | 7351627 |
| 31 | 6989850 | 6992312 | 6993213 | 6993482 | 6993487 | 6993487 |
| 32 | 6644487 | 6647874 | 6648749 | 6648945 | 6648978 | 6648978 |
| 33 | 6312517 | 6315761 | 6317370 | 6317571 | 6317571 | 6317571 |
| 34 | 5993092 | 5996532 | 5998085 | 5998795 | 5998795 | 5998795 |
| 35 | 5686284 | 5689462 | 5691195 | 5691897 | 5692160 | 5692160 |
| 36 | 5391503 | 5394541 | 5396091 | 5396928 | 5397206 | 5397206 |
| 37 | 5108387 | 5111220 | 5112682 | 5113389 | 5113741 | 5113741 |
| 38 | 4836434 | 4839139 | 4840463 | 4841108 | 4841366 | 4841477 |
| 39 | 4575228 | 4577816 | 4579070 | 4579622 | 4579832 | 4579898 |
| 40 | 4324390 | 4326855 | 4328044 | 4328564 | 4328714 | 4328747 |
| 41 | 4083291 | 4085891 | 4087009 | 4087496 | 4087641 | 4087641 |
| 42 | 3851697 | 3854372 | 3855612 | 3856062 | 3856199 | 3856205 |
| 43 | 3629323 | 3632069 | 3633376 | 3633921 | 3634048 | 3634053 |
| 44 | 3415718 | 3418713 | 3420077 | 3420669 | 3420860 | 3420869 |
| 45 | 3210650 | 3213907 | 3215462 | 3216087 | 3216302 | 3216345 |
| 46 | 3014090 | 3017427 | 3019185 | 3019936 | 3020158 | 3020210 |
| 47 | 2825829 | 2829214 | 2831033 | 2831921 | 2832206 | 2832254 |
| 48 | 2645795 | 2649058 | 2650914 | 2651840 | 2652197 | 2652264 |
| 49 | 2473542 | 2476859 | 2478621 | 2479569 | 2479942 | 2480033 |
| 50 | 2309023 | 2312221 | 2314025 | 2314902 | 2315287 | 2315380 |
| 51 | 2151913 | 2155069 | 2156779 | 2157686 | 2158027 | 2158123 |
| 52 | 2002013 | 2005108 | 2006780 | 2007618 | 2007984 | 2008060 |
| 53 | 1859072 | 1862145 | 1863762 | 1864570 | 1864898 | 1864990 |
| 54 | 1723081 | 1725948 | 1727539 | 1728304 | 1728618 | 1728697 |
| 55 | 1593775 | 1596477 | 1597897 | 1598639 | 1598932 | 1599008 |
| 56 | 1470785 | 1473489 | 1474764 | 1475378 | 1475664 | 1475734 |
| 57 | 1354033 | 1356655 | 1357921 | 1358420 | 1358633 | 1358705 |
| 58 | 1243248 | 1245922 | 1247095 | 1247567 | 1247712 | 1247756 |
| 59 | 1138288 | 1141021 | 1142197 | 1142591 | 1142720 | 1142739 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT—*Cont.*
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | N_x^0 | $N_{[x-1]+1}^1$ | $N_{[x-2]+2}^2$ | $N_{[x-3]+3}^3$ | $N_{[x-4]+4}^4$ | 5 or More. N_x |
|------|----------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 60 | 1039015 | 1041828 | 1043021 | 1043396 | 1043472 | 1043491 |
| 61 | 945314.3 | 948214.2 | 949438.3 | 949806.4 | 949866.1 | 949866.1 |
| 62 | 857268.3 | 860064.9 | 861327.8 | 861700.9 | 861753.2 | 861753.2 |
| 63 | 775037.7 | 777409.8 | 778575.7 | 778961.6 | 779022.5 | 779022.5 |
| 64 | 698140.8 | 700325.9 | 701160.8 | 701475.5 | 701559.6 | 701559.6 |
| 65 | 625896.0 | 628391.4 | 629079.2 | 629172.6 | 629248.3 | 629248.3 |
| 66 | 558732.2 | 561144.6 | 561971.4 | 561971.4 | 561971.4 | 561971.4 |
| 67 | 496453.1 | 498792.6 | 499568.0 | 499568.0 | 499568.0 | 499568.0 |
| 68 | 438896.0 | 441149.5 | 441880.5 | 441880.5 | 441880.5 | 441880.5 |
| 69 | 385806.1 | 388045.9 | 388727.1 | 388727.1 | 388727.1 | 388727.1 |
| 70 | 336992.7 | 339264.0 | 339931.7 | 339931.7 | 339931.7 | 339931.7 |
| 71 | 292281.8 | 294632.9 | 295310.9 | 295310.9 | 295310.9 | 295310.9 |
| 72 | 251567.5 | 253997.9 | 254711.8 | 254711.8 | 254711.8 | 254711.8 |
| 73 | 214756.7 | 217245.1 | 217997.6 | 217997.6 | 217997.6 | 217997.6 |
| 74 | 181878.3 | 184261.6 | 185045.7 | 185045.7 | 185045.7 | 185045.7 |
| 75 | 152674.6 | 154983.7 | 155724.3 | 155724.3 | 155724.3 | 155724.3 |
| 76 | ..... | 129167.3 | 129882.5 | 129882.5 | 129882.5 | 129882.5 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $C_{[x]}$ | 1 $C_{[x-1]}+_1$ | 2 $C_{[x-2]}+_2$ | 3 $C_{[x-3]}+_3$ | 4 $C_{[x-4]}+_4$ | 5 or More C_x |
|------|----------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| 15 | 1839.9 | ..... | ..... | ..... | ..... | 1994.1 |
| 16 | 2194.3 | 2238.6 | ..... | ..... | ..... | 2238.6 |
| 17 | 2467.4 | 2525.8 | 2525.8 | ..... | ..... | 2525.8 |
| 18 | 2603.7 | 3022.5 | 3022.5 | 3022.5 | ..... | 3022.5 |
| 19 | 2671.8 | 3534.3 | 3598.9 | 3598.9 | 3598.9 | 3598.9 |
| 20 | 2570.6 | 4026.7 | 4300.4 | 4300.4 | 4300.4 | 4300.4 |
| 21 | 2401.5 | 4246.2 | 4801.4 | 4801.4 | 4801.4 | 4801.4 |
| 22 | 2248.8 | 3929.5 | 4914.9 | 4914.9 | 4914.9 | 4914.9 |
| 23 | 2113.0 | 3648.4 | 4599.1 | 4919.3 | 4919.3 | 4919.3 |
| 24 | 1992.4 | 3398.4 | 4296.8 | 4679.1 | 4776.1 | 4776.1 |
| 25 | 1888.4 | 3179.7 | 4015.9 | 4404.5 | 4451.5 | 4451.5 |
| 26 | 1798.1 | 2989.7 | 3758.7 | 4096.7 | 4096.7 | 4096.7 |
| 27 | 1721.3 | 2826.2 | 3529.5 | 3850.3 | 3890.0 | 3890.0 |
| 28 | 1656.4 | 2686.2 | 3326.1 | 3604.9 | 3649.4 | 3649.4 |
| 29 | 1600.1 | 2566.2 | 3150.2 | 3390.8 | 3419.5 | 3419.5 |
| 30 | 1553.5 | 2464.6 | 2997.0 | 3199.9 | 3199.9 | 3199.9 |
| 31 | 1512.4 | 2377.3 | 2867.3 | 3063.5 | 3067.9 | 3067.9 |
| 32 | 1476.0 | 2302.5 | 2757.4 | 2946.7 | 2978.5 | 2978.5 |
| 33 | 1443.6 | 2236.2 | 2661.6 | 2855.2 | 2855.2 | 2855.2 |
| 34 | 1414.9 | 2177.6 | 2579.1 | 2807.5 | 2807.5 | 2807.5 |
| 35 | 1387.8 | 2124.4 | 2508.2 | 2720.7 | 2863.8 | 2863.8 |
| 36 | 1361.8 | 2075.6 | 2445.7 | 2675.6 | 2793.6 | 2847.4 |
| 37 | 1337.1 | 2030.5 | 2387.9 | 2630.7 | 2753.8 | 2829.5 |
| 38 | 1314.0 | 1987.5 | 2335.5 | 2581.1 | 2702.5 | 2810.2 |
| 39 | 1293.1 | 1948.5 | 2287.7 | 2528.0 | 2665.3 | 2728.4 |
| 40 | 1272.9 | 1913.3 | 2244.7 | 2470.5 | 2615.7 | 2648.9 |
| 41 | 1255.5 | 1880.9 | 2206.9 | 2414.2 | 2542.8 | 2542.8 |
| 42 | 1239.2 | 1852.7 | 2173.1 | 2369.9 | 2490.3 | 2496.8 |
| 43 | 1224.3 | 1827.1 | 2144.7 | 2339.3 | 2445.5 | 2451.3 |
| 44 | 1211.1 | 1805.3 | 2120.0 | 2323.4 | 2423.5 | 2432.8 |
| 45 | 1200.8 | 1787.1 | 2100.8 | 2318.3 | 2423.1 | 2464.7 |
| 46 | 1191.5 | 1772.0 | 2086.0 | 2321.0 | 2441.5 | 2492.6 |
| 47 | 1183.3 | 1761.3 | 2076.6 | 2325.6 | 2470.3 | 2516.8 |
| 48 | 1181.8 | 1754.8 | 2072.8 | 2328.9 | 2495.9 | 2561.0 |
| 49 | 1180.5 | 1752.1 | 2074.6 | 2333.1 | 2512.2 | 2600.4 |
| 50 | 1181.1 | 1754.2 | 2083.3 | 2339.0 | 2522.9 | 2613.3 |
| 51 | 1183.6 | 1760.7 | 2096.6 | 2348.4 | 2529.8 | 2623.2 |
| 52 | 1188.6 | 1771.0 | 2115.5 | 2362.2 | 2535.9 | 2629.4 |
| 53 | 1195.6 | 1785.2 | 2140.4 | 2382.0 | 2544.9 | 2634.7 |
| 54 | 1204.2 | 1802.6 | 2170.4 | 2406.7 | 2560.7 | 2636.7 |
| 55 | 1214.4 | 1823.8 | 2205.7 | 2434.8 | 2580.9 | 2655.4 |
| 56 | 1225.6 | 1848.4 | 2247.0 | 2467.7 | 2603.0 | 2670.8 |
| 57 | 1237.4 | 1875.1 | 2292.6 | 2510.7 | 2630.6 | 2701.0 |
| 58 | 1249.0 | 1903.3 | 2341.9 | 2564.6 | 2667.5 | 2709.8 |
| 59 | 1259.9 | 1932.4 | 2392.7 | 2625.2 | 2713.7 | 2732.7 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT.—*Cont.*
 YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $C[x]$ | 1 $C[x-1]+1$ | 2 $C[x-2]+2$ | 3 $C[x-3]+3$ | 4 $C[x-4]+4$ | 5 or More. C_x |
|------|-------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 60 | 1269.5 | 1961.7 | 2446.0 | 2693.1 | 2766.8 | 2784.9 |
| 61 | 1277.2 | 1980.6 | 2503.7 | 2757.9 | 2815.8 | 2815.8 |
| 62 | 1283.5 | 2015.7 | 2565.2 | 2807.3 | 2858.1 | 2858.1 |
| 63 | 1289.1 | 2040.1 | 2627.2 | 2836.3 | 2895.5 | 2895.5 |
| 64 | 1292.1 | 2063.7 | 2690.4 | 2846.8 | 2928.3 | 2928.3 |
| 65 | 1288.7 | 2085.1 | 2750.0 | 2840.6 | 2914.1 | 2914.1 |
| 66 | 1281.7 | 2095.6 | 2808.2 | 2898.2 | 2898.2 | 2898.2 |
| 67 | 1270.4 | 2101.1 | 2854.0 | 2854.0 | 2854.0 | 2854.0 |
| 68 | 1254.9 | 2100.3 | 2809.9 | 2809.9 | 2809.9 | 2809.9 |
| 69 | 1233.4 | 2092.0 | 2753.3 | 2753.3 | 2753.3 | 2753.3 |
| 70 | 1205.0 | 2073.9 | 2722.1 | 2722.1 | 2722.1 | 2722.1 |
| 71 | 1168.5 | 2044.2 | 2702.4 | 2702.4 | 2702.4 | 2702.4 |
| 72 | 1123.4 | 2000.0 | 2693.0 | 2693.0 | 2693.0 | 2693.0 |
| 73 | 1069.5 | 1940.1 | 2670.7 | 2670.7 | 2670.7 | 2670.7 |
| 74 | 1010.1 | 1864.4 | 2625.6 | 2625.6 | 2625.6 | 2625.6 |
| 75 | 945.0 | 1777.1 | 2496.2 | 2496.2 | 2496.2 | 2496.2 |
| 76 | ..... | 1677.8 | 2372.2 | 2372.2 | 2372.2 | 2372.2 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $M_{[x]}$ | 1 $M_{[x-1]} +$ | 2 $M_{[x-2]} +$ | 3 $M_{[x-3]} +$ | 4 $M_{[x-4]} +$ | 5 or More. M_x |
|------|----------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| 15 | 200460 | ..... | ..... | ..... | ..... | 200614 |
| 16 | 198575 | 198620 | ..... | ..... | ..... | 198620 |
| 17 | 196323 | 196381 | 196381 | ..... | ..... | 196381 |
| 18 | 193372 | 193856 | 193856 | 193856 | ..... | 193856 |
| 19 | 189633 | 190768 | 190833 | 190833 | 190833 | 190833 |
| 20 | 184949 | 186961 | 187234 | 187234 | 187234 | 187234 |
| 21 | 179131 | 182378 | 182934 | 182934 | 182934 | 182934 |
| 22 | 173670 | 176730 | 178132 | 178132 | 178132 | 178132 |
| 23 | 168598 | 171421 | 172800 | 173217 | 173217 | 173217 |
| 24 | 163865 | 166485 | 167773 | 168201 | 168298 | 168298 |
| 25 | 159448 | 161873 | 163087 | 163476 | 163522 | 163522 |
| 26 | 155352 | 157500 | 158693 | 159071 | 159071 | 159071 |
| 27 | 151576 | 153558 | 154570 | 154934 | 154974 | 154974 |
| 28 | 148030 | 149851 | 150732 | 151040 | 151084 | 151084 |
| 29 | 144648 | 146374 | 147165 | 147406 | 147435 | 147435 |
| 30 | 141457 | 143048 | 143808 | 144015 | 144015 | 144015 |
| 31 | 138391 | 139903 | 140583 | 140811 | 140815 | 140815 |
| 32 | 135201 | 136879 | 137526 | 137716 | 137747 | 137747 |
| 33 | 132125 | 133725 | 134576 | 134769 | 134769 | 134769 |
| 34 | 129074 | 130681 | 131489 | 131914 | 131914 | 131914 |
| 35 | 126125 | 127659 | 128503 | 128910 | 129106 | 129106 |
| 36 | 123250 | 124737 | 125535 | 125905 | 126189 | 126242 |
| 37 | 120460 | 121888 | 122661 | 123089 | 123319 | 123395 |
| 38 | 117750 | 119123 | 119857 | 120273 | 120458 | 120565 |
| 39 | 115116 | 116430 | 117136 | 117522 | 117692 | 117755 |
| 40 | 112544 | 113823 | 114487 | 114848 | 114994 | 115027 |
| 41 | 109989 | 111271 | 111910 | 112242 | 112378 | 112378 |
| 42 | 107443 | 108733 | 109390 | 109703 | 109828 | 109835 |
| 43 | 104902 | 106204 | 106881 | 107217 | 107333 | 107338 |
| 44 | 102325 | 103678 | 104377 | 104736 | 104878 | 104887 |
| 46 | 99709.3 | 101114 | 101872 | 102257 | 102413 | 102454 |
| 46 | 97087.1 | 98508.5 | 99326.7 | 99771.4 | 99938.4 | 99989.5 |
| 47 | 94465.8 | 95895.6 | 96736.5 | 97240.7 | 97450.4 | 97496.9 |
| 48 | 91874.5 | 93280.5 | 94134.3 | 94659.9 | 94915.1 | 94980.1 |
| 49 | 89276.7 | 90692.7 | 91525.7 | 92061.5 | 92331.0 | 92419.2 |
| 50 | 86701.6 | 88096.2 | 88940.6 | 89451.1 | 89728.4 | 89818.8 |
| 51 | 84128.8 | 85520.5 | 86342.0 | 86857.3 | 87112.1 | 87205.5 |
| 52 | 81557.4 | 82945.2 | 83759.8 | 84245.4 | 84508.9 | 84582.3 |
| 53 | 78976.5 | 80368.8 | 81174.2 | 81644.3 | 81883.2 | 81973.0 |
| 54 | 76417.7 | 77780.9 | 78583.6 | 79033.8 | 79262.3 | 79338.3 |
| 55 | 73865.5 | 75213.5 | 75978.3 | 76413.2 | 76627.1 | 76701.6 |
| 56 | 71281.5 | 72651.1 | 73389.7 | 73772.6 | 73978.4 | 74046.2 |
| 57 | 68673.4 | 70055.9 | 70802.7 | 71142.7 | 71304.9 | 71375.4 |
| 58 | 66016.4 | 67436.0 | 68180.8 | 68510.1 | 68632.0 | 68674.3 |
| 59 | 63395.6 | 64767.4 | 65532.7 | 65838.9 | 65945.5 | 65964.5 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT.—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 M _[1] | 1 M _{[1-1]+} | 2 M _{[1-2]+} | 3 M _{[1-3]+} | 4 M _{[1-4]+} | 5 or More. M ₅ |
|------|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------|
| 60 | 60538.1 | 62045.7 | 62835.0 | 63140.0 | 63213.7 | 63231.8 |
| 61 | 57716.2 | 59268.6 | 60084.0 | 60389.0 | 60446.9 | 60446.9 |
| 62 | 54889.8 | 56439.0 | 57279.0 | 57580.3 | 57631.1 | 57631.1 |
| 63 | 52138.0 | 53606.3 | 54423.3 | 54713.8 | 54773.0 | 54773.0 |
| 64 | 49412.4 | 50848.9 | 51566.2 | 51796.1 | 51877.5 | 51877.5 |
| 65 | 46521.3 | 48120.3 | 48785.2 | 48875.8 | 48949.3 | 48949.3 |
| 66 | 43665.9 | 45232.6 | 46035.2 | 46035.2 | 46035.2 | 46035.2 |
| 67 | 40843.9 | 42384.2 | 43137.0 | 43137.0 | 43137.0 | 43137.0 |
| 68 | 38066.8 | 39573.5 | 40283.1 | 40283.1 | 40283.1 | 40283.1 |
| 69 | 35305.1 | 36811.9 | 37473.2 | 37473.2 | 37473.2 | 37473.2 |
| 70 | 32544.6 | 34071.7 | 34719.9 | 34719.9 | 34719.9 | 34719.9 |
| 71 | 29770.9 | 31339.6 | 31997.8 | 31997.8 | 31997.8 | 31997.8 |
| 72 | 26995.2 | 28602.4 | 29295.4 | 29295.4 | 29295.4 | 29295.4 |
| 73 | 24240.0 | 25871.8 | 26602.4 | 26602.4 | 26602.4 | 26602.4 |
| 74 | 21597.1 | 23170.5 | 23931.7 | 23931.7 | 23931.7 | 23931.7 |
| 75 | 19060.6 | 20587.0 | 21306.1 | 21306.1 | 21306.1 | 21306.1 |
| 76 | ..... | 18115.6 | 18809.9 | 18809.9 | 18809.9 | 18809.9 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 R _[x] | 1 R _[x-1] + 1 | 2 R _[x-2] + 2 | 3 R _[x-3] + 3 | 4 R _[x-4] + 4 | 5 or More. R _x |
|------|-----------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|
| 15 | 6552169 | ..... | ..... | ..... | ..... | 6552323 |
| 16 | 6351664 | 6351709 | ..... | ..... | ..... | 6351709 |
| 17 | 6153030 | 6153089 | 6153089 | ..... | ..... | 6153089 |
| 18 | 5956159 | 5956707 | 5956707 | 5956707 | ..... | 5956707 |
| 19 | 5761379 | 5762787 | 5762852 | 5762852 | 5762852 | 5762852 |
| 20 | 5569178 | 5571746 | 5572019 | 5572019 | 5572019 | 5572019 |
| 21 | 5379065 | 5384229 | 5384785 | 5384785 | 5384785 | 5384785 |
| 22 | 5195021 | 5199934 | 5201851 | 5201851 | 5201851 | 5201851 |
| 23 | 5016851 | 5021351 | 5023204 | 5023718 | 5023718 | 5023718 |
| 24 | 4844001 | 4848253 | 4849930 | 4850404 | 4850501 | 4850501 |
| 25 | 4676170 | 4680136 | 4681768 | 4682157 | 4682203 | 4682203 |
| 26 | 4513170 | 4516722 | 4518263 | 4518681 | 4518681 | 4518681 |
| 27 | 4354706 | 4357814 | 4359162 | 4359570 | 4359610 | 4359610 |
| 28 | 4200311 | 4203134 | 4204256 | 4204592 | 4204636 | 4204636 |
| 29 | 4049535 | 4052281 | 4053283 | 4053524 | 4053552 | 4053552 |
| 30 | 3902426 | 3904887 | 3905907 | 3906118 | 3906118 | 3906118 |
| 31 | 3758618 | 3760969 | 3761839 | 3762103 | 3762103 | 3762103 |
| 32 | 3617024 | 3620227 | 3621066 | 3621256 | 3621288 | 3621288 |
| 33 | 3477878 | 3481823 | 3483348 | 3483540 | 3483540 | 3483540 |
| 34 | 3343304 | 3346613 | 3348098 | 3348772 | 3348772 | 3348772 |
| 35 | 3211282 | 3214290 | 3215932 | 3216609 | 3216858 | 3216858 |
| 36 | 3082278 | 3085157 | 3086631 | 3087429 | 3087699 | 3087752 |
| 37 | 2956334 | 2959028 | 2960420 | 2961096 | 2961434 | 2961510 |
| 38 | 2832297 | 2835874 | 2837140 | 2837759 | 2838007 | 2838115 |
| 39 | 2713100 | 2715547 | 2716751 | 2717283 | 2717486 | 2717549 |
| 40 | 2595628 | 2597984 | 2599111 | 2599615 | 2599761 | 2599794 |
| 41 | 2480626 | 2483084 | 2484161 | 2484624 | 2484767 | 2484767 |
| 42 | 2368104 | 2370637 | 2371813 | 2372251 | 2372382 | 2372389 |
| 43 | 2258062 | 2260661 | 2261904 | 2262423 | 2262548 | 2262554 |
| 44 | 2150330 | 2153160 | 2154457 | 2155023 | 2155206 | 2155215 |
| 45 | 2044933 | 2048005 | 2049482 | 2050080 | 2050287 | 2050328 |
| 46 | 1942077 | 1945224 | 1946891 | 1947610 | 1947823 | 1947874 |
| 47 | 1841799 | 1844990 | 1846715 | 1847564 | 1847838 | 1847885 |
| 48 | 1744256 | 1747333 | 1749094 | 1749979 | 1750323 | 1750388 |
| 49 | 1649253 | 1652382 | 1654053 | 1654960 | 1655319 | 1655408 |
| 50 | 1556960 | 1559976 | 1561689 | 1562527 | 1562898 | 1562988 |
| 51 | 1467278 | 1470258 | 1471880 | 1472748 | 1473076 | 1473170 |
| 52 | 1380224 | 1383149 | 1384737 | 1385538 | 1385891 | 1385964 |
| 53 | 1295761 | 1298667 | 1300204 | 1300978 | 1301292 | 1301382 |
| 54 | 1214069 | 1216784 | 1218298 | 1219030 | 1219333 | 1219409 |
| 55 | 1135083 | 1137651 | 1139003 | 1139714 | 1139996 | 1140071 |
| 56 | 1058618 | 1061218 | 1062438 | 1063025 | 1063301 | 1063369 |
| 57 | 984858.8 | 987366.0 | 988566.8 | 989047.8 | 989252.3 | 989322.8 |
| 58 | 913637.6 | 916185.4 | 917310.1 | 917704.1 | 917905.1 | 917947.4 |
| 59 | 845014.3 | 847621.2 | 848749.4 | 849129.3 | 849254.0 | 849273.1 |

SPRAGUE'S SELECT LIFE TABLES, THREE PER CENT—Cont.
YEARS ELAPSED SINCE DATE OF INSURANCE.

| Age. | 0 $R_{[x]}$ | 1 $R_{[x-1]+1}$ | 2 $R_{[x-2]+2}$ | 3 $R_{[x-3]+3}$ | 4 $R_{[x-4]+4}$ | 5 or More. R_x |
|------|----------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| 60 | 779025.2 | 781708.7 | 782853.8 | 783216.7 | 783290.4 | 783308.5 |
| 61 | 715722.8 | 718487.1 | 719663.0 | 720018.8 | 720076.7 | 720076.7 |
| 62 | 655337.0 | 658006.6 | 659218.5 | 659579.0 | 659629.8 | 659629.8 |
| 63 | 598171.0 | 606447.2 | 601567.6 | 601939.5 | 601998.7 | 601998.7 |
| 64 | 543931.6 | 546033.0 | 546840.9 | 547144.3 | 547225.7 | 547225.7 |
| 65 | 492117.6 | 494519.2 | 495184.1 | 495274.7 | 495348.2 | 495348.2 |
| 66 | 443276.8 | 445596.3 | 446398.9 | 446398.9 | 446398.9 | 446398.9 |
| 67 | 397361.0 | 399610.9 | 400363.7 | 400363.7 | 400363.7 | 400363.7 |
| 68 | 354349.1 | 356517.1 | 357226.7 | 357226.7 | 357226.7 | 357226.7 |
| 69 | 314127.2 | 316282.3 | 316943.6 | 316943.6 | 316943.6 | 316943.6 |
| 70 | 276636.8 | 278822.1 | 279470.4 | 279470.4 | 279470.4 | 279470.4 |
| 71 | 241830.5 | 244092.2 | 244750.4 | 244750.4 | 244750.4 | 244750.4 |
| 72 | 209721.8 | 212059.6 | 212752.6 | 212752.6 | 212752.6 | 212752.6 |
| 73 | 180333.6 | 182726.6 | 183457.2 | 183457.2 | 183457.2 | 183457.2 |
| 74 | 153801.0 | 156093.6 | 156854.8 | 156854.8 | 156854.8 | 156854.8 |
| 75 | 129983.2 | 132203.9 | 132923.1 | 132923.1 | 132923.1 | 132923.1 |
| 76 | ..... | 110922.6 | 111616.9 | 111616.9 | 111616.9 | 111616.9 |

INTRODUCTION TO CRAIG'S MODIFIED ACTUARIES' TABLE FOR IMPAIRED LIVES.

No experience table for impaired or sub-standard lives being available, James M. Craig, actuary of the Metropolitan Life Insurance Company, has modified the Actuaries' Table so as to answer in his judgment for impaired life purposes. The modification consists in doubling the rate of mortality to age sixty, after which it gradually declines toward the Actuaries' Table ratios.

Mr. Craig developed the table, with commutation columns at four per cent, on this basis and published it in the papers of the Actuarial Society of America, reporting the proceedings of the Society at its meeting on October 23 and 24, 1890.



CRAIG'S IMPAIRED LIFE TABLE.

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TABLE NO. I.

CRAIG'S MODIFIED ACTUARIES' TABLE FOR IMPAIRED LIVES.

| AGE. | Number Living. | Number Dying. | Deaths Per 1000. | AGE. | Number Living. | Number Dying. | Deaths Per 1000. |
|------|----------------|---------------|------------------|------|----------------|---------------|------------------|
| 10 | 100,000 | 1352 | 13.520 | 55 | 40,071 | 1736 | 43.328 |
| 11 | 98,648 | 1339 | 13.572 | 56 | 38,335 | 1773 | 46.252 |
| 12 | 97,309 | 1326 | 13.624 | 57 | 36,562 | 1805 | 49.358 |
| 13 | 95,983 | 1315 | 13.696 | 58 | 34,757 | 1834 | 52.772 |
| 14 | 94,668 | 1306 | 13.792 | 59 | 32,923 | 1860 | 56.492 |
| 15 | 93,362 | 1297 | 13.888 | 60 | 31,063 | 1847 | 59.458 |
| 16 | 92,065 | 1289 | 14.006 | 61 | 29,216 | 1820 | 62.615 |
| 17 | 90,776 | 1282 | 14.124 | 62 | 27,387 | 1808 | 66.027 |
| 18 | 89,494 | 1277 | 14.268 | 63 | 25,579 | 1781 | 69.626 |
| 19 | 88,217 | 1271 | 14.412 | 64 | 23,798 | 1749 | 73.487 |
| 20 | 86,946 | 1268 | 14.582 | 65 | 22,049 | 1711 | 77.584 |
| 21 | 85,678 | 1264 | 14.754 | 66 | 20,338 | 1665 | 81.896 |
| 22 | 84,414 | 1260 | 14.928 | 67 | 18,673 | 1614 | 86.476 |
| 23 | 83,154 | 1258 | 15.128 | 68 | 17,059 | 1556 | 91.233 |
| 24 | 81,896 | 1256 | 15.332 | 69 | 15,503 | 1490 | 96.139 |
| 25 | 80,640 | 1253 | 15.540 | 70 | 14,013 | 1419 | 101.295 |
| 26 | 79,387 | 1252 | 15.774 | 71 | 12,594 | 1343 | 106.640 |
| 27 | 78,135 | 1251 | 16.012 | 72 | 11,251 | 1262 | 112.191 |
| 28 | 76,884 | 1252 | 16.278 | 73 | 9,989 | 1177 | 117.912 |
| 29 | 75,632 | 1252 | 16.550 | 74 | 8,812 | 1091 | 123.855 |
| 30 | 74,380 | 1253 | 16.850 | 75 | 7,721 | 1003 | 129.962 |
| 31 | 73,127 | 1255 | 17.156 | 76 | 6,718 | 914 | 136.198 |
| 32 | 71,872 | 1257 | 17.494 | 77 | 5,804 | 828 | 142.680 |
| 33 | 70,615 | 1260 | 17.838 | 78 | 4,976 | 743 | 149.350 |
| 34 | 69,355 | 1262 | 18.190 | 79 | 4,233 | 661 | 156.078 |
| 35 | 68,093 | 1266 | 18.576 | 80 | 3,572 | 581 | 162.871 |
| 36 | 66,827 | 1268 | 18.970 | 81 | 2,991 | 507 | 169.608 |
| 37 | 65,559 | 1270 | 19.374 | 82 | 2,484 | 437 | 176.250 |
| 38 | 64,289 | 1274 | 19.812 | 83 | 2,047 | 374 | 182.950 |
| 39 | 63,015 | 1277 | 20.262 | 84 | 1,673 | 317 | 189.678 |
| 40 | 61,738 | 1279 | 20.724 | 85 | 1,356 | 278 | 205.095 |
| 41 | 60,459 | 1283 | 21.224 | 86 | 1,078 | 240 | 222.480 |
| 42 | 59,176 | 1289 | 21.788 | 87 | 838 | 202 | 242.234 |
| 43 | 57,887 | 1303 | 22.502 | 88 | 636 | 168 | 265.274 |
| 44 | 56,584 | 1324 | 23.394 | 89 | 468 | 136 | 292.382 |
| 45 | 55,260 | 1350 | 24.424 | 90 | 332 | 107 | 322.892 |
| 46 | 53,910 | 1384 | 25.678 | 91 | 225 | 81 | 360.000 |
| 47 | 52,526 | 1420 | 27.032 | 92 | 144 | 58 | 402.778 |
| 48 | 51,106 | 1458 | 28.520 | 93 | 86 | 39 | 453.488 |
| 49 | 49,648 | 1495 | 30.122 | 94 | 47 | 24 | 510.638 |
| 50 | 48,153 | 1535 | 31.876 | 95 | 23 | 13 | 565.217 |
| 51 | 46,618 | 1575 | 33.796 | 96 | 10 | 6 | 600.000 |
| 52 | 45,043 | 1617 | 35.894 | 97 | 4 | 3 | 750.000 |
| 53 | 43,426 | 1658 | 38.186 | 98 | 1 | 1 | 1000.000 |
| 54 | 41,768 | 1697 | 40.626 | | | | |

NORTHAMPTON TABLE OF MORTALITY.

THE most commonly employed of the mortality tables embracing unselected lives has been the Northampton, adapted from mortality statistics of the English town of that name by Dr. Price. It is now used only for computations involving impaired lives or in computing the values of annuity interests, dowers, etc., in the courts. For the latter purpose it is the standard in New York at five per cent interest and in many other States at six per cent or higher. Therefore we depart from our custom and give annuity tables at from three per cent to eight per cent interest, as well as commutation tables at three per cent and four per cent. Joint-life annuities at several rates of interest are also given. These will be found useful to attorneys in computing values of life remainders, etc.

We also give annuity commutation tables at five per cent, computed especially for this work by Mr. G. L. Plumley, assistant actuary of the Home Life Insurance Company of New York, and kindly contributed by him.

The commutation table at four per cent is furnished by the kindness of Samuel C. Beckley, superintendent of Actuarial Department, New York Life Insurance Company, having been computed under his supervision for the use of the office. The three per cent commutation tables and annuity tables are from "David Jones."

TABLE I.
NORTHAMPTON TABLE OF MORTALITY.

| Age. | Living. | Decrements. | Proportion Which Die. | Proportion Which Survive. | Age. | Living. | Decrements. | Proportion Which Die. | Proportion Which Survive. |
|------|---------|-------------|-----------------------|---------------------------|------|---------|-------------|-----------------------|---------------------------|
| 0 | 11,650 | 3,000 | .257511 | .742489 | 49 | 2,936 | 70 | .026908 | .973092 |
| 1 | 8,650 | 1,367 | .158035 | .841965 | 50 | 2,857 | 81 | .028351 | .971649 |
| 2 | 7,283 | 502 | .068928 | .931072 | 51 | 2,776 | 82 | .029539 | .970461 |
| 3 | 6,781 | 335 | .049103 | .950897 | 52 | 2,694 | 82 | .030438 | .969562 |
| 4 | 6,446 | 197 | .030562 | .969438 | 53 | 2,612 | 82 | .031394 | .968606 |
| 5 | 6,249 | 184 | .029445 | .970555 | 54 | 2,530 | 82 | .032411 | .967589 |
| 6 | 6,065 | 140 | .023084 | .976916 | 55 | 2,448 | 82 | .033497 | .966503 |
| 7 | 5,925 | 110 | .018565 | .981435 | 56 | 2,366 | 82 | .034658 | .965342 |
| 8 | 5,815 | 80 | .013757 | .986243 | 57 | 2,284 | 82 | .035902 | .964108 |
| 9 | 5,735 | 60 | .010462 | .989538 | 58 | 2,202 | 82 | .037239 | .962761 |
| 10 | 5,675 | 52 | .009163 | .990837 | 59 | 2,120 | 82 | .038679 | .961321 |
| 11 | 5,623 | 50 | .008892 | .991108 | 60 | 2,038 | 82 | .040235 | .959765 |
| 12 | 5,573 | 50 | .008972 | .991028 | 61 | 1,956 | 82 | .041922 | .958078 |
| 13 | 5,523 | 50 | .009053 | .990947 | 62 | 1,874 | 81 | .043223 | .956777 |
| 14 | 5,473 | 50 | .009136 | .990864 | 63 | 1,793 | 81 | .045176 | .954824 |
| 15 | 5,423 | 50 | .009220 | .990780 | 64 | 1,712 | 80 | .046729 | .953271 |
| 16 | 5,373 | 53 | .009364 | .990136 | 65 | 1,632 | 80 | .049020 | .950980 |
| 17 | 5,320 | 58 | .010902 | .989098 | 66 | 1,552 | 80 | .051546 | .948454 |
| 18 | 5,262 | 63 | .011972 | .988028 | 67 | 1,472 | 80 | .054348 | .945652 |
| 19 | 5,199 | 67 | .012887 | .987113 | 68 | 1,392 | 80 | .057471 | .942529 |
| 20 | 5,132 | 72 | .014030 | .985970 | 69 | 1,312 | 80 | .060975 | .939025 |
| 21 | 5,065 | 75 | .014822 | .985178 | 70 | 1,232 | 80 | .064935 | .935065 |
| 22 | 4,985 | 75 | .015045 | .984955 | 71 | 1,152 | 80 | .069444 | .930556 |
| 23 | 4,910 | 75 | .015275 | .984725 | 72 | 1,072 | 80 | .074627 | .925373 |
| 24 | 4,835 | 75 | .015512 | .984488 | 73 | 992 | 80 | .080645 | .919355 |
| 25 | 4,760 | 75 | .015756 | .984244 | 74 | 912 | 80 | .087719 | .912281 |
| 26 | 4,685 | 75 | .016009 | .983991 | 75 | 832 | 80 | .096154 | .903846 |
| 27 | 4,610 | 75 | .016269 | .983731 | 76 | 752 | 77 | .102393 | .897607 |
| 28 | 4,535 | 75 | .016538 | .983462 | 77 | 675 | 73 | .108148 | .891852 |
| 29 | 4,460 | 75 | .016816 | .983184 | 78 | 602 | 68 | .112957 | .887043 |
| 30 | 4,385 | 75 | .017104 | .982896 | 79 | 534 | 65 | .121723 | .878277 |
| 31 | 4,310 | 75 | .017401 | .982599 | 80 | 469 | 63 | .134328 | .865672 |
| 32 | 4,235 | 75 | .017710 | .982290 | 81 | 406 | 60 | .147783 | .852217 |
| 33 | 4,160 | 75 | .018029 | .981971 | 82 | 346 | 57 | .164740 | .835260 |
| 34 | 4,085 | 75 | .018360 | .981640 | 83 | 289 | 55 | .190311 | .809589 |
| 35 | 4,010 | 75 | .018704 | .981296 | 84 | 234 | 48 | .205128 | .794872 |
| 36 | 3,935 | 75 | .019060 | .980940 | 85 | 186 | 41 | .220430 | .779570 |
| 37 | 3,860 | 75 | .019430 | .980570 | 86 | 145 | 34 | .234483 | .765517 |
| 38 | 3,785 | 75 | .019815 | .980185 | 87 | 111 | 28 | .252252 | .747748 |
| 39 | 3,710 | 75 | .020216 | .979784 | 88 | 83 | 21 | .253012 | .746988 |
| 40 | 3,635 | 76 | .020908 | .979092 | 89 | 62 | 16 | .258065 | .741935 |
| 41 | 3,559 | 77 | .021635 | .978305 | 90 | 46 | 12 | .260869 | .739131 |
| 42 | 3,482 | 78 | .022401 | .977599 | 91 | 34 | 10 | .294118 | .705882 |
| 43 | 3,404 | 78 | .022914 | .977086 | 92 | 24 | 8 | .333333 | .666667 |
| 44 | 3,326 | 78 | .023452 | .976548 | 93 | 16 | 7 | .437500 | .562500 |
| 45 | 3,248 | 78 | .024015 | .975985 | 94 | 9 | 5 | .555556 | .444444 |
| 46 | 3,170 | 78 | .024606 | .975394 | 95 | 4 | 3 | .750000 | .250000 |
| 47 | 3,092 | 78 | .025227 | .974773 | 96 | 1 | 1 | | |
| 48 | 3,014 | 78 | .025879 | .974121 | | | | | |

TABLE II.
NORTHAMPTON, FOUR PER CENT.

| Age. | D_x | N_x | S_x |
|------|--------------|----------------|-----------------|
| 0 | 11650. | 120320.4448446 | 2010147 3392293 |
| 1 | 8317.3076800 | 112003.1371646 | 1889826.8943847 |
| 2 | 6733.5428774 | 105269.5942872 | 1777823.7572201 |
| 3 | 6028.2843172 | 99241.3099700 | 1672554.1629329 |
| 4 | 5510.0678087 | 93731.2421613 | 1573312.8529029 |
| 5 | 5136.2225104 | 88595.0196509 | 1479581.6108016 |
| 6 | 4793.2576345 | 83801.7620164 | 1390986.5911507 |
| 7 | 4502.5130253 | 79299.2489911 | 1307184.8291343 |
| 8 | 4248.9635712 | 75050.2854199 | 1227885.5701432 |
| 9 | 4029.3349539 | 71020.9504660 | 1152835.2947233 |
| 10 | 3833.8266658 | 67187.1238002 | 1081814.3442573 |
| 11 | 3652.5935694 | 63534.5302308 | 1014627.2204571 |
| 12 | 3480.8793597 | 60053.6508711 | 951092.6902263 |
| 13 | 3316.9706991 | 56736.6801720 | 891039.0393552 |
| 14 | 3160.5211128 | 53576.1590592 | 834302.3591832 |
| 15 | 3011.1093835 | 50564.9596757 | 780726.2001240 |
| 16 | 2868.6836511 | 47696.2710246 | 730161.2404483 |
| 17 | 2731.1456900 | 44965.1253346 | 682464.9994237 |
| 18 | 2597.4711674 | 42367.6541672 | 637499.8440891 |
| 19 | 2467.6659416 | 39899.9882256 | 595132.1899219 |
| 20 | 2342.1778274 | 37557.8103982 | 555232.2016963 |
| 21 | 2220.4980160 | 35337.3123822 | 517674.3912981 |
| 22 | 2103.4476192 | 33233.8647630 | 482337.0789159 |
| 23 | 1992.1162803 | 31241.7484827 | 450103.2141529 |
| 24 | 1886.2373075 | 29355.5111752 | 418861.4650702 |
| 25 | 1785.5559680 | 27569.9532072 | 389505.9544950 |
| 26 | 1689.8290426 | 25880.1201646 | 361936.0012878 |
| 27 | 1598.8243877 | 24281.3017769 | 336055.8751232 |
| 28 | 1512.3203265 | 22768.9814504 | 311774.5733463 |
| 29 | 1430.1052886 | 21338.8761618 | 289005.5918959 |
| 30 | 1351.9773680 | 19996.8987938 | 267666.7157341 |
| 31 | 1277.7437206 | 18709.1550732 | 247669.8169403 |
| 32 | 1207.2203759 | 17501.9346973 | 228960.6618671 |
| 33 | 1140.2317472 | 16361.7029501 | 211458.7271698 |
| 34 | 1076.6102877 | 15281.0926624 | 195097.0242197 |
| 35 | 1016.1060347 | 14208.8966277 | 179811.9315573 |
| 36 | 958.8364132 | 13310.0602145 | 165543.0349296 |
| 37 | 904.3858410 | 12405.6743735 | 152232.9747151 |
| 38 | 852.7053526 | 11552.9690209 | 139827.3003416 |
| 39 | 803.6624631 | 10749.3065578 | 128274.3313207 |
| 40 | 757.1306604 | 9992.1758974 | 117525.0247629 |
| 41 | 712.7891529 | 9279.3867445 | 107532.8488655 |
| 42 | 670.5459663 | 8608.8408382 | 98253.4621210 |
| 43 | 630.3125528 | 7978.5282854 | 89644.6212828 |
| 44 | 592.1821601 | 7386.3461253 | 81666.0929974 |
| 45 | 556.0524357 | 6830.2936896 | 74279.7468721 |
| 46 | 521.8259362 | 6308.4677534 | 67449.4531825 |
| 47 | 489.4096755 | 5819.0580779 | 61140.9854291 |
| 48 | 458.7150066 | 5360.3430713 | 55321.9273512 |
| 49 | 429.6575283 | 4937.6855430 | 49901.5842799 |

TABLE II.—*Cont.*
 COMMUTATION TABLE, NORTHAMPTON, FOUR PER CENT.

| Age. | C ₁ | M ₁ | R. |
|------|----------------|----------------|---------------|
| 0 | 2884.6153800 | 6574.2136525 | 49543.2222343 |
| 1 | 1263.8683391 | 3689.5982725 | 42909.0085818 |
| 2 | 446.2761727 | 2425.7299334 | 39279.4103093 |
| 3 | 286.3594037 | 1979.4537607 | 36853.6803759 |
| 4 | 161.9196407 | 1693.0943570 | 34874.2266152 |
| 5 | 145.4178735 | 1531.1747163 | 33181.1322582 |
| 6 | 106.3884934 | 1385.7568428 | 31649.9575419 |
| 7 | 80.3759231 | 1279.3683494 | 30264.2006991 |
| 8 | 56.2069392 | 1198.9924263 | 29984.8323497 |
| 9 | 40.5338502 | 1142.7854871 | 27785.8399234 |
| 10 | 33.7782084 | 1102.2516369 | 26643.0544363 |
| 11 | 31.2298526 | 1068.4734285 | 25540.8027994 |
| 12 | 30.0287045 | 1037.2435759 | 24472.3293799 |
| 13 | 28.8737540 | 1007.2148714 | 23435.0857950 |
| 14 | 27.7632250 | 978.3411174 | 22427.8709236 |
| 15 | 26.6954090 | 950.5778924 | 21449.5298062 |
| 16 | 27.2087823 | 923.8824834 | 20498.9519138 |
| 17 | 28.6304310 | 896.6737011 | 19575.0694304 |
| 18 | 29.0024725 | 868.0132701 | 18678.3957293 |
| 19 | 30.5779257 | 838.1407976 | 17810.3524592 |
| 20 | 31.5960192 | 807.5628719 | 16972.2116616 |
| 21 | 31.6466543 | 775.9668527 | 16164.6487897 |
| 22 | 30.4294748 | 744.3201984 | 15388.6819370 |
| 23 | 29.2591103 | 713.8907236 | 14644.3617386 |
| 24 | 28.1337600 | 684.6316133 | 13930.4710150 |
| 25 | 27.0516923 | 656.4978533 | 13245.8394017 |
| 26 | 26.0112428 | 629.4461610 | 12589.3415484 |
| 27 | 25.0108103 | 603.4349182 | 11959.8953874 |
| 28 | 24.0488558 | 578.4241079 | 11356.4604692 |
| 29 | 23.1239003 | 554.3752521 | 10778.0363613 |
| 30 | 22.2345195 | 531.2513518 | 10223.6611092 |
| 31 | 21.3793455 | 509.0168323 | 9692.4097574 |
| 32 | 20.5570628 | 487.6374868 | 9183.3929251 |
| 33 | 19.7664068 | 467.0804240 | 8695.7554383 |
| 34 | 19.0061603 | 447.3140172 | 8228.6750143 |
| 35 | 18.2751540 | 428.3078569 | 7781.3609971 |
| 36 | 17.5722638 | 410.0327029 | 7353.0531402 |
| 37 | 16.8964073 | 392.4604391 | 6943.0204373 |
| 38 | 16.2465458 | 375.5640318 | 6550.5599982 |
| 39 | 15.6216781 | 359.3174860 | 6174.9959664 |
| 40 | 15.2211227 | 343.6958079 | 5815.6784804 |
| 41 | 14.8282666 | 328.4746852 | 5471.9826725 |
| 42 | 14.4431196 | 313.6464156 | 5143.5079873 |
| 43 | 13.8876153 | 299.2032960 | 4829.8615717 |
| 44 | 13.3534700 | 285.3156807 | 4530.6582757 |
| 45 | 12.8398811 | 271.9622047 | 4249.3425950 |
| 46 | 12.3460397 | 259.1223236 | 3973.3803903 |
| 47 | 11.8711912 | 246.7762839 | 3714.2580667 |
| 48 | 11.4146074 | 234.9050927 | 3467.4817828 |
| 49 | 11.1162970 | 223.4904853 | 3232.5766901 |

NORTHAMPTON TABLE.

TABLE II.—Cont.
NORTHAMPTON, FOUR PER CENT.

| Age. | D_x | N_x | S_x |
|------|-------------|--------------|-----------------|
| 50 | 402.0159553 | 4528.6695877 | 45030.8, 87,365 |
| 51 | 375.5944378 | 4153.0751499 | 40502.2291492 |
| 52 | 350.4855637 | 3802.5945862 | 36349.1539993 |
| 53 | 326.7429160 | 3475.8516702 | 32546.5594131 |
| 54 | 304.3127769 | 3171.5388933 | 29070.7077429 |
| 55 | 283.1246885 | 2888.4142048 | 25899.1688496 |
| 56 | 263.1162825 | 2625.2979223 | 23010.7546448 |
| 57 | 244.2281657 | 2381.0697566 | 20385.4567225 |
| 58 | 226.4037607 | 2154.6659959 | 18004.3869659 |
| 59 | 209.5891784 | 1945.0768175 | 15849.7209700 |
| 60 | 193.7339952 | 1751.3437223 | 13904.6441525 |
| 61 | 178.7866739 | 1572.5570484 | 12153.3004302 |
| 62 | 164.7033863 | 1407.8536621 | 10580.7433818 |
| 63 | 151.5234716 | 1256.3301905 | 9172.8897197 |
| 64 | 139.1137474 | 1117.2164431 | 7916.5595292 |
| 65 | 127.5125920 | 989.7038441 | 6799.3430861 |
| 66 | 116.5980662 | 873.1057779 | 5809.6392420 |
| 67 | 106.3446885 | 766.7713094 | 4930.5334041 |
| 68 | 96.6879024 | 670.0834070 | 4169.7621547 |
| 69 | 87.6266922 | 582.4573148 | 3499.6787477 |
| 70 | 79.1183008 | 503.3390140 | 2917.2214329 |
| 71 | 71.1353318 | 432.2036822 | 2413.8224189 |
| 72 | 63.6494104 | 368.5542718 | 1981.6787367 |
| 73 | 56.6340835 | 311.9201883 | 1613.1244649 |
| 74 | 50.0542491 | 261.8559392 | 1301.2042766 |
| 75 | 43.9160134 | 217.9399258 | 1039.3483374 |
| 76 | 38.1666546 | 179.7732712 | 821.4084116 |
| 77 | 32.9100923 | 146.8322789 | 641.6351404 |
| 78 | 28.2485430 | 118.5837359 | 494.8028615 |
| 79 | 24.0939198 | 94.4898161 | 376.2191256 |
| 80 | 20.3472508 | 74.1425653 | 281.7293095 |
| 81 | 16.9365742 | 57.2059911 | 207.5867442 |
| 82 | 13.8784925 | 43.3274986 | 150.3807531 |
| 83 | 11.1462994 | 32.1811992 | 107.0532545 |
| 84 | 8.6779134 | 23.5032858 | 74.8720553 |
| 85 | 6.6325275 | 16.8707583 | 51.3687695 |
| 86 | 4.9710527 | 11.8991056 | 34.4980112 |
| 87 | 3.6595057 | 8.2395999 | 24.5989056 |
| 88 | 2.6311415 | 5.6024584 | 14.3593057 |
| 89 | 1.8898376 | 3.7180208 | 8.7508473 |
| 90 | 1.3482094 | 2.3704114 | 5.0322265 |
| 91 | 0.9581754 | 1.4122360 | 2.6618151 |
| 92 | 0.6503453 | .7618907 | 1.2495791 |
| 93 | 0.4168880 | .3450027 | .4876884 |
| 94 | 0.2254803 | .1195224 | .1426857 |
| 95 | 0.0963591 | .0231633 | .0231633 |
| 96 | 0.0231633 | .0000000 | .0000000 |

TABLE II.—Cont.
COMMUTATION TABLE, NORTHAMPTON, FOUR PER CENT.

| Age. | C _x | M _x | R _x |
|------|----------------|----------------|----------------|
| 50 | 10.5593478 | 212.3741283 | 3009.0862048 |
| 51 | 10.6679310 | 201.4148405 | 2796.7120165 |
| 52 | 10.2576260 | 190.7469095 | 2595.2971760 |
| 53 | 9.8631019 | 180.4892835 | 2404.5502665 |
| 54 | 9.4837518 | 170.6261816 | 2224.0609830 |
| 55 | 9.1189920 | 161.1424298 | 2053.4348014 |
| 56 | 8.7682616 | 152.0234378 | 1892.2923716 |
| 57 | 8.4310211 | 143.2551762 | 1740.2689338 |
| 58 | 8.1067512 | 134.8241551 | 1597.0137576 |
| 59 | 7.7949528 | 126.7174039 | 1462.1896025 |
| 60 | 7.4951469 | 118.9224511 | 1335.4721986 |
| 61 | 7.2008718 | 111.4273042 | 1216.5497475 |
| 62 | 6.8451764 | 104.2204324 | 1105.1224433 |
| 63 | 6.5819004 | 97.3752560 | 1000.9020109 |
| 64 | 6.2506176 | 90.7933556 | 903.5267549 |
| 65 | 6.0102096 | 84.5427380 | 812.7333993 |
| 66 | 5.7790172 | 78.5325284 | 728.1906613 |
| 67 | 5.5567760 | 72.7534812 | 649.6581329 |
| 68 | 5.3430544 | 67.1967052 | 576.9046517 |
| 69 | 5.1375520 | 61.8530508 | 509.7079465 |
| 70 | 4.9399536 | 56.7160988 | 447.8542957 |
| 71 | 4.7499560 | 51.7761452 | 391.1381969 |
| 72 | 4.5672648 | 47.0261892 | 339.3620517 |
| 73 | 4.3916008 | 42.4589244 | 292.3358625 |
| 74 | 4.2226936 | 38.0673236 | 249.8769381 |
| 75 | 4.0602824 | 33.8446300 | 211.8096145 |
| 76 | 3.7577132 | 29.7843476 | 177.9649845 |
| 77 | 3.4254878 | 26.0266344 | 148.1806369 |
| 78 | 3.0681396 | 22.6011466 | 122.1540025 |
| 79 | 2.8169816 | 19.5330070 | 99.5528559 |
| 80 | 2.6280891 | 16.7130254 | 80.0198489 |
| 81 | 2.4066751 | 14.0849363 | 63.3068235 |
| 82 | 2.1984051 | 11.6782612 | 49.2218872 |
| 83 | 2.0396805 | 9.4798561 | 37.5436260 |
| 84 | 1.7116200 | 7.4401756 | 28.0637699 |
| 85 | 1.4057777 | 5.7285556 | 20.6235943 |
| 86 | 1.1209297 | 4.3227779 | 14.8950387 |
| 87 | .8876140 | 3.2018482 | 10.5722608 |
| 88 | .6401063 | 2.3142342 | 7.3704126 |
| 89 | .4689424 | 1.6741279 | 5.0561784 |
| 90 | .3381796 | 1.2051855 | 3.3820505 |
| 91 | .2709772 | .8670059 | 2.1768650 |
| 92 | .2084440 | .5960287 | 1.3098591 |
| 93 | .1753736 | .3875847 | .7138304 |
| 94 | .1204489 | .2122111 | .3262457 |
| 95 | .0694898 | .0917622 | .1140346 |
| 96 | .0222724 | .0222724 | .0222724 |

TABLE III.
COMMUTATION COLUMNS, NORTHAMPTON TABLE,
THREE PER CENT.

| Age. | D. | N. | S. | M. | R. |
|------|-----------|------------|-----------|----------|----------|
| 0 | 11650.000 | 142947.351 | 2719587.3 | 7147.166 | 70883.26 |
| 1 | 8398.058 | 134549.293 | 2576639.9 | 4234.544 | 63736.09 |
| 2 | 6864.926 | 127684.367 | 2442090.7 | 2946.015 | 59501.55 |
| 3 | 6205.576 | 121478.791 | 2314406.3 | 2486.614 | 56555.53 |
| 4 | 5727.188 | 115751.604 | 2192927.5 | 2188.971 | 54068.92 |
| 5 | 5390.442 | 110361.161 | 2077175.9 | 2019.037 | 51879.95 |
| 6 | 5079.342 | 105281.819 | 1966814.7 | 1864.940 | 49860.91 |
| 7 | 4817.567 | 100464.252 | 1861532.9 | 1751.107 | 47995.97 |
| 8 | 4590.415 | 95873.837 | 1761068.7 | 1664.272 | 46244.87 |
| 9 | 4395.400 | 91478.437 | 1665194.8 | 1602.958 | 44580.59 |
| 10 | 4222.733 | 87255.705 | 1573716.4 | 1558.313 | 42977.64 |
| 11 | 4062.175 | 83193.530 | 1486460.7 | 1520.747 | 41419.32 |
| 12 | 3908.790 | 79284.740 | 1403267.2 | 1485.678 | 39898.58 |
| 13 | 3760.894 | 75523.846 | 1323982.4 | 1451.630 | 38412.90 |
| 14 | 3618.298 | 71905.548 | 1248458.6 | 1418.574 | 36961.27 |
| 15 | 3480.817 | 68424.731 | 1176553.0 | 1386.481 | 35542.69 |
| 16 | 3348.276 | 65076.455 | 1108128.3 | 1355.323 | 34156.21 |
| 17 | 3218.688 | 61857.767 | 1043051.8 | 1323.257 | 32800.89 |
| 18 | 3090.870 | 58766.897 | 981194.1 | 1289.188 | 31477.63 |
| 19 | 2964.917 | 55801.980 | 922427.2 | 1253.260 | 30188.44 |
| 20 | 2841.464 | 52960.516 | 866625.2 | 1216.164 | 28935.18 |
| 21 | 2719.999 | 50240.516 | 813664.7 | 1177.460 | 27719.02 |
| 22 | 2601.634 | 47638.882 | 763424.2 | 1138.318 | 26541.56 |
| 23 | 2487.856 | 45151.026 | 715785.3 | 1100.317 | 25403.24 |
| 24 | 2378.500 | 42772.526 | 670634.3 | 1063.422 | 24302.93 |
| 25 | 2273.402 | 40499.124 | 627861.7 | 1027.601 | 23239.50 |
| 26 | 2172.410 | 38326.714 | 587362.6 | 992.8241 | 22211.90 |
| 27 | 2075.372 | 36251.343 | 549035.9 | 959.0599 | 21219.08 |
| 28 | 1982.143 | 34269.199 | 512784.5 | 926.2791 | 20260.02 |
| 29 | 1892.585 | 32376.615 | 478515.3 | 894.4531 | 19333.74 |
| 30 | 1806.562 | 30570.053 | 446138.7 | 863.5541 | 18439.29 |
| 31 | 1723.945 | 28846.108 | 415568.7 | 833.5551 | 17575.73 |
| 32 | 1644.607 | 27201.501 | 386722.6 | 804.4298 | 16742.18 |
| 33 | 1568.429 | 25633.072 | 359521.1 | 776.1528 | 15937.75 |
| 34 | 1495.293 | 24137.779 | 333888.0 | 748.6994 | 15161.59 |
| 35 | 1425.087 | 22712.691 | 309750.2 | 722.0456 | 14412.90 |
| 36 | 1357.703 | 21354.988 | 287037.5 | 696.1682 | 13690.85 |
| 37 | 1293.034 | 20061.954 | 265682.5 | 671.0445 | 12994.68 |
| 38 | 1230.981 | 18830.973 | 245620.6 | 646.6525 | 12323.64 |
| 39 | 1171.446 | 17659.528 | 226789.6 | 622.9710 | 11676.98 |
| 40 | 1114.334 | 16545.194 | 209130.1 | 599.9792 | 11054.01 |
| 41 | 1059.258 | 15485.936 | 192584.9 | 577.3595 | 10454.03 |
| 42 | 1006.156 | 14479.780 | 177099.0 | 555.1096 | 9876.67 |
| 43 | 954.968 | 13524.811 | 162619.2 | 533.2273 | 9321.57 |
| 44 | 905.908 | 12618.903 | 149094.4 | 511.9823 | 8788.34 |
| 45 | 858.897 | 11760.007 | 136475.5 | 491.3561 | 8276.36 |
| 46 | 813.855 | 10946.152 | 124715.5 | 471.3307 | 7785.00 |
| 47 | 770.708 | 10175.444 | 113769.3 | 451.8885 | 7313.67 |

NORTHAMPTON TABLE.

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TABLE III.—Cont.
COMMUTATION COLUMNS, NORTHAMPTON TABLE,
THREE PER CENT.

| Age. | D. | N. | S. | M. | R. |
|------|---------|----------|----------|----------|----------|
| 48 | 729.384 | 9446.059 | 103593.9 | 433.0126 | 6861.780 |
| 49 | 689.814 | 8756.245 | 94147.80 | 414.6865 | 6428.768 |
| 50 | 651.702 | 8104.543 | 85391.56 | 396.6660 | 6014.081 |
| 51 | 614.782 | 7489.762 | 77287.01 | 378.7275 | 5617.415 |
| 52 | 579.244 | 6910.517 | 69797.25 | 361.0965 | 5238.688 |
| 53 | 545.256 | 6365.262 | 62886.73 | 343.9790 | 4877.591 |
| 54 | 512.756 | 5852.506 | 56521.47 | 327.3600 | 4533.612 |
| 55 | 481.686 | 5370.820 | 50668.97 | 311.2251 | 4206.252 |
| 56 | 451.991 | 4918.829 | 45298.15 | 295.5601 | 3895.027 |
| 57 | 423.618 | 4495.211 | 40379.32 | 280.3512 | 3599.467 |
| 58 | 396.514 | 4098.697 | 35884.11 | 265.5855 | 3319.116 |
| 59 | 370.629 | 3728.068 | 31785.41 | 251.2498 | 3053.530 |
| 60 | 345.916 | 3382.152 | 28057.34 | 237.3317 | 2802.281 |
| 61 | 322.328 | 3059.824 | 24675.19 | 223.8190 | 2564.949 |
| 62 | 299.821 | 2760.004 | 21615.37 | 210.6998 | 2341.130 |
| 63 | 278.506 | 2481.497 | 18855.36 | 198.1180 | 2130.430 |
| 64 | 258.179 | 2223.217 | 16373.87 | 185.9027 | 1932.312 |
| 65 | 238.946 | 1984.371 | 14150.55 | 174.1896 | 1746.409 |
| 66 | 220.615 | 1763.756 | 12166.18 | 162.8177 | 1572.220 |
| 67 | 203.149 | 1560.608 | 10402.42 | 151.7770 | 1409.402 |
| 68 | 186.512 | 1374.095 | 8841.81 | 141.0579 | 1257.625 |
| 69 | 170.673 | 1203.422 | 7467.72 | 130.6510 | 1116.567 |
| 70 | 155.598 | 1047.824 | 6264.30 | 120.5472 | 985.916 |
| 71 | 141.257 | 906.5667 | 5216.47 | 110.7377 | 865.369 |
| 72 | 127.619 | 778.9479 | 4309.91 | 101.2139 | 754.631 |
| 73 | 114.655 | 664.2927 | 3530.96 | 91.9675 | 653.417 |
| 74 | 102.339 | 561.9540 | 2866.67 | 82.9904 | 561.450 |
| 75 | 90.6425 | 471.3115 | 2304.71 | 74.2748 | 478.460 |
| 76 | 79.5405 | 391.7710 | 1833.40 | 65.8130 | 404.185 |
| 77 | 69.3167 | 322.4543 | 1441.63 | 57.9058 | 338.372 |
| 78 | 60.0196 | 262.4347 | 1119.18 | 50.6277 | 280.466 |
| 79 | 51.6893 | 210.7454 | 856.74 | 44.0455 | 229.838 |
| 80 | 44.0751 | 166.6703 | 646.00 | 37.9370 | 185.793 |
| 81 | 37.0434 | 129.6269 | 479.33 | 32.1889 | 147.856 |
| 82 | 30.6495 | 98.9774 | 349.70 | 26.8740 | 115.667 |
| 83 | 24.8547 | 74.1227 | 250.72 | 21.9718 | 88.793 |
| 84 | 19.5384 | 54.5843 | 176.60 | 17.3795 | 66.821 |
| 85 | 15.0781 | 39.5062 | 122.01 | 13.4883 | 49.442 |
| 86 | 11.4121 | 28.0941 | 82.51 | 10.2614 | 35.953 |
| 87 | 8.4817 | 19.6124 | 54.41 | 7.66344 | 25.692 |
| 88 | 6.1574 | 13.4550 | 34.80 | 5.58622 | 18.029 |
| 89 | 4.4655 | 8.9895 | 21.35 | 4.07368 | 12.442 |
| 90 | 3.2166 | 5.7729 | 12.36 | 2.95484 | 8.369 |
| 91 | 2.3033 | 3.4846 | 6.584 | 2.14015 | 5.414 |
| 92 | 1.5819 | 1.8827 | 3.100 | 1.48101 | 3.274 |
| 93 | 1.0238 | .8589 | 1.217 | .969059 | 1.793 |
| 94 | .5591 | .2998 | .3583 | .534150 | .8236 |
| 95 | .2413 | .0585 | .0585 | .232548 | .2804 |
| 96 | .0585 | .0000 | .0000 | .056858 | .0569 |

NORTHAMPTON TABLE.

TABLE II.
NORTHAMPTON TABLE, COMMUTATION COLUMNS,
FIVE PER CENT.
(Annuities only.)

| Age. | D_x | N_x | Age. | D_x | N_x |
|------|-----------|------------|------|----------|-----------|
| 1 | 8238.0952 | 95264.0796 | 49 | 268.8316 | 2807.6873 |
| 2 | 6605.8957 | 88658.1839 | 50 | 249.1411 | 2558.5462 |
| 3 | 5857.6828 | 82800.5011 | 51 | 230.5501 | 2327.9962 |
| 4 | 5303.1401 | 77497.3610 | 52 | 213.0856 | 2114.9106 |
| 5 | 4896.2550 | 72601.1060 | 53 | 196.7616 | 1918.1490 |
| 6 | 4525.7964 | 68075.3096 | 54 | 181.5091 | 1736.6399 |
| 7 | 4210.7869 | 63864.5227 | 55 | 167.2630 | 1569.3769 |
| 8 | 3935.8209 | 59928.7018 | 56 | 153.9622 | 1415.4147 |
| 9 | 3696.8322 | 56231.8696 | 57 | 141.5488 | 1273.8600 |
| 10 | 3483.9577 | 52747.9119 | 58 | 129.9685 | 1143.8975 |
| 11 | 3287.6516 | 49460.2603 | 59 | 119.1701 | 1024.7275 |
| 12 | 3103.2549 | 46357.0054 | 60 | 109.1054 | 915.6221 |
| 13 | 2928.9648 | 43428.0406 | 61 | 99.7290 | 815.8930 |
| 14 | 2764.2369 | 40663.8037 | 62 | 90.9983 | 724.8948 |
| 15 | 2608.5557 | 38055.2480 | 63 | 82.9191 | 641.9757 |
| 16 | 2461.4332 | 35593.8148 | 64 | 75.4030 | 566.5727 |
| 17 | 2321.0984 | 33272.7164 | 65 | 68.4567 | 498.1160 |
| 18 | 2186.4697 | 31086.2467 | 66 | 62.0009 | 436.1152 |
| 19 | 2057.4209 | 29028.8258 | 67 | 56.0047 | 380.1104 |
| 20 | 1934.1968 | 27094.6290 | 68 | 50.4391 | 329.6714 |
| 21 | 1816.2483 | 25278.3807 | 69 | 45.2764 | 284.3949 |
| 22 | 1704.1216 | 23574.2591 | 70 | 40.4911 | 243.9038 |
| 23 | 1598.5551 | 21975.7040 | 71 | 36.0589 | 207.8449 |
| 24 | 1499.1783 | 20476.5257 | 72 | 31.9569 | 175.8880 |
| 25 | 1405.6412 | 19070.8845 | 73 | 28.1639 | 147.7241 |
| 26 | 1317.6128 | 17753.2717 | 74 | 24.6596 | 123.0644 |
| 27 | 1234.7808 | 16518.4909 | 75 | 21.4252 | 101.6392 |
| 28 | 1156.8497 | 15361.0412 | 76 | 18.4430 | 83.1962 |
| 29 | 1083.5406 | 14278.1006 | 77 | 15.7662 | 67.4300 |
| 30 | 1014.5901 | 13263.5105 | 78 | 13.3916 | 54.03843 |
| 31 | 949.7493 | 12313.7611 | 79 | 11.3132 | 42.72520 |
| 32 | 888.7832 | 11424.9779 | 80 | 9.46300 | 33.26220 |
| 33 | 831.4698 | 10593.5081 | 81 | 7.80177 | 25.46044 |
| 34 | 777.5994 | 9815.9088 | 82 | 6.33218 | 19.12825 |
| 35 | 726.9740 | 9088.9348 | 83 | 5.03716 | 14.09109 |
| 36 | 679.4069 | 8409.5279 | 84 | 3.88432 | 10.20677 |
| 37 | 634.7215 | 7774.8063 | 85 | 2.94051 | 7.26626 |
| 38 | 592.7513 | 7182.0550 | 86 | 2.18317 | 5.08309 |
| 39 | 553.3390 | 6628.7161 | 87 | 1.59167 | 3.491415 |
| 40 | 516.3361 | 6112.3800 | 88 | 1.13350 | 2.357919 |
| 41 | 481.4672 | 5630.9128 | 89 | .806388 | 1.551531 |
| 42 | 448.6196 | 5182.2932 | 90 | .569798 | .981733 |
| 43 | 417.6858 | 4764.6075 | 91 | .401100 | .580633 |
| 44 | 388.6808 | 4375.9267 | 92 | .269647 | .310986 |
| 45 | 361.4911 | 4014.4356 | 93 | .171204 | .1397818 |
| 46 | 336.0094 | 3678.4262 | 94 | .0917167 | .0480652 |
| 47 | 312.1350 | 3366.2912 | 95 | .0388219 | .0092433 |
| 48 | 289.7723 | 3076.5189 | 96 | .0092433 | .0000000 |

TABLE V.

NORTHAMPTON TABLE OF MORTALITY.

Value of Annuities, first payment due in one year, computed at different rates of interest.

| Age. | Three Per Cent. | Four Per Cent. | Five Per Cent. | Six Per Cent. | Seven Per Cent. | Age. | Three Per Cent. | Four Per Cent. | Five Per Cent. | Six Per Cent. | Seven Per Cent. |
|------|-----------------|----------------|----------------|---------------|-----------------|------|-----------------|----------------|----------------|---------------|-----------------|
| 1 | 16.02 | 13.47 | 11.56 | 10.11 | 8.96 | 49 | 12.69 | 11.48 | 10.44 | 9.56 | 8.80 |
| 2 | 18.60 | 15.63 | 13.42 | 11.72 | 10.39 | 50 | 12.44 | 11.26 | 10.27 | 9.42 | 8.68 |
| 3 | 19.58 | 16.46 | 14.14 | 12.35 | 10.94 | 51 | 12.18 | 11.06 | 10.10 | 9.27 | 8.56 |
| 4 | 20.21 | 17.01 | 14.61 | 12.77 | 11.32 | 52 | 11.93 | 10.85 | 9.93 | 9.13 | 8.44 |
| 5 | 20.47 | 17.25 | 14.83 | 12.95 | 11.49 | 53 | 11.67 | 10.64 | 9.75 | 8.98 | 8.31 |
| 6 | 20.73 | 17.48 | 15.04 | 13.16 | 11.67 | 54 | 11.41 | 10.42 | 9.57 | 8.83 | 8.18 |
| 7 | 20.85 | 17.61 | 15.17 | 13.28 | 11.78 | 55 | 11.15 | 10.20 | 9.38 | 8.67 | 8.05 |
| 8 | 20.89 | 17.66 | 15.23 | 13.34 | 11.84 | 56 | 10.88 | 9.98 | 9.19 | 8.51 | 7.91 |
| 9 | 20.81 | 17.63 | 15.21 | 13.34 | 11.85 | 57 | 10.61 | 9.75 | 9.00 | 8.34 | 7.77 |
| 10 | 20.66 | 17.52 | 15.14 | 13.29 | 11.81 | 58 | 10.34 | 9.52 | 8.80 | 8.17 | 7.62 |
| 11 | 20.48 | 17.39 | 15.04 | 13.21 | 11.75 | 59 | 10.06 | 9.28 | 8.60 | 8.00 | 7.47 |
| 12 | 20.28 | 17.25 | 14.94 | 13.13 | 11.69 | 60 | 9.78 | 9.04 | 8.39 | 7.82 | 7.31 |
| 13 | 20.08 | 17.11 | 14.83 | 13.04 | 11.62 | 61 | 9.49 | 8.80 | 8.18 | 7.64 | 7.15 |
| 14 | 19.87 | 16.95 | 14.71 | 12.95 | 11.55 | 62 | 9.21 | 8.55 | 7.97 | 7.45 | 6.99 |
| 15 | 19.66 | 16.79 | 14.59 | 12.86 | 11.47 | 63 | 8.91 | 8.29 | 7.74 | 7.25 | 6.82 |
| 16 | 19.44 | 16.63 | 14.46 | 12.76 | 11.38 | 64 | 8.61 | 8.03 | 7.51 | 7.05 | 6.64 |
| 17 | 19.22 | 16.46 | 14.33 | 12.66 | 11.30 | 65 | 8.30 | 7.76 | 7.28 | 6.84 | 6.45 |
| 18 | 19.01 | 16.31 | 14.22 | 12.56 | 11.23 | 66 | 7.99 | 7.49 | 7.03 | 6.63 | 6.26 |
| 19 | 18.82 | 16.17 | 14.11 | 12.48 | 11.16 | 67 | 7.68 | 7.21 | 6.79 | 6.41 | 6.06 |
| 20 | 18.64 | 16.04 | 14.01 | 12.40 | 11.09 | 68 | 7.37 | 6.93 | 6.54 | 6.18 | 5.86 |
| 21 | 18.47 | 15.91 | 13.92 | 12.33 | 11.04 | 69 | 7.05 | 6.65 | 6.28 | 5.95 | 5.65 |
| 22 | 18.31 | 15.80 | 13.83 | 12.27 | 10.99 | 70 | 6.73 | 6.36 | 6.02 | 5.72 | 5.43 |
| 23 | 18.15 | 15.68 | 13.75 | 12.20 | 10.94 | 71 | 6.42 | 6.08 | 5.76 | 5.48 | 5.22 |
| 24 | 17.98 | 15.56 | 13.66 | 12.13 | 10.89 | 72 | 6.10 | 5.79 | 5.50 | 5.24 | 5.00 |
| 25 | 17.81 | 15.44 | 13.57 | 12.06 | 10.84 | 73 | 5.79 | 5.51 | 5.25 | 5.00 | 4.78 |
| 26 | 17.64 | 15.32 | 13.47 | 11.99 | 10.78 | 74 | 5.49 | 5.23 | 4.99 | 4.77 | 4.57 |
| 27 | 17.47 | 15.19 | 13.38 | 11.92 | 10.72 | 75 | 5.20 | 4.96 | 4.74 | 4.54 | 4.35 |
| 28 | 17.29 | 15.06 | 13.28 | 11.84 | 10.66 | 76 | 4.93 | 4.71 | 4.51 | 4.33 | 4.15 |
| 29 | 17.11 | 14.92 | 13.18 | 11.76 | 10.60 | 77 | 4.65 | 4.46 | 4.28 | 4.11 | 3.95 |
| 30 | 16.92 | 14.78 | 13.07 | 11.68 | 10.54 | 78 | 4.37 | 4.20 | 4.04 | 3.88 | 3.74 |
| 31 | 16.73 | 14.64 | 12.97 | 11.60 | 10.47 | 79 | 4.08 | 3.92 | 3.78 | 3.64 | 3.51 |
| 32 | 16.54 | 14.50 | 12.85 | 11.51 | 10.40 | 80 | 3.78 | 3.64 | 3.52 | 3.39 | 3.28 |
| 33 | 16.34 | 14.35 | 12.74 | 11.42 | 10.33 | 81 | 3.50 | 3.38 | 3.26 | 3.16 | 3.06 |
| 34 | 16.14 | 14.20 | 12.62 | 11.33 | 10.26 | 82 | 3.23 | 3.12 | 3.02 | 2.93 | 2.84 |
| 35 | 15.94 | 14.04 | 12.50 | 11.24 | 10.18 | 83 | 2.98 | 2.89 | 2.80 | 2.71 | 2.63 |
| 36 | 15.73 | 13.88 | 12.38 | 11.14 | 10.10 | 84 | 2.79 | 2.71 | 2.63 | 2.55 | 2.48 |
| 37 | 15.52 | 13.72 | 12.25 | 11.04 | 10.02 | 85 | 2.62 | 2.54 | 2.47 | 2.40 | 2.34 |
| 38 | 15.30 | 13.55 | 12.12 | 10.93 | 9.94 | 86 | 2.46 | 2.39 | 2.33 | 2.27 | 2.21 |
| 39 | 15.08 | 13.38 | 11.98 | 10.82 | 9.85 | 87 | 2.31 | 2.25 | 2.19 | 2.14 | 2.09 |
| 40 | 14.85 | 13.20 | 11.84 | 10.71 | 9.75 | 88 | 2.19 | 2.13 | 2.08 | 2.03 | 1.98 |
| 41 | 14.62 | 13.02 | 11.70 | 10.59 | 9.66 | 89 | 2.01 | 1.97 | 1.92 | 1.88 | 1.84 |
| 42 | 14.39 | 12.84 | 11.55 | 10.47 | 9.56 | 90 | 1.79 | 1.76 | 1.72 | 1.69 | 1.66 |
| 43 | 14.16 | 12.66 | 11.41 | 10.36 | 9.47 | 91 | 1.50 | 1.47 | 1.45 | 1.42 | 1.40 |
| 44 | 13.93 | 12.47 | 11.26 | 10.24 | 9.37 | 92 | 1.19 | 1.17 | 1.15 | 1.14 | 1.12 |
| 45 | 13.69 | 12.28 | 11.11 | 10.11 | 9.26 | 93 | .84 | .83 | .82 | .81 | .80 |
| 46 | 13.45 | 12.09 | 10.95 | 9.98 | 9.15 | 94 | .54 | .53 | .52 | .52 | .51 |
| 47 | 13.20 | 11.89 | 10.78 | 9.85 | 9.04 | 95 | .24 | .24 | .24 | .24 | .23 |
| 48 | 12.95 | 11.69 | 10.62 | | 8.93 | | | | | | |

NORTHAMPTON TABLE.

TABLE VI.
JOINT LIFE ANNUITIES—TWO LIVES.

| AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | |
|--------|----------|----------------|----------------|---------------|--------|----------|----------------|----------------|---------------|--------|
| Older. | Younger. | | | | Older. | Younger. | | | | |
| 1 | 1 | 8.252 | 7.287 | 6.515 | 17 | 7 | 13.599 | 12.083 | 10.849 | |
| | | | | | | 12 | 13.480 | 12.009 | 10.805 | |
| | | | | | | 17 | 13.019 | 11.630 | 10.489 | |
| 2 | 2 | 11.107 | 9.793 | 8.741 | 18 | 3 | 12.531 | 11.134 | 9.998 | |
| | | | | | | 8 | 13.569 | 12.070 | 10.847 | |
| 3 | 3 | 12.325 | 10.862 | 9.689 | 13 | 13 | 13.303 | 11.864 | 10.685 | |
| | | | | | | 18 | 12.841 | 11.483 | 10.365 | |
| 4 | 4 | 13.185 | 11.621 | 10.365 | 19 | 4 | 12.876 | 11.447 | 10.284 | |
| | | | | | | 9 | 13.482 | 12.006 | 10.799 | |
| 5 | 5 | 13.591 | 11.984 | 10.691 | 14 | 14 | 13.130 | 11.723 | 10.568 | |
| | | | | | | 19 | 12.679 | 11.351 | 10.255 | |
| 6 | 1 | 10.741 | 9.479 | 8.467 | 20 | 5 | 12.993 | 11.561 | 10.391 | |
| | | 6 | 14.005 | 12.358 | | 11.031 | 10 | 13.355 | 11.906 | 10.719 |
| 7 | 2 | 12.581 | 11.100 | 9.911 | 15 | 15 | 12.961 | 11.585 | 10.453 | |
| | | 7 | 14.224 | 12.596 | | 11.251 | 20 | 12.535 | 11.232 | 10.156 |
| 8 | 3 | 13.319 | 11.755 | 10.498 | 21 | 1 | 10.053 | 8.961 | 8.070 | |
| | | 8 | 14.399 | 12.731 | | 11.382 | 6 | 13.121 | 11.685 | 10.510 |
| 9 | 4 | 13.775 | 12.165 | 10.869 | 11 | 11 | 13.217 | 11.797 | 10.631 | |
| | | 9 | 14.396 | 12.744 | | 11.404 | 16 | 12.799 | 11.452 | 10.342 |
| 10 | 5 | 13.933 | 12.315 | 11.010 | 17 | 17 | 12.409 | 11.131 | 10.074 | |
| | | 10 | 14.277 | 12.665 | | 11.345 | 21 | 12.409 | 11.131 | 10.074 |
| 11 | 1 | 10.782 | 9.544 | 8.547 | 22 | 2 | 11.605 | 10.344 | 9.313 | |
| | | 9 | 14.068 | 12.447 | | 11.136 | 7 | 13.178 | 11.748 | 10.576 |
| | | 11 | 14.133 | 12.546 | | 11.249 | 12 | 13.078 | 11.686 | 10.541 |
| 12 | 2 | 12.438 | 11.010 | 9.857 | 17 | 17 | 12.646 | 11.327 | 10.239 | |
| | | 7 | 14.111 | 12.498 | | 11.192 | 22 | 12.293 | 11.042 | 10.002 |
| | | 12 | 13.966 | 12.411 | | 11.139 | 23 | 12.161 | 10.843 | 9.764 |
| 13 | 3 | 13.019 | 11.528 | 10.324 | 8 | 8 | 13.178 | 11.761 | 10.597 | |
| | | 8 | 14.089 | 12.492 | | 11.197 | 13 | 12.934 | 11.570 | 10.446 |
| | | 13 | 13.789 | 12.268 | | 11.023 | 18 | 12.500 | 11.209 | 10.140 |
| 14 | 4 | 13.374 | 11.850 | 10.617 | 18 | 18 | 12.179 | 10.951 | 9.928 | |
| | | 9 | 13.992 | 12.421 | | 11.144 | 23 | 12.179 | 10.951 | 9.928 |
| | | 14 | 13.604 | 12.118 | | 10.899 | 24 | 12.511 | 11.163 | 10.057 |
| 15 | 5 | 13.479 | 11.954 | 10.716 | 9 | 9 | 13.112 | 11.715 | 10.566 | |
| | | 10 | 13.841 | 12.302 | | 11.048 | 14 | 12.784 | 11.450 | 10.348 |
| | | 15 | 13.411 | 11.960 | | 10.767 | 19 | 12.361 | 11.096 | 10.048 |
| 16 | 6 | 10.406 | 9.243 | 8.301 | 24 | 24 | 12.062 | 10.858 | 9.853 | |
| | | 6 | 13.578 | 12.052 | | 10.812 | 5 | 12.633 | 11.281 | 10.170 |
| | | 11 | 13.664 | 12.158 | | 10.929 | 10 | 12.998 | 11.627 | 10.497 |
| 17 | 7 | 13.212 | 11.793 | 10.626 | 15 | 15 | 12.630 | 11.324 | 10.244 | |
| | | | | | | 20 | 12.229 | 10.989 | 9.960 | |
| | | | | | | 25 | 11.944 | 10.764 | 9.776 | |
| 18 | 8 | 10.406 | 9.243 | 8.301 | 26 | 1 | 9.770 | 8.742 | 7.897 | |
| | | 8 | 13.578 | 12.052 | | 10.812 | 6 | 12.754 | 11.400 | 10.285 |

NORTHAMPTON TABLE.

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TABLE VI.—Cont.
JOINT LIFE ANNUITIES—TWO LIVES.

| AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | |
|--------|----------|----------------|----------------|---------------|--------|----------|----------------|----------------|---------------|-------|
| Older. | Younger. | | | | Older. | Younger. | | | | |
| 26 | 11 | 12 861 | 11.519 | 10.410 | 33 | 13 | 12.125 | 10.932 | 9.934 | |
| | 16 | 12.470 | 11.193 | 10.135 | | 18 | 11.750 | 10.613 | 9.600 | |
| | 21 | 12.105 | 10.890 | 9.879 | | 23 | 11.485 | 10.393 | 9.474 | |
| | 26 | 11.822 | 10.667 | 9.697 | | 28 | 11.225 | 10.181 | 9.299 | |
| 27 | 2 | 11.264 | 10.080 | 9.104 | 34 | 38 | 10.902 | 9.919 | 9.082 | |
| | 7 | 12.798 | 11.452 | 10.341 | | 4 | 11.651 | 10.488 | 9.518 | |
| | 12 | 12.715 | 11.402 | 10.314 | | 9 | 12.234 | 11.024 | 10.012 | |
| | 17 | 12.311 | 11.063 | 10.027 | | 14 | 11.959 | 10.796 | 9.822 | |
| | 22 | 11.987 | 10.796 | 9.803 | | 19 | 11.595 | 10.486 | 9.554 | |
| | 27 | 11.699 | 10.567 | 9.616 | | 24 | 11.352 | 10.285 | 9.386 | |
| 28 | 29 | 11.088 | 10.069 | 9.207 | 35 | 34 | 10.759 | 9.801 | 8.984 | |
| | 3 | 11.790 | 10.555 | 9.537 | | 5 | 11.732 | 10.572 | 9.602 | |
| | 8 | 12.786 | 11.455 | 10.354 | | 10 | 12.098 | 10.916 | 9.925 | |
| | 13 | 12.564 | 11.280 | 10.215 | | 15 | 11.787 | 10.655 | 9.703 | |
| | 18 | 12.158 | 10.939 | 9.924 | | 20 | 11.445 | 10.363 | 9.451 | |
| 29 | 23 | 11.866 | 10.699 | 9.724 | 36 | 25 | 11.217 | 10.175 | 9.295 | |
| | 28 | 11.573 | 10.466 | 9.533 | | 30 | 10.948 | 9.954 | 9.112 | |
| | 4 | 12.116 | 10.855 | 9.813 | | 35 | 10.612 | 9.680 | 8.883 | |
| | 9 | 12.710 | 11.401 | 10.315 | | 37 | 1 | 9.047 | 8.173 | 7.442 |
| | 14 | 12.408 | 11.153 | 10.110 | | | 6 | 11.812 | 10.656 | 9.687 |
| | 19 | 12.013 | 10.820 | 9.826 | | | 11 | 11.941 | 10.788 | 9.820 |
| 24 | 11.743 | 10.600 | 9.643 | 16 | 11.609 | | 10.507 | 9.579 | | |
| 29 | 11.445 | 10.362 | 9.448 | 21 | 11.302 | | 10.246 | 9.354 | | |
| 30 | 5 | 12.220 | 10.959 | 9.913 | 38 | | 26 | 11.078 | 10.062 | 9.201 |
| | 10 | 12.586 | 11.304 | 10.239 | | 31 | 10.805 | 9.837 | 9.014 | |
| | 15 | 12.246 | 11.021 | 10.001 | | 36 | 10.462 | 9.555 | 8.778 | |
| | 20 | 11.873 | 10.707 | 9.732 | | 39 | 2 | 10.392 | 9.390 | 8.551 |
| | 25 | 11.618 | 10.499 | 9.561 | | | 7 | 11.819 | 10.676 | 9.715 |
| | 30 | 11.313 | 10.255 | 9.360 | | | 12 | 11.773 | 10.651 | 9.707 |
| 31 | 1 | 9.438 | 8.483 | 7.691 | 17 | | 11.430 | 10.358 | 9.454 | |
| | 6 | 12.322 | 11.062 | 10.015 | 22 | | 11.163 | 10.132 | 9.260 | |
| | 11 | 12.441 | 11.188 | 10.144 | 27 | | 10.936 | 9.946 | 9.105 | |
| | 16 | 12.078 | 10.883 | 9.886 | 32 | 10.659 | 9.716 | 8.913 | | |
| | 21 | 11.742 | 10.600 | 9.644 | 37 | 10.307 | 9.427 | 8.670 | | |
| | 26 | 11.489 | 10.396 | 9.476 | 38 | 3 | 10.838 | 9.800 | 8.928 | |
| 31 | 11.179 | 10.146 | 9.270 | 8 | | 11.772 | 10.648 | 9.701 | | |
| 32 | 2 | 10.865 | 9.767 | 8.855 | | 13 | 11.600 | 10.509 | 9.588 | |
| | 7 | 12.350 | 11.100 | 10.060 | | 18 | 11.257 | 10.214 | 9.333 | |
| | 12 | 12.286 | 11.062 | 10.042 | | 23 | 11.020 | 10.015 | 9.163 | |
| | 17 | 11.911 | 10.746 | 9.771 | | 28 | 10.791 | 9.826 | 9.005 | |
| | 22 | 11.615 | 10.498 | 9.561 | 33 | 10.508 | 9.591 | 8.808 | | |
| | 27 | 11.359 | 10.289 | 9.389 | 38 | 10.149 | 9.294 | 8.558 | | |
| 33 | 32 | 11.042 | 10.034 | 9.178 | 39 | 4 | 11.097 | 10.043 | 9.157 | |
| | 3 | 11.355 | 10.213 | 9.263 | | 9 | 11.665 | 10.565 | 9.637 | |
| | 8 | 12.323 | 11.060 | 10.061 | | | | | | |

TABLE VI.—Cont.
JOINT LIFE ANNUITIES—TWO LIVES.

| AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. |
|--------|----------|----------------|----------------|---------------|--------|----------|----------------|----------------|---------------|
| Older. | Younger. | | | | Older. | Younger. | | | |
| 39 | 14 | 11.420 | 10.360 | 9.464 | 44 | 29 | 10.117 | 9.267 | 8.536 |
| | 19 | 11.089 | 10.074 | 9.215 | | 34 | 9.869 | 9.058 | 8.358 |
| | 24 | 10.874 | 9.895 | 9.063 | | 39 | 9.550 | 8.787 | 8.127 |
| | 29 | 10.642 | 9.703 | 8.902 | | 44 | 9.160 | 8.457 | 7.843 |
| | 34 | 10.354 | 9.463 | 8.701 | 45 | 5 | 10.500 | 9.571 | 8.778 |
| 39 | 9.986 | 9.158 | 8.442 | 10 | | 10.851 | 9.900 | 9.088 | |
| 40 | 5 | 11.150 | 10.102 | 9.219 | | 15 | 10.607 | 9.690 | 8.905 |
| | 10 | 11.513 | 10.442 | 9.537 | | 20 | 10.330 | 9.448 | 8.692 |
| | 15 | 11.234 | 10.205 | 9.333 | | 25 | 10.160 | 9.304 | 8.569 |
| | 20 | 10.924 | 9.937 | 9.100 | 30 | 9.959 | 9.135 | 8.424 | |
| | 25 | 10.725 | 9.771 | 8.960 | 35 | 9.766 | 8.921 | 8.242 | |
| | 30 | 10.490 | 9.576 | 8.795 | 40 | 9.381 | 8.643 | 8.003 | |
| | 35 | 10.196 | 9.331 | 8.589 | 45 | 8.990 | 8.312 | 7.718 | |
| 40 | 9.820 | 9.016 | 8.322 | 46 | 1 | 8.071 | 7.379 | 6.787 | |
| 41 | 1 | 8.585 | 7.800 | | 7.135 | 6 | 10.528 | 9.609 | 8.823 |
| | 6 | 11.203 | 10.163 | | 9.283 | 11 | 10.697 | 9.774 | 8.962 |
| | 11 | 11.342 | 10.302 | | 9.420 | 16 | 10.408 | 9.522 | 8.762 |
| | 16 | 11.044 | 10.046 | | 9.198 | 21 | 10.165 | 9.310 | 8.574 |
| | 21 | 10.768 | 9.809 | | 8.992 | 26 | 10.000 | 9.170 | 8.455 |
| | 26 | 10.574 | 9.647 | | 8.855 | 31 | 9.797 | 8.998 | 8.309 |
| | 31 | 10.336 | 9.448 | | 8.688 | 36 | 9.540 | 8.781 | 8.122 |
| | 36 | 10.037 | 9.198 | 8.476 | 41 | 9.210 | 8.497 | 7.878 | |
| 41 | 9.654 | 8.876 | 8.202 | 46 | 8.815 | 8.162 | 7.589 | | |
| 42 | 2 | 9.839 | 8.942 | 8.182 | 47 | 2 | 9.221 | 8.435 | 7.760 |
| | 7 | 11.190 | 10.165 | 9.296 | | 7 | 10.491 | 9.589 | 8.815 |
| | 12 | 11.165 | 10.156 | 9.298 | | 12 | 10.481 | 9.592 | 8.827 |
| | 17 | 10.856 | 9.889 | 9.065 | | 17 | 10.208 | 9.353 | 8.617 |
| | 22 | 10.619 | 9.685 | 8.889 | | 22 | 10.001 | 9.173 | 8.458 |
| | 27 | 10.423 | 9.522 | 8.751 | | 27 | 9.836 | 9.032 | 8.338 |
| | 32 | 10.182 | 9.320 | 8.580 | | 32 | 9.631 | 8.858 | 8.189 |
| | 37 | 9.877 | 9.062 | 8.362 | | 37 | 9.370 | 8.636 | 7.998 |
| | 42 | 9.491 | 8.737 | 8.083 | | 42 | 9.037 | 8.350 | 7.751 |
| 43 | 3 | 10.242 | 9.315 | 8.528 | 48 | 3 | 9.566 | 8.759 | 8.063 |
| | 8 | 11.130 | 10.124 | 9.270 | | 8 | 10.404 | 9.524 | 8.767 |
| | 13 | 10.985 | 10.007 | 9.173 | | 13 | 10.284 | 9.425 | 8.686 |
| | 18 | 10.677 | 9.739 | 8.938 | | 18 | 10.011 | 9.186 | 8.473 |
| | 23 | 10.470 | 9.562 | 8.785 | | 23 | 9.833 | 9.031 | 8.338 |
| | 28 | 10.272 | 9.396 | 8.645 | | 28 | 9.667 | 8.890 | 8.217 |
| | 33 | 10.027 | 9.190 | 8.471 | | 33 | 9.461 | 8.714 | 8.066 |
| | 38 | 9.716 | 8.927 | 8.246 | | 38 | 9.195 | 8.487 | 7.870 |
| | 43 | 9.326 | 8.599 | 7.965 | | 43 | 8.862 | 8.200 | 7.621 |
| | 48 | 8.453 | 7.849 | 7.316 | | 48 | 8.453 | 7.849 | 7.316 |
| 44 | 4 | 10.468 | 9.531 | 8.733 | 49 | 4 | 9.744 | 8.932 | 8.230 |
| | 9 | 11.012 | 10.031 | 9.197 | | 9 | 10.263 | 9.409 | 8.673 |
| | 14 | 10.799 | 9.852 | 9.042 | | 14 | 10.080 | 9.252 | 8.538 |
| | 19 | 10.502 | 9.592 | 8.814 | | | | | |
| 24 | 10.317 | 9.435 | 8.670 | | | | | | |

TABLE VI.—Cont.
JOINT LIFE ANNU TIES—TWO LIVES.

| AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. |
|--------|----------|----------------|----------------|---------------|--------|----------|----------------|----------------|---------------|
| Older. | Younger. | | | | Older. | Younger. | | | |
| 49 | 19 | 9.818 | 9.021 | 8.332 | 53 | 43 | 8.308 | 7.724 | 7.208 |
| | 24 | 9.661 | 8.886 | 8.214 | | 48 | 7.965 | 7.424 | 6.945 |
| | 29 | 9.495 | 8.744 | 8.092 | | 53 | 7.544 | 7.056 | 6.620 |
| | 34 | 9.286 | 8.565 | 7.938 | 54 | 4 | 8.957 | 8.269 | 7.668 |
| | 39 | 9.015 | 8.333 | 7.737 | | 9 | 9.412 | 8.718 | 8.085 |
| | 44 | 8.683 | 8.046 | 7.488 | | 14 | 9.290 | 8.586 | 7.970 |
| | 49 | 8.266 | 7.686 | 7.173 | | 19 | 9.003 | 8.383 | 7.788 |
| 50 | 5 | 9.742 | 8.941 | 8.248 | 24 | 8.934 | 8.270 | 7.688 | |
| | 10 | 10.085 | 9.260 | 8.548 | 29 | 8.799 | 8.153 | 7.586 | |
| | 15 | 9.872 | 9.076 | 8.386 | 34 | 8.629 | 8.005 | 7.457 | |
| | 20 | 9.630 | 8.861 | 8.195 | 39 | 8.406 | 7.810 | 7.286 | |
| | 25 | 9.488 | 8.739 | 8.080 | 44 | 8.130 | 7.569 | 7.073 | |
| | 30 | 9.321 | 8.596 | 7.966 | 49 | 7.780 | 7.262 | 6.802 | |
| | 35 | 9.110 | 8.415 | 7.809 | 54 | 7.362 | 6.897 | 6.480 | |
| | 40 | 8.834 | 8.177 | 7.602 | 55 | 5 | 8.931 | 8.256 | 7.665 |
| | 45 | 8.503 | 7.891 | 7.353 | | 10 | 9.256 | 8.500 | 7.951 |
| | 50 | 8.081 | 7.522 | 7.030 | | 15 | 9.077 | 8.403 | 7.812 |
| 51 | 1 | 7.479 | 6.885 | 6.370 | | 20 | 8.869 | 8.216 | 7.643 |
| | 6 | 9.745 | 8.956 | 8.271 | | 25 | 8.754 | 8.116 | 7.555 |
| | 11 | 9.894 | 9.100 | 8.411 | | 30 | 8.619 | 7.999 | 7.453 |
| | 16 | 9.665 | 8.899 | 8.234 | 35 | 8.448 | 7.849 | 7.322 | |
| | 21 | 9.454 | 8.712 | 8.067 | 40 | 8.221 | 7.651 | 7.146 | |
| | 26 | 9.318 | 8.595 | 7.966 | 45 | 7.948 | 7.411 | 6.935 | |
| | 31 | 9.151 | 8.451 | 7.841 | 50 | 7.593 | 7.098 | 6.658 | |
| | 36 | 8.937 | 8.267 | 7.681 | 55 | 7.179 | 6.735 | 6.336 | |
| | 41 | 8.658 | 8.025 | 7.470 | 56 | 1 | 6.843 | 6.346 | 5.911 |
| | 46 | 8.326 | 7.737 | 7.219 | | 6 | 8.902 | 8.241 | 7.662 |
| 51 | 7.900 | 7.366 | 6.893 | 11 | | 9.052 | 8.386 | 7.801 | |
| 52 | 2 | 8.520 | 7.848 | 7.264 | | 16 | 8.858 | 8.214 | 7.648 |
| | 7 | 9.690 | 8.919 | 8.248 | | 21 | 8.679 | 8.053 | 7.502 |
| | 12 | 9.698 | 8.934 | 8.270 | | 26 | 8.570 | 7.958 | 7.419 |
| | 17 | 9.461 | 8.724 | 8.083 | 31 | 8.436 | 7.841 | 7.316 | |
| | 22 | 9.284 | 8.568 | 7.944 | 36 | 8.264 | 7.690 | 7.183 | |
| | 27 | 9.148 | 8.451 | 7.842 | 41 | 8.035 | 7.489 | 7.005 | |
| | 32 | 8.980 | 8.306 | 7.716 | 46 | 7.763 | 7.249 | 6.793 | |
| | 37 | 8.763 | 8.119 | 7.553 | 51 | 7.409 | 6.936 | 6.515 | |
| | 42 | 8.483 | 7.875 | 7.340 | 56 | 6.993 | 6.571 | 6.190 | |
| | 47 | 8.147 | 7.582 | 7.084 | 57 | 2 | 7.756 | 7.199 | 6.709 |
| 52 | 7.724 | 7.213 | 6.758 | 7 | | 8.817 | 8.176 | 7.612 | |
| 53 | 3 | 8.815 | 8.128 | 7.529 | | 12 | 8.839 | 8.203 | 7.643 |
| | 8 | 9.591 | 8.841 | 8.188 | | 17 | 8.639 | 8.024 | 7.481 |
| | 13 | 9.497 | 8.763 | 8.123 | | 22 | 8.451 | 7.891 | 7.362 |
| | 18 | 9.260 | 8.552 | 7.934 | | 27 | 8.383 | 7.797 | 7.279 |
| | 23 | 9.111 | 8.421 | 7.818 | 32 | 8.250 | 7.680 | 7.175 | |
| | 28 | 8.975 | 8.304 | 7.716 | 37 | 8.076 | 7.527 | 7.041 | |
| | 33 | 8.806 | 8.157 | 7.588 | 42 | 7.848 | 7.320 | 6.862 | |
| | 38 | 8.586 | 7.966 | 7.421 | 47 | 7.574 | 7.084 | 6.648 | |

TABLE VI.—Cont.
JOINT LIFE ANNUITIES—TWO LIVES.

| AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. |
|--------|----------|----------------|----------------|---------------|--------|----------|----------------|----------------|---------------|
| Older. | Younger. | | | | Older. | Younger. | | | |
| 57 | 58 | 7.225 | 6.774 | 6.371 | 61 | 46 | 7.076 | 6.648 | 6.263 |
| | 57 | 6.805 | 6.404 | 6.041 | | 51 | 6.705 | 6.395 | 6.035 |
| 58 | 3 | 7.986 | 7.421 | 6.922 | 62 | 56 | 6.465 | 6.100 | 5.770 |
| | 8 | 8.691 | 8.073 | 7.527 | | 61 | 6.090 | 5.712 | 5.420 |
| | 13 | 8.622 | 8.015 | 7.479 | | 2 | 6.894 | 6.452 | 6.059 |
| | 18 | 8.422 | 7.835 | 7.316 | | 7 | 7.828 | 7.319 | 6.865 |
| | 23 | 8.299 | 7.725 | 7.218 | | 12 | 7.863 | 7.357 | 6.905 |
| | 28 | 8.193 | 7.632 | 7.135 | | 17 | 7.700 | 7.208 | 6.770 |
| | 33 | 8.060 | 7.515 | 7.031 | | 22 | 7.580 | 7.100 | 6.670 |
| | 38 | 7.884 | 7.360 | 6.894 | | 27 | 7.499 | 7.027 | 6.605 |
| | 43 | 7.660 | 7.162 | 6.718 | | 32 | 7.397 | 6.937 | 6.524 |
| | 48 | 7.382 | 6.915 | 6.498 | | 37 | 7.265 | 6.819 | 6.418 |
| 59 | 53 | 7.039 | 6.609 | 6.225 | 63 | 42 | 7.088 | 6.660 | 6.276 |
| | 58 | 6.614 | 6.234 | 5.860 | | 47 | 6.875 | 6.469 | 6.104 |
| | 4 | 8.075 | 7.514 | 7.017 | | 52 | 6.600 | 6.222 | 5.880 |
| | 9 | 8.519 | 7.927 | 7.403 | | 57 | 6.270 | 5.925 | 5.613 |
| | 14 | 8.399 | 7.821 | 7.310 | | 62 | 5.831 | 5.533 | 5.259 |
| | 19 | 8.207 | 7.648 | 7.153 | | 3 | 7.048 | 6.605 | 6.209 |
| | 24 | 8.104 | 7.556 | 7.070 | | 8 | 7.669 | 7.184 | 6.750 |
| | 29 | 7.999 | 7.464 | 6.988 | | 13 | 7.625 | 7.147 | 6.719 |
| 34 | 7.866 | 7.346 | 6.884 | 18 | 7.462 | 6.998 | 6.583 | | |
| 60 | 39 | 7.689 | 7.189 | 6.744 | 64 | 23 | 7.365 | 6.910 | 6.503 |
| | 44 | 7.469 | 6.994 | 6.570 | | 28 | 7.286 | 6.839 | 6.439 |
| | 49 | 7.186 | 6.742 | 6.344 | | 33 | 7.186 | 6.750 | 6.359 |
| | 54 | 6.850 | 6.442 | 6.076 | | 38 | 7.053 | 6.631 | 6.252 |
| | 59 | 6.421 | 6.062 | 5.735 | | 43 | 6.881 | 6.477 | 6.112 |
| | 5 | 8.011 | 7.466 | 6.982 | | 48 | 6.667 | 6.283 | 5.937 |
| | 10 | 8.314 | 7.750 | 7.250 | | 53 | 6.399 | 6.042 | 5.719 |
| | 15 | 8.170 | 7.622 | 7.135 | | 58 | 6.070 | 5.744 | 5.450 |
| | 20 | 7.995 | 7.463 | 6.990 | | 63 | 5.626 | 5.347 | 5.089 |
| | 25 | 7.906 | 7.383 | 6.919 | | 65 | 4 | 7.076 | 6.641 | 6.251 |
| 30 | 7.802 | 7.292 | 6.837 | 9 | 7.470 | | 7.010 | 6.598 | |
| 35 | 7.669 | 7.174 | 6.732 | 14 | 7.381 | | 6.931 | 6.527 | |
| 40 | 7.490 | 7.015 | 6.590 | 19 | 7.226 | | 6.789 | 6.396 | |
| 45 | 7.274 | 6.822 | 6.418 | 24 | 7.147 | | 6.717 | 6.331 | |
| 50 | 6.983 | 6.568 | 6.189 | 29 | 7.069 | | 6.648 | 6.268 | |
| 55 | 6.659 | 6.272 | 5.924 | 34 | 6.971 | | 6.559 | 6.189 | |
| 60 | 6.226 | 5.888 | 5.579 | 39 | 6.838 | | 6.440 | 6.081 | |
| 61 | 1 | 6.123 | 5.725 | 5.372 | 44 | | 6.671 | 6.289 | 5.944 |
| | 6 | 7.944 | 7.415 | 6.945 | 49 | | 6.454 | 6.093 | 5.767 |
| | 11 | 8.092 | 7.557 | 7.081 | 54 | 6.196 | 5.860 | 5.555 | |
| | 16 | 7.935 | 7.416 | 6.953 | 59 | 5.867 | 5.561 | 5.284 | |
| | 21 | 7.787 | 7.281 | 6.830 | 64 | 5.417 | 5.158 | 4.917 | |
| | 26 | 7.704 | 7.207 | 6.764 | 66 | 5 | 6.963 | 6.546 | 6.171 |
| | 31 | 7.601 | 7.116 | 6.682 | | 10 | 7.256 | 6.803 | 6.414 |
| | 36 | 7.469 | 6.998 | 6.577 | | 15 | 7.127 | 6.705 | 6.325 |
| | 41 | 7.290 | 6.838 | 6.434 | | 20 | 6.986 | 6.576 | 6.205 |

TABLE VI.—Cont.
JOINT LIFE ANNUITIES—TWO LIVES.

| AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | |
|--------|----------|----------------|----------------|---------------|--------|----------|----------------|----------------|---------------|-------|
| Older. | Younger. | | | | Older. | Younger. | | | | |
| 65 | 25 | 6.920 | 6.515 | 6.151 | 68 | 58 | 5.341 | 5.084 | 4.849 | |
| | 30 | 6.844 | 6.447 | 6.089 | | 63 | 5.017 | 4.786 | 4.576 | |
| | 35 | 6.747 | 6.360 | 6.010 | | 68 | 4.537 | 4.348 | 4.171 | |
| | 40 | 6.614 | 6.240 | 5.901 | | 69 | 4 | 5.924 | 5.611 | 5.332 |
| | 45 | 6.453 | 6.094 | 5.769 | | | 9 | 6.262 | 5.929 | 5.626 |
| | 50 | 6.236 | 5.897 | 5.590 | | | 14 | 6.202 | 5.876 | 5.578 |
| | 55 | 5.986 | 5.671 | 5.384 | | | 19 | 6.084 | 5.766 | 5.476 |
| | 60 | 5.658 | 5.372 | 5.112 | | | 24 | 6.207 | 5.713 | 5.427 |
| | 65 | 5.201 | 4.960 | 4.736 | | | 29 | 5.973 | 5.664 | 5.383 |
| | 66 | 1 | 5.295 | 4.996 | | | 4.728 | 34 | 5.906 | 5.603 | 5.326 |
| 6 | | 6.846 | 6.447 | 6.087 | 39 | | 5.813 | 5.518 | 5.249 | |
| 11 | | 6.987 | 6.581 | 6.215 | 44 | | 5.696 | 5.411 | 5.150 | |
| 16 | | 6.866 | 6.472 | 6.115 | 49 | | 5.541 | 5.268 | 5.019 | |
| 21 | | 6.749 | 6.364 | 6.015 | 54 | 5.357 | 5.100 | 4.864 | | |
| 26 | | 6.689 | 6.309 | 5.966 | 59 | 5.121 | 4.883 | 4.665 | | |
| 31 | | 6.615 | 6.243 | 5.905 | 64 | 4.798 | 4.585 | 4.390 | | |
| 36 | | 6.520 | 6.156 | 5.827 | 69 | 4.312 | 4.140 | 3.977 | | |
| 41 | | 6.388 | 6.037 | 5.718 | 70 | 5 | 5.768 | 5.472 | 5.209 | |
| 46 | | 6.230 | 5.894 | 5.588 | | 10 | 6.008 | 5.700 | 5.418 | |
| 51 | 6.019 | 5.701 | 5.412 | 15 | | 5.933 | 5.631 | 5.355 | | |
| 56 | 5.774 | 5.479 | 5.209 | 20 | | 5.826 | 5.532 | 5.262 | | |
| 61 | 5.447 | 5.180 | 4.938 | 25 | | 5.780 | 5.489 | 5.223 | | |
| 66 | 4.982 | 4.759 | 4.551 | 30 | | 5.729 | 5.442 | 5.180 | | |
| 67 | 2 | 5.896 | 5.569 | 5.276 | | 35 | 5.663 | 5.382 | 5.125 | |
| | 7 | 6.684 | 6.306 | 5.963 | | 40 | 5.571 | 5.298 | 5.047 | |
| | 12 | 6.730 | 6.351 | 6.009 | | 45 | 5.460 | 5.195 | 4.953 | |
| | 17 | 6.604 | 6.236 | 5.903 | | 50 | 5.306 | 5.054 | 4.822 | |
| | 22 | 6.512 | 6.151 | 5.824 | 55 | 5.132 | 4.893 | 4.674 | | |
| | 27 | 6.454 | 6.098 | 5.776 | 60 | 4.900 | 4.680 | 4.478 | | |
| | 32 | 6.382 | 6.033 | 5.717 | 65 | 4.573 | 4.378 | 4.199 | | |
| | 37 | 6.288 | 5.948 | 5.639 | 70 | 4.087 | 3.930 | 3.781 | | |
| | 42 | 6.159 | 5.831 | 5.532 | 71 | 1 | 4.380 | 4.169 | 3.976 | |
| | 47 | 6.004 | 5.690 | 5.403 | | 6 | 5.610 | 5.331 | 5.084 | |
| 52 | 5.801 | 5.504 | 5.233 | 11 | | 5.744 | 5.460 | 5.199 | | |
| 57 | 5.559 | 5.283 | 5.031 | 16 | | 5.660 | 5.382 | 5.127 | | |
| 62 | 5.285 | 4.986 | 4.760 | 21 | | 5.572 | 5.300 | 5.050 | | |
| 67 | 4.760 | 4.555 | 4.363 | 26 | | 5.532 | 5.263 | 5.016 | | |
| 68 | 3 | 5.965 | 5.641 | 5.352 | | 31 | 5.483 | 5.218 | 4.974 | |
| | 8 | 6.490 | 6.134 | 5.811 | | 36 | 5.419 | 5.159 | 4.920 | |
| | 13 | 6.468 | 6.116 | 5.796 | | 41 | 5.329 | 5.076 | 4.844 | |
| | 18 | 6.343 | 6.001 | 5.689 | | 46 | 5.222 | 4.978 | 4.753 | |
| | 23 | 6.271 | 5.934 | 5.628 | 51 | 5.074 | 4.841 | 4.626 | | |
| | 28 | 6.215 | 5.883 | 5.581 | 56 | 4.905 | 4.685 | 4.482 | | |
| | 33 | 6.146 | 5.820 | 5.524 | 61 | 4.679 | 4.476 | 4.289 | | |
| | 38 | 6.052 | 5.735 | 5.446 | 66 | 4.349 | 4.169 | 4.005 | | |
| | 43 | 5.929 | 5.622 | 5.343 | 71 | 3.862 | 3.719 | 3.584 | | |
| | 48 | 5.774 | 5.481 | 5.213 | 72 | 2 | 4.814 | 4.588 | 4.380 | |
| 53 | 5.580 | 5.303 | 5.050 | | | | | | | |

TABLE VI.—Cont.
JOINT LIFE ANNUITIES—TWO LIVES.

| AGES. | | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | | | |
|--------|----------|--------|----------------|----------------|---------------|----------|----------------|----------------|---------------|-------|
| Older. | Younger. | Older. | | | | Younger. | Four Per Cent. | Five Per Cent. | Six Per Cent. | |
| 72 | 7 | 5.418 | 5.157 | 4.929 | 75 | 25 | 4.589 | 4.396 | 4.216 | |
| | 12 | 5.478 | 5.216 | 4.976 | | 30 | 4.557 | 4.365 | 4.188 | |
| | 17 | 5.389 | 5.133 | 4.899 | | 35 | 4.516 | 4.327 | 4.152 | |
| | 22 | 5.321 | 5.070 | 4.840 | | 40 | 4.457 | 4.272 | 4.101 | |
| | 27 | 5.283 | 5.035 | 4.807 | | 45 | 4.386 | 4.206 | 4.040 | |
| | 32 | 5.236 | 4.992 | 4.767 | | 50 | 4.285 | 4.112 | 3.951 | |
| | 37 | 5.174 | 4.934 | 4.714 | | 55 | 4.171 | 4.006 | 3.852 | |
| | 42 | 5.087 | 4.854 | 4.640 | | 60 | 4.021 | 3.866 | 3.721 | |
| | 47 | 4.983 | 4.758 | 4.551 | | 65 | 3.806 | 3.665 | 3.533 | |
| | 52 | 4.845 | 4.630 | 4.430 | | 70 | 3.471 | 3.347 | 3.236 | |
| | 57 | 4.679 | 4.477 | 4.289 | | 75 | 3.015 | 2.917 | 2.827 | |
| | 62 | 4.458 | 4.272 | 4.099 | | 76 | 6 | 4.403 | 4.221 | 4.053 |
| | 67 | 4.124 | 3.960 | 3.811 | | | 11 | 4.487 | 4.301 | 4.148 |
| | 72 | 3.639 | 3.510 | 3.387 | | | 16 | 4.452 | 4.270 | 4.101 |
| 73 | 3 | 4.811 | 4.591 | 4.389 | 21 | | 4.391 | 4.212 | 4.046 | |
| | 8 | 5.204 | 4.993 | 4.752 | 26 | | 4.365 | 4.188 | 4.024 | |
| | 13 | 5.212 | 4.972 | 4.751 | 31 | | 4.335 | 4.160 | 3.997 | |
| | 18 | 5.123 | 4.889 | 4.673 | 36 | 4.295 | 4.123 | 3.962 | | |
| | 23 | 5.072 | 4.841 | 4.628 | 41 | 4.238 | 4.069 | 3.912 | | |
| | 28 | 5.036 | 4.808 | 4.597 | 46 | 4.171 | 4.006 | 3.853 | | |
| | 33 | 4.991 | 4.766 | 4.559 | 51 | 4.074 | 3.916 | 3.768 | | |
| | 38 | 4.930 | 4.710 | 4.507 | 56 | 3.966 | 3.815 | 3.674 | | |
| | 43 | 4.848 | 4.634 | 4.436 | 61 | 3.821 | 3.679 | 3.546 | | |
| | 48 | 4.746 | 4.539 | 4.348 | 66 | 3.606 | 3.477 | 3.357 | | |
| | 53 | 4.614 | 4.417 | 4.234 | 71 | 3.270 | 3.159 | 3.059 | | |
| | 58 | 4.455 | 4.269 | 4.096 | 76 | 2.833 | 2.750 | 2.668 | | |
| | 63 | 4.236 | 4.066 | 3.908 | 77 | 7 | 4.222 | 4.055 | 3.899 | |
| | 68 | 3.901 | 3.752 | 3.616 | | 12 | 4.368 | 4.195 | 3.943 | |
| 73 | 3.421 | 3.304 | 3.193 | 17 | | 4.210 | 4.045 | 3.822 | | |
| 74 | 4 | 4.726 | 4.516 | 4.323 | | 22 | 4.164 | 4.001 | 3.850 | |
| | 9 | 4.969 | 4.747 | 4.556 | | 27 | 4.140 | 3.979 | 3.829 | |
| | 14 | 4.950 | 4.731 | 4.528 | | 32 | 4.111 | 3.952 | 3.804 | |
| | 19 | 4.866 | 4.651 | 4.453 | 37 | 4.073 | 3.916 | 3.770 | | |
| | 24 | 4.827 | 4.615 | 4.419 | 42 | 4.019 | 3.865 | 3.722 | | |
| | 29 | 4.792 | 4.583 | 4.390 | 47 | 3.954 | 3.805 | 3.666 | | |
| | 34 | 4.749 | 4.543 | 4.353 | 52 | 3.864 | 3.720 | 3.586 | | |
| | 39 | 4.690 | 4.488 | 4.301 | 57 | 3.761 | 3.623 | 3.494 | | |
| | 44 | 4.613 | 4.417 | 4.235 | 62 | 3.621 | 3.492 | 3.371 | | |
| | 49 | 4.511 | 4.322 | 4.146 | 67 | 3.405 | 3.289 | 3.180 | | |
| | 54 | 4.389 | 4.208 | 4.040 | 72 | 3.070 | 2.971 | 2.882 | | |
| | 59 | 4.234 | 4.064 | 3.906 | 77 | 2.656 | 2.583 | 2.511 | | |
| | 64 | 4.019 | 3.864 | 3.719 | 78 | 8 | 4.016 | 3.864 | 3.722 | |
| | 69 | 3.683 | 3.547 | 3.423 | | 13 | 4.022 | 3.871 | 3.729 | |
| 74 | 3.211 | 3.105 | 3.005 | 18 | | 3.964 | 3.815 | 3.677 | | |
| 75 | 5 | 4.557 | 4.362 | 4.181 | | 23 | 3.930 | 3.783 | 3.646 | |
| | 10 | 4.725 | 4.522 | 4.350 | | 28 | 3.908 | 3.762 | 3.626 | |
| | 15 | 4.695 | 4.495 | 4.310 | | 33 | 3.881 | 3.737 | 3.602 | |
| | 20 | 4.619 | 4.424 | 4.242 | 38 | 3.844 | 3.702 | 3.570 | | |

TABLE VI.—Cont.
JOINT LIFE ANNUITIES—TWO LIVES.

| AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | |
|--------|----------|----------------|----------------|---------------|--------|----------|----------------|----------------|---------------|-------|
| Older. | Younger. | | | | Older. | Younger. | | | | |
| 78 | 43 | 3.794 | 3.655 | 3.525 | 81 | 61 | 2.870 | 2.782 | 2.699 | |
| | 48 | 3.731 | 3.596 | 3.469 | | 66 | 2.746 | 2.664 | 2.587 | |
| | 53 | 3.648 | 3.518 | 3.396 | | 71 | 2.542 | 2.470 | 2.402 | |
| | 58 | 3.549 | 3.424 | 3.308 | | 76 | 2.258 | 2.195 | 2.147 | |
| | 63 | 3.414 | 3.297 | 3.188 | | 81 | 1.869 | 1.827 | 1.786 | |
| | 68 | 3.199 | 3.095 | 2.996 | | 82 | 12 | 3.020 | 2.924 | 2.833 |
| | 73 | 2.869 | 2.780 | 2.701 | | | 17 | 2.987 | 2.893 | 2.804 |
| | 78 | 2.470 | 2.410 | 2.346 | | | 22 | 2.958 | 2.865 | 2.777 |
| 79 | 9 | 3.775 | 3.638 | 3.510 | 27 | | 2.945 | 2.853 | 2.765 | |
| | 14 | 3.759 | 3.624 | 3.497 | 32 | | 2.929 | 2.838 | 2.751 | |
| | 19 | 3.704 | 3.571 | 3.447 | 37 | | 2.909 | 2.818 | 2.733 | |
| | 24 | 3.679 | 3.548 | 3.424 | 42 | | 2.878 | 2.789 | 2.705 | |
| | 29 | 3.659 | 3.528 | 3.406 | 47 | | 2.843 | 2.756 | 2.673 | |
| | 34 | 3.633 | 3.505 | 3.384 | 52 | 2.792 | 2.707 | 2.627 | | |
| | 39 | 3.598 | 3.471 | 3.352 | 57 | 2.733 | 2.651 | 2.574 | | |
| | 44 | 3.552 | 3.428 | 3.312 | 62 | 2.656 | 2.578 | 2.504 | | |
| | 49 | 3.490 | 3.369 | 3.256 | 67 | 2.533 | 2.461 | 2.393 | | |
| | 54 | 3.416 | 3.299 | 3.189 | 72 | 2.334 | 2.271 | 2.211 | | |
| | 59 | 3.222 | 3.210 | 3.105 | 77 | 2.077 | 2.013 | 1.975 | | |
| | 64 | 3.192 | 3.088 | 2.990 | 82 | 1.681 | 1.642 | 1.606 | | |
| | 69 | 2.979 | 2.887 | 2.799 | 83 | 13 | 2.794 | 2.709 | 2.628 | |
| | 74 | 2.659 | 2.580 | 2.511 | | 18 | 2.760 | 2.677 | 2.598 | |
| | 79 | 2.271 | 2.217 | 2.161 | | 23 | 2.740 | 2.657 | 2.579 | |
| | 80 | 10 | 3.517 | 3.395 | | 3.281 | 28 | 2.728 | 2.646 | 2.568 |
| 15 | | 3.492 | 3.372 | 3.259 | | 33 | 2.713 | 2.632 | 2.555 | |
| 20 | | 3.443 | 3.325 | 3.214 | | 38 | 2.694 | 2.613 | 2.537 | |
| 25 | | 3.425 | 3.308 | 3.198 | | 43 | 2.666 | 2.587 | 2.511 | |
| 30 | | 3.406 | 3.290 | 3.181 | | 48 | 2.632 | 2.554 | 2.481 | |
| 35 | | 3.383 | 3.268 | 3.160 | 53 | 2.585 | 2.510 | 2.438 | | |
| 40 | | 3.349 | 3.236 | 3.130 | 58 | 2.530 | 2.457 | 2.388 | | |
| 45 | | 3.308 | 3.197 | 3.093 | 63 | 2.457 | 2.387 | 2.321 | | |
| 50 | | 3.247 | 3.140 | 3.039 | 68 | 2.336 | 2.272 | 2.211 | | |
| 55 | | 3.180 | 3.076 | 2.978 | 73 | 2.141 | 2.085 | 2.032 | | |
| 60 | | 3.092 | 2.992 | 2.899 | 78 | 1.899 | 1.838 | 1.810 | | |
| 65 | | 2.965 | 2.873 | 2.786 | 83 | 1.510 | 1.472 | 1.441 | | |
| 70 | | 2.757 | 2.675 | 2.598 | 84 | 14 | 2.622 | 2.545 | 2.472 | |
| 75 | | 2.448 | 2.381 | 2.323 | | 19 | 2.589 | 2.513 | 2.442 | |
| 80 | | 2.068 | 2.018 | 1.969 | | 24 | 2.574 | 2.499 | 2.429 | |
| 81 | | 11 | 3.264 | 3.156 | | 3.054 | 29 | 2.563 | 2.489 | 2.418 |
| | 16 | 3.235 | 3.128 | 3.028 | | 34 | 2.549 | 2.476 | 2.406 | |
| | 21 | 3.195 | 3.091 | 2.992 | | 39 | 2.530 | 2.457 | 2.388 | |
| | 26 | 3.181 | 3.077 | 2.979 | | 44 | 2.505 | 2.433 | 2.365 | |
| | 31 | 3.164 | 3.060 | 2.963 | | 49 | 2.470 | 2.400 | 2.334 | |
| | 36 | 3.142 | 3.040 | 2.944 | 54 | 2.428 | 2.360 | 2.295 | | |
| | 41 | 3.109 | 3.009 | 2.914 | 59 | 2.376 | 2.310 | 2.247 | | |
| | 46 | 3.072 | 2.973 | 2.881 | 64 | 2.305 | 2.242 | 2.182 | | |
| | 51 | 3.015 | 2.920 | 2.829 | 69 | 2.183 | 2.126 | 2.071 | | |
| | 56 | 2.953 | 2.861 | 2.774 | 74 | 1.991 | 1.941 | 1.894 | | |

TABLE VI.—Cont.
JOINT LIFE ANNUITIES—TWO LIVES.

| AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | Four Per Cent. | Five Per Cent. | Six Per Cent. |
|--------|----------|----------------|----------------|---------------|--------|----------|----------------|----------------|---------------|
| Older. | Younger. | | | | Older. | Younger. | | | |
| 84 | 79 | 1.751 | 1.750 | 1.672 | 88 | 18 | 2.061 | 2.012 | 1.965 |
| | 84 | 1.387 | 1.357 | 1.330 | | 23 | 2.048 | 1.999 | 1.953 |
| 85 | 15 | 2.462 | 2.393 | 2.327 | 28 | 2.041 | 1.992 | 1.946 | |
| | 20 | 2.431 | 2.364 | 2.299 | 33 | 2.033 | 1.985 | 1.939 | |
| | 25 | 2.421 | 2.354 | 2.290 | 38 | 2.022 | 1.974 | 1.929 | |
| | 30 | 2.411 | 2.344 | 2.280 | 43 | 2.006 | 1.959 | 1.914 | |
| | 35 | 2.398 | 2.331 | 2.268 | 48 | 1.987 | 1.941 | 1.895 | |
| | 40 | 2.379 | 2.313 | 2.251 | 53 | 1.960 | 1.914 | 1.870 | |
| | 45 | 2.356 | 2.291 | 2.230 | 58 | 1.928 | 1.883 | 1.841 | |
| | 50 | 2.322 | 2.258 | 2.198 | 63 | 1.886 | 1.843 | 1.802 | |
| | 55 | 2.284 | 2.222 | 2.164 | 68 | 1.817 | 1.777 | 1.737 | |
| | 60 | 2.234 | 2.174 | 2.118 | 73 | 1.697 | 1.660 | 1.625 | |
| | 65 | 2.163 | 2.107 | 2.053 | 78 | 1.546 | 1.514 | 1.483 | |
| | 70 | 2.042 | 1.991 | 1.941 | 83 | 1.259 | 1.235 | 1.212 | |
| 75 | 1.856 | 1.811 | 1.769 | 88 | 1.030 | 1.063 | 1.044 | | |
| 80 | 1.608 | 1.573 | 1.539 | 89 | 19 | 1.904 | 1.862 | 1.822 | |
| 85 | 1.339 | 1.256 | 1.232 | | 24 | 1.895 | 1.854 | 1.814 | |
| 86 | 16 | 2.315 | 2.253 | | 2.194 | 29 | 1.889 | 1.848 | 1.808 |
| | 21 | 2.290 | 2.229 | | 2.171 | 34 | 1.882 | 1.841 | 1.802 |
| | 26 | 2.282 | 2.221 | | 2.163 | 39 | 1.872 | 1.832 | 1.792 |
| | 31 | 2.272 | 2.212 | | 2.154 | 44 | 1.859 | 1.818 | 1.779 |
| | 36 | 2.260 | 2.200 | | 2.143 | 49 | 1.840 | 1.800 | 1.761 |
| | 41 | 2.241 | 2.182 | | 2.126 | 54 | 1.817 | 1.778 | 1.740 |
| | 46 | 2.221 | 2.162 | | 2.107 | 59 | 1.788 | 1.750 | 1.713 |
| | 51 | 2.188 | 2.131 | | 2.077 | 64 | 1.751 | 1.714 | 1.678 |
| | 56 | 2.153 | 2.097 | | 2.044 | 69 | 1.685 | 1.650 | 1.616 |
| | 61 | 2.105 | 2.051 | | 2.000 | 74 | 1.570 | 1.538 | 1.508 |
| | 66 | 2.035 | 1.984 | 1.936 | 79 | 1.427 | 1.400 | 1.373 | |
| | 71 | 1.914 | 1.867 | 1.823 | 84 | 1.164 | 1.145 | 1.124 | |
| 76 | 1.739 | 1.699 | 1.661 | 89 | 1.015 | 1.001 | .984 | | |
| 81 | 1.478 | 1.447 | 1.417 | 90 | 20 | 1.704 | 1.670 | 1.638 | |
| 86 | 1.195 | 1.171 | 1.149 | | 25 | 1.699 | 1.665 | 1.633 | |
| 87 | 17 | 2.177 | 2.121 | | 2.069 | 30 | 1.694 | 1.660 | 1.628 |
| | 22 | 2.158 | 2.104 | | 2.051 | 35 | 1.688 | 1.654 | 1.622 |
| | 27 | 2.151 | 2.096 | | 2.044 | 40 | 1.679 | 1.646 | 1.614 |
| | 32 | 2.142 | 2.088 | | 2.036 | 45 | 1.668 | 1.635 | 1.604 |
| | 37 | 2.130 | 2.077 | | 2.026 | 50 | 1.651 | 1.619 | 1.590 |
| | 42 | 2.113 | 2.060 | | 2.009 | 55 | 1.633 | 1.601 | 1.570 |
| | 47 | 2.093 | 2.041 | | 1.991 | 60 | 1.608 | 1.577 | 1.547 |
| | 52 | 2.063 | 2.012 | | 1.963 | 65 | 1.575 | 1.544 | 1.515 |
| | 57 | 2.030 | 1.980 | | 1.932 | 70 | 1.515 | 1.486 | 1.459 |
| | 62 | 1.985 | 1.937 | | 1.891 | 75 | 1.413 | 1.387 | 1.361 |
| | 67 | 1.915 | 1.870 | 1.826 | 80 | 1.278 | 1.255 | 1.234 | |
| | 72 | 1.794 | 1.753 | 1.713 | 85 | 1.054 | 1.038 | 1.021 | |
| 77 | 1.633 | 1.597 | 1.562 | 90 | .922 | .909 | .895 | | |
| 82 | 1.356 | 1.329 | 1.303 | 91 | 21 | 1.432 | 1.407 | 1.382 | |
| 87 | 1.124 | 1.098 | 1.078 | | 26 | 1.429 | 1.404 | 1.379 | |
| | | | | | 31 | 1.425 | 1.400 | 1.376 | |

TABLE VI.—Cont.
JOINT LIFE ANNUITIES—TWO LIVES.

| AGES. | | | Four Per Cent. | Five Per Cent. | Six Per Cent. | AGES. | | | | | |
|--------|----------|--------|----------------|----------------|---------------|----------|----------------|----------------|---------------|------|------|
| Older. | Younger. | Older. | | | | Younger. | Four Per Cent. | Five Per Cent. | Six Per Cent. | | |
| 91 | 36 | | 1.420 | 1.395 | 1.371 | 93 | 68 | .760 | .750 | .740 | |
| | 41 | | 1.413 | 1.388 | 1.364 | | 73 | .733 | .723 | .714 | |
| | 46 | | 1.405 | 1.380 | 1.356 | | 78 | .697 | .688 | .679 | |
| | 51 | | 1.391 | 1.367 | 1.343 | | 83 | .614 | .606 | .599 | |
| | 56 | | 1.377 | 1.353 | 1.330 | | 88 | .554 | .547 | .541 | |
| | 61 | | 1.358 | 1.334 | 1.311 | | 93 | .395 | .391 | .387 | |
| | 66 | | 1.330 | 1.307 | 1.285 | | 94 | 24 | .520 | .514 | .508 |
| | 71 | | 1.280 | 1.259 | 1.238 | | | 29 | .519 | .513 | .507 |
| | 76 | | 1.200 | 1.180 | 1.160 | | | 34 | .518 | .512 | .506 |
| | 81 | | 1.078 | 1.061 | 1.044 | | | 39 | .517 | .511 | .505 |
| | 86 | | .902 | .892 | .879 | | | 44 | .515 | .509 | .503 |
| 91 | | .756 | .748 | .737 | 49 | .512 | | .507 | .501 | | |
| 92 | 22 | | 1.142 | 1.124 | 1.107 | 54 | | .509 | .503 | .498 | |
| | 27 | | 1.140 | 1.122 | 1.105 | 59 | | .505 | .499 | .494 | |
| | 32 | | 1.137 | 1.119 | 1.102 | 64 | | .500 | .494 | .489 | |
| | 37 | | 1.134 | 1.116 | 1.099 | 69 | | .491 | .485 | .480 | |
| | 42 | | 1.128 | 1.111 | 1.094 | 74 | | .474 | .469 | .464 | |
| | 47 | | 1.122 | 1.105 | 1.089 | 79 | .453 | .448 | .443 | | |
| | 52 | | 1.113 | 1.095 | 1.079 | 84 | .403 | .398 | .394 | | |
| | 57 | | 1.102 | 1.085 | 1.069 | 89 | .373 | .369 | .365 | | |
| | 62 | | 1.088 | 1.071 | 1.055 | 94 | .201 | .199 | .197 | | |
| | 67 | | 1.067 | 1.050 | 1.035 | 95 | 25 | .236 | .234 | .232 | |
| | 72 | | 1.028 | 1.012 | .997 | | 30 | .236 | .234 | .231 | |
| 77 | | .970 | .955 | .942 | 35 | | .235 | .233 | .231 | | |
| 82 | | .864 | .852 | .840 | 40 | | .235 | .233 | .231 | | |
| 87 | | .738 | .734 | .725 | 45 | | .234 | .232 | .230 | | |
| 92 | | .583 | .576 | .569 | 50 | | .233 | .231 | .229 | | |
| 93 | 23 | | .809 | .798 | .788 | | 55 | .232 | .230 | .228 | |
| | 28 | | .808 | .797 | .786 | | 60 | .230 | .228 | .226 | |
| | 33 | | .806 | .795 | .785 | | 65 | .228 | .226 | .224 | |
| | 38 | | .804 | .793 | .783 | | 70 | .224 | .222 | .220 | |
| | 43 | | .800 | .790 | .779 | | 75 | .217 | .215 | .213 | |
| | 48 | | .797 | .786 | .776 | 80 | .208 | .206 | .204 | | |
| | 53 | | .790 | .780 | .770 | 85 | .187 | .185 | .183 | | |
| | 58 | | .784 | .773 | .763 | 90 | .177 | .175 | .174 | | |
| | 63 | | .774 | .764 | .754 | 95 | .060 | .059 | .058 | | |

INTRODUCTION TO CARLISLE TABLES.

THE Carlisle Table was constructed by the philosopher and scientist, Milne, from the parish records of two parishes of Carlisle, Scotland, covering a period of but eight years, viz., from 1780 to 1787, inclusive. This table was published by him in 1816 in a volume which was very largely given over to discussions of the virtues of Swedish government tables. By a strange chance the incident became the important thing; the Carlisle Tables have been widely adopted and employed, while the Swedish Tables have slumbered.

The Carlisle Table slowly displaced the Northampton in the favor of the British companies. Neither the Seventeen Offices' or Actuaries' Table nor even Dr. Farr's English Life Tables were able to displace the Carlisle, which was not discarded by most British companies until after the H^M and H^F Tables appeared, and has not been discarded by all even at this date.

The Commutation Tables given herein are taken from "David Jones," with the exception of the M and R columns of the four per cent tables where "David Jones" was found to be wrong, and therefore figures from "David Chisholm's Tables" were substituted.

TABLE I.
CARLISLE TABLE OF MORTALITY.

| Age. | Living. | Decrements. | Proportion Which Die. | Proportion Which Survive. | Age. | Living. | Decrements. | Proportion Which Die. | Proportion Which Survive. |
|------|---------|-------------|-----------------------|---------------------------|------|---------|-------------|-----------------------|---------------------------|
| 0 | 10000 | 1539 | .153900 | .846100 | 53 | 4211 | 68 | .016148 | .983852 |
| 1 | 8461 | 682 | .080605 | .919395 | 54 | 4143 | 70 | .016896 | .983104 |
| 2 | 7779 | 505 | .064918 | .935082 | 55 | 4073 | 73 | .017923 | .982077 |
| 3 | 7274 | 270 | .037943 | .962057 | 56 | 4000 | 76 | .019000 | .981000 |
| 4 | 6998 | 201 | .028723 | .971277 | 57 | 3924 | 82 | .020897 | .979103 |
| 5 | 6797 | 121 | .017802 | .982198 | 58 | 3842 | 93 | .024206 | .975794 |
| 6 | 6676 | 82 | .012283 | .987717 | 59 | 3749 | 106 | .028274 | .971726 |
| 7 | 6594 | 58 | .008796 | .991204 | 60 | 3643 | 122 | .033489 | .966511 |
| 8 | 6536 | 43 | .006579 | .993421 | 61 | 3521 | 126 | .035785 | .964215 |
| 9 | 6493 | 33 | .005082 | .994918 | 62 | 3395 | 127 | .037408 | .962592 |
| 10 | 6460 | 29 | .004489 | .995511 | 63 | 3268 | 125 | .038250 | .961750 |
| 11 | 6431 | 31 | .004820 | .995180 | 64 | 3143 | 125 | .039771 | .960229 |
| 12 | 6400 | 32 | .005000 | .995000 | 65 | 3018 | 124 | .041087 | .958913 |
| 13 | 6368 | 33 | .005182 | .994818 | 66 | 2894 | 123 | .042502 | .957498 |
| 14 | 6335 | 35 | .005525 | .994475 | 67 | 2771 | 123 | .043388 | .956112 |
| 15 | 6300 | 39 | .006191 | .993809 | 68 | 2648 | 123 | .046450 | .953550 |
| 16 | 6261 | 42 | .006708 | .993292 | 69 | 2525 | 124 | .049109 | .950891 |
| 17 | 6219 | 43 | .006914 | .993086 | 70 | 2401 | 124 | .051645 | .948355 |
| 18 | 6176 | 43 | .006962 | .993038 | 71 | 2277 | 131 | .058849 | .941151 |
| 19 | 6133 | 43 | .007011 | .992989 | 72 | 2143 | 146 | .068129 | .931871 |
| 20 | 6090 | 43 | .007061 | .992939 | 73 | 1997 | 156 | .078117 | .921853 |
| 21 | 6047 | 42 | .006946 | .993054 | 74 | 1841 | 166 | .090168 | .909832 |
| 22 | 6005 | 42 | .006994 | .993006 | 75 | 1675 | 160 | .095522 | .904478 |
| 23 | 5963 | 42 | .007043 | .992957 | 76 | 1515 | 156 | .102970 | .897030 |
| 24 | 5921 | 42 | .007093 | .992907 | 77 | 1359 | 146 | .107432 | .892568 |
| 25 | 5879 | 43 | .007314 | .992686 | 78 | 1213 | 132 | .108821 | .891179 |
| 26 | 5836 | 43 | .007368 | .992632 | 79 | 1081 | 128 | .118409 | .881591 |
| 27 | 5793 | 45 | .007768 | .992232 | 80 | 953 | 116 | .121721 | .878279 |
| 28 | 5748 | 50 | .008699 | .991301 | 81 | 837 | 112 | .133811 | .866189 |
| 29 | 5698 | 56 | .009828 | .990172 | 82 | 725 | 102 | .140600 | .859310 |
| 30 | 5642 | 57 | .010103 | .989897 | 83 | 623 | 94 | .150883 | .849117 |
| 31 | 5585 | 57 | .010206 | .989794 | 84 | 529 | 84 | .158790 | .841210 |
| 32 | 5528 | 56 | .010130 | .989870 | 85 | 445 | 78 | .175281 | .824719 |
| 33 | 5472 | 55 | .010051 | .989949 | 86 | 367 | 71 | .193461 | .800539 |
| 34 | 5417 | 55 | .010153 | .989847 | 87 | 296 | 64 | .216216 | .783784 |
| 35 | 5362 | 55 | .010257 | .989743 | 88 | 232 | 51 | .219828 | .770172 |
| 36 | 5307 | 56 | .010552 | .989448 | 89 | 181 | 39 | .215470 | .784530 |
| 37 | 5251 | 57 | .010855 | .989145 | 90 | 142 | 37 | .260563 | .739117 |
| 38 | 5194 | 58 | .011167 | .988833 | 91 | 105 | 30 | .285714 | .714486 |
| 39 | 5136 | 61 | .011877 | .988123 | 92 | 75 | 21 | .280000 | .720000 |
| 40 | 5075 | 66 | .013005 | .986995 | 93 | 54 | 14 | .259259 | .740711 |
| 41 | 5009 | 69 | .013775 | .986225 | 94 | 40 | 10 | .250000 | .750000 |
| 42 | 4940 | 71 | .014373 | .985627 | 95 | 30 | 7 | .233333 | .766667 |
| 43 | 4869 | 71 | .014582 | .985418 | 96 | 23 | 5 | .217391 | .782609 |
| 44 | 4798 | 71 | .014798 | .985202 | 97 | 18 | 4 | .222222 | .777778 |
| 45 | 4727 | 70 | .014809 | .985191 | 98 | 14 | 3 | .214286 | .785714 |
| 46 | 4657 | 69 | .014816 | .985184 | 99 | 11 | 2 | .181818 | .818182 |
| 47 | 4588 | 67 | .014603 | .985397 | 100 | 9 | 2 | .222222 | .777778 |
| 48 | 4521 | 63 | .013935 | .986065 | 101 | 7 | 2 | .285714 | .714286 |
| 49 | 4458 | 61 | .013683 | .986317 | 102 | 5 | 2 | .400000 | .600000 |
| 50 | 4397 | 59 | .013418 | .986582 | 103 | 3 | 2 | .666666 | .333334 |
| 51 | 4338 | 62 | .014292 | .985708 | 104 | 1 | 1 | | |
| 52 | 4276 | 65 | .015201 | .984799 | | | | | |

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CARLISLE TABLE.

TABLE II.
COMMUTATION COLUMNS, CARLISLE TABLE,
FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 0 | 10000.0000 | 142816.4335 | 2661123.5878 | 4122.4446 | 44587.0711 |
| 1 | 8135.5769 | 134680.8566 | 2518307.1543 | 2642.6369 | 40465.5259 |
| 2 | 7192.1228 | 127488.7339 | 2383626.2977 | 2012.0895 | 37822.8887 |
| 3 | 6466.5595 | 121022.1744 | 2256137.5638 | 1563.1464 | 35810.7989 |
| 4 | 5981.9197 | 115040.2547 | 2135115.3894 | 1327.2204 | 34247.6523 |
| 5 | 5586.6386 | 109453.6161 | 2020075.1347 | 1162.0131 | 32920.4316 |
| 6 | 5276.1398 | 104177.4763 | 1910621.5186 | 1066.3850 | 31758.41825 |
| 7 | 5010.8980 | 99166.5782 | 1806444.0423 | 1004.0718 | 30602.03297 |
| 8 | 4775.7912 | 94390.7871 | 1707277.4641 | 961.6917 | 29687.66095 |
| 9 | 4561.8957 | 89828.8914 | 1612886.6770 | 931.4805 | 28726.26896 |
| 10 | 4364.1445 | 85464.7469 | 1523057.7856 | 909.1869 | 27794.78820 |
| 11 | 4177.4550 | 81287.2919 | 1437593.0387 | 890.3490 | 26885.60126 |
| 12 | 3997.4211 | 77346.8708 | 1356305.7468 | 870.9865 | 25995.25177 |
| 13 | 3824.4558 | 73465.4150 | 1279015.8760 | 851.7682 | 25124.26499 |
| 14 | 3658.3046 | 69807.1103 | 1205550.4610 | 832.7115 | 24272.46658 |
| 15 | 3498.1664 | 66308.9440 | 1135743.3507 | 813.2772 | 23439.78484 |
| 16 | 3342.7991 | 62966.1449 | 1069434.4067 | 792.4548 | 22626.50735 |
| 17 | 3192.6682 | 59773.4766 | 1006468.2618 | 770.8931 | 21834.05228 |
| 18 | 3048.6473 | 56724.8294 | 946694.7852 | 749.6671 | 21063.15888 |
| 19 | 2910.9820 | 53813.8474 | 889969.9558 | 729.2575 | 20313.49149 |
| 20 | 2779.3965 | 51034.4509 | 836156.1084 | 709.0329 | 19584.23373 |
| 21 | 2653.6268 | 48380.8241 | 785121.6575 | 690.7630 | 18874.60061 |
| 22 | 2533.8421 | 45846.0820 | 736740.8334 | 673.0409 | 18183.83734 |
| 23 | 2419.3461 | 43427.6359 | 690893.8514 | 656.0004 | 17510.79619 |
| 24 | 2309.9092 | 41117.7267 | 647466.2155 | 639.6153 | 16854.79554 |
| 25 | 2205.3117 | 38912.4150 | 606348.4888 | 623.8604 | 16215.17999 |
| 26 | 2104.9823 | 36807.4327 | 567436.0738 | 608.3507 | 15591.31915 |
| 27 | 2009.1084 | 34798.3243 | 530628.6411 | 593.4376 | 14982.96835 |
| 28 | 1916.8285 | 32881.4958 | 495830.3168 | 578.4311 | 14389.53040 |
| 29 | 1827.0717 | 31054.4240 | 462048.8210 | 562.3986 | 13811.09906 |
| 30 | 1739.5339 | 29314.8901 | 431894.3970 | 545.1327 | 13248.70023 |
| 31 | 1655.7306 | 27659.1596 | 402579.5069 | 528.2345 | 12703.56724 |
| 32 | 1575.8003 | 26083.3593 | 374920.3473 | 511.9862 | 12175.33249 |
| 33 | 1499.8433 | 24583.5160 | 348836.9880 | 496.6369 | 11663.34601 |
| 34 | 1427.6617 | 23155.8543 | 324253.4720 | 482.1415 | 11160.70886 |
| 35 | 1358.8137 | 21797.0406 | 301097.6177 | 468.2037 | 10684.56795 |
| 36 | 1293.1499 | 20503.8907 | 279300.5771 | 454.8019 | 10216.36309 |
| 37 | 1230.2928 | 19273.5979 | 258796.6864 | 441.6813 | 9761.56091 |
| 38 | 1170.1325 | 18103.4654 | 239523.0885 | 428.8400 | 9319.87935 |
| 39 | 1112.5635 | 16990.9019 | 221419.6231 | 416.2760 | 8891.03906 |
| 40 | 1057.0669 | 15933.8350 | 204428.7212 | 403.5704 | 8474.76277 |
| 41 | 1003.1921 | 14930.6430 | 188494.8862 | 390.3520 | 8071.19211 |
| 42 | 951.3202 | 13979.3228 | 173564.2132 | 377.0644 | 7680.83979 |
| 43 | 901.5840 | 13077.7388 | 159584.9204 | 363.9174 | 7303.77514 |
| 44 | 854.2664 | 12223.4724 | 146507.1816 | 351.2761 | 6939.85743 |
| 45 | 809.2549 | 11414.2176 | 134283.7092 | 339.1211 | 6588.58101 |
| 46 | 766.6067 | 10647.6108 | 122869.4916 | 327.5981 | 6249.45967 |
| 47 | 726.2004 | 9921.4104 | 112221.8808 | 316.6765 | 5921.86130 |
| 48 | 688.0725 | 9233.3379 | 102300.4704 | 306.4795 | 5605.18443 |
| 49 | 652.3887 | 8580.4492 | 93067.1325 | 297.2600 | 5298.704615 |
| 50 | 618.7134 | 7962.2358 | 84486.1833 | 288.6766 | 5001.44289 |
| 51 | 586.9340 | 7375.3019 | 76523.9475 | 280.6938 | 4712.767431 |
| 52 | 556.2936 | 6819.0083 | 69148.6456 | 272.6278 | 4432.073309 |

TABLE II.—Cont.
COMMUTATION COLUMNS, CARLISLE TABLE,
FOUR PER CENT.

| Age. | D _x | N. | S _x | M _x | R _x |
|------|----------------|-----------|----------------|----------------|----------------|
| 53 | 526.7666 | 6202.2417 | 62329.6373 | 264.4968 | 4159.445184 |
| 54 | 498.3272 | 5793.9145 | 56037.3956 | 256.3176 | 3894.948105 |
| 55 | 471.0649 | 5322.8496 | 50243.4811 | 248.2218 | 3638.630184 |
| 56 | 444.8289 | 4878.0207 | 44920.6315 | 240.1036 | 3390.408149 |
| 57 | 419.5934 | 4458.4273 | 40042.6108 | 231.9770 | 3150.304242 |
| 58 | 395.0242 | 4063.4031 | 35584.1835 | 223.5459 | 2918.327019 |
| 59 | 370.6367 | 3692.7664 | 31520.7804 | 214.3517 | 2694.780818 |
| 60 | 346.3050 | 3346.4614 | 27828.0140 | 204.2753 | 2480.428859 |
| 61 | 321.8343 | 3024.6271 | 24481.5526 | 193.1240 | 2276.153302 |
| 62 | 298.3821 | 2726.2451 | 21456.9255 | 182.0500 | 2083.029060 |
| 63 | 276.1733 | 2450.0718 | 18730.6804 | 171.3174 | 1900.978792 |
| 64 | 255.3940 | 2194.6778 | 16280.6086 | 161.1602 | 1729.661083 |
| 65 | 235.8046 | 1958.8732 | 14085.9308 | 151.3936 | 1568.500628 |
| 66 | 217.4193 | 1741.4540 | 12127.0576 | 142.0778 | 1417.106762 |
| 67 | 200.1717 | 1541.2822 | 10385.6036 | 133.1925 | 1275.028720 |
| 68 | 183.9293 | 1357.3530 | 8844.3214 | 124.0489 | 1141.835964 |
| 69 | 168.6402 | 1188.7128 | 7486.9684 | 116.4340 | 1017.186752 |
| 70 | 154.1908 | 1034.5220 | 6298.2566 | 108.4708 | 900.752486 |
| 71 | 140.6034 | 893.9186 | 5263.7336 | 100.8139 | 792.281425 |
| 72 | 127.2395 | 766.6792 | 4369.8150 | 92.8577 | 691.467293 |
| 73 | 114.0103 | 652.6688 | 3603.1358 | 84.5224 | 598.609336 |
| 74 | 101.0617 | 551.6071 | 2950.4670 | 75.9588 | 514.086639 |
| 75 | 88.4126 | 463.1945 | 2398.8599 | 67.1967 | 438.127564 |
| 76 | 76.8916 | 386.3028 | 1935.6654 | 59.0762 | 370.930579 |
| 77 | 66.3212 | 319.9817 | 1549.3626 | 51.4631 | 311.854158 |
| 78 | 56.9194 | 263.0623 | 1229.3809 | 44.6121 | 260.390767 |
| 79 | 48.7744 | 214.2878 | 966.3186 | 38.6563 | 215.778351 |
| 80 | 41.34527 | 172.9426 | 752.0308 | 33.1031 | 177.121735 |
| 81 | 34.91604 | 138.02654 | 579.08815 | 28.26413 | 144.018314 |
| 82 | 29.08066 | 108.94588 | 441.06161 | 23.77167 | 115.753914 |
| 83 | 24.02818 | 84.91770 | 332.11573 | 19.83768 | 91.981974 |
| 84 | 19.61802 | 65.29968 | 247.19803 | 16.35168 | 72.144021 |
| 85 | 15.86814 | 49.43154 | 181.89835 | 13.35365 | 55.792068 |
| 86 | 12.58342 | 36.84812 | 132.46681 | 10.68194 | 42.435450 |
| 87 | 9.75868 | 27.08943 | 95.61869 | 8.34118 | 31.753238 |
| 88 | 7.35452 | 19.73492 | 68.52926 | 6.31235 | 23.411791 |
| 89 | 5.51711 | 14.21781 | 48.79434 | 4.75780 | 17.099176 |
| 90 | 4.16186 | 10.05595 | 34.57653 | 3.61475 | 12.341105 |
| 91 | 2.95907 | 7.09688 | 24.52058 | 2.57203 | 8.726081 |
| 92 | 2.032329 | 5.064547 | 17.423696 | 1.75910 | 6.153777 |
| 93 | 1.400997 | 3.657550 | 12.359149 | 1.21194 | 4.394405 |
| 94 | 1.002135 | 2.655416 | 8.701599 | .861190 | 3.182198 |
| 95 | .722693 | 1.932722 | 6.046183 | .620292 | 2.320738 |
| 96 | .532755 | 1.399967 | 4.113461 | .458149 | 1.700177 |
| 97 | .400902 | .999005 | 2.713494 | .340787 | 1.241757 |
| 98 | .299820 | .699245 | 1.714429 | .261124 | .894700 |
| 99 | .226512 | .472733 | 1.015154 | .199618 | .633305 |
| 100 | .178200 | .294532 | .542451 | .160018 | .433687 |
| 101 | .133270 | .161263 | .247919 | .121941 | .273669 |
| 102 | .091531 | .069731 | .086656 | .085329 | .151727 |
| 103 | .052806 | .016925 | .016925 | .050124 | .066399 |
| 104 | .016925 | .000000 | .000000 | .016274 | .016274 |

TABLE III.
COMMUTATION COLUMNS, CARLISLE TABLE.
THREE AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 0 | 10000.0000 | 156719.2811 | 3126762.5941 | 4362.1499 | 55413.1307 |
| 1 | 8174.8792 | 148544.4019 | 2970043.3130 | 2875.1934 | 51050.9808 |
| 2 | 7261.7797 | 141282.6222 | 2821498.9111 | 2238.5391 | 48175.7874 |
| 3 | 6560.7312 | 134721.8910 | 2680216.2889 | 1783.0580 | 45937.2484 |
| 4 | 6008.3527 | 128623.5383 | 2545494.3979 | 1542.5400 | 44154.1903 |
| 5 | 5722.8916 | 122900.6466 | 2416870.8596 | 1373.3034 | 42611.6504 |
| 6 | 5430.9303 | 117469.7164 | 2293970.2130 | 1274.8698 | 41238.3470 |
| 7 | 5182.8244 | 112286.8920 | 2176500.4966 | 1210.4185 | 39963.4772 |
| 8 | 4963.5140 | 107323.3780 | 2064213.6046 | 1166.3726 | 38753.0587 |
| 9 | 4764.1152 | 102559.2629 | 1956890.2266 | 1134.8222 | 37586.6861 |
| 10 | 4579.6155 | 97979.6473 | 1854330.9637 | 1111.4279 | 36451.8339 |
| 11 | 4404.8859 | 93574.7615 | 1754351.3164 | 1091.5645 | 35340.4360 |
| 12 | 4235.4131 | 89339.3484 | 1660776.5549 | 1071.0402 | 34248.8715 |
| 13 | 4071.7256 | 85207.6227 | 1571437.2065 | 1050.5883 | 33177.8223 |
| 14 | 3913.6476 | 81353.9751 | 1486169.5838 | 1030.2015 | 32127.2341 |
| 15 | 3760.4109 | 77593.5642 | 1404815.6087 | 1009.3103 | 31097.0326 |
| 16 | 3610.7557 | 73982.8085 | 1327222.0445 | 986.8188 | 30087.7223 |
| 17 | 3465.2593 | 70517.5582 | 1253239.2360 | 963.4162 | 29100.9036 |
| 18 | 3324.9184 | 67192.6398 | 1182721.6778 | 940.2667 | 28137.4874 |
| 19 | 3190.1149 | 64002.5249 | 1115529.0380 | 917.9000 | 27197.2207 |
| 20 | 3060.6262 | 60941.8987 | 1051526.5131 | 896.2896 | 26279.3208 |
| 21 | 2936.2472 | 58005.6515 | 990584.6144 | 875.4101 | 25383.0311 |
| 22 | 2817.2495 | 55188.4020 | 932578.9629 | 855.7058 | 24507.6210 |
| 23 | 2702.9422 | 52485.4597 | 877390.5609 | 836.6678 | 23651.9153 |
| 24 | 2593.1442 | 49892.3156 | 824905.1012 | 818.2736 | 22815.2475 |
| 25 | 2487.6811 | 47404.6344 | 775012.7856 | 800.5014 | 21996.9740 |
| 26 | 2385.9766 | 45018.6578 | 727608.1512 | 782.9214 | 21196.4726 |
| 27 | 2288.3059 | 42730.3519 | 682589.4934 | 765.9358 | 20413.5512 |
| 28 | 2193.7491 | 40536.6028 | 639859.1415 | 748.7614 | 19647.6154 |
| 29 | 2101.1270 | 38435.4758 | 599322.5387 | 730.3340 | 18898.8540 |
| 30 | 2010.1228 | 36425.3530 | 560887.0629 | 710.3724 | 18168.5309 |
| 31 | 1922.5265 | 34502.8265 | 524461.7099 | 690.7513 | 17458.1576 |
| 32 | 1838.5559 | 32664.2706 | 489958.8834 | 671.7937 | 16767.4063 |
| 33 | 1758.3873 | 30905.8833 | 457294.6128 | 653.7985 | 16095.6127 |
| 34 | 1681.8488 | 29224.0345 | 426388.7295 | 636.7223 | 15441.8142 |
| 35 | 1608.4759 | 27615.5586 | 397164.6950 | 620.2236 | 14805.0919 |
| 36 | 1538.1422 | 26077.4164 | 369549.1364 | 604.2828 | 14184.8684 |
| 37 | 1470.4460 | 24606.9704 | 343471.7200 | 588.6010 | 13580.5856 |
| 38 | 1405.2987 | 23201.6717 | 318864.7496 | 573.1790 | 12991.0846 |
| 39 | 1342.6146 | 21859.0571 | 295663.0779 | 558.0170 | 12418.8057 |
| 40 | 1281.8053 | 20577.2518 | 273804.0208 | 542.6101 | 11860.7887 |
| 41 | 1222.3531 | 19354.8987 | 253226.7690 | 526.5040 | 11318.1786 |
| 42 | 1164.7488 | 18190.1499 | 233871.8703 | 510.2353 | 10791.6745 |
| 43 | 1109.1869 | 17080.9630 | 215681.7204 | 494.0611 | 10281.4393 |
| 44 | 1056.0509 | 16024.9121 | 198600.7575 | 478.4338 | 9787.3782 |
| 45 | 1005.2402 | 15019.6719 | 182575.8453 | 463.3350 | 9308.9444 |
| 46 | 956.8639 | 14062.8080 | 167556.1731 | 448.9522 | 8845.6094 |
| 47 | 910.8083 | 13151.9998 | 153493.3654 | 435.2544 | 8396.6572 |
| 48 | 867.1570 | 12284.8428 | 140341.3656 | 422.4033 | 7961.4028 |
| 49 | 826.1576 | 11458.6832 | 128056.5528 | 410.7282 | 7538.9995 |
| 50 | 787.2977 | 10671.3875 | 116597.8376 | 399.8059 | 7128.2713 |
| 51 | 750.4672 | 9920.9203 | 105926.4501 | 389.5990 | 6728.4654 |
| 52 | 714.7259 | 9206.1945 | 96005.5298 | 379.2358 | 6338.8664 |

CARLISLE TABLE.

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TABLE III.—Cont.
COMMUTATION COLUMNS, CARLISLE TABLE,
THREE AND ONE-HALF PER CENT.

| Age | D _t | N _t | S _t | M _t | R _t |
|-----|----------------|----------------|----------------|----------------|----------------|
| 63 | 680.0592 | 8526.1353 | 86799.3353 | 368.7386 | 5959.6305 |
| 64 | 646.4516 | 7879.6836 | 78273.2000 | 358.1282 | 5590.8920 |
| 65 | 614.0379 | 7205.6457 | 70393.5164 | 347.5752 | 5232.7637 |
| 66 | 582.6402 | 6683.0056 | 63127.8707 | 336.9420 | 4885.1886 |
| 67 | 552.2415 | 6130.7640 | 56444.8651 | 326.2462 | 4548.2466 |
| 68 | 522.4167 | 5608.3473 | 50314.1012 | 315.0962 | 4222.0004 |
| 69 | 492.5324 | 5115.8149 | 44705.7538 | 302.8781 | 3906.9042 |
| 70 | 462.4217 | 4653.3932 | 39589.9389 | 289.4231 | 3604.0261 |
| 71 | 431.8219 | 4221.5713 | 34930.3457 | 274.4668 | 3314.6030 |
| 72 | 402.2889 | 3819.2824 | 30714.9744 | 259.5305 | 3040.1422 |
| 73 | 374.1450 | 3445.1373 | 26895.6920 | 244.9060 | 2780.6117 |
| 74 | 347.6658 | 3097.4715 | 23450.5547 | 231.1636 | 2535.6212 |
| 75 | 322.5496 | 2774.9219 | 20353.0832 | 217.8042 | 2304.4576 |
| 76 | 298.8377 | 2476.0842 | 17578.1613 | 204.9938 | 2086.6534 |
| 77 | 276.4605 | 2199.6237 | 15102.0771 | 192.7282 | 1881.6536 |
| 78 | 255.2550 | 1944.3687 | 12902.4534 | 180.8715 | 1681.9254 |
| 79 | 235.1675 | 1709.2013 | 10958.0847 | 169.4159 | 1508.0539 |
| 70 | 216.0567 | 1493.1446 | 9248.8834 | 158.2576 | 1338.6380 |
| 71 | 197.9695 | 1295.1751 | 7755.7388 | 147.4766 | 1180.3804 |
| 72 | 180.0184 | 1115.1567 | 6460.5637 | 136.2202 | 1032.9038 |
| 73 | 162.0812 | 953.0756 | 5345.4070 | 124.3705 | 896.6835 |
| 74 | 144.3670 | 808.7086 | 4392.3314 | 112.1374 | 772.3130 |
| 75 | 126.9079 | 681.8007 | 3583.6228 | 99.56024 | 660.1756 |
| 76 | 110.9037 | 570.8970 | 2901.8221 | 87.84764 | 560.6154 |
| 77 | 96.1197 | 474.7773 | 2330.9251 | 76.81403 | 472.7677 |
| 78 | 82.8922 | 391.8851 | 1856.14780 | 66.83690 | 395.9537 |
| 79 | 71.3737 | 320.51141 | 1464.26271 | 58.12152 | 329.1168 |
| 80 | 60.79459 | 259.71682 | 1143.75130 | 49.95604 | 270.9953 |
| 81 | 51.589005 | 208.127819 | 884.034478 | 42.80631 | 221.0392 |
| 82 | 43.174700 | 164.953119 | 675.906659 | 36.13656 | 178.2329 |
| 83 | 35.845863 | 129.107256 | 510.953540 | 30.26774 | 142.0964 |
| 84 | 29.408051 | 99.699205 | 381.846284 | 25.04211 | 111.8286 |
| 85 | 23.901782 | 75.797423 | 282.147079 | 20.53031 | 86.78652 |
| 86 | 19.045660 | 56.751762 | 206.349656 | 16.48246 | 66.25621 |
| 87 | 14.841618 | 41.910145 | 149.597893 | 12.92248 | 49.77375 |
| 88 | 11.239247 | 30.670898 | 107.687748 | 9.821995 | 36.85128 |
| 89 | 8.472029 | 22.198869 | 77.016850 | 7.434849 | 27.02928 |
| 90 | 6.421801 | 15.777068 | 54.817981 | 5.671114 | 19.59443 |
| 91 | 4.587937 | 11.1891305 | 39.0409134 | 4.054413 | 13.92332 |
| 92 | 3.166278 | 8.0228525 | 27.8517829 | 2.787902 | 9.868906 |
| 93 | 2.2026281 | 5.8202244 | 19.8289304 | 1.931324 | 7.081005 |
| 94 | 1.5764024 | 4.2438220 | 14.0087060 | 1.379583 | 5.149681 |
| 95 | 1.1423205 | 3.1015015 | 9.7648840 | .9988096 | 3.770098 |
| 96 | .8401633 | 2.2553382 | 6.6633825 | .7412817 | 2.771288 |
| 97 | .6398212 | 1.6155170 | 4.4080443 | .5635536 | 2.030006 |
| 98 | .4808101 | 1.1347069 | 2.7925273 | .4261792 | 1.466453 |
| 99 | .3650043 | .7697026 | 1.6578204 | .3266326 | 1.040274 |
| 100 | .2885410 | .4811616 | .8881178 | .2625124 | .713641 |
| 101 | .2168317 | .2643300 | .4069562 | .2005605 | .451129 |
| 102 | .1496423 | .1146877 | .1426262 | .1407036 | .250568 |
| 103 | .0867491 | .0279385 | .0279385 | .0828708 | .109865 |
| 104 | .0279285 | .0000000 | .0000000 | .0269938 | .026994 |

TABLE IV.
COMMUTATION COLUMNS, CARLISLE TABLE,
THREE PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 0 | 10000.000 | 173198.234 | 3702049.698 | 4664.129 | 70035 663 |
| 1 | 8214.563 | 164983.671 | 3528851.464 | 3169.954 | 65371.534 |
| 2 | 7332.454 | 157651.218 | 3363867.793 | 2527.104 | 62201.580 |
| 3 | 6656.740 | 150994.477 | 3206216.575 | 2064.957 | 59674.476 |
| 4 | 6217.632 | 144776.845 | 3055222.098 | 1819.735 | 57609.519 |
| 5 | 5863.152 | 138913.693 | 2910445.253 | 1646.351 | 55789.784 |
| 6 | 5591.045 | 133322.648 | 2771537.560 | 1545.015 | 54143.434 |
| 7 | 5361.525 | 127961.123 | 2638208.912 | 1478.341 | 52598.419 |
| 8 | 5159.579 | 122801.544 | 2510247.790 | 1432.556 | 51120.078 |
| 9 | 4976.344 | 117825.200 | 2387446.246 | 1399.600 | 49687.522 |
| 10 | 4806.847 | 113018.353 | 2269621.046 | 1375.045 | 48287.922 |
| 11 | 4645.801 | 108372.462 | 2156602.693 | 1354.095 | 46912.877 |
| 12 | 4488.831 | 103883.631 | 2048230.230 | 1332.352 | 45558.783 |
| 13 | 4336.298 | 99547.333 | 1944346.599 | 1310.561 | 44226.431 |
| 14 | 4188.181 | 95359.152 | 1844799.266 | 1288.744 | 42915.870 |
| 15 | 4043.730 | 91315.421 | 1749440.115 | 1266.279 | 41627.126 |
| 16 | 3901.648 | 87413.773 | 1658124.694 | 1241.976 | 40360.847 |
| 17 | 3762.597 | 83651.176 | 1570710.920 | 1216.565 | 39118.871 |
| 18 | 3627.749 | 80023.427 | 1487059.745 | 1191.307 | 37902.306 |
| 19 | 3497.504 | 76525.862 | 1407036.318 | 1166.785 | 36710.999 |
| 20 | 3371.885 | 73153.977 | 1330510.456 | 1142.977 | 35544.214 |
| 21 | 3250.560 | 69903.417 | 1257356.478 | 1119.862 | 34401.238 |
| 22 | 3133.964 | 66769.452 | 1187453.062 | 1097.943 | 33281.376 |
| 23 | 3021.403 | 63748.049 | 1120683.609 | 1076.662 | 32183.434 |
| 24 | 2912.740 | 60835.310 | 1056935.560 | 1056.000 | 31106.773 |
| 25 | 2807.843 | 58027.467 | 996100.251 | 1035.741 | 30050.773 |
| 26 | 2706.122 | 55321.344 | 938072.784 | 1016.002 | 29014.832 |
| 27 | 2607.945 | 52713.399 | 882751.440 | 996.6439 | 27998.830 |
| 28 | 2512.317 | 50201.082 | 830038.041 | 976.9755 | 27002.186 |
| 29 | 2417.926 | 47783.156 | 779836.959 | 955.7581 | 26025.211 |
| 30 | 2324.429 | 45458.727 | 732053.803 | 932.6869 | 25069.453 |
| 31 | 2233.928 | 43224.799 | 686595.076 | 909.8876 | 24136.766 |
| 32 | 2146.727 | 41078.072 | 643370.278 | 887.7524 | 23226.879 |
| 33 | 2063.088 | 39014.984 | 602292.206 | 866.6389 | 22339.127 |
| 34 | 1982.865 | 37032.119 | 563277.222 | 846.5065 | 21472.488 |
| 35 | 1905.566 | 35126.553 | 526245.103 | 826.9604 | 20625.982 |
| 36 | 1831.087 | 33295.466 | 491118.550 | 807.9836 | 19799.022 |
| 37 | 1758.995 | 31536.470 | 457823.085 | 789.2245 | 18991.039 |
| 38 | 1689.225 | 29847.246 | 426286.614 | 770.6867 | 18201.815 |
| 39 | 1621.710 | 28225.536 | 396439.368 | 752.3729 | 17431.129 |
| 40 | 1555.776 | 26669.760 | 368213.833 | 733.6730 | 16678.756 |
| 41 | 1490.819 | 25178.941 | 341544.073 | 714.0295 | 15945.083 |
| 42 | 1427.459 | 23751.482 | 316365.132 | 694.0913 | 15231.054 |
| 43 | 1365.964 | 22385.519 | 292613.650 | 674.1728 | 14536.963 |
| 44 | 1306.840 | 21078.579 | 270228.131 | 654.8344 | 13862.790 |
| 45 | 1250.001 | 19828.678 | 249149.452 | 636.0593 | 13207.956 |
| 46 | 1195.622 | 18633.056 | 229320.774 | 618.0877 | 12571.897 |
| 47 | 1143.599 | 17489.457 | 210687.718 | 600.8888 | 11953.810 |
| 48 | 1094.077 | 16395.380 | 193198.262 | 584.6749 | 11352.921 |
| 49 | 1047.408 | 15347.972 | 176802.882 | 569.8731 | 10768.246 |
| 50 | 1002.987 | 14344.985 | 161454.911 | 555.9585 | 10198.373 |
| 51 | 960.7073 | 13384.277 | 147109.926 | 542.8922 | 9642.415 |
| 52 | 919.3947 | 12464.883 | 133725.648 | 529.5614 | 9099.522 |
| 53 | 879.0475 | 11585.835 | 121260.766 | 515.9926 | 8569.6610 |

CARLISLE TABLE.

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TABLE IV.—Cont.
COMMUTATION COLUMNS, CARLISLE TABLE,
THREE PER CENT

| Age | D _x | N _x | S _x | M _x | R _x |
|-----|----------------|----------------|----------------|----------------|----------------|
| 54 | 839.6626 | 10746.173 | 109674.930 | 502.2111 | 8053.9683 |
| 55 | 801.4327 | 9944.7400 | 98928.7577 | 488.4374 | 7551.7573 |
| 56 | 764.1444 | 9180.5956 | 88984.0177 | 474.4917 | 7063.3199 |
| 57 | 727.7919 | 8452.8038 | 79803.4221 | 460.3959 | 6588.8222 |
| 58 | 691.8283 | 7760.9755 | 71350.6183 | 445.6301 | 6122.4323 |
| 59 | 655.4193 | 7105.5562 | 63589.6429 | 429.3714 | 5682.8022 |
| 60 | 618.3376 | 6487.2186 | 56484.0867 | 411.3797 | 5353.4308 |
| 61 | 580.2235 | 5906.9951 | 49996.8681 | 391.2754 | 4842.0511 |
| 62 | 543.1651 | 5363.8300 | 44089.8730 | 371.1167 | 4450.7757 |
| 63 | 507.6178 | 4856.2121 | 38726.0431 | 351.3898 | 4079.6590 |
| 64 | 473.9822 | 4382.2300 | 33869.8310 | 332.5391 | 3728.2692 |
| 65 | 441.8752 | 3940.3548 | 29487.6010 | 314.2374 | 3395.7301 |
| 66 | 411.3786 | 3528.9762 | 25547.2462 | 296.6110 | 3081.4927 |
| 67 | 382.4216 | 3146.5546 | 22018.2700 | 279.6359 | 2784.8817 |
| 68 | 354.8025 | 2791.7521 | 18871.7155 | 263.1553 | 2505.2458 |
| 69 | 328.4679 | 2463.2842 | 16079.9634 | 247.1547 | 2242.0905 |
| 70 | 303.2400 | 2160.0442 | 13616.6792 | 231.4938 | 1994.9358 |
| 71 | 279.2030 | 1880.8412 | 11456.6350 | 216.2891 | 1763.4420 |
| 72 | 255.1185 | 1625.7227 | 9575.7937 | 200.3367 | 1547.1529 |
| 73 | 230.8132 | 1394.9095 | 7950.0710 | 183.4621 | 1346.8161 |
| 74 | 206.5852 | 1188.3243 | 6555.1615 | 165.9567 | 1163.3541 |
| 75 | 182.4832 | 1005.8411 | 5366.8372 | 147.8718 | 997.3973 |
| 76 | 160.2447 | 845.5965 | 4360.9960 | 130.9483 | 849.5255 |
| 77 | 139.5575 | 706.0390 | 3515.3996 | 114.9285 | 718.5772 |
| 78 | 120.9365 | 585.1025 | 2809.3606 | 100.3722 | 603.6487 |
| 79 | 104.6369 | 480.4656 | 2224.2581 | 87.5951 | 503.2765 |
| 80 | 89.50018 | 390.9054 | 1743.7925 | 75.5660 | 415.6814 |
| 81 | 76.36780 | 314.5376 | 1352.8871 | 64.9822 | 340.1153 |
| 82 | 64.22226 | 250.3153 | 1038.3495 | 55.0610 | 275.1331 |
| 83 | 53.57947 | 196.7359 | 788.07419 | 46.2887 | 220.0722 |
| 84 | 44.17014 | 152.5657 | 591.29831 | 38.4400 | 173.7834 |
| 85 | 36.07413 | 116.4916 | 438.73257 | 31.6305 | 135.3435 |
| 86 | 28.88449 | 87.60711 | 322.24097 | 25.4915 | 103.7130 |
| 87 | 22.61795 | 64.98917 | 234.63386 | 20.0663 | 78.22142 |
| 88 | 17.21124 | 47.77792 | 169.64470 | 15.3184 | 58.15517 |
| 89 | 13.03664 | 34.74128 | 121.86677 | 11.6450 | 42.83681 |
| 90 | 9.929746 | 24.81154 | 87.12549 | 8.91786 | 31.19177 |
| 91 | 7.128560 | 17.68298 | 62.31395 | 6.45589 | 22.27390 |
| 92 | 4.943523 | 12.73046 | 44.63097 | 4.42849 | 15.86861 |
| 93 | 3.455667 | 9.28379 | 31.89152 | 3.08461 | 11.43952 |
| 94 | 2.485197 | 6.79859 | 22.60773 | 2.21480 | 8.35491 |
| 95 | 1.809610 | 4.98898 | 15.80914 | 1.61159 | 6.14011 |
| 96 | 1.346959 | 3.64202 | 10.82016 | 1.20165 | 4.52852 |
| 97 | 1.023438 | 2.61858 | 7.17813 | .917360 | 3.32687 |
| 98 | .772823 | 1.84576 | 4.55955 | .699554 | 2.40951 |
| 99 | .589532 | 1.25623 | 2.71379 | .535772 | 1.71296 |
| 100 | .468296 | .787934 | 1.45756 | .431706 | 1.17718 |
| 101 | .353621 | .434312 | .669626 | .330672 | .745480 |
| 102 | .245230 | .189083 | .235313 | .232580 | .414800 |
| 103 | .142852 | .046231 | .046231 | .137345 | .182220 |
| 104 | .046231 | .000000 | .000000 | .044884 | .044884 |

INTRODUCTION TO FARR'S ENGLISH LIFE
TABLES No. 3.

THE English Life Tables No. 3, Male and Female, are from the population experience of Great Britain, and were graduated by Dr. William Farr and published in the 60's.

This table (males), with five per cent interest, was made the first standard for valuations in the State of New York in 1865, but was abandoned after one year for the American Experience Table and four and one-half per cent.

TABLE I.
FARR'S ENGLISH LIFE TABLE, No. 3. MALES.

| Age | Living. | Dying. | Proba- bility of Living. | Proba- bility of Dying. | Age. | Living. | Dying. | Proba- bility of Living. | Proba- bility of Dying. |
|-----|---------|--------|--------------------------------|-------------------------------|------|---------|--------|--------------------------------|-------------------------------|
| 0 | 511745 | 83719 | .83640 | .16359 | 55 | 209539 | 5144 | .97545 | .02455 |
| 1 | 428026 | 27521 | .93570 | .06428 | 56 | 204395 | 5281 | .97416 | .02584 |
| 2 | 400505 | 14215 | .96451 | .03549 | 57 | 199114 | 5428 | .97274 | .02726 |
| 3 | 386290 | 9213 | .97615 | .02385 | 58 | 193686 | 5584 | .97117 | .02883 |
| 4 | 377077 | 6719 | .98218 | .01782 | 59 | 188102 | 5752 | .96942 | .03058 |
| 5 | 370358 | 5033 | .98641 | .01359 | 60 | 182350 | 5929 | .96748 | .03252 |
| 6 | 365325 | 3953 | .98918 | .01082 | 61 | 176421 | 6118 | .96532 | .03468 |
| 7 | 361372 | 3310 | .99084 | .00916 | 62 | 170303 | 6314 | .96293 | .03707 |
| 8 | 358062 | 2734 | .99236 | .00764 | 63 | 163989 | 6515 | .96027 | .03973 |
| 9 | 355328 | 2297 | .99354 | .00646 | 64 | 157474 | 6720 | .95733 | .04267 |
| 10 | 353031 | 1983 | .99438 | .00562 | 65 | 150754 | 6921 | .95409 | .04591 |
| 11 | 351048 | 1776 | .99494 | .00506 | 66 | 143833 | 7115 | .95053 | .04947 |
| 12 | 349272 | 1666 | .99523 | .00477 | 67 | 136718 | 7297 | .94663 | .05337 |
| 13 | 347606 | 1637 | .99529 | .00471 | 68 | 129421 | 7458 | .94237 | .05763 |
| 14 | 345969 | 1679 | .99515 | .00485 | 69 | 121963 | 7593 | .93774 | .06226 |
| 15 | 344290 | 1781 | .99483 | .00517 | 70 | 114370 | 7695 | .93272 | .06728 |
| 16 | 342509 | 1928 | .99437 | .00563 | 71 | 106675 | 7756 | .92729 | .07271 |
| 17 | 340581 | 2112 | .99380 | .00620 | 72 | 98919 | 7770 | .92144 | .07856 |
| 18 | 338469 | 2320 | .99314 | .00686 | 73 | 91149 | 7733 | .91516 | .08484 |
| 19 | 336149 | 2541 | .99244 | .00756 | 74 | 83416 | 7639 | .90843 | .09157 |
| 20 | 333668 | 2764 | .99172 | .00828 | 75 | 75777 | 7483 | .90124 | .10041 |
| 21 | 330844 | 2801 | .99153 | .00847 | 76 | 68294 | 7268 | .89359 | .10641 |
| 22 | 328043 | 2836 | .99136 | .00864 | 77 | 61026 | 6990 | .88545 | .11455 |
| 23 | 325207 | 2868 | .99118 | .00882 | 78 | 54036 | 6655 | .87684 | .12316 |
| 24 | 322339 | 2897 | .99101 | .00899 | 79 | 47381 | 6266 | .86775 | .13225 |
| 25 | 319442 | 2926 | .99084 | .00916 | 80 | 41115 | 5832 | .85816 | .14184 |
| 26 | 316516 | 2954 | .99067 | .00933 | 81 | 35283 | 5361 | .84807 | .15193 |
| 27 | 313562 | 2981 | .99049 | .00951 | 82 | 29922 | 4862 | .83750 | .16250 |
| 28 | 310581 | 3009 | .99031 | .00969 | 83 | 25060 | 4349 | .82644 | .17356 |
| 29 | 307572 | 3038 | .99012 | .00988 | 84 | 20711 | 3834 | .81488 | .18512 |
| 30 | 304534 | 3068 | .98993 | .01007 | 85 | 16877 | 3328 | .80285 | .19715 |
| 31 | 301466 | 3100 | .98972 | .01028 | 86 | 13549 | 2840 | .79035 | .20965 |
| 32 | 298366 | 3134 | .98950 | .01050 | 87 | 10709 | 2384 | .77737 | .22263 |
| 33 | 295232 | 3171 | .98926 | .01074 | 88 | 8325 | 1965 | .76395 | .23605 |
| 34 | 292061 | 3211 | .98901 | .01099 | 89 | 6360 | 1590 | .75009 | .24991 |
| 35 | 288850 | 3254 | .98873 | .01127 | 90 | 4770 | 1260 | .73580 | .26420 |
| 36 | 285596 | 3300 | .98844 | .01156 | 91 | 3510 | 979 | .72110 | .27890 |
| 37 | 282296 | 3352 | .98813 | .01187 | 92 | 2531 | 744 | .70601 | .29399 |
| 38 | 278944 | 3406 | .98779 | .01221 | 93 | 1787 | 553 | .69056 | .30944 |
| 39 | 275538 | 3465 | .98742 | .01258 | 94 | 1234 | 401 | .67476 | .32524 |
| 40 | 272073 | 3529 | .98703 | .01297 | 95 | 833 | 285 | .65863 | .34137 |
| 41 | 268544 | 3596 | .98661 | .01339 | 96 | 548 | 196 | .64221 | .35779 |
| 42 | 264948 | 3668 | .98615 | .01385 | 97 | 352 | 132 | .62552 | .37448 |
| 43 | 261280 | 3746 | .98567 | .01433 | 98 | 220 | 86 | .60859 | .39141 |
| 44 | 257534 | 3826 | .98514 | .01486 | 99 | 134 | 55 | .59144 | .40856 |
| 45 | 253708 | 3912 | .98458 | .01542 | 100 | 79 | 33 | .57412 | .42588 |
| 46 | 249796 | 4001 | .98398 | .01602 | 101 | 46 | 21 | .55664 | .44336 |
| 47 | 245795 | 4095 | .98334 | .01666 | 102 | 25 | 11 | .53905 | .46095 |
| 48 | 241700 | 4192 | .98266 | .01734 | 103 | 14 | 7 | .52137 | .47863 |
| 49 | 237508 | 4292 | .98193 | .01807 | 104 | 7 | 3 | .50364 | .49636 |
| 50 | 233216 | 4395 | .98116 | .01884 | 105 | 4 | 2 | .48589 | .51411 |
| 51 | 228821 | 4502 | .97978 | .02022 | 106 | 2 | 1 | .46816 | .53184 |
| 52 | 224195 | 4758 | .97878 | .02112 | 107 | 1 | 1 | .45048 | .54952 |
| 53 | 219437 | 4885 | .97774 | .02226 | 108 | | | .43288 | .56712 |
| 54 | 214552 | 5013 | .97664 | .02336 | | | | | |

TABLE III.
COMMUTATION COLUMNS, FARR'S ENGLISH LIFE TABLE NO. 3.
MALES, FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 0 | 511745 | 7673088 | 141954511 | 196943.65 | 2410246.79 |
| 1 | 411503 | 7261525 | 134281423 | 116444.61 | 2213303.14 |
| 2 | 370289 | 6891236 | 127010898 | 90999.90 | 2065858.53 |
| 3 | 343410 | 6547826 | 120128662 | 78362.82 | 2005858.63 |
| 4 | 322327 | 6225499 | 113580836 | 70487.51 | 1927495.81 |
| 5 | 304407 | 5921092 | 107355337 | 64964.98 | 1857008.30 |
| 6 | 288721 | 5632371 | 101434245 | 60987.33 | 1792043.32 |
| 7 | 274613 | 5357758 | 95801874 | 57983.38 | 1731055.99 |
| 8 | 261632 | 5066126 | 90444116 | 55564.79 | 1673072.61 |
| 9 | 249649 | 4816177 | 85347999 | 53643.92 | 1617507.82 |
| 10 | 238495 | 4607682 | 80501513 | 52092.15 | 1563803.90 |
| 11 | 228034 | 4379948 | 75893531 | 50804.03 | 1511771.75 |
| 12 | 218154 | 4161794 | 71513583 | 49694.75 | 1463977.72 |
| 13 | 208763 | 3953031 | 67351780 | 48694.19 | 1411272.97 |
| 14 | 199789 | 3753242 | 63398756 | 47748.86 | 1362578.78 |
| 15 | 191172 | 3562070 | 59645516 | 46816.57 | 1314829.92 |
| 16 | 182869 | 3379201 | 56083446 | 45865.68 | 1268013.35 |
| 17 | 174845 | 3204356 | 52704215 | 44875.90 | 1222147.67 |
| 18 | 167078 | 3037278 | 49499889 | 43833.36 | 1177271.77 |
| 19 | 159550 | 2877728 | 46462611 | 42732.19 | 1133438.41 |
| 20 | 152254 | 2725474 | 43584883 | 41572.51 | 1090706.22 |
| 21 | 145186 | 2580288 | 40859409 | 40359.57 | 1049133.71 |
| 22 | 138419 | 2441869 | 38279121 | 39177.67 | 1008774.14 |
| 23 | 131945 | 2309924 | 35837252 | 38027.03 | 969596.47 |
| 24 | 125751 | 2184173 | 33527328 | 36908.16 | 931569.44 |
| 25 | 119828 | 2064345 | 31343155 | 35821.45 | 894661.28 |
| 26 | 114164 | 1950181 | 29278810 | 34766.07 | 858839.83 |
| 27 | 108749 | 1841432 | 27328629 | 33741.57 | 824073.76 |
| 28 | 103572 | 1737860 | 25487197 | 32747.47 | 790332.19 |
| 29 | 98623 | 1639237 | 23749337 | 31782.63 | 757584.72 |
| 30 | 93894 | 1545343 | 22110100 | 30845.96 | 725802.09 |
| 31 | 89373 | 1455970 | 20564757 | 29936.42 | 694956.13 |
| 32 | 85052 | 1370918 | 19108787 | 29052.74 | 665019.71 |
| 33 | 80921 | 1289997 | 17737869 | 28193.73 | 635966.97 |
| 34 | 76973 | 1213024 | 16447872 | 27358.01 | 607773.24 |
| 35 | 73199 | 1139825 | 15234848 | 26544.29 | 580415.23 |
| 36 | 69591 | 1070234 | 14095023 | 25751.39 | 553870.94 |
| 37 | 66141 | 1004093 | 13024789 | 24978.21 | 528119.55 |
| 38 | 62842 | 941251 | 12020696 | 24223.05 | 503141.34 |
| 39 | 59687 | 881564 | 11079445 | 23485.24 | 478918.29 |
| 40 | 56670 | 824894 | 10197881 | 22763.52 | 455433.05 |
| 41 | 53784 | 771110 | 9372087 | 22056.74 | 432669.53 |
| 42 | 51022 | 720088 | 8601877 | 21364.24 | 410612.79 |
| 43 | 48381 | 671707 | 7881789 | 20685.04 | 389248.55 |
| 44 | 45853 | 625854 | 7210082 | 20018.08 | 368563.51 |
| 45 | 43434 | 582420 | 6584228 | 19363.07 | 348545.43 |
| 46 | 41120 | 541300 | 6201802 | 18719.10 | 329182.36 |
| 47 | 38905 | 502395 | 5460508 | 18085.81 | 310463.26 |
| 48 | 36785 | 465610 | 4958113 | 17462.57 | 292377.45 |
| 49 | 34757 | 430253 | 4492503 | 16849.11 | 274914.88 |
| 50 | 32816 | 398037 | 4061650 | 16245.17 | 258065.77 |
| 51 | 30960 | 367077 | 3663613 | 15650.52 | 241820.60 |
| 52 | 29167 | 337010 | 3296536 | 15048.69 | 226170.08 |
| 53 | 27450 | 310460 | 2958626 | 14453.50 | 211121.39 |
| 54 | 25807 | 284653 | 2648166 | 13865.95 | 196667.89 |

TABLE III.—Cont.

COMMUTATION COLUMNS, FARR'S ENGLISH LIFE TABLE No. 3.
MALES, FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 24234 | 260419 | 2363513 | 13286.14 | 182801.97 |
| 56 | 22730 | 237689 | 2103094 | 12714.09 | 169515.83 |
| 57 | 21291 | 216398 | 1865405 | 12149.39 | 156801.74 |
| 58 | 19914 | 196484 | 1649007 | 11591.30 | 144652.35 |
| 59 | 18596 | 177888 | 1452523 | 11039.25 | 133061.05 |
| 60 | 17334 | 160554 | 1274635 | 10492.46 | 122021.80 |
| 61 | 16126 | 144428 | 1114081 | 9950.52 | 111529.34 |
| 62 | 14968 | 129460 | 969653 | 9412.82 | 101578.82 |
| 63 | 13858 | 115602 | 840193 | 8870.23 | 92166.00 |
| 64 | 12796 | 102806 | 724591 | 8349.83 | 83286.77 |
| 65 | 11779 | 91027 | 621785 | 7824.78 | 74936.94 |
| 66 | 10806 | 80220.7 | 530757.5 | 7304.82 | 67112.16 |
| 67 | 9876.2 | 70344.5 | 450536.8 | 6790.85 | 59807.34 |
| 68 | 8989.5 | 61355.0 | 380192.3 | 6284.00 | 53016.49 |
| 69 | 8145.7 | 53209.3 | 318837.3 | 5785.89 | 46732.49 |
| 70 | 7344.8 | 45864.5 | 265628.0 | 5298.27 | 40946.00 |
| 71 | 6587.1 | 39277.4 | 219763.5 | 4823.11 | 35648.33 |
| 72 | 5873.3 | 33404.1 | 180486.1 | 4362.60 | 30825.22 |
| 73 | 5203.7 | 28200.4 | 147082.0 | 3919.00 | 26462.62 |
| 74 | 4579.1 | 23621.3 | 118881.6 | 3494.50 | 22543.62 |
| 75 | 3999.8 | 19621.5 | 95260.3 | 3091.29 | 19049.12 |
| 76 | 3466.1 | 16155.4 | 75638.8 | 2711.50 | 15957.83 |
| 77 | 2978.2 | 13177.2 | 59483.4 | 2356.81 | 13246.33 |
| 78 | 2535.6 | 10641.6 | 46306.2 | 2028.81 | 10889.52 |
| 79 | 2137.8 | 8503.8 | 35664.6 | 1728.54 | 8860.71 |
| 80 | 1783.7 | 6720.1 | 27160.8 | 1456.69 | 7132.17 |
| 81 | 1471.9 | 5248.2 | 20440.7 | 1213.40 | 5675.48 |
| 82 | 1200.2 | 4047.99 | 15192.54 | 998.36 | 4462.08 |
| 83 | 966.53 | 3081.46 | 11144.55 | 810.84 | 3463.72 |
| 84 | 768.05 | 2313.41 | 8063.09 | 649.56 | 2652.88 |
| 85 | 601.80 | 1711.61 | 5745.68 | 512.84 | 2003.32 |
| 86 | 464.57 | 1247.04 | 4038.07 | 398.73 | 1490.48 |
| 87 | 353.05 | 893.99 | 2791.03 | 305.10 | 1091.75 |
| 88 | 263.90 | 630.09 | 1897.04 | 229.53 | 786.65 |
| 89 | 193.85 | 436.24 | 1266.95 | 169.63 | 557.12 |
| 90 | 139.81 | 296.429 | 830.713 | 123.03 | 387.49 |
| 91 | 98.917 | 197.512 | 534.284 | 87.52 | 264.46 |
| 92 | 68.585 | 128.927 | 336.772 | 60.99 | 176.94 |
| 93 | 46.560 | 82.367 | 207.845 | 41.60 | 115.95 |
| 94 | 30.916 | 51.451 | 125.478 | 27.75 | 74.35 |
| 95 | 20.058 | 31.393 | 74.027 | 18.09 | 46.60 |
| 96 | 12.703 | 18.6904 | 42.6343 | 11.49 | 28.51 |
| 97 | 7.8442 | 10.8462 | 23.9439 | 7.12 | 17.02 |
| 98 | 4.7180 | 6.1282 | 13.0977 | 4.29 | 9.90 |
| 99 | 2.7009 | 3.3673 | 6.9695 | 2.52 | 5.61 |
| 100 | 1.5701 | 1.7972 | 3.6022 | 1.43 | 3.09 |
| 101 | .8668 | .9304 | 1.8050 | .80 | 1.66 |
| 102 | .4639 | .4665 | .8747 | .42 | .86 |
| 103 | .2405 | .2260 | .4081 | .23 | .46 |
| 104 | .1205 | .1055 | .1821 | .11 | .21 |
| 105 | .0584 | .0471 | .0766 | .06 | .10 |
| 106 | .0273 | .0198 | .0295 | .03 | .04 |
| 107 | .0123 | .0075 | .0097 | .01 | .01 |
| 108 | .0053 | .0022 | .0022 | .00 | .00 |
| 109 | .0022 | | .0000 | .00 | .00 |

TABLE IV.
FARR'S ENGLISH LIFE TABLE NO. 3. COMMUTATION COLUMNS.
THREE PER CENT. MALES.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 0 | 511745 | 9288191 | 106217813 | 226301.22 | 3799711.50 |
| 1 | 415559 | 8872932 | 186929322 | 145020.64 | 3573410.28 |
| 2 | 377514 | 8495418 | 178050390 | 119079.40 | 3428389.64 |
| 3 | 353510 | 8141908 | 169560972 | 106070.72 | 3309310.18 |
| 4 | 335028 | 7806880 | 161419064 | 97885.09 | 3203239.46 |
| 5 | 319474 | 7487406 | 153612184 | 92089.22 | 3105354.37 |
| 6 | 305953 | 7181453 | 146124778 | 87874.16 | 3013265.15 |
| 7 | 293828 | 6887625 | 138043325 | 84660.01 | 2925390.99 |
| 8 | 282657 | 6604968 | 132055700 | 82047.07 | 2840730.98 |
| 9 | 272329 | 6332039 | 125450732 | 79951.09 | 2758683.91 |
| 10 | 262688 | 6069951 | 119118093 | 78242.51 | 2678732.22 |
| 11 | 253605 | 5816346 | 113048142 | 76809.95 | 2600489.71 |
| 12 | 244972 | 5571374 | 107231796 | 75564.30 | 2523679.76 |
| 13 | 236703 | 5334671 | 101660422 | 74429.84 | 2448115.46 |
| 14 | 228726 | 5105945 | 96225751 | 73347.59 | 2373685.62 |
| 15 | 220987 | 4884958 | 91219806 | 72269.99 | 2300338.03 |
| 16 | 213441 | 4671517 | 86334848 | 71160.04 | 2228068.13 |
| 17 | 206057 | 4465460 | 81663331 | 69993.57 | 2156908.09 |
| 18 | 198815 | 4266645 | 77197871 | 68752.99 | 2086914.52 |
| 19 | 191701 | 4074944 | 72931226 | 67429.93 | 2018161.53 |
| 20 | 184711 | 3890233 | 68856282 | 66203.04 | 1950731.60 |
| 21 | 177845 | 3712388 | 64966049 | 64537.25 | 1884708.56 |
| 22 | 171203 | 3541185 | 61253661 | 63075.43 | 1820171.31 |
| 23 | 164780 | 3376405 | 57712476 | 61638.48 | 1757095.88 |
| 24 | 158570 | 3217835 | 54336071 | 60227.58 | 1695457.43 |
| 25 | 152567 | 3065268 | 51118236 | 58843.96 | 1635229.85 |
| 26 | 146767 | 2918501 | 48052968 | 57487.19 | 1576385.89 |
| 27 | 141162 | 2777339 | 45134467 | 56157.33 | 1518888.70 |
| 28 | 135748 | 2641591 | 42357128 | 54854.40 | 1462741.37 |
| 29 | 130517 | 2511074 | 39715537 | 53577.54 | 1407886.97 |
| 30 | 125464 | 2385610 | 37204403 | 52325.92 | 1354309.43 |
| 31 | 120583 | 2265027 | 34818853 | 51098.76 | 1301983.51 |
| 32 | 115867 | 2149160 | 32553826 | 49894.92 | 1250884.75 |
| 33 | 111310 | 2037850 | 30404666 | 48713.32 | 1200989.83 |
| 34 | 106907 | 1930943 | 28366816 | 47552.59 | 1152276.51 |
| 35 | 102653 | 1828290 | 26435873 | 46411.45 | 1104723.92 |
| 36 | 98540 | 1729750 | 24607583 | 45288.71 | 1058312.47 |
| 37 | 94564 | 1635186 | 22877833 | 44183.27 | 1013023.76 |
| 38 | 90720 | 1544466 | 21242647 | 43093.11 | 968840.49 |
| 39 | 87002 | 1457464 | 19698181 | 42017.65 | 925747.38 |
| 40 | 83406 | 1374158 | 18240717 | 40955.43 | 883729.73 |
| 41 | 79926 | 1294132 | 16866659 | 39905.10 | 842774.30 |
| 42 | 76559 | 1217573 | 15572521 | 38866.00 | 802869.20 |
| 43 | 73300 | 1144273 | 14354954 | 37836.97 | 764003.20 |
| 44 | 70145 | 1174128 | 13210681 | 36816.67 | 726166.23 |
| 45 | 67090 | 1007038 | 12136553 | 35804.93 | 689349.56 |
| 46 | 64132 | 942906 | 11129515 | 34800.58 | 653544.63 |
| 47 | 61267 | 881639 | 10186609 | 33803.30 | 618744.05 |
| 48 | 58491 | 823148 | 9304970 | 32812.31 | 584940.75 |
| 49 | 55803 | 767345 | 8481822 | 31827.40 | 552128.44 |
| 50 | 53198 | 714177 | 7714477 | 30848.36 | 520301.04 |
| 51 | 50676 | 663471 | 7000330 | 29875.03 | 489452.68 |
| 52 | 48205 | 615266 | 6336859 | 28880.38 | 459577.65 |
| 53 | 45808 | 569458 | 5721593 | 27887.15 | 430607.27 |
| 54 | 43483 | 525975 | 5152135 | 26897.11 | 402810.12 |

TABLE III.—Cont.
 COMMUTATION COLUMNS, FARR'S ENGLISH LIFE TABLE NO. 3,
 MALES, FOUR PER CENT.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 24234 | 260419 | 2363513 | 13286.14 | 182801.97 |
| 56 | 22730 | 237689 | 2103094 | 12714.09 | 169515.83 |
| 57 | 21291 | 216398 | 1865405 | 12149.39 | 156801.74 |
| 58 | 19914 | 196484 | 1649007 | 11591.30 | 144652.35 |
| 59 | 18596 | 177888 | 1452523 | 11039.25 | 133061.05 |
| 60 | 17334 | 160554 | 1274635 | 10492.46 | 122021.80 |
| 61 | 16126 | 144428 | 1114081 | 9950.52 | 111529.34 |
| 62 | 14968 | 129460 | 969653 | 9412.82 | 101578.82 |
| 63 | 13858 | 115602 | 840193 | 8870.23 | 92166.00 |
| 64 | 12796 | 102806 | 724591 | 8349.83 | 83286.77 |
| 65 | 11779 | 91027 | 621785 | 7824.78 | 74936.94 |
| 66 | 10806 | 80220 7 | 530757.5 | 7304.82 | 67112.16 |
| 67 | 9876.2 | 70344 5 | 450536.8 | 6790.85 | 59807.34 |
| 68 | 8989.5 | 61355 0 | 380192.3 | 6284.00 | 53016.49 |
| 69 | 8145.7 | 53209.3 | 318837.3 | 5785.89 | 46732.60 |
| 70 | 7344.8 | 45864.5 | 265628.0 | 5298.27 | 40946.60 |
| 71 | 6587.1 | 39277.4 | 219763.5 | 4823.11 | 35648.33 |
| 72 | 5873.3 | 33404.1 | 180486.1 | 4362.60 | 30825.22 |
| 73 | 5203.7 | 28200.4 | 147082.0 | 3919.00 | 26462.62 |
| 74 | 4579.1 | 23621.3 | 118881.6 | 3494.50 | 22543.62 |
| 75 | 3999.8 | 19621.5 | 95260.3 | 3091.29 | 19049.12 |
| 76 | 3466.1 | 16155.4 | 75638 8 | 2711.50 | 15957.83 |
| 77 | 2978.2 | 13177.2 | 59483.4 | 2356.81 | 13246.33 |
| 78 | 2535.6 | 10641.6 | 46306.2 | 2028.81 | 10889.52 |
| 79 | 2137.8 | 8503.8 | 35664.6 | 1728.54 | 8860.71 |
| 80 | 1783.7 | 6720.1 | 27160.8 | 1456.69 | 7132.17 |
| 81 | 1471.9 | 5248.2 | 20440.7 | 1213.40 | 5675.48 |
| 82 | 1200.2 | 4047.99 | 15192.54 | 998 36 | 4462.08 |
| 83 | 966 53 | 3081.46 | 11144.55 | 810 84 | 3463.72 |
| 84 | 768.05 | 2313.41 | 8063.09 | 649.56 | 2652.88 |
| 85 | 601.80 | 1711.61 | 5746.68 | 512.84 | 2003.32 |
| 86 | 464.57 | 1247.04 | 4038.07 | 398.73 | 1490.48 |
| 87 | 353.05 | 893.99 | 2791.03 | 305.10 | 1091.75 |
| 88 | 263.90 | 630.09 | 1897.04 | 229.53 | 786.65 |
| 89 | 193.85 | 436 24 | 1266.95 | 169.63 | 557.12 |
| 90 | 139.81 | 296.429 | 830.713 | 123.03 | 387.49 |
| 91 | 98.917 | 197.512 | 534.284 | 87.52 | 264 46 |
| 92 | 68.585 | 128.927 | 336.772 | 60 99 | 176.94 |
| 93 | 46 560 | 82.367 | 207.845 | 41.60 | 115 95 |
| 94 | 30.916 | 51.451 | 125.478 | 27 75 | 74 35 |
| 95 | 20.058 | 51.393 | 74.027 | 18.09 | 46.60 |
| 96 | 12.703 | 18.6904 | 42.6343 | 11.49 | 28.51 |
| 97 | 7.8442 | 10.8462 | 23.9439 | 7.12 | 17.02 |
| 98 | 4.7180 | 6 1282 | 13.0977 | 4.29 | 9.90 |
| 99 | 2.7609 | 3.3673 | 6.9695 | 2.52 | 5.61 |
| 100 | 1.5701 | 1.7972 | 3.6022 | 1.43 | 3.09 |
| 101 | .8668 | .9304 | 1.8050 | .80 | 1.66 |
| 102 | .4639 | .4665 | .8747 | .42 | .86 |
| 103 | .2405 | .2260 | .4081 | .23 | .46 |
| 104 | .1205 | .1055 | .1821 | .11 | .21 |
| 105 | .0584 | .0471 | .0766 | .06 | .10 |
| 106 | .0273 | .0198 | .0295 | .03 | .04 |
| 107 | .0123 | .0075 | .0097 | .01 | .01 |
| 108 | .0053 | .0022 | .0022 | .00 | .00 |
| 109 | .0022 | | .0000 | .00 | .00 |

TABLE I.—Cont.
FARR'S ENGLISH LIFE TABLE, No. 3. FEMALES.

| Age. | Living. | Dying. | Proba- bility of Living. | Proba- bility of Dying. | Age. | Living. | Dying. | Proba- bility of Living. | Proba- bility of Dying. |
|------|---------|--------|--------------------------------|-------------------------------|------|---------|--------|--------------------------------|-------------------------------|
| 0 | 488255 | 65774 | .86529 | .13471 | 55 | 211576 | 4439 | .97902 | .02098 |
| 1 | 422481 | 26159 | .93808 | .06192 | 56 | 207137 | 4628 | .97766 | .02234 |
| 2 | 396322 | 14023 | .96462 | .03538 | 57 | 202509 | 4817 | .97621 | .02379 |
| 3 | 382299 | 9243 | .97582 | .02418 | 58 | 197692 | 5009 | .97466 | .02534 |
| 4 | 373056 | 6566 | .98232 | .01768 | 59 | 192683 | 5206 | .97298 | .02702 |
| 5 | 366460 | 4866 | .98672 | .01328 | 60 | 187477 | 5409 | .97115 | .02885 |
| 6 | 361594 | 3815 | .98945 | .01055 | 61 | 182068 | 5619 | .96914 | .03086 |
| 7 | 357779 | 3249 | .99092 | .00908 | 62 | 176449 | 5835 | .96693 | .03307 |
| 8 | 354530 | 2721 | .99232 | .00768 | 63 | 170614 | 6057 | .96450 | .03550 |
| 9 | 351806 | 2328 | .99338 | .00662 | 64 | 164557 | 6282 | .96182 | .03818 |
| 10 | 349478 | 2045 | .99415 | .00585 | 65 | 158275 | 6509 | .95888 | .04112 |
| 11 | 347433 | 1861 | .99464 | .00536 | 66 | 151766 | 6731 | .95565 | .04435 |
| 12 | 345572 | 1765 | .99489 | .00511 | 67 | 145035 | 6947 | .95210 | .04790 |
| 13 | 343807 | 1745 | .99493 | .00507 | 68 | 138088 | 7149 | .94823 | .05177 |
| 14 | 342062 | 1789 | .99477 | .00523 | 69 | 130939 | 7332 | .94401 | .05599 |
| 15 | 340273 | 1888 | .99445 | .00555 | 70 | 123607 | 7489 | .93941 | .06059 |
| 16 | 338385 | 2029 | .99400 | .00600 | 71 | 116118 | 7613 | .93444 | .06556 |
| 17 | 336356 | 2205 | .99345 | .00655 | 72 | 108505 | 7698 | .92905 | .07095 |
| 18 | 334151 | 2400 | .99282 | .00718 | 73 | 100807 | 7736 | .92325 | .07675 |
| 19 | 331751 | 2609 | .99214 | .00786 | 74 | 93071 | 7742 | .91702 | .08298 |
| 20 | 329142 | 2819 | .99144 | .00856 | 75 | 85347 | 7653 | .91033 | .08967 |
| 21 | 326323 | 2867 | .99121 | .00879 | 76 | 77694 | 7521 | .90319 | .09681 |
| 22 | 323456 | 2912 | .99100 | .00900 | 77 | 70173 | 7329 | .89557 | .10443 |
| 23 | 320544 | 2952 | .99079 | .00921 | 78 | 62844 | 7071 | .88747 | .11253 |
| 24 | 317592 | 2989 | .99059 | .00941 | 79 | 55773 | 6755 | .87889 | .12111 |
| 25 | 314603 | 3024 | .99039 | .00961 | 80 | 49018 | 6382 | .86981 | .13019 |
| 26 | 311579 | 3055 | .99020 | .00980 | 81 | 42636 | 5959 | .86023 | .13977 |
| 27 | 308524 | 3084 | .99000 | .01000 | 82 | 36677 | 5496 | .85015 | .14985 |
| 28 | 305440 | 3112 | .98981 | .01019 | 83 | 31181 | 5003 | .83956 | .16044 |
| 29 | 302328 | 3138 | .98962 | .01038 | 84 | 26178 | 4490 | .82847 | .17153 |
| 30 | 299190 | 3163 | .98943 | .01057 | 85 | 21688 | 3972 | .81688 | .18312 |
| 31 | 296027 | 3187 | .98924 | .01076 | 86 | 17716 | 3458 | .80480 | .19520 |
| 32 | 292847 | 3209 | .98904 | .01096 | 87 | 14258 | 2962 | .79223 | .20777 |
| 33 | 289631 | 3223 | .98884 | .01116 | 88 | 11206 | 2494 | .77919 | .22081 |
| 34 | 286398 | 3255 | .98863 | .01137 | 89 | 8802 | 2063 | .76567 | .23433 |
| 35 | 283143 | 3279 | .98842 | .01158 | 90 | 6739 | 1673 | .75170 | .24830 |
| 36 | 279864 | 3321 | .98820 | .01180 | 91 | 5066 | 1331 | .73729 | .26271 |
| 37 | 276563 | 3326 | .98797 | .01203 | 92 | 3735 | 1037 | .72246 | .27754 |
| 38 | 273237 | 3350 | .98774 | .01226 | 93 | 2698 | 790 | .70722 | .29278 |
| 39 | 269887 | 3376 | .98749 | .01251 | 94 | 1908 | 588 | .69160 | .30840 |
| 40 | 266511 | 3402 | .98723 | .01277 | 95 | 1320 | 428 | .67563 | .32437 |
| 41 | 263109 | 3431 | .98696 | .01304 | 96 | 892 | 304 | .65931 | .34069 |
| 42 | 259678 | 3459 | .98668 | .01332 | 97 | 588 | 210 | .64269 | .35731 |
| 43 | 256219 | 3490 | .98638 | .01362 | 98 | 378 | 142 | .62579 | .37421 |
| 44 | 252729 | 3522 | .98606 | .01394 | 99 | 236 | 92 | .60864 | .39136 |
| 45 | 249207 | 3555 | .98573 | .01427 | 100 | 144 | 59 | .59126 | .40874 |
| 46 | 245652 | 3591 | .98538 | .01462 | 101 | 85 | 36 | .57370 | .42630 |
| 47 | 242061 | 3627 | .98502 | .01498 | 102 | 49 | 22 | .55598 | .44402 |
| 48 | 238434 | 3665 | .98463 | .01537 | 103 | 27 | 12 | .53814 | .46186 |
| 49 | 234769 | 3705 | .98422 | .01578 | 104 | 15 | 7 | .52021 | .47979 |
| 50 | 231064 | 3746 | .98379 | .01621 | 105 | 8 | 4 | .50222 | .49778 |
| 51 | 227318 | 3788 | .98334 | .01666 | 106 | 4 | 2 | .48422 | .51578 |
| 52 | 223530 | 3832 | .98286 | .01714 | 107 | 2 | 1 | .46624 | .53376 |
| 53 | 219698 | 3876 | .98236 | .01764 | 108 | 1 | 1 | .44831 | .55169 |
| 54 | 215822 | 4246 | .98033 | .01967 | | | | | |

TABLE II.

FARR'S ENGLISH LIFE TABLE NO. 3. COMMUTATION COLUMNS,
FOUR PER CENT. FEMALES.

| Age. | D_x | N_x | S_x | M_x | R_x |
|------|--------|---------|-----------|-----------|------------|
| 0 | 488255 | 7593795 | 141207163 | 177406.81 | 2340157.77 |
| 1 | 406231 | 7187564 | 133613368 | 114162.57 | 2162750.96 |
| 2 | 366422 | 6821142 | 126425804 | 89977.11 | 2048588.39 |
| 3 | 339862 | 6481280 | 119604662 | 77510.72 | 1958611.28 |
| 4 | 318890 | 6162390 | 113123382 | 69609.77 | 1881100.56 |
| 5 | 301203 | 5861187 | 106960922 | 64188.34 | 1811490.79 |
| 6 | 285773 | 5575444 | 101099805 | 60342.67 | 1747302.45 |
| 7 | 271882 | 5303532 | 95524391 | 57443.58 | 1686959.78 |
| 8 | 259052 | 5044480 | 90220859 | 55069.57 | 1629516.20 |
| 9 | 247174 | 4797306 | 85176379 | 53155.72 | 1574446.63 |
| 10 | 236004 | 4561212 | 80379073 | 51583.01 | 1521290.91 |
| 11 | 225686 | 4335526 | 75817861 | 50254.62 | 1469707.90 |
| 12 | 215843 | 4119683 | 71482335 | 49092.25 | 1419453.28 |
| 13 | 206481 | 3913202 | 67362652 | 48032.24 | 1370361.03 |
| 14 | 197532 | 3715670 | 63449450 | 47024.55 | 1322328.79 |
| 15 | 188042 | 3526728 | 59733780 | 46031.18 | 1275304.24 |
| 16 | 180667 | 3346061 | 56207052 | 45023.16 | 1229273.06 |
| 17 | 172676 | 3173185 | 52860991 | 43981.53 | 1184249.90 |
| 18 | 164947 | 3008438 | 49687606 | 42893.08 | 1140268.37 |
| 19 | 157463 | 2850975 | 4667168 | 41753.94 | 1097375.29 |
| 20 | 150216 | 2700759 | 43828193 | 40563.23 | 1055621.35 |
| 21 | 143202 | 2557557 | 41127434 | 39326.16 | 1015058.12 |
| 22 | 136484 | 2421073 | 38569877 | 38116.41 | 975731.96 |
| 23 | 130053 | 2291020 | 36148804 | 36934.93 | 937615.55 |
| 24 | 123899 | 2167121 | 33857784 | 35783.29 | 910680.62 |
| 25 | 118013 | 2049108 | 31690663 | 34662.07 | 864897.33 |
| 26 | 112383 | 1936725 | 29641555 | 33571.35 | 830235.26 |
| 27 | 107001 | 1829724 | 27704830 | 32511.83 | 796663.91 |
| 28 | 101857 | 1727867 | 25875106 | 31483.39 | 764152.08 |
| 29 | 96942 | 1630225 | 24147239 | 30485.52 | 732668.89 |
| 30 | 92246 | 1538679 | 22516314 | 29518.02 | 702183.17 |
| 31 | 87760 | 1450919 | 20977635 | 28580.32 | 672665.15 |
| 32 | 83477 | 1367442 | 19526716 | 27671.84 | 644084.83 |
| 33 | 79386 | 1288056 | 18159274 | 26792.27 | 616121.99 |
| 34 | 75481 | 1212575 | 16871218 | 25940.21 | 589620.72 |
| 35 | 71753 | 1140822 | 15658643 | 25115.34 | 563680.51 |
| 36 | 68194 | 1072628 | 14517821 | 24316.35 | 538565.17 |
| 37 | 64798 | 1007830 | 13445193 | 23522.94 | 514248.82 |
| 38 | 61556 | 946274 | 12437363 | 22793.64 | 490705.88 |
| 39 | 58463 | 887811 | 11491080 | 22067.96 | 467912.24 |
| 40 | 55511 | 832300 | 10603278 | 21364.78 | 445844.28 |
| 41 | 52695 | 779605 | 9770978 | 20683.43 | 424479.50 |
| 42 | 50008 | 729597 | 8991373 | 20022.71 | 403796.07 |
| 43 | 47444 | 682153 | 8261776 | 19382.21 | 383773.36 |
| 44 | 44998 | 637155 | 7576623 | 18760.83 | 364391.15 |
| 45 | 42664 | 594491 | 6942468 | 18157.87 | 345630.32 |
| 46 | 40438 | 554053 | 6347977 | 17572.67 | 327472.45 |
| 47 | 38314 | 515739 | 5793924 | 17004.28 | 309899.78 |
| 48 | 36288 | 479451 | 5278185 | 16452.27 | 292895.50 |
| 49 | 34356 | 445995 | 4798734 | 15915.93 | 276443.23 |
| 50 | 32514 | 412581 | 4353639 | 15394.59 | 260527.30 |
| 51 | 30756 | 381825 | 3941058 | 14887.75 | 245132.71 |
| 52 | 29081 | 352744 | 3559233 | 14394.94 | 230244.96 |
| 53 | 27483 | 325261 | 3206480 | 13915.58 | 215850.02 |
| 54 | 25957 | 299302 | 2881228 | 13449.37 | 201934.44 |

TABLE II.—Cont.

FARR'S ENGLISH LIFE TABLE No. 3, COMMUTATION COLUMNS, FOUR PER CENT. FEMALES.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 24470 | 274832 | 2581926 | 12958 30 | 188485.07 |
| 56 | 23035 | 251797 | 2307094 | 12464.65 | 175526.77 |
| 57 | 21654 | 230143 | 2055297 | 11969.78 | 163062.12 |
| 58 | 20320 | 209817 | 1825154 | 11474.51 | 151092.34 |
| 59 | 19049 | 190768 | 1615337 | 10979.31 | 139617.83 |
| 60 | 17822 | 172946 | 1424569 | 10484.43 | 128638.52 |
| 61 | 16642 | 156304 | 1251623 | 9990.02 | 118154.09 |
| 62 | 15508 | 140796 | 1095319 | 9496.17 | 108164.07 |
| 63 | 14418 | 126378 | 954523 | 9003.06 | 98667.90 |
| 64 | 13372 | 113006 | 828145 | 8510.88 | 89664.84 |
| 65 | 12366 | 100640 | 715139 | 8020.05 | 81153.96 |
| 66 | 11402 | 89238 | 614499 | 7531.04 | 73133.91 |
| 67 | 10477 | 78761.2 | 525261.2 | 7044.81 | 65602.87 |
| 68 | 9591.5 | 69109.7 | 446500.0 | 6562.27 | 58558.06 |
| 69 | 8745.2 | 60424.5 | 377330.3 | 6084.80 | 51995.79 |
| 70 | 7938.0 | 52486.5 | 316905.8 | 5613.94 | 45910.99 |
| 71 | 7170.2 | 45316.3 | 264419.3 | 5151.50 | 40297.05 |
| 72 | 6442.4 | 38873.9 | 219103.0 | 4699.48 | 35145.55 |
| 73 | 5755.2 | 33118.7 | 180229.1 | 4259.99 | 30446.07 |
| 74 | 5109.1 | 28009.6 | 147110.4 | 3835.32 | 26186.08 |
| 75 | 4504.9 | 23504.7 | 119100.8 | 3427.62 | 22350.76 |
| 76 | 3943.3 | 19561.4 | 95596.1 | 3039.20 | 18923.14 |
| 77 | 3424.5 | 16136.9 | 76034.7 | 2672.16 | 15883.94 |
| 78 | 2948.9 | 13188.0 | 59897.8 | 2328.25 | 13211.78 |
| 79 | 2516.5 | 10671.5 | 46709.8 | 2009.21 | 10883.53 |
| 80 | 2126.6 | 8544.9 | 36038.3 | 1716.15 | 8874.32 |
| 81 | 1778.6 | 6766.3 | 27493.4 | 1449.92 | 7158.17 |
| 82 | 1471.2 | 5295.1 | 20727.1 | 1210.90 | 5708.25 |
| 83 | 1202.6 | 4092.49 | 15432.04 | 998.93 | 4497.35 |
| 84 | 970.82 | 3121.67 | 11339.55 | 813.39 | 3498.42 |
| 85 | 773.36 | 2348.31 | 8217.88 | 653.28 | 2685.03 |
| 86 | 607.45 | 1740.86 | 5869.57 | 517.09 | 2031.75 |
| 87 | 470.07 | 1270.79 | 4128.71 | 403.08 | 1514.66 |
| 88 | 358.08 | 912.71 | 2857.92 | 309.18 | 1111.58 |
| 89 | 268.28 | 644.43 | 1945.21 | 233.16 | 802.40 |
| 90 | 197.52 | 446.91 | 1300.78 | 172.70 | 569.24 |
| 91 | 142.76 | 304.15 | 853.87 | 125.55 | 396.54 |
| 92 | 101.21 | 202.938 | 549.718 | 89.48 | 270.99 |
| 93 | 70.307 | 132.631 | 346.780 | 62.46 | 181.51 |
| 94 | 47.810 | 84.821 | 214.149 | 42.67 | 119.05 |
| 95 | 31.794 | 53.027 | 129.328 | 28.51 | 76.38 |
| 96 | 20.655 | 32.372 | 76.301 | 18.60 | 47.87 |
| 97 | 13.094 | 19.2778 | 43.9293 | 11.83 | 29.27 |
| 98 | 8.0918 | 11.1860 | 24.6515 | 7.33 | 17.44 |
| 99 | 4.8690 | 6.3170 | 13.4655 | 4.41 | 10.11 |
| 100 | 2.8495 | 3.4675 | 7.1485 | 2.59 | 5.70 |
| 101 | 1.6200 | 1.8475 | 3.6810 | 1.47 | 3.11 |
| 102 | .8936 | .9539 | 1.8335 | .81 | 1.64 |
| 103 | .4777 | .4762 | .8796 | .42 | .83 |
| 104 | .2472 | .2290 | .4034 | .22 | .41 |
| 105 | .1236 | .1054 | .1744 | .11 | .19 |
| 106 | .0597 | .0457 | .0690 | .05 | .08 |
| 107 | .0278 | .0179 | .0233 | .02 | .03 |
| 108 | .0125 | .0054 | .0054 | .01 | .01 |
| 109 | .0054 | .0000 | .0000 | .00 | .00 |

TABLE III.

FARR'S ENGLISH LIFE TABLES No. 3. COMMUTATION COLUMNS,
THREE PER CENT. FEMALES.

| Age. | D _x | N _x | S _x | i | R _x |
|------|----------------|----------------|----------------|-----------|----------------|
| 0 | 488255 | 9203701 | 195913869 | 205965.03 | 3703432.41 |
| 1 | 410175 | 8793526 | 186710158 | 142106.77 | 3497467.38 |
| 2 | 373571 | 8419955 | 177916642 | 117449.40 | 3355360.61 |
| 3 | 349858 | 8070097 | 169496687 | 104616.37 | 3237911.21 |
| 4 | 331456 | 7738641 | 161426590 | 96404.08 | 3133294.84 |
| 5 | 316112 | 7422529 | 153687949 | 90714.31 | 3036890.76 |
| 6 | 302330 | 7119699 | 146265420 | 86639.11 | 2946176.45 |
| 7 | 290907 | 6828792 | 139145721 | 83537.17 | 2859537.34 |
| 8 | 279870 | 6548922 | 132316929 | 80972.38 | 2776000.17 |
| 9 | 269630 | 6279292 | 125768007 | 78884.66 | 2695027.79 |
| 10 | 260044 | 6019248 | 119488715 | 77152.41 | 2616143.13 |
| 11 | 250993 | 5768255 | 113469467 | 75675.06 | 2538990.72 |
| 12 | 242377 | 5525878 | 107701212 | 74369.79 | 2463315.66 |
| 13 | 234116 | 5291762 | 102175334 | 73167.91 | 2388945.87 |
| 14 | 226143 | 5065619 | 96883572 | 72014.26 | 2315777.90 |
| 15 | 218408 | 4847211 | 91817953 | 70865.97 | 2243763.70 |
| 16 | 210870 | 4636341 | 86970742 | 69689.42 | 2172897.73 |
| 17 | 203501 | 4432840 | 82334401 | 68461.85 | 2103208.30 |
| 18 | 196279 | 4236561 | 77901561 | 67166.64 | 2034746.45 |
| 19 | 189193 | 4047368 | 73665000 | 65797.95 | 1967579.81 |
| 20 | 182238 | 3865130 | 69617632 | 64353.41 | 1901781.86 |
| 21 | 175415 | 3689715 | 65752502 | 62838.06 | 1837428.45 |
| 22 | 168809 | 3520906 | 62062787 | 61341.79 | 1774590.39 |
| 23 | 162417 | 3358489 | 58541881 | 59866.30 | 1713248.60 |
| 24 | 156234 | 3202255 | 55183392 | 58414.11 | 1653382.30 |
| 25 | 150256 | 3051999 | 51981137 | 56986.55 | 1594968.19 |
| 26 | 144478 | 2907521 | 48929138 | 55584.34 | 1537981.64 |
| 27 | 138894 | 2768627 | 46021617 | 54209.01 | 1482397.30 |
| 28 | 133501 | 2635126 | 43252990 | 52861.07 | 1428186.29 |
| 29 | 128292 | 2506834 | 40617864 | 51540.50 | 1375327.22 |
| 30 | 123262 | 2383572 | 38110030 | 50247.69 | 1323786.72 |
| 31 | 118407 | 2265165 | 35727458 | 48982.53 | 1273539.03 |
| 32 | 113721 | 2151444 | 33462293 | 47744.90 | 1224556.50 |
| 33 | 109198 | 2042246 | 31310849 | 46535.02 | 1176811.60 |
| 34 | 104835 | 1937411 | 29268603 | 45351.60 | 1130276.58 |
| 35 | 100624 | 1836787 | 27331192 | 44194.83 | 1084924.98 |
| 36 | 96562 | 1740225 | 25494405 | 43063.47 | 1040730.15 |
| 37 | 92644 | 1647581 | 23754180 | 41957.69 | 997666.68 |
| 38 | 88864 | 1558717 | 22106599 | 40875.99 | 955708.99 |
| 39 | 85218 | 1473499 | 20547882 | 39818.22 | 914833.00 |
| 40 | 81702 | 1391798 | 19074383 | 38783.28 | 875014.78 |
| 41 | 78309 | 1313489 | 17682585 | 37770.75 | 836231.50 |
| 42 | 75036 | 1238453 | 16369096 | 36779.33 | 798460.75 |
| 43 | 71880 | 1166573 | 15130643 | 35808.93 | 761681.42 |
| 44 | 68836 | 1097737 | 13964070 | 34858.35 | 725872.49 |
| 45 | 65900 | 1031837 | 12866333 | 33927.00 | 691014.14 |
| 46 | 63068 | 968769 | 11834496 | 33014.30 | 657087.14 |
| 47 | 60336 | 908433 | 10865727 | 32119.21 | 624072.84 |
| 48 | 57701 | 850732 | 9957294 | 31241.48 | 591953.63 |
| 49 | 55159 | 795573 | 9106562 | 30380.39 | 560712.15 |
| 50 | 52707 | 742866 | 8310989 | 29535.25 | 530331.70 |
| 51 | 50343 | 692223 | 7568123 | 28705.65 | 500706.51 |
| 52 | 48062 | 644461 | 6875600 | 27891.18 | 472090.86 |
| 53 | 45862 | 598509 | 6231139 | 27091.25 | 444190.68 |
| 54 | 43741 | 554858 | 5632540 | 26305.70 | 417108.43 |

FARR'S ENGLISH TABLE NO. 3.—FEMALES. 195

TABLE III.—Cont.

FARR'S ENGLISH LIFE TABLES NO. 3. COMMUTATION COLUMNS, THREE PER CENT. FEMALES.

| Age. | D _x | N _x | S _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|
| 55 | 41631 | 513227 | 5077682 | 25470.23 | 390802.73 |
| 56 | 39571 | 473656 | 4564455 | 24622.22 | 365332.50 |
| 57 | 37560 | 436066 | 4090799 | 23763.86 | 340710.28 |
| 58 | 35598 | 400498 | 3654703 | 22896.46 | 316946.42 |
| 59 | 33686 | 366812 | 3254205 | 22020.76 | 294049.96 |
| 60 | 31821 | 334991 | 2887393 | 21137.13 | 272029.20 |
| 61 | 30003 | 304988 | 2552402 | 20245.78 | 250892.07 |
| 62 | 28230 | 276758 | 2247414 | 19346.80 | 230646.29 |
| 63 | 26501 | 250257 | 197 656 | 18440.45 | 211299.49 |
| 64 | 24816 | 225441 | 1720399 | 17527.02 | 192859.04 |
| 65 | 23174 | 202267 | 1494958 | 16607.25 | 175332.02 |
| 66 | 21573 | 180694 | 1292691 | 15682.00 | 158724.77 |
| 67 | 20016 | 160678 | 1111997 | 14753.06 | 143042.77 |
| 68 | 18502 | 142176 | 951319 | 13822.24 | 128289.71 |
| 69 | 17033 | 125143 | 809143 | 12892.25 | 114467.47 |
| 70 | 15611 | 109532 | 684000 | 11966.24 | 101575.22 |
| 71 | 14238 | 95294 | 574468 | 11047.95 | 89608.98 |
| 72 | 12917 | 82377 | 479174 | 10141.64 | 78561.03 |
| 73 | 11651 | 70726 | 396797 | 9211.91 | 68419.39 |
| 74 | 10444 | 60281.5 | 326070.7 | 8383.83 | 59167.48 |
| 75 | 9298.2 | 50983.3 | 265789.2 | 7542.34 | 50783.65 |
| 76 | 8217.9 | 42765.4 | 214805.9 | 6732.87 | 43241.31 |
| 77 | 7200.1 | 35559.3 | 172040.5 | 5960.53 | 36508.44 |
| 78 | 6265.6 | 29293.7 | 136481.2 | 5229.83 | 30547.91 |
| 79 | 5398.6 | 23895.1 | 107187.5 | 4545.38 | 25318.08 |
| 80 | 4606.6 | 19288.5 | 83292.4 | 3910.56 | 20772.70 |
| 81 | 3890.1 | 15398.4 | 64003.9 | 3328.27 | 16862.14 |
| 82 | 3248.9 | 12149.5 | 48605.5 | 2800.41 | 13533.87 |
| 83 | 2681.6 | 9467.9 | 36456.0 | 2327.74 | 10733.46 |
| 84 | 2185.8 | 7282.1 | 26988.1 | 1910.00 | 8405.72 |
| 85 | 1758.1 | 5524.0 | 19706.0 | 1546.02 | 6495.72 |
| 86 | 1394.4 | 4129.6 | 14182.0 | 1233.41 | 4919.70 |
| 87 | 1089.5 | 3040.10 | 10052.37 | 969.18 | 3716.29 |
| 88 | 838.00 | 2202.10 | 7012.27 | 749.44 | 2747.11 |
| 89 | 633.94 | 1568.16 | 4810.17 | 569.81 | 1997.67 |
| 90 | 471.25 | 1096.91 | 3242.01 | 425.55 | 1427.86 |
| 91 | 343.92 | 752.99 | 2145.10 | 311.67 | 1002.31 |
| 92 | 246.18 | 506.81 | 1392.11 | 224.24 | 690.34 |
| 93 | 172.68 | 334.13 | 885.30 | 157.88 | 466.10 |
| 94 | 118.56 | 215.574 | 551.173 | 108.80 | 308.22 |
| 95 | 79.611 | 135.963 | 335.599 | 73.33 | 199.42 |
| 96 | 52.221 | 83.742 | 199.636 | 48.26 | 126.09 |
| 97 | 33.427 | 50.315 | 115.894 | 30.98 | 77.83 |
| 98 | 20.858 | 29.457 | 65.579 | 19.39 | 46.85 |
| 99 | 12.672 | 16.7848 | 36.1217 | 11.78 | 27.46 |
| 100 | 7.4882 | 9.2966 | 19.3369 | 6.99 | 15.68 |
| 101 | 4.2985 | 4.9981 | 10.0403 | 4.01 | 8.69 |
| 102 | 2.3942 | 2.6039 | 5.0422 | 2.24 | 4.68 |
| 103 | 1.2924 | 1.3115 | 2.4383 | 1.19 | 2.44 |
| 104 | .6752 | .6363 | 1.1268 | .64 | 1.25 |
| 105 | .3410 | .2953 | .4405 | .33 | .61 |
| 106 | .1663 | .1290 | .1952 | .16 | .28 |
| 107 | .0782 | .0508 | .0662 | .08 | .12 |
| 108 | .0354 | .0154 | .0154 | .04 | .04 |
| 109 | .0154 | | .0000 | | |

**INTRODUCTION TO TWENTY-THREE GERMAN
OFFICES' TABLE.**

THE Twenty-three German Offices' Table is, as its name implies, a graduation from the experience of twenty-three German companies. It is standard now throughout the German Empire.

The commutation tables have not been before published. They are furnished by the kindness of Messrs. Weeks and Frankland of the New York Life Insurance Company's actuarial force, and were computed for the use of that office.

TWENTY-THREE GERMAN OFFICES' TABLE. 199

TABLE I.
TWENTY-THREE GERMAN COMPANIES' MORTALITY TABLE.

| Age. | l_x | d_x | Age. | l_x | d_x |
|------|--------|-------|------|-------|-------|
| 17 | 102787 | 909 | 59 | 57792 | 1900 |
| 18 | 101878 | 936 | 60 | 55892 | 1976 |
| 19 | 100942 | 942 | 61 | 53916 | 2038 |
| 20 | 100000 | 919 | 62 | 51878 | 2097 |
| 21 | 99081 | 908 | 63 | 49781 | 2149 |
| 22 | 98173 | 887 | 64 | 47632 | 2197 |
| 23 | 97286 | 861 | 65 | 45435 | 2246 |
| 24 | 96425 | 835 | 66 | 43189 | 2302 |
| 25 | 95590 | 816 | 67 | 40887 | 2355 |
| 26 | 94774 | 804 | 68 | 38532 | 2399 |
| 27 | 93970 | 797 | 69 | 36133 | 2432 |
| 28 | 93173 | 795 | 70 | 33701 | 2452 |
| 29 | 92378 | 800 | 71 | 31249 | 2455 |
| 30 | 91578 | 808 | 72 | 28794 | 2436 |
| 31 | 90770 | 818 | 73 | 26358 | 2406 |
| 32 | 89952 | 831 | 74 | 23952 | 2360 |
| 33 | 89121 | 841 | 75 | 21592 | 2299 |
| 34 | 88280 | 856 | 76 | 19293 | 2210 |
| 35 | 87424 | 873 | 77 | 17083 | 2103 |
| 36 | 86551 | 889 | 78 | 14980 | 1982 |
| 37 | 85662 | 906 | 79 | 12998 | 1848 |
| 38 | 84756 | 928 | 80 | 11100 | 1730 |
| 39 | 83828 | 950 | 81 | 9420 | 1599 |
| 40 | 82878 | 975 | 82 | 7821 | 1443 |
| 41 | 81903 | 1006 | 83 | 6378 | 1264 |
| 42 | 80897 | 1035 | 84 | 5114 | 1080 |
| 43 | 79862 | 1063 | 85 | 4034 | 896 |
| 44 | 78799 | 1092 | 86 | 3138 | 715 |
| 45 | 77707 | 1117 | 87 | 2423 | 587 |
| 46 | 76590 | 1140 | 88 | 1836 | 487 |
| 47 | 75450 | 1169 | 89 | 1349 | 394 |
| 48 | 74281 | 1204 | 90 | 955 | 309 |
| 49 | 73077 | 1246 | 91 | 646 | 233 |
| 50 | 71831 | 1303 | 92 | 413 | 167 |
| 51 | 70528 | 1362 | 93 | 246 | 113 |
| 52 | 69166 | 1425 | 94 | 133 | 69 |
| 53 | 67741 | 1490 | 95 | 64 | 37 |
| 54 | 66251 | 1556 | 96 | 27 | 18 |
| 55 | 64695 | 1621 | 97 | 9 | 6 |
| 56 | 63074 | 1691 | 98 | 3 | 2 |
| 57 | 61383 | 1759 | 99 | 1 | 1 |
| 58 | 59624 | 1832 | | | |

TABLE II.
 TWENTY-THREE GERMAN COMPANIES' COMMUTATION TABLES,
 FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 17 | 52768 | 966826 | 15945462 | 448.71 | 13553.09 | 367092.66 |
| 18 | 50290 | 916536 | 14978043 | 444.27 | 13104.38 | 353539.57 |
| 19 | 47911 | 868625 | 14062114 | 429.92 | 12660.11 | 340435.19 |
| 20 | 45639 | 822986 | 13193489 | 403.29 | 12230.19 | 327775.08 |
| 21 | 43480 | 779506 | 12370503 | 383.14 | 11826.90 | 315544.89 |
| 22 | 41425 | 738081 | 11590997 | 359.88 | 11443.76 | 303717.99 |
| 23 | 39472 | 698609 | 10852916 | 335.90 | 11083.88 | 292274.23 |
| 24 | 37618 | 660991 | 10154307 | 313.22 | 10747.98 | 281190.35 |
| 25 | 35857 | 625134 | 9493316 | 294.32 | 10434.76 | 270442.37 |
| 26 | 34184 | 590950 | 8868182 | 278.84 | 10140.44 | 260007.61 |
| 27 | 32590 | 558360 | 8277232 | 265.78 | 9861.60 | 249867.17 |
| 28 | 31071 | 527289 | 7718872 | 254.92 | 9595.82 | 240005.57 |
| 29 | 29621 | 497668 | 7191583 | 246.66 | 9340.90 | 230409.75 |
| 30 | 28235 | 469433 | 6693915 | 239.54 | 9094.24 | 221068.85 |
| 31 | 26910 | 442523 | 6224482 | 233.18 | 8854.70 | 211974.61 |
| 32 | 25642 | 416881 | 5781959 | 227.77 | 8621.52 | 203119.91 |
| 33 | 24428 | 392453 | 5365078 | 221.65 | 8393.75 | 194498.39 |
| 34 | 23266 | 369187 | 4972625 | 216.92 | 8172.10 | 186104.64 |
| 35 | 22155 | 347032 | 4603438 | 212.72 | 7955.18 | 177932.54 |
| 36 | 21090 | 325942 | 4256406 | 208.29 | 7742.46 | 169977.36 |
| 37 | 20070 | 305872 | 3930464 | 204.11 | 7534.17 | 162234.90 |
| 38 | 19094 | 286778 | 3624592 | 201.02 | 7330.06 | 151700.73 |
| 39 | 18159 | 268619 | 3337814 | 197.88 | 7129.04 | 147370.67 |
| 40 | 17263 | 251356 | 3069195 | 195.27 | 6931.16 | 140241.63 |
| 41 | 16403 | 234953 | 2817839 | 193.73 | 6735.89 | 133310.47 |
| 42 | 15579 | 219374 | 2582886 | 191.65 | 6542.16 | 126574.58 |
| 43 | 14788 | 204586 | 2363512 | 189.26 | 6350.51 | 120032.42 |
| 44 | 14030 | 190556 | 2158926 | 186.95 | 6161.25 | 113681.91 |
| 45 | 13303 | 177253 | 1968370 | 183.87 | 5974.30 | 107520.66 |
| 46 | 12608 | 164645 | 1791117 | 180.44 | 5790.43 | 101546.36 |
| 47 | 11942 | 152703 | 1626472 | 177.92 | 5609.99 | 95755.93 |
| 48 | 11305 | 141398 | 1473769 | 176.20 | 5432.07 | 90145.94 |
| 49 | 10694 | 130704 | 1332371 | 175.33 | 5255.87 | 84713.87 |
| 50 | 10108 | 120595.6 | 1201667.0 | 176.30 | 5080.54 | 79458.00 |
| 51 | 9542.5 | 111053.1 | 1081071.4 | 177.19 | 4904.24 | 74377.46 |
| 52 | 8998.3 | 102054.8 | 970018.3 | 178.26 | 4727.05 | 69473.22 |
| 53 | 8474.0 | 93580.8 | 867963.5 | 179.22 | 4548.79 | 64746.17 |
| 54 | 7968.8 | 85612.0 | 774382.7 | 179.96 | 4369.57 | 60197.38 |
| 55 | 7482.4 | 78129.6 | 688770.7 | 180.27 | 4189.61 | 55827.81 |
| 56 | 7014.3 | 71115.3 | 610641.1 | 180.82 | 4009.34 | 51638.20 |
| 57 | 6563.7 | 64551.6 | 539525.8 | 180.86 | 3828.52 | 47628.86 |
| 58 | 6130.4 | 58421.2 | 474974.2 | 181.12 | 3647.66 | 43800.34 |
| 59 | 5713.5 | 52707.7 | 416553.0 | 180.62 | 3466.54 | 40152.68 |
| 60 | 5313.1 | 47394.6 | 363845.3 | 180.62 | 3285.92 | 36686.14 |
| 61 | 4928.2 | 42466.4 | 316450.7 | 179.12 | 3105.30 | 33400.22 |

TWENTY-THREE GERMAN OFFICES' TABLE. 201

TABLE II.—Cont.

TWENTY-THREE GERMAN COMPANIES' COMMUTATION TABLES,
FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | F _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 62 | 4559.5 | 37906.9 | 273984.3 | 177.22 | 2926.18 | 30294.92 |
| 63 | 4206.9 | 33700.0 | 236077.4 | 174.62 | 2748.96 | 27368.74 |
| 64 | 3870.5 | 29829.5 | 202377.4 | 171.66 | 2574.34 | 24619.78 |
| 65 | 3550.0 | 26279.5 | 172547.9 | 168.74 | 2402.68 | 22045.44 |
| 66 | 3244.7 | 23034.8 | 146268.4 | 166.29 | 2233.94 | 19642.76 |
| 67 | 2953.6 | 20081.2 | 123233.6 | 163.58 | 2067.65 | 17408.82 |
| 68 | 2676.4 | 17404.8 | 103152.4 | 160.23 | 1904.07 | 15341.17 |
| 69 | 2413.3 | 14991.5 | 85747.6 | 156.18 | 1743.84 | 13437.10 |
| 70 | 2164.3 | 12827.2 | 70756.1 | 151.41 | 1587.66 | 11693.26 |
| 71 | 1929.6 | 10897.6 | 57928.9 | 145.77 | 1436.25 | 10105.60 |
| 72 | 1709.6 | 9188.0 | 47031.3 | 139.07 | 1290.48 | 8669.35 |
| 73 | 1504.8 | 7683.2 | 37843.3 | 132.08 | 1151.41 | 7378.87 |
| 74 | 1314.9 | 6368.3 | 30160.1 | 124.57 | 1019.33 | 6227.46 |
| 75 | 1139.7 | 5228.55 | 23791.78 | 116.68 | 894.76 | 5208.13 |
| 76 | 973.19 | 4249.36 | 18563.23 | 107.85 | 778.08 | 4313.37 |
| 77 | 833.68 | 3415.68 | 14313.87 | 98.68 | 670.23 | 3535.29 |
| 78 | 702.93 | 2712.75 | 10898.19 | 89.43 | 571.55 | 2865.06 |
| 79 | 586.47 | 2126.28 | 8185.44 | 80.17 | 482.12 | 2293.51 |
| 80 | 483.74 | 1642.54 | 6059.16 | 72.17 | 401.95 | 1811.39 |
| 81 | 392.96 | 1249.58 | 4416.62 | 64.14 | 329.78 | 1409.44 |
| 82 | 313.71 | 935.87 | 3167.04 | 55.65 | 265.64 | 1079.66 |
| 83 | 245.99 | 689.88 | 2231.17 | 46.88 | 209.99 | 814.02 |
| 84 | 189.65 | 500.23 | 1541.29 | 38.51 | 163.11 | 604.03 |
| 85 | 143.85 | 356.38 | 1041.06 | 30.72 | 124.60 | 440.92 |
| 86 | 107.59 | 248.786 | 684.675 | 23.57 | 93.88 | 316.32 |
| 87 | 79.883 | 168.903 | 435.889 | 18.61 | 70.31 | 222.44 |
| 88 | 58.203 | 110.700 | 266.96 | 14.84 | 51.70 | 152.13 |
| 89 | 41.120 | 69.580 | 156.286 | 11.55 | 36.86 | 100.43 |
| 90 | 27.990 | 41.590 | 86.706 | 8.708 | 25.313 | 63.566 |
| 91 | 18.205 | 23.385 | 45.116 | 6.314 | 16.605 | 38.253 |
| 92 | 11.191 | 12.194 | 21.731 | 4.351 | 10.291 | 21.648 |
| 93 | 6.410 | 5.784 | 9.537 | 2.831 | 5.940 | 11.357 |
| 94 | 3.332 | 2.452 | 3.753 | 1.662 | 3.109 | 5.417 |
| 95 | 1.542 | 0.910 | 1.301 | 0.8570 | 1.4474 | 2.3081 |
| 96 | 0.625 | 0.285 | 0.391 | 0.4009 | 0.5904 | 0.8607 |
| 97 | 0.200 | 0.085 | 0.106 | 0.1285 | 0.1895 | 0.2703 |
| 98 | 0.064 | 0.021 | 0.021 | 0.0412 | 0.0610 | 0.0808 |
| 99 | 0.021 | 0.000 | 0.000 | 0.0193 | 0.0198 | 0.0198 |

202 TWENTY-THREE GERMAN OFFICES' TABLE.

TABLE III.
 TWENTY-THREE GERMAN COMPANIES' COMMUTATION TABLES,
 THREE AND ONE-HALF PER CENT.

| Age. | D _t | N _t | S _t | C _t | M _t | R _t |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 17 | 57273 | 1138562 | 19777475 | 489.37 | 16834.60 | 486597.22 |
| 18 | 54847 | 1083716 | 18638912 | 486.87 | 16345.23 | 469762.62 |
| 19 | 52506 | 1031210 | 17555106 | 473.42 | 15858.36 | 453417.39 |
| 20 | 50257 | 980952 | 16523985 | 446.24 | 15384.94 | 437559.03 |
| 21 | 48111 | 932842 | 15543033 | 425.99 | 14938.70 | 422174.09 |
| 22 | 46058 | 886784 | 14610191 | 402.07 | 14512.71 | 407235.39 |
| 23 | 44098 | 842686 | 13723407 | 377.08 | 14110.61 | 392722.68 |
| 24 | 42230 | 800456 | 12880721 | 353.33 | 13733.56 | 378612.04 |
| 25 | 40449 | 760007 | 12080265 | 333.61 | 13380.23 | 364878.48 |
| 26 | 38747 | 721260 | 11320253 | 317.59 | 13046.62 | 351498.25 |
| 27 | 37119 | 684141 | 10599998 | 304.18 | 12729.03 | 338451.63 |
| 28 | 35560 | 648581 | 9914857 | 293.16 | 12424.85 | 325722.60 |
| 29 | 34064 | 614517 | 9266276 | 285.02 | 12131.69 | 313297.75 |
| 30 | 32627 | 581800 | 8651759 | 278.14 | 11846.67 | 301166.06 |
| 31 | 31246 | 550644 | 8069869 | 272.06 | 11568.53 | 289319.39 |
| 32 | 29917 | 520727 | 7519225 | 267.04 | 11296.47 | 277750.86 |
| 33 | 28638 | 492080 | 6998498 | 261.11 | 11029.43 | 266454.39 |
| 34 | 27400 | 464680 | 6506409 | 256.78 | 10768.32 | 255424.96 |
| 35 | 26225 | 438455 | 6041729 | 253.02 | 10511.54 | 244656.64 |
| 36 | 25086 | 413309 | 5603274 | 248.95 | 10258.52 | 234145.10 |
| 37 | 23988 | 389381 | 5189905 | 245.13 | 10009.57 | 223886.58 |
| 38 | 22932 | 366449 | 4800524 | 242.59 | 9764.44 | 213877.01 |
| 39 | 21914 | 344535 | 4434075 | 239.94 | 9521.85 | 204112.57 |
| 40 | 20933 | 323602 | 4089540 | 237.93 | 9281.91 | 194590.72 |
| 41 | 19987 | 303615 | 3765938 | 237.19 | 9043.98 | 185308.81 |
| 42 | 19074 | 284541 | 3462323 | 235.78 | 8806.79 | 176264.83 |
| 43 | 18193 | 266348 | 3177782 | 233.97 | 8571.01 | 167458.04 |
| 44 | 17344 | 249004 | 2911434 | 232.23 | 8337.04 | 158887.03 |
| 45 | 16525 | 232479 | 2662430 | 229.51 | 8104.81 | 150549.99 |
| 46 | 15737 | 216742 | 2429951 | 226.31 | 7875.30 | 142445.18 |
| 47 | 14978 | 201764 | 2213209 | 224.22 | 7648.99 | 134569.89 |
| 48 | 14248 | 187516 | 2011445 | 223.13 | 7424.77 | 126920.88 |
| 49 | 13543 | 173973 | 1823929 | 223.10 | 7201.64 | 119496.12 |
| 50 | 12862 | 161111 | 1649956 | 225.42 | 6978.54 | 112294.48 |
| 51 | 12201 | 148910 | 1488845 | 227.66 | 6753.12 | 105315.94 |
| 52 | 11561 | 137340 | 1339935 | 230.13 | 6525.46 | 98562.82 |
| 53 | 10940 | 126408.9 | 1202586 | 232.49 | 6295.33 | 92037.36 |
| 54 | 10337.6 | 116071.3 | 1076177 | 234.58 | 6062.84 | 85742.03 |
| 55 | 9753.4 | 106117.9 | 960105.9 | 236.12 | 5828.26 | 79679.19 |
| 56 | 9187.4 | 97130.5 | 853788.0 | 237.98 | 5592.14 | 73850.93 |
| 57 | 8638.8 | 88491.7 | 756657.5 | 239.18 | 5354.16 | 68258.79 |
| 58 | 8107.4 | 80384.3 | 668165.8 | 240.68 | 5114.98 | 62904.63 |
| 59 | 7592.6 | 72791.7 | 587781.5 | 241.18 | 4874.30 | 57780.65 |
| 60 | 7094.7 | 65607.0 | 514389.8 | 242.34 | 4633.12 | 52915.35 |
| 61 | 6612.4 | 59084.6 | 449292.8 | 241.49 | 4390.78 | 48282.23 |

TABLE III.—Cont.

TWENTY-THREE GERMAN COMPANIES' COMMUTATION TABLES,
THREE AND ONE-HALF PER CENT.

| Age. | D _t | N _t | S _t | C _t | M _t | R _t |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 62 | 6147.3 | 52937.3 | 390208.2 | 240.08 | 4149.29 | 43891.45 |
| 63 | 5699.3 | 47238.0 | 337270.9 | 237.72 | 3709.21 | 37742.16 |
| 64 | 5268.9 | 41969.1 | 290032.9 | 234.81 | 3671.49 | 35832.95 |
| 65 | 4855.9 | 37113.2 | 248063.8 | 231.93 | 3436.68 | 32161.46 |
| 66 | 4459.8 | 32653.4 | 210950.6 | 229.67 | 3204.75 | 28724.78 |
| 67 | 4079.3 | 28574.1 | 178297.2 | 227.01 | 2975.08 | 25520.03 |
| 68 | 3714.3 | 24859.8 | 149723.1 | 223.43 | 2748.07 | 22544.95 |
| 69 | 3365.3 | 21494.5 | 124863.3 | 218.85 | 2524.64 | 19796.88 |
| 70 | 3032.6 | 18461.9 | 103368.8 | 213.19 | 2305.79 | 17272.24 |
| 71 | 2716.9 | 15745.0 | 84906.9 | 206.23 | 2092.60 | 14966.45 |
| 72 | 2418.8 | 13326.2 | 69161.9 | 197.71 | 1886.37 | 12873.85 |
| 73 | 2139.3 | 11186.9 | 55835.7 | 188.67 | 1688.66 | 10987.48 |
| 74 | 1878.3 | 9308.6 | 44648.8 | 178.81 | 1499.99 | 9298.82 |
| 75 | 1636.0 | 7672.6 | 35340.2 | 168.30 | 1321.18 | 7798.83 |
| 76 | 1412.3 | 6260.3 | 27697.6 | 156.31 | 1152.88 | 6477.65 |
| 77 | 1208.3 | 5052.02 | 21407.3 | 143.71 | 996.57 | 5324.77 |
| 78 | 1023.73 | 4028.29 | 16355.3 | 130.86 | 852.86 | 4328.20 |
| 79 | 858.21 | 3170.08 | 12327.0 | 117.89 | 722.00 | 3475.34 |
| 80 | 711.30 | 2458.78 | 9156.9 | 106.63 | 624.11 | 2753.34 |
| 81 | 580.61 | 1878.17 | 6698.16 | 95.22 | 497.48 | 2149.23 |
| 82 | 465.76 | 1412.41 | 4819.99 | 83.03 | 402.26 | 1651.75 |
| 83 | 366.98 | 1045.43 | 3407.58 | 70.27 | 319.23 | 1249.49 |
| 84 | 284.30 | 761.13 | 2362.148 | 58.01 | 248.96 | 930.26 |
| 85 | 216.68 | 544.45 | 1601.018 | 46.50 | 190.95 | 681.30 |
| 86 | 162.85 | 381.60 | 1056.568 | 35.85 | 144.45 | 490.35 |
| 87 | 121.49 | 260.11 | 674.968 | 28.44 | 108.60 | 345.90 |
| 88 | 88.95 | 171.16 | 414.858 | 22.80 | 80.16 | 237.30 |
| 89 | 63.14 | 108.02 | 243.698 | 17.82 | 57.36 | 157.14 |
| 90 | 43.19 | 64.83 | 135.678 | 13.50 | 39.535 | 99.78 |
| 91 | 28.23 | 36.60 | 70.848 | 9.837 | 26.035 | 60.239 |
| 92 | 17.44 | 19.16 | 34.248 | 6.812 | 16.198 | 34.204 |
| 93 | 10.03 | 9.128 | 15.088 | 4.453 | 9.386 | 18.006 |
| 94 | 5.242 | 3.886 | 5.960 | 2.627 | 4.933 | 8.620 |
| 95 | 2.437 | 1.440 | 2.074 | 1.361 | 2.300 | 3.687 |
| 96 | 0.993 | 0.456 | 0.625 | 0.640 | 0.945 | 1.381 |
| 97 | 0.320 | 0.136 | 0.169 | 0.206 | 0.305 | 0.436 |
| 98 | 0.103 | 0.033 | 0.033 | 0.0664 | 0.0985 | 0.1306 |
| 99 | 0.033 | 0.000 | 0.000 | 0.0321 | 0.0321 | 0.0321 |

TABLE IV.
 TWENTY-THREE GERMAN OFFICES—COMMUTATION TABLES,
 THREE PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 17 | 62188 | 1347790 | 24679861 | 553.94 | 21120.77 | 650080.37 |
| 18 | 59843 | 1287947 | 23332071 | 533.79 | 20586.83 | 628059.60 |
| 19 | 57506 | 1230381 | 22044124 | 521.56 | 20053.04 | 608372.77 |
| 20 | 55368 | 1175013 | 20813743 | 494.01 | 19531.48 | 588319.73 |
| 21 | 53261 | 1121752 | 19638730 | 473.88 | 19037.47 | 568788.25 |
| 22 | 51236 | 1070516 | 18516978 | 449.44 | 18563.59 | 549750.78 |
| 23 | 49294 | 1021222 | 17416462 | 423.56 | 18114.15 | 531187.19 |
| 24 | 47435 | 973787 | 16425240 | 398.80 | 17690.59 | 513073.04 |
| 25 | 45054 | 928133 | 15451453 | 378.38 | 17291.79 | 495382.45 |
| 26 | 43946 | 884187 | 14523320 | 361.95 | 16913.41 | 478090.66 |
| 27 | 42304 | 841883 | 13639133 | 348.35 | 16551.46 | 461177.25 |
| 28 | 40724 | 801159 | 12797250 | 337.36 | 16203.11 | 444625.79 |
| 29 | 39200 | 761959 | 11906091 | 329.59 | 15865.75 | 428422.68 |
| 30 | 37729 | 724230 | 11234132 | 323.19 | 15536.16 | 412556.93 |
| 31 | 36307 | 687923 | 10599902 | 317.66 | 15212.97 | 397020.77 |
| 32 | 34932 | 652991 | 9821979 | 313.31 | 14895.31 | 381807.80 |
| 33 | 33601 | 619390 | 9168988 | 307.84 | 14584.00 | 366912.49 |
| 34 | 32315 | 587075 | 8549598 | 304.21 | 14274.16 | 352330.49 |
| 35 | 31069 | 556006 | 7962523 | 301.21 | 13969.95 | 338056.33 |
| 36 | 29863 | 526143 | 7406517 | 297.80 | 13668.74 | 324086.38 |
| 37 | 28695 | 497448 | 6880374 | 294.66 | 13370.94 | 310417.64 |
| 38 | 27565 | 469883 | 6382926 | 293.02 | 13076.28 | 297046.70 |
| 39 | 26469 | 443414 | 5913043 | 291.23 | 12783.26 | 283970.42 |
| 40 | 25407 | 418007 | 5466629 | 290.19 | 12492.03 | 271187.16 |
| 41 | 24377 | 393630 | 5051622 | 290.69 | 12201.84 | 258695.13 |
| 42 | 23376 | 370254 | 4657992 | 290.36 | 11911.15 | 246493.29 |
| 43 | 22405 | 347849 | 4287738 | 289.53 | 11620.79 | 234582.14 |
| 44 | 21463 | 326386 | 3939889 | 288.77 | 11331.26 | 222961.35 |
| 45 | 20549 | 305837 | 3613503 | 286.78 | 11042.49 | 211630.09 |
| 46 | 19664 | 286173 | 3307666 | 284.16 | 10755.71 | 200587.60 |
| 47 | 18807 | 267366 | 3021493 | 282.00 | 10471.55 | 189831.89 |
| 48 | 17976 | 249390 | 2754127 | 282.88 | 10188.65 | 179360.34 |
| 49 | 17170 | 232220 | 2504737 | 284.22 | 9905.77 | 169171.69 |
| 50 | 16385 | 215835 | 2272517 | 288.57 | 9621.55 | 159265.92 |
| 51 | 15619 | 200216 | 2056682 | 292.85 | 9332.98 | 149644.37 |
| 52 | 14872 | 185344 | 1856466 | 297.47 | 9040.13 | 140311.39 |
| 53 | 14141 | 171203 | 1671122 | 301.98 | 8742.66 | 131271.26 |
| 54 | 13427 | 157776 | 1499919 | 306.17 | 8440.68 | 122528.60 |
| 55 | 12730 | 145046 | 1342143 | 309.67 | 8134.51 | 114087.92 |
| 56 | 12049 | 132997 | 1197097 | 313.63 | 7824.84 | 105953.41 |
| 57 | 11385 | 121612 | 1064100 | 316.74 | 7511.21 | 98128.57 |
| 58 | 10737 | 110875 | 942487.7 | 320.28 | 7194.47 | 90617.36 |
| 59 | 10104 | 100770.6 | 831612.7 | 322.49 | 6874.19 | 83422.89 |
| 60 | 9486.8 | 91289.8 | 730842.1 | 325.62 | 6551.70 | 76548.70 |
| 61 | 8884.8 | 82399.0 | 639558.3 | 326.06 | 6226.08 | 69997.00 |

TWENTY-THREE GERMAN OFFICES' TABLE. 205

TABLE IV.—Cont.

TWENTY-THREE GERMAN OFFICES—COMMUTATION TABLES, THREE PER CENT.

| Age. | D ₁ | N ₁ | S ₁ | C ₁ | M ₁ | R ₁ |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 63 | 8300.0 | 74099.0 | 557159.3 | 325.73 | 5900.02 | 63770.92 |
| 63 | 7732.5 | 66366.5 | 483060.3 | 324.08 | 5574.29 | 57870.90 |
| 64 | 7183.2 | 59183.3 | 416693.8 | 321.67 | 5250.21 | 52296.61 |
| 65 | 6652.3 | 52531.0 | 357510.5 | 319.27 | 4928.54 | 47046.40 |
| 66 | 6139.3 | 46391.7 | 304979.5 | 317.70 | 4609.27 | 42117.86 |
| 67 | 5642.8 | 40748.9 | 258587.8 | 315.55 | 4291.57 | 37508.59 |
| 68 | 5162.9 | 35586.0 | 217838.9 | 312.08 | 3976.02 | 33217.02 |
| 69 | 4700.4 | 30885.6 | 182252.9 | 307.16 | 3663.94 | 29241.00 |
| 70 | 4256.4 | 26620.2 | 151367.3 | 300.66 | 3356.78 | 25577.06 |
| 71 | 3831.7 | 22797.5 | 124738.1 | 292.26 | 3056.12 | 22220.28 |
| 72 | 3427.9 | 19369.6 | 101940.6 | 281.55 | 2763.86 | 19164.16 |
| 73 | 3046.5 | 16323.1 | 82571.0 | 269.99 | 2482.31 | 16400.30 |
| 74 | 2687.8 | 13635.3 | 66247.9 | 257.11 | 2212.32 | 13917.99 |
| 75 | 2352.4 | 11282.9 | 52612.6 | 243.17 | 1955.21 | 11705.67 |
| 76 | 2040.7 | 9242.2 | 41329.7 | 226.95 | 1712.04 | 9750.46 |
| 77 | 1754.3 | 7487.9 | 32087.5 | 209.67 | 1485.09 | 8038.42 |
| 78 | 1493.5 | 5994.4 | 24599.6 | 191.85 | 1275.42 | 6553.33 |
| 79 | 1258.2 | 4736.2 | 18605.2 | 173.67 | 1083.57 | 5277.91 |
| 80 | 1047.8 | 3688.39 | 13869.05 | 157.85 | 909.90 | 4104.34 |
| 81 | 859.48 | 2828.91 | 10180.66 | 141.64 | 752.05 | 3284.44 |
| 82 | 692.81 | 2136.10 | 7351.75 | 124.10 | 610.41 | 2532.39 |
| 83 | 548.53 | 1587.57 | 5215.65 | 105.54 | 486.31 | 1921.08 |
| 84 | 427.01 | 1160.56 | 3628.08 | 87.55 | 380.77 | 1435.67 |
| 85 | 327.02 | 833.54 | 2467.52 | 70.52 | 293.22 | 1054.90 |
| 86 | 246.98 | 586.56 | 1633.98 | 54.63 | 222.70 | 761.68 |
| 87 | 185.15 | 401.41 | 1047.42 | 43.55 | 168.07 | 538.98 |
| 88 | 136.21 | 265.203 | 646.006 | 35.08 | 124.52 | 370.01 |
| 89 | 97.136 | 168.040 | 380.803 | 27.55 | 89.44 | 246.39 |
| 90 | 66.781 | 101.259 | 212.763 | 20.98 | 61.89 | 156.95 |
| 91 | 43.858 | 57.401 | 111.504 | 15.36 | 40.91 | 95.06 |
| 92 | 27.222 | 30.179 | 54.103 | 10.69 | 25.55 | 54.15 |
| 93 | 15.743 | 14.4359 | 23.9243 | 7.021 | 14.863 | 28.600 |
| 94 | 8.2633 | 6.1726 | 9.4884 | 4.162 | 7.842 | 13.737 |
| 95 | 3.8605 | 2.3121 | 3.3158 | 2.167 | 3.680 | 5.895 |
| 96 | 1.5812 | 0.73092 | 1.00371 | 1.023 | 1.513 | 2.215 |
| 97 | 0.51172 | 0.21920 | 0.27279 | 0.3312 | 0.4904 | 0.7016 |
| 98 | 0.16561 | 0.05359 | 0.05359 | 0.1072 | 0.1592 | 0.2112 |
| 99 | 0.05359 | 0.00000 | 0.00000 | 0.0520 | 0.0520 | 0.0520 |

**THE FRENCH ACTUARIES' (A. F. AND R. F.)
TABLES.**

THE French Actuaries' Tables are drawn from the combined experience of four French companies and were computed and adjusted by a committee of French actuaries. The tables were at first prepared according to Woolhouse's formula, but this work was discarded and a new graduation made by Makeham's formula. The tables were published in complete form in "Tables de Mortalite," in 1895.

In making the tables, the sexes were not separated; but tables were separately computed on the lives of insured and annuitants. The former is called A. F. (Assurances Français or French Insurance) and the latter R. F. (Rentiers Français or French Annuitants.).

Commutation columns are given at three per cent, three and one-half per cent and four per cent on both the A. F. and the R. F. tables.

1

FRENCH ACTUARIES' TABLE—ASSURANCES. 209

TABLE I.

FRENCH ACTUARIES' MORTALITY TABLE, ASSURANCE (A F).

| | l_x | d_x | q_x | u_x | $\frac{d_x}{l_x}$ | l_x | d_x | q_x | |
|----|---------|-------|--------|--------|-------------------|--------|-------|--------|---------|
| 0 | 1000000 | 36015 | .03602 | .04181 | 52 | 607659 | 11270 | .01855 | .01813 |
| 1 | 963985 | 26497 | .02749 | .03186 | 53 | 596380 | 11795 | .01978 | .01933 |
| 2 | 937488 | 19549 | .02085 | .02415 | 54 | 584594 | 12348 | .02112 | .02064 |
| 3 | 917939 | 14453 | .01575 | .01821 | 55 | 572246 | 12924 | .02259 | .02207 |
| 4 | 903486 | 10721 | .01187 | .01370 | 56 | 559322 | 13525 | .02420 | .02364 |
| 5 | 892765 | 8011 | .00897 | .01032 | 57 | 545797 | 14148 | .02592 | .02534 |
| 6 | 884754 | 6078 | .00687 | .00783 | 58 | 531649 | 14788 | .02782 | .02721 |
| 7 | 878676 | 4744 | .00540 | .00605 | 59 | 516861 | 15444 | .02988 | .02924 |
| 8 | 873932 | 3876 | .00443 | .00485 | 60 | 501417 | 16110 | .03213 | .03146 |
| 9 | 870056 | 3372 | .00388 | .00410 | 61 | 485307 | 16782 | .03458 | .03380 |
| 10 | 866684 | 3155 | .00364 | .00372 | 62 | 468525 | 17450 | .03725 | .03653 |
| 11 | 863529 | 3158 | .00366 | .00362 | 63 | 451075 | 18111 | .04015 | .03942 |
| 12 | 860371 | 3328 | .00387 | .00374 | 64 | 432964 | 18750 | .04331 | .04258 |
| 13 | 857043 | 3617 | .00422 | .00403 | 65 | 414214 | 19363 | .04674 | .04602 |
| 14 | 853426 | 3980 | .00466 | .00444 | 66 | 394851 | 19933 | .05048 | .04978 |
| 15 | 849446 | 4377 | .00515 | .00491 | 67 | 374918 | 20450 | .05455 | .05387 |
| 16 | 845069 | 4771 | .00565 | .00542 | 68 | 354468 | 20901 | .05896 | .05836 |
| 17 | 840298 | 5125 | .00610 | .00590 | 69 | 335667 | 21268 | .06376 | .06325 |
| 18 | 835173 | 5411 | .00648 | .00632 | 70 | 312299 | 21540 | .06897 | .06859 |
| 19 | 829762 | 5603 | .00675 | .00665 | 71 | 290759 | 21697 | .07462 | .07422 |
| 20 | 824159 | 5688 | .00690 | .00687 | 72 | 269062 | 21729 | .08076 | .08048 |
| 21 | 818471 | 5662 | .00692 | .00695 | 73 | 247333 | 21619 | .08741 | .08773 |
| 22 | 812809 | 5538 | .00681 | .00690 | 74 | 225714 | 21355 | .09461 | .09531 |
| 23 | 807271 | 5345 | .00652 | .00670 | 75 | 204359 | 20929 | .10241 | .10359 |
| 24 | 801926 | 5140 | .00641 | .00663 | 76 | 183430 | 20334 | .11085 | .11263 |
| 25 | 796786 | 5006 | .00628 | .00625 | 77 | 163096 | 19566 | .11997 | .12250 |
| 26 | 791780 | 5067 | .00640 | .00636 | 78 | 143530 | 18634 | .12982 | .13327 |
| 27 | 786713 | 5135 | .00653 | .00648 | 79 | 124896 | 17542 | .14045 | .14502 |
| 28 | 781578 | 5210 | .00667 | .00662 | 80 | 107354 | 16307 | .15190 | .15786 |
| 29 | 776368 | 5293 | .00682 | .00676 | 81 | 91047 | 14953 | .16424 | .17187 |
| 30 | 771075 | 5385 | .00698 | .00692 | 82 | 76004 | 13506 | .17749 | .18717 |
| 31 | 765690 | 5487 | .00717 | .00710 | 83 | 62588 | 12000 | .19172 | .20387 |
| 32 | 760203 | 5597 | .00736 | .00729 | 84 | 50588 | 10470 | .20698 | .22210 |
| 33 | 754606 | 5719 | .00758 | .00750 | 85 | 40118 | 8959 | .22330 | .24200 |
| 34 | 748887 | 5851 | .00781 | .00772 | 86 | 31159 | 7501 | .24074 | .26373 |
| 35 | 743036 | 5997 | .00807 | .00797 | 87 | 23658 | 6135 | .25933 | .28745 |
| 36 | 737039 | 6155 | .00835 | .00824 | 88 | 17523 | 4891 | .27911 | .31334 |
| 37 | 730884 | 6328 | .00866 | .00854 | 89 | 12632 | 3791 | .30010 | .34161 |
| 38 | 724556 | 6514 | .00899 | .00886 | 90 | 8841 | 2849 | .32231 | .37247 |
| 39 | 718042 | 6718 | .00936 | .00921 | 91 | 5992 | 2072 | .34575 | .40615 |
| 40 | 711324 | 6938 | .00975 | .00959 | 92 | 3920 | 1452 | .37043 | .44293 |
| 41 | 704386 | 7176 | .01019 | .01001 | 93 | 2468 | 978 | .39630 | .48308 |
| 42 | 697210 | 7433 | .01066 | .01047 | 94 | 1490 | 631 | .42333 | .52691 |
| 43 | 689777 | 7710 | .01118 | .01097 | 95 | 859 | 388 | .45146 | .57176 |
| 44 | 682067 | 8009 | .01174 | .01152 | 96 | 471 | 226 | .48060 | .62099 |
| 45 | 674058 | 8329 | .01230 | .01211 | 97 | 245 | 125 | .51065 | .68401 |
| 46 | 665729 | 8673 | .01303 | .01276 | 98 | 120 | 65 | .54148 | .74626 |
| 47 | 657056 | 9041 | .01376 | .01347 | 99 | 55 | 32 | .57292 | .81422 |
| 48 | 648015 | 9434 | .01456 | .01425 | 100 | 23 | 14 | .60478 | .88841 |
| 49 | 638581 | 9854 | .01543 | .01509 | 101 | 9 | 6 | .63686 | .96940 |
| 50 | 628727 | 10298 | .01638 | .01602 | 102 | 3 | 2 | .66891 | 1.05782 |
| 51 | 618429 | 10770 | .01742 | .01703 | 103 | 1 | 1 | .70068 | 1.15434 |

210 FRENCH ACTUARIES' TABLE—ASSURANCES.

TABLE II.
COMMUATION TABLES, FRENCH ACTUARIES' ASSURANCE
(A. F.). FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 1000000.0 | 18979926.0 | 362935557 | 35315.6 | 236128 | 5356451 |
| 1 | 926908.7 | 18053017.3 | 343955631 | 24983.1 | 200812 | 5120324 |
| 2 | 866760.2 | 17186257.1 | 325902613 | 17723.2 | 175829 | 4919512 |
| 3 | 816044.4 | 16370212.7 | 308716356 | 12599.2 | 158106 | 4743683 |
| 4 | 772303.5 | 15597909.2 | 292346143 | 8986.4 | 145506 | 4585578 |
| 5 | 733787.9 | 14864121.3 | 276748234 | 6456.6 | 136520 | 4440072 |
| 6 | 699234.0 | 14164887.3 | 261884113 | 4710.3 | 130063 | 4303552 |
| 7 | 667721.4 | 13497165.9 | 247719226 | 3535.0 | 125353 | 4173489 |
| 8 | 638573.6 | 12858592.3 | 234222060 | 2777.2 | 121818 | 4048136 |
| 9 | 611289.7 | 12247302.2 | 221363467 | 2323.1 | 119041 | 3926319 |
| 10 | 585500.7 | 11661801.9 | 203116165 | 2090.0 | 116718 | 3807278 |
| 11 | 560931.9 | 11100870.0 | 197454363 | 2011.5 | 114628 | 3690561 |
| 12 | 537385.1 | 10563484.9 | 186353493 | 2038.3 | 112616 | 3575933 |
| 13 | 514717.8 | 10048767.1 | 1757900.8 | 2130.1 | 110578 | 3463317 |
| 14 | 492832.2 | 9555934.9 | 165741241 | 2253.7 | 108448 | 3352739 |
| 15 | 471667.2 | 9084267.7 | 156185306 | 2383.2 | 106194 | 3244291 |
| 16 | 451189.3 | 8633078.4 | 147101038 | 2497.8 | 103811 | 3138097 |
| 17 | 431386.5 | 8201691.9 | 138467960 | 2580.0 | 101313 | 3034286 |
| 18 | 412265.0 | 7789426.9 | 130266268 | 2619.2 | 98732.9 | 2932973 |
| 19 | 393840.2 | 7395586.7 | 122176841 | 2607.8 | 96113.7 | 2834240 |
| 20 | 370135.3 | 7019451.4 | 115081255 | 2545.5 | 93505.9 | 2738126 |
| 21 | 359172.6 | 6660278.8 | 108061803 | 2436.4 | 90960.4 | 2644620 |
| 22 | 342969.2 | 6317309.6 | 101401524 | 2291.4 | 88524.0 | 2553660 |
| 23 | 327531.1 | 5989778.5 | 95084215 | 2126.5 | 86232.6 | 2465136 |
| 24 | 312848.5 | 5676930.0 | 89094436 | 1966.3 | 84106.1 | 2378003 |
| 25 | 298887.8 | 5378042.2 | 83417506 | 1841.3 | 82139.8 | 2294797 |
| 26 | 285586.6 | 5092455.6 | 78039464 | 1792.16 | 80298.53 | 2212657 |
| 27 | 272845.1 | 4819610.5 | 72947.08 | 1746.22 | 78506.37 | 2132359 |
| 28 | 260638.7 | 4558971.8 | 68127398 | 1703.75 | 76760.15 | 2053853 |
| 29 | 248943.5 | 4310028.3 | 63568426 | 1664.44 | 75056.40 | 1977092 |
| 30 | 237736.7 | 4072291.6 | 59258398 | 1628.09 | 73391.06 | 1902036 |
| 31 | 226996.5 | 3845205.1 | 55186106 | 1594.89 | 71763.87 | 1828614 |
| 32 | 216701.9 | 3628593.2 | 51340811 | 1564.55 | 70168.98 | 1756880 |
| 33 | 206833.1 | 3421700.1 | 47712218 | 1537.05 | 68604.43 | 1686711 |
| 34 | 197370.8 | 3224389.3 | 44290458 | 1512.26 | 67067.38 | 1618107 |
| 35 | 188296.7 | 3036032.6 | 41066069 | 1490.23 | 65555.12 | 1551039 |
| 36 | 179593.3 | 2856499.3 | 38.29976 | 1470.66 | 64064.89 | 1485484 |
| 37 | 171243.7 | 2685255.6 | 35173477 | 1453.75 | 62594.23 | 1421419 |
| 38 | 163231.9 | 2522023.7 | 32488221 | 1439.13 | 61140.48 | 1358825 |
| 39 | 155542.7 | 2366481.0 | 29966197 | 1426.94 | 59701.35 | 1297685 |
| 40 | 148160.9 | 2218320.1 | 27599716 | 1417.05 | 58274.41 | 1237983 |
| 41 | 141072.9 | 2077247.2 | 25381396 | 1409.29 | 56857.36 | 1179709 |
| 42 | 134265.1 | 1942982.1 | 23304149 | 1403.58 | 55448.07 | 1122052 |
| 43 | 127724.8 | 1815257.3 | 21361167 | 1399.96 | 54044.49 | 1067403 |
| 44 | 121439.5 | 1693817.8 | 19545910 | 1398.22 | 52644.53 | 1013359 |
| 45 | 115397.7 | 1578420.1 | 17852092 | 1398.28 | 51246.31 | 960714.4 |
| 46 | 109588.2 | 1468831.9 | 16273672 | 1399.98 | 49848.03 | 909468.1 |
| 47 | 104000.5 | 1364831.36 | 14804840 | 1403.27 | 48448.05 | 859620.1 |
| 48 | 98624.45 | 1266206.91 | 13440008 | 1407.96 | 47044.78 | 811172.0 |
| 49 | 93450.57 | 1172756.34 | 12173802 | 1413.93 | 45636.82 | 764127.2 |

FRENCH ACTUARIES' TABLE—ASSURANCES. 211

TABLE II.—Cont.
COMMUTATION TABLES, FRENCH ACTUARIES' ASSURANCE
(A. F.). FOUR PER CENT.

| Age | D _x | N _x | S _x | C _x | M _x | R _x |
|-----|----------------|----------------|----------------|----------------|----------------|----------------|
| 60 | 88469.88 | 1084286.46 | 11001045 | 1420.98 | 44222.89 | 718490.4 |
| 61 | 83673.81 | 1000612.65 | 9916758.7 | 1428.96 | 42801.91 | 674267.5 |
| 62 | 79054.36 | 921558.29 | 8916146.1 | 1437.69 | 41372.95 | 631465.6 |
| 63 | 74604.07 | 846954.22 | 7994587.8 | 1446.86 | 39935.26 | 590092.7 |
| 64 | 70315.90 | 776638.32 | 7147633.6 | 1456.31 | 38488.40 | 550157.4 |
| 65 | 66183.44 | 710454.88 | 6370995.2 | 1465.74 | 37032.09 | 511669.9 |
| 66 | 62200.64 | 648254.24 | 5660540.4 | 1474.91 | 35565.35 | 474636.9 |
| 67 | 58362.05 | 589892.19 | 5012286.1 | 1483.41 | 34091.44 | 439070.6 |
| 68 | 54662.76 | 535229.43 | 4422393.9 | 1490.96 | 32608.03 | 404979.1 |
| 69 | 51098.34 | 484131.09 | 3887164.5 | 1497.22 | 31117.07 | 372371.1 |
| 70 | 47664.90 | 436466.19 | 3403033.4 | 1501.73 | 29619.85 | 341254.0 |
| 71 | 44359.08 | 392107.11 | 2966567.2 | 1504.11 | 28118.12 | 311634.2 |
| 72 | 41178.06 | 350299.05 | 2574460.1 | 1503.94 | 26614.01 | 283516.1 |
| 73 | 38119.56 | 312809.49 | 2223531.1 | 1500.75 | 25110.07 | 256902.1 |
| 74 | 35181.82 | 277627.67 | 1910721.6 | 1494.07 | 23609.32 | 231792.0 |
| 75 | 32363.63 | 245264.04 | 1633093.9 | 1483.45 | 22115.25 | 208182.7 |
| 76 | 29664.23 | 215599.81 | 1387829.9 | 1468.45 | 20631.80 | 186067.4 |
| 77 | 27083.37 | 188516.44 | 1172230.1 | 1448.63 | 19163.35 | 165435.6 |
| 78 | 24621.22 | 163895.22 | 983713.6 | 1423.55 | 17714.72 | 146272.3 |
| 79 | 22278.35 | 141616.87 | 819818.4 | 1392.91 | 16291.17 | 128557.5 |
| 80 | 20055.64 | 121561.23 | 678201.5 | 1356.395 | 14898.26 | 112266.4 |
| 81 | 17954.23 | 103607.00 | 556640.3 | 1313.823 | 13541.87 | 97368.11 |
| 82 | 15975.38 | 87631.62 | 453033.3 | 1265.103 | 12228.04 | 83826.25 |
| 83 | 14120.41 | 73511.21 | 365401.7 | 1210.276 | 10962.94 | 71598.21 |
| 84 | 12390.55 | 61120.66 | 291890.5 | 1149.537 | 9752.663 | 60635.27 |
| 85 | 10786.79 | 50333.870 | 230769.8 | 1083.259 | 8603.126 | 50882.61 |
| 86 | 9309.700 | 41024.170 | 180435.9 | 1011.949 | 7519.867 | 42279.48 |
| 87 | 7959.343 | 33064.827 | 139411.762 | 936.357 | 6507.918 | 34759.01 |
| 88 | 6735.048 | 26329.779 | 106346.935 | 857.385 | 5571.561 | 28251.69 |
| 89 | 5635.279 | 20694.500 | 80017.156 | 776.116 | 4714.176 | 22680.13 |
| 90 | 4657.498 | 16037.002 | 59322.656 | 693.756 | 3938.060 | 17965.96 |
| 91 | 3798.082 | 12238.920 | 43285.654 | 611.670 | 3244.304 | 14027.90 |
| 92 | 3052.218 | 9186.702 | 31046.734 | 531.226 | 2632.634 | 10783.59 |
| 93 | 2413.917 | 6772.785 | 21860.032 | 453.819 | 2101.408 | 8150.959 |
| 94 | 1876.672 | 4896.713 | 15087.247 | 380.766 | 1647.589 | 6049.551 |
| 95 | 1430.546 | 3460.167 | 10190.534 | 313.244 | 1266.823 | 4401.902 |
| 96 | 1068.365 | 2397.8021 | 6724.3672 | 252.210 | 953.579 | 3135.139 |
| 97 | 779.9668 | 1617.8253 | 4326.5651 | 198.342 | 701.369 | 2181.560 |
| 98 | 555.4772 | 1062.3581 | 2708.7298 | 152.031 | 503.027 | 1480.191 |
| 99 | 385.0372 | 677.3209 | 1646.3717 | 113.305 | 350.996 | 977.164 |
| 100 | 259.1249 | 418.1960 | 969.0508 | 81.895 | 237.691 | 626.168 |
| 101 | 168.8525 | 249.3435 | 550.8548 | 57.248 | 155.796 | 388.477 |
| 102 | 106.2221 | 143.12136 | 301.51127 | 38.585 | 98.548 | 232.081 |
| 103 | 64.30267 | 78.81869 | 158.38991 | 24.988 | 59.963 | 134.133 |
| 104 | 37.32667 | 41.49202 | 79.57122 | 15.494 | 34.975 | 74.170 |
| 105 | 20.69731 | 20.79471 | 38.07920 | 9.163 | 19.481 | 39.195 |
| 106 | 10.91609 | 9.878020 | 17.281485 | 5.145 | 10.318 | 19.714 |
| 107 | 5.452030 | 4.425990 | 7.406465 | 2.730 | 5.173 | 9.393 |
| 108 | 2.565322 | 1.860668 | 2.980475 | 1.363 | 2.443 | 4.223 |
| 109 | 1.131017 | 0.729651 | 1.119807 | 0.636 | 1.080 | 1.780 |

212 FRENCH ACTUARIES' TABLE—ASSURANCES.

TABLE III.
COMMUTATION TABLES, FRENCH ACTUARIES' ASSURANCE
(A F), THREE AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 1,000,000.0 | 20876419.6 | 426306796 | 35400.8 | 264733.4 | 6837104 |
| 1 | 931386.6 | 19945033.0 | 405430376 | 25164.4 | 229332.6 | 6572371 |
| 2 | 875155.0 | 19069878.0 | 385485338 | 17938.0 | 204168.2 | 6343038 |
| 3 | 827928.4 | 18241949.6 | 366415460 | 12813.5 | 186230.2 | 6138870 |
| 4 | 787335.7 | 17454613.9 | 348173511 | 9183.4 | 173416.7 | 5952640 |
| 5 | 751684.4 | 16702929.5 | 330718867 | 6330.0 | 164233.3 | 5779224 |
| 6 | 719748.0 | 15983181.5 | 314015967 | 4800.1 | 157603.3 | 5614990 |
| 7 | 690631.4 | 15292550.0 | 298032786 | 3665.2 | 152743.1 | 5457387 |
| 8 | 663674.0 | 14628876.1 | 282740236 | 2893.3 | 149278.0 | 5304644 |
| 9 | 638387.0 | 13990189.1 | 268111360 | 2432.0 | 146184.7 | 5155566 |
| 10 | 614408.6 | 13376080.5 | 254120871 | 2198.5 | 143752.7 | 5009382 |
| 11 | 591470.5 | 12784610.0 | 240744790 | 2126.2 | 141554.1 | 4865629 |
| 12 | 569379.2 | 12215230.8 | 227960180 | 2164.9 | 139427.9 | 4724075 |
| 13 | 547996.9 | 11667233.9 | 215744949 | 2273.3 | 137263.0 | 4584647 |
| 14 | 527231.1 | 11140002.8 | 204077715 | 2416.9 | 134989.7 | 4447384 |
| 15 | 507026.4 | 10632976.4 | 192937713 | 2568.0 | 132572.8 | 4312395 |
| 16 | 487356.3 | 10145620.1 | 182304736 | 2704.6 | 130004.8 | 4179822 |
| 17 | 468217.3 | 9677402.8 | 172159116 | 2807.0 | 127300.3 | 4049817 |
| 18 | 449624.7 | 9227778.1 | 162481713 | 2863.4 | 124493.3 | 3922517 |
| 19 | 431605.4 | 8796172.7 | 153253935 | 2864.7 | 121620.9 | 3798023 |
| 20 | 414194.2 | 8381978.5 | 144457763 | 2809.9 | 118765.1 | 3676393 |
| 21 | 397425.8 | 7984552.7 | 136075784 | 2702.4 | 115955.3 | 3557628 |
| 22 | 381329.8 | 7603222.9 | 128091231 | 2553.9 | 113252.9 | 3441673 |
| 23 | 365924.4 | 7237298.5 | 120488008 | 2381.5 | 110699.0 | 3328120 |
| 24 | 351209.2 | 6886089.3 | 113250710 | 2212.7 | 108317.5 | 3217721 |
| 25 | 337157.7 | 6548931.6 | 106364621 | 2082.1 | 106104.8 | 3109404 |
| 26 | 323709.6 | 6225222.0 | 99815689 | 2036.30 | 104022.7 | 3003299 |
| 27 | 310761.4 | 5914460.6 | 93590467 | 1993.68 | 101986.4 | 2899276 |
| 28 | 298292.7 | 5616167.9 | 87676006 | 1954.59 | 99992.74 | 2797299 |
| 29 | 286284.3 | 5329883.6 | 82059839 | 1918.73 | 98038.15 | 2697297 |
| 30 | 274717.2 | 5055166.4 | 76729955 | 1885.88 | 96119.42 | 2599259 |
| 31 | 263573.6 | 4791592.8 | 71674789 | 1856.35 | 94233.54 | 2503139 |
| 32 | 252835.8 | 4538757.0 | 66883196 | 1829.83 | 92337.19 | 2408006 |
| 33 | 242487.2 | 4296269.8 | 62344439 | 1806.36 | 90547.36 | 2316529 |
| 34 | 232511.6 | 4063758.2 | 58048169 | 1785.81 | 88741.00 | 2225981 |
| 35 | 222893.5 | 3840864.7 | 53984411 | 1768.29 | 86955.19 | 2137240 |
| 36 | 213617.9 | 3627246.8 | 50143546 | 1753.51 | 85186.00 | 2050285 |
| 37 | 204670.5 | 3422576.3 | 46516299 | 1741.72 | 83433.39 | 1965098 |
| 38 | 196037.3 | 3226539.0 | 43093723 | 1732.52 | 81691.67 | 1881665 |
| 39 | 187705.0 | 3038834.0 | 39867184 | 1726.15 | 79959.15 | 1799973 |
| 40 | 179660.8 | 2859173.2 | 36828350 | 1722.47 | 78233.00 | 1720014 |
| 41 | 171892.3 | 2687280.9 | 33969177 | 1721.31 | 76510.53 | 1641781 |
| 42 | 164387.5 | 2522893.4 | 31281896 | 1722.62 | 74789.22 | 1565271 |
| 43 | 157135.3 | 2365758.1 | 28759002 | 1726.48 | 73066.60 | 1490481 |
| 44 | 150124.5 | 2215633.6 | 26393244 | 1732.66 | 71340.12 | 1417415 |
| 45 | 143344.7 | 2072288.9 | 24177611 | 1741.11 | 69607.46 | 1346075 |
| 46 | 136785.9 | 1935503.0 | 22105322 | 1751.64 | 67866.35 | 1276467 |
| 47 | 130438.5 | 1805064.5 | 20169819 | 1764.24 | 66114.71 | 1208601 |
| 48 | 124293.4 | 1680771.1 | 18364754 | 1778.69 | 64350.47 | 1142486 |
| 49 | 118341.9 | 1562429.2 | 16683983 | 1794.87 | 62571.78 | 1078136 |

FRENCH ACTUARIES' TABLE—ASSURANCES. 213

TABLE III—Cont.

COMMUTATION TABLES, FRENCH ACTUARIES' ASSURANCE (A F), THREE AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 50 | 112575.8 | 1449853.4 | 15121554.0 | 1812.53 | 60776.91 | 1015564 |
| 51 | 106987.2 | 1342866.2 | 13671700.6 | 1831.51 | 58964.38 | 954786.9 |
| 52 | 101569.0 | 1241297.16 | 12328834.5 | 1851.60 | 57132.87 | 895822.6 |
| 53 | 96314.36 | 1144982.80 | 11087537.3 | 1872.42 | 55281.27 | 838689.7 |
| 54 | 91216.85 | 1053765.95 | 9942554.5 | 1893.75 | 53408.85 | 783408.4 |
| 55 | 86270.80 | 967495.15 | 8888788.6 | 1915.21 | 51515.10 | 729999.6 |
| 56 | 81470.87 | 886024.28 | 7921293.4 | 1936.51 | 49599.89 | 678484.5 |
| 57 | 76812.36 | 802211.92 | 7035269.1 | 1957.08 | 47663.38 | 628884.6 |
| 58 | 72291.13 | 730920.79 | 6226057.2 | 1976.55 | 45766.30 | 581221.2 |
| 59 | 67993.67 | 669017.12 | 5489136.4 | 1994.42 | 43729.75 | 535514.9 |
| 60 | 63647.03 | 605370.09 | 4820119.3 | 2010.10 | 41735.33 | 491785.1 |
| 61 | 59518.90 | 545851.19 | 4214749.2 | 2023.02 | 39725.23 | 450049.8 |
| 62 | 55517.67 | 490333.52 | 3668898.0 | 2032.56 | 37702.61 | 410324.6 |
| 63 | 51642.38 | 438691.14 | 3178564.5 | 2038.05 | 35669.25 | 372622.4 |
| 64 | 47892.74 | 390798.40 | 2739873.4 | 2038.78 | 33631.60 | 336952.7 |
| 65 | 44269.19 | 346529.21 | 2349075.0 | 2034.07 | 31592.82 | 303321.1 |
| 66 | 40772.79 | 3 15756.42 | 2002545.8 | 2023.23 | 29558.75 | 271728.3 |
| 67 | 37405.29 | 268351.13 | 1696780.3 | 2005.55 | 27535.52 | 242163.6 |
| 68 | 34169.05 | 234182.08 | 1428438.2 | 1980.36 | 25529.97 | 214634.0 |
| 69 | 31067.01 | 203115.07 | 1194256.1 | 1947.09 | 23549.61 | 189104.1 |
| 70 | 28102.56 | 175012.51 | 991141.1 | 1905.209 | 21602.52 | 165554.5 |
| 71 | 25279.52 | 149732.99 | 816128.6 | 1854.326 | 19697.32 | 143951.9 |
| 72 | 22601.97 | 127131.02 | 666395.6 | 1794.188 | 17842.99 | 124254.6 |
| 73 | 20074.08 | 107056.94 | 539264.5 | 1724.724 | 16048.80 | 106411.6 |
| 74 | 17699.95 | 89356.99 | 432207.6 | 1646.082 | 14324.08 | 90362.82 |
| 75 | 15483.40 | 73873.59 | 342850.6 | 1558.669 | 12678.00 | 76038.74 |
| 76 | 13427.74 | 60445.85 | 268977.0 | 1463.096 | 11119.33 | 63360.75 |
| 77 | 11535.53 | 48910.320 | 208531.179 | 1360.344 | 9656.230 | 5221.42 |
| 78 | 9808.304 | 39102.016 | 159620.859 | 1251.631 | 8296.886 | 42585.19 |
| 79 | 8246.349 | 30855.667 | 120518.843 | 1138.467 | 7044.255 | 34289.31 |
| 80 | 6848.444 | 24007.223 | 89663.176 | 1022.571 | 5905.788 | 27245.05 |
| 81 | 5611.728 | 18395.495 | 65655.953 | 905.935 | 4883.217 | 21339.26 |
| 82 | 4531.486 | 13864.009 | 47260.458 | 790.591 | 3977.282 | 16456.05 |
| 83 | 3601.145 | 10262.864 | 33396.449 | 678.654 | 3186.631 | 12478.77 |
| 84 | 2812.295 | 7450.569 | 23133.585 | 572.159 | 2508.037 | 9202.074 |
| 85 | 2154.794 | 5295.775 | 15683.016 | 472.972 | 1935.878 | 6784.037 |
| 86 | 1617.026 | 3678.749 | 10387.241 | 382.654 | 1462.906 | 4848.159 |
| 87 | 1186.223 | 2492.5255 | 6708.4928 | 302.379 | 1080.252 | 3385.253 |
| 88 | 848.8859 | 1643.6396 | 4215.9673 | 232.896 | 777.873 | 2305.001 |
| 89 | 591.2605 | 1052.3791 | 2572.3277 | 174.411 | 544.977 | 1527.128 |
| 90 | 399.8326 | 652.5465 | 1519.9486 | 126.670 | 370.555 | 982.152 |
| 91 | 261.8001 | 390.7404 | 867.4021 | 88.975 | 243.896 | 611.586 |
| 92 | 165.4892 | 225.25719 | 476.65578 | 60.259 | 154.921 | 367.630 |
| 93 | 100.66467 | 124.59252 | 251.39853 | 39.212 | 94.662 | 212.759 |
| 94 | 58.71653 | 65.87599 | 126.80607 | 24.432 | 55.450 | 118.107 |
| 95 | 32.71509 | 33.16090 | 60.93008 | 14.518 | 31.018 | 62.657 |
| 96 | 17.33876 | 15.822135 | 27.769184 | 8.191 | 16.499 | 31.639 |
| 97 | 8.701182 | 7.120953 | 11.047049 | 4.368 | 8.308 | 15.140 |
| 98 | 4.113912 | 3.007041 | 4.826096 | 2.191 | 3.941 | 6.832 |
| 99 | 1.822533 | 1.184508 | 1.819055 | 1.027 | 1.750 | 2.891 |

TABLE IV.
COMMUTATION TABLES, FRENCH ACTUARIES' ASSURANCE
(A F), THREE PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 1000000 | 23124696.2 | 505068944.1 | 35486.6 | 301766.4 | 8841014 |
| 1 | 935907.9 | 22188788.3 | 481944247.9 | 25347.8 | 266279.8 | 8539247 |
| 2 | 883672.4 | 21305115.9 | 459755459.6 | 18156.5 | 240932.0 | 8272968 |
| 3 | 842044.1 | 20465071.8 | 438450343.7 | 13032.5 | 222775.5 | 8032036 |
| 4 | 802735.5 | 19662336.3 | 417985271.9 | 9385.7 | 209743.0 | 7809260 |
| 5 | 770107.0 | 18892229.3 | 398322935.6 | 6809.0 | 200357.3 | 7599517 |
| 6 | 740967.8 | 18151261.5 | 379430706.3 | 5015.6 | 195548.3 | 7399160 |
| 7 | 714444.0 | 17436817.5 | 361279444.8 | 3800.7 | 188532.7 | 7205611 |
| 8 | 689890.0 | 16746927.5 | 343842627.3 | 3014.9 | 184732.0 | 7017079 |
| 9 | 666825.5 | 16080102.0 | 327095699.8 | 2546.4 | 181717.1 | 6832347 |
| 10 | 644894.4 | 15435207.6 | 311015597.8 | 2319.8 | 179170.7 | 6650630 |
| 11 | 623831.7 | 14811375.9 | 295580390.2 | 2241.4 | 176857.5 | 6471459 |
| 12 | 603447.1 | 14207928.8 | 280769014.3 | 2299.9 | 174609.6 | 6294601 |
| 13 | 583604.6 | 13624324.2 | 266561085.5 | 2426.9 | 172309.7 | 6119992 |
| 14 | 564215.2 | 13060109.0 | 252936761.3 | 2592.6 | 169882.8 | 5947682 |
| 15 | 545227.2 | 12514881.8 | 239876652.3 | 2768.2 | 167290.2 | 5777799 |
| 16 | 526619.3 | 11988262.5 | 227361770.5 | 2929.5 | 164522.0 | 5610509 |
| 17 | 508394.3 | 11479868.2 | 215373508.0 | 3055.2 | 161592.5 | 5445987 |
| 18 | 490576.2 | 10989292.0 | 203893639.8 | 3131.8 | 158537.3 | 5284395 |
| 19 | 473201.7 | 10516090.3 | 192904347.8 | 3148.4 | 155495.5 | 5125857 |
| 20 | 456516.9 | 10059773.4 | 182388257.5 | 3103.1 | 152257.1 | 4970452 |
| 21 | 439968.6 | 9619804.8 | 172328484.1 | 2999.0 | 149154.0 | 4818195 |
| 22 | 424199.0 | 9195605.8 | 162708679.3 | 2847.8 | 146155.0 | 4669041 |
| 23 | 409037.5 | 8786568.3 | 153513073.5 | 2668.5 | 143307.2 | 4522886 |
| 24 | 394494.5 | 8392073.8 | 144726565.2 | 2491.4 | 140638.7 | 4379579 |
| 25 | 380549.6 | 8011524.2 | 136334431.4 | 2355.7 | 138147.3 | 4238940 |
| 26 | 367144.4 | 7644379.8 | 128322907.2 | 2315.1 | 135791.6 | 4100793 |
| 27 | 354169.8 | 7290210.0 | 120678527.4 | 2277.7 | 133476.5 | 3965001 |
| 28 | 341609.8 | 6948600.2 | 113388317.4 | 2243.9 | 131198.8 | 3831524 |
| 29 | 329445.1 | 6619151.1 | 106439717.2 | 2213.4 | 128955.0 | 3700326 |
| 30 | 317672.6 | 6301478.5 | 99820566.1 | 2186.0 | 126741.6 | 3571371 |
| 31 | 306266.1 | 5995212.4 | 93519087.6 | 2162.3 | 124555.5 | 3441629 |
| 32 | 295215.1 | 5699997.3 | 87523875.2 | 2141.7 | 122393.3 | 3320074 |
| 33 | 284506.4 | 5415490.9 | 81823877.9 | 2124.5 | 120251.6 | 3197680 |
| 34 | 274126.4 | 5141364.5 | 76408387.0 | 2110.5 | 118127.0 | 3077422 |
| 35 | 264062.6 | 4877301.9 | 71267022.5 | 2100.0 | 116016.5 | 2959302 |
| 36 | 254302.4 | 4622999.5 | 66389720.6 | 2092.5 | 113916.5 | 2843285 |
| 37 | 244833.7 | 4378165.8 | 61766721.1 | 2088.5 | 111824.0 | 2729369 |
| 38 | 235644.7 | 4142521.1 | 57388555.3 | 2087.6 | 109735.5 | 2617545 |
| 39 | 226724.2 | 3915796.9 | 53246034.2 | 2090.0 | 107647.9 | 2507809 |
| 40 | 218061.3 | 3697735.6 | 49330237.3 | 2095.7 | 105557.8 | 2400161 |
| 41 | 209645.0 | 3488090.6 | 45632501.7 | 2104.5 | 103462.2 | 2294603 |
| 42 | 201465.3 | 3286625.3 | 42144411.1 | 2116.3 | 101357.7 | 2191141 |
| 43 | 193512.1 | 3093113.2 | 38857785.8 | 2131.3 | 99241.4 | 2089784 |
| 44 | 185775.8 | 2907337.4 | 35704672.6 | 2149.3 | 97110.1 | 1990522 |
| 45 | 178247.1 | 2729090.3 | 32857335.2 | 2170.3 | 94960.8 | 1893432 |
| 46 | 170917.0 | 2558173.3 | 30128244.9 | 2194.0 | 92750.5 | 1798471 |
| 47 | 163777.0 | 2394396.3 | 27570071.6 | 2220.5 | 90566.5 | 1705681 |
| 48 | 156818.9 | 2237577.4 | 25175675.3 | 2249.6 | 88376.0 | 1615084 |
| 49 | 150034.8 | 2087542.6 | 22938097.9 | 2281.1 | 86126.4 | 1526708 |

TABLE IV.—Cont.
COMMUTATION TABLES, FRENCH ACTUARIES' ASSURANCE
(A F), THREE PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 50 | 143417.3 | 1944125.3 | 20850555.3 | 2314.67 | 83845.4 | 1440582. |
| 51 | 139959.3 | 1807160.0 | 18906430.0 | 2350.28 | 81530.7 | 1350736. |
| 52 | 130654.4 | 1676511.6 | 17099264.0 | 2387.58 | 79180.4 | 1275206. |
| 53 | 124496.4 | 1552015.2 | 15422752.4 | 2426.15 | 76792.8 | 1196025. |
| 54 | 118479.7 | 1433535.5 | 13870737.2 | 2465.70 | 74366.7 | 1119233. |
| 55 | 112599.4 | 1320936.1 | 12437201.7 | 2505.76 | 71901.0 | 1044866.0 |
| 56 | 106850.7 | 1214085.4 | 11116265.6 | 2545.92 | 69395.2 | 972964.9 |
| 57 | 101230.1 | 1112855.28 | 9902180.2 | 2585.46 | 66849.3 | 903569.7 |
| 58 | 95734.07 | 1017121.21 | 8789324.93 | 2623.85 | 64263.8 | 836720.4 |
| 59 | 90360.35 | 926760.86 | 7772203.72 | 2660.43 | 61639.9 | 772456.6 |
| 60 | 85107.12 | 841653.74 | 6845442.86 | 2694.36 | 58979.5 | 710816.6 |
| 61 | 79973.44 | 761680.30 | 6003789.12 | 2724.84 | 56285.2 | 651837.1 |
| 62 | 74959.26 | 686721.04 | 5242108.82 | 2750.97 | 53560.3 | 595551.9 |
| 63 | 70065.37 | 616655.67 | 4555387.78 | 2771.80 | 50809.4 | 541991.6 |
| 64 | 65293.50 | 551362.17 | 3938732.11 | 2786.25 | 48037.6 | 491182.2 |
| 65 | 60646.39 | 490715.78 | 3387369.94 | 2793.30 | 45251.3 | 443144.6 |
| 66 | 56127.66 | 434588.12 | 2896654.16 | 2791.91 | 42458.0 | 397893.3 |
| 67 | 51741.95 | 382846.17 | 2462060.04 | 2780.95 | 39666.1 | 355435.3 |
| 68 | 47494.77 | 335351.40 | 2079219.87 | 2759.35 | 36885.2 | 315769.2 |
| 69 | 43392.56 | 291958.84 | 1743868.47 | 2726.16 | 34125.8 | 278884.0 |
| 70 | 39442.55 | 252156.29 | 1451909.63 | 2680.46 | 31399.7 | 244758.2 |
| 71 | 35652.60 | 216863.69 | 1199393.34 | 2621.55 | 28719.2 | 213358.6 |
| 72 | 32031.09 | 184326.60 | 982529.65 | 2548.84 | 26097.6 | 184639.4 |
| 73 | 28586.70 | 156245.90 | 797697.05 | 2462.05 | 23548.8 | 158541.7 |
| 74 | 25328.16 | 130917.74 | 641451.15 | 2361.20 | 21086.7 | 134992.9 |
| 75 | 22263.89 | 108653.85 | 510533.41 | 2246.663 | 18725.5 | 113906.2 |
| 76 | 19401.74 | 89252.11 | 401879.56 | 2119.141 | 16478.9 | 95180.42 |
| 77 | 16748.60 | 72503.51 | 312627.45 | 1979.880 | 14359.7 | 78701.59 |
| 78 | 14309.95 | 58193.56 | 240123.94 | 1830.498 | 12379.9 | 64342.00 |
| 79 | 12089.52 | 46104.04 | 181930.38 | 1673.079 | 10549.4 | 51962.08 |
| 80 | 10088.87 | 36015.169 | 135826.34 | 1510.056 | 8876.28 | 41412.75 |
| 81 | 8307.113 | 27708.056 | 99811.169 | 1344.310 | 7366.23 | 32536.49 |
| 82 | 6740.582 | 20967.474 | 72103.113 | 1178.848 | 6021.92 | 25170.28 |
| 83 | 6382.701 | 15584.773 | 51135.639 | 1016.849 | 4843.07 | 19148.37 |
| 84 | 4223.998 | 11360.775 | 35550.866 | 861.446 | 3826.22 | 14395.31 |
| 85 | 3252.160 | 8108.615 | 24190.091 | 715.566 | 2964.77 | 10479.09 |
| 86 | 2452.371 | 5656.244 | 16081.476 | 581.734 | 2249.21 | 7514.32 |
| 87 | 1807.751 | 3848.493 | 10425.232 | 461.927 | 1667.47 | 5265.11 |
| 88 | 1299.944 | 2548.5485 | 6576.7388 | 357.509 | 1205.55 | 3597.64 |
| 89 | 909.8240 | 1638.7245 | 4028.1903 | 269.031 | 848.036 | 2392.09 |
| 90 | 618.2440 | 1020.4805 | 2389.4658 | 196.337 | 579.006 | 1544.05 |
| 91 | 406.7752 | 613.7053 | 1368.9853 | 138.581 | 382.669 | 905.048 |
| 92 | 258.3793 | 355.3260 | 755.2800 | 94.310 | 244.101 | 582.379 |
| 93 | 157.9313 | 197.39470 | 399.95404 | 61.668 | 149.779 | 338.291 |
| 94 | 92.56666 | 104.82804 | 202.55934 | 38.611 | 88.111 | 188.512 |
| 95 | 51.82573 | 53.00231 | 97.73130 | 23.055 | 49.509 | 100.401 |
| 96 | 27.60050 | 25.40171 | 44.72899 | 13.070 | 26.445 | 50.901 |
| 97 | 13.91816 | 11.483553 | 19.327278 | 7.003 | 13.375 | 24.456 |
| 98 | 6.61239 | 4.871114 | 7.843725 | 3.530 | 6.372 | 11.080 |
| 99 | 2.943644 | 1.927470 | 2.972611 | 1.663 | 2.842 | 4.703 |



FRENCH ACTUARIES' TABLE—ANNUITANTS. 217

TABLE I.
FRENCH ACTUARIES' MORTALITY TABLE ANNUITIES (R. F.).

| Age. | l_x | d_x | q_x | L_x | Age. | l_x | d_x | q_x | L_x |
|------|---------|-------|--------|--------|------|--------|-------|--------|--------|
| 0 | 1000000 | 36015 | .03602 | .04181 | 58 | 622913 | 9419 | .01512 | .01478 |
| 1 | 963985 | 26497 | .02749 | .03186 | 54 | 613494 | 9860 | .01607 | .01570 |
| 2 | 937488 | 19550 | .02085 | .02415 | 56 | 603634 | 10332 | .01712 | .01672 |
| 3 | 917939 | 14453 | .01575 | .01821 | 56 | 593302 | 10837 | .01826 | .01783 |
| 4 | 903486 | 10721 | .01197 | .01370 | 57 | 582465 | 11373 | .01953 | .01906 |
| 5 | 892765 | 8011 | .00897 | .01032 | 58 | 571092 | 11943 | .02091 | .02040 |
| 6 | 884754 | 6078 | .00687 | .00783 | 59 | 559149 | 12545 | .02244 | .02189 |
| 7 | 878676 | 4744 | .00540 | .00605 | 60 | 546604 | 13177 | .02411 | .02352 |
| 8 | 873932 | 3876 | .00443 | .00485 | 61 | 533427 | 13839 | .02594 | .02531 |
| 9 | 870056 | 3372 | .00388 | .00410 | 62 | 519588 | 14548 | .02796 | .02729 |
| 10 | 866684 | 3155 | .00364 | .00372 | 63 | 505060 | 15240 | .03017 | .02946 |
| 11 | 863529 | 3158 | .00366 | .00362 | 64 | 489820 | 15969 | .03260 | .03185 |
| 12 | 860371 | 3328 | .00387 | .00374 | 65 | 473851 | 16712 | .03527 | .03448 |
| 13 | 857043 | 3617 | .00422 | .00403 | 66 | 457139 | 17459 | .03819 | .03737 |
| 14 | 853426 | 3980 | .00466 | .00444 | 67 | 439680 | 18202 | .04140 | .04056 |
| 15 | 849446 | 4377 | .00515 | .00491 | 68 | 421478 | 18929 | .04491 | .04406 |
| 16 | 845069 | 4771 | .00565 | .00542 | 69 | 402549 | 19630 | .04876 | .04791 |
| 17 | 840298 | 5125 | .00610 | .00590 | 70 | 382919 | 20289 | .05298 | .05215 |
| 18 | 835173 | 5411 | .00648 | .00632 | 71 | 362630 | 20889 | .05760 | .05681 |
| 19 | 829702 | 5633 | .00675 | .00665 | 72 | 341741 | 21413 | .06266 | .06193 |
| 20 | 824159 | 5688 | .00690 | .00687 | 73 | 320328 | 21244 | .06819 | .06758 |
| 21 | 818471 | 5662 | .00692 | .00695 | 74 | 298484 | 22159 | .07424 | .07378 |
| 22 | 812809 | 5538 | .00681 | .00690 | 75 | 276325 | 22341 | .08085 | .08061 |
| 23 | 807271 | 5345 | .00662 | .00671 | 76 | 253984 | 22366 | .08806 | .08812 |
| 24 | 801926 | 5140 | .00641 | .00665 | 77 | 231618 | 22220 | .09593 | .09638 |
| 25 | 796786 | 4969 | .00624 | .00622 | 78 | 209398 | 21886 | .10452 | .10547 |
| 26 | 791817 | 4990 | .00630 | .00629 | 79 | 187512 | 21350 | .11386 | .11547 |
| 27 | 786827 | 5016 | .00638 | .00636 | 80 | 166162 | 20609 | .12403 | .12647 |
| 28 | 781811 | 5047 | .00646 | .00643 | 81 | 145553 | 19662 | .13508 | .13857 |
| 29 | 776764 | 5083 | .00654 | .00652 | 82 | 125891 | 18517 | .14708 | .15189 |
| 30 | 771681 | 5125 | .00664 | .00661 | 83 | 107374 | 17189 | .16009 | .16653 |
| 31 | 766556 | 5173 | .00675 | .00672 | 84 | 90185 | 15708 | .17417 | .18265 |
| 32 | 761383 | 5227 | .00687 | .00683 | 85 | 74477 | 14105 | .18939 | .20037 |
| 33 | 756156 | 5290 | .00699 | .00695 | 86 | 60372 | 12425 | .20581 | .21987 |
| 34 | 750866 | 5358 | .00714 | .00709 | 87 | 47947 | 10715 | .22348 | .24132 |
| 35 | 745508 | 5438 | .00729 | .00724 | 88 | 37232 | 9028 | .24248 | .26492 |
| 36 | 740070 | 5525 | .00747 | .00740 | 89 | 28204 | 7413 | .26283 | .29089 |
| 37 | 734545 | 5623 | .00766 | .00759 | 90 | 20791 | 5917 | .28460 | .31945 |
| 38 | 728922 | 5732 | .00786 | .00779 | 91 | 14874 | 4578 | .30780 | .35087 |
| 39 | 723190 | 5852 | .00809 | .00801 | 92 | 10296 | 3423 | .33246 | .38544 |
| 40 | 717338 | 5980 | .00834 | .00825 | 93 | 6873 | 2465 | .35857 | .42347 |
| 41 | 711352 | 6133 | .00862 | .00851 | 94 | 4408 | 1702 | .38612 | .46530 |
| 42 | 705219 | 6294 | .00893 | .00881 | 95 | 2706 | 1123 | .41506 | .51131 |
| 43 | 698925 | 6473 | .00926 | .00913 | 96 | 1583 | 705 | .44532 | .56196 |
| 44 | 692452 | 6668 | .00963 | .00948 | 97 | 878 | 419 | .47681 | .61766 |
| 45 | 685784 | 6882 | .01003 | .00987 | 98 | 459 | 234 | .50939 | .67893 |
| 46 | 678902 | 7115 | .01048 | .01030 | 99 | 225 | 122 | .54289 | .74635 |
| 47 | 671787 | 7370 | .01097 | .01078 | 100 | 103 | 59 | .57711 | .82051 |
| 48 | 664417 | 7647 | .01151 | .01129 | 101 | 44 | 27 | .61181 | .90209 |
| 49 | 656770 | 7947 | .01210 | .01187 | 102 | 17 | 11 | .64670 | .99184 |
| 50 | 648823 | 8275 | .01275 | .01249 | 103 | 6 | 4 | .68147 | .09058 |
| 51 | 640548 | 8627 | .01347 | .01319 | 104 | 2 | 1 | .71578 | .19920 |
| 52 | 631921 | 9008 | .01427 | .01395 | 105 | 1 | 1 | .74927 | .31870 |

TABLE II.
COMMUTATION TABLES, FRENCH ACTUARIES' ANNUITY
(R. F.), FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 1000000 | 19139904.6 | 373016522 | 35315.6 | 229853 | 5117919 |
| 1 | 926908.7 | 18212995.9 | 353876617 | 24983.1 | 194537 | 4888066 |
| 2 | 866760.2 | 17346235.7 | 335663622 | 17723.2 | 169554 | 4693529 |
| 3 | 810044.4 | 16530191.3 | 318317386 | 12599.2 | 151831 | 4523975 |
| 4 | 772303.5 | 15757887.8 | 301787195 | 8986.4 | 139222 | 4372144 |
| 5 | 733787.9 | 15024099.9 | 286029307 | 6456.6 | 130245 | 4232912 |
| 6 | 699234.0 | 14324865.9 | 271005208 | 4710.3 | 123789 | 4102667 |
| 7 | 667721.4 | 13657144.5 | 256680342 | 3535.0 | 119078 | 3978878 |
| 8 | 638573.6 | 13018570.9 | 243023198 | 2777.2 | 115543 | 3859800 |
| 9 | 611289.7 | 12407281.2 | 230004627 | 2223.1 | 112766 | 3744257 |
| 10 | 585500.7 | 11821780.5 | 217597346 | 2090.0 | 110443 | 3631491 |
| 11 | 560931.9 | 11260848.6 | 205775565 | 2011.5 | 108353 | 3521048 |
| 12 | 537385.1 | 10723463.5 | 194514717 | 2038.3 | 106341 | 3412695 |
| 13 | 514717.8 | 10208745.7 | 183791253 | 2130.1 | 104303 | 3306354 |
| 14 | 492832.2 | 9715913.5 | 173582508 | 2253.7 | 102173.0 | 3202051 |
| 15 | 471667.2 | 9244246.3 | 163866594 | 2383.2 | 99919.0 | 3099878 |
| 16 | 451189.3 | 8793057.0 | 154622348 | 2497.8 | 97535.8 | 2999959 |
| 17 | 431386.5 | 8361670.5 | 145829291 | 2580.0 | 95038.0 | 2902423 |
| 18 | 412265.0 | 7949405.5 | 137467620 | 2619.2 | 92458.0 | 2807385 |
| 19 | 393840.2 | 7555565.3 | 129518215 | 2607.8 | 89838.8 | 2714927 |
| 20 | 376135.3 | 7179430.0 | 121962649 | 2545.5 | 87231.0 | 2625088 |
| 21 | 359172.6 | 6820257.4 | 114783219 | 2436.4 | 84685.5 | 2537857 |
| 22 | 342969.2 | 6477288.2 | 107962962 | 2291.4 | 82249.1 | 2453172 |
| 23 | 327531.1 | 6149757.1 | 101485674 | 2126.5 | 79957.7 | 2370923 |
| 24 | 312848.5 | 5836908.6 | 95335917 | 1966.3 | 77831.2 | 2290965 |
| 25 | 298887.8 | 5538020.8 | 89499008 | 1827.65 | 75864.93 | 2213134 |
| 26 | 285600.0 | 5252420.8 | 83960087 | 1764.96 | 74037.28 | 2137269 |
| 27 | 272884.7 | 4979536.1 | 78708567 | 1705.92 | 72272.32 | 2063231 |
| 28 | 260716.3 | 4718819.8 | 73729030 | 1650.48 | 70566.40 | 1990959 |
| 29 | 249070.3 | 4469749.5 | 69010211 | 1598.19 | 68915.92 | 1920393 |
| 30 | 237923.5 | 4231826.0 | 64540461 | 1549.42 | 67317.73 | 1851477 |
| 31 | 227253.3 | 4004572.7 | 60308635 | 1503.75 | 65768.31 | 1784159 |
| 32 | 217038.3 | 3787534.4 | 56304062 | 1461.12 | 64264.56 | 1718391 |
| 33 | 207257.9 | 3580276.5 | 52516528 | 1421.64 | 62803.44 | 1654126 |
| 34 | 197802.4 | 3382384.1 | 48936251.5 | 1384.93 | 61381.80 | 1591323 |
| 35 | 188923.1 | 3193461.0 | 45553867.4 | 1351.19 | 59996.87 | 1529941 |
| 36 | 180331.9 | 3013129.1 | 42360406.4 | 1320.20 | 58645.68 | 1469944 |
| 37 | 172101.5 | 2841027.6 | 39347277.3 | 1291.87 | 57325.48 | 1411298 |
| 38 | 164215.5 | 2676812.1 | 36506249.7 | 1266.20 | 56033.61 | 1353973 |
| 39 | 156657.8 | 2520154.3 | 33829437.6 | 1243.11 | 54767.41 | 1297939 |
| 40 | 149413.6 | 2370740.7 | 31309283.3 | 1222.53 | 53524.30 | 1243172 |
| 41 | 142468.1 | 2228272.6 | 28938542.6 | 1204.42 | 52301.77 | 1189748 |
| 42 | 135807.6 | 2092465.0 | 26710270.0 | 1188.69 | 51097.35 | 1137446 |
| 43 | 129418.6 | 1963046.4 | 24617805.0 | 1175.29 | 49938.66 | 1086348 |
| 44 | 123288.5 | 1839757.9 | 22654758.6 | 1164.14 | 48733.37 | 1036340 |
| 45 | 117405.1 | 1722352.8 | 20815000.7 | 1155.28 | 47569.23 | 987606.4 |
| 46 | 111756.7 | 1610506.1 | 19092647.9 | 1148.49 | 46413.95 | 940037.1 |
| 47 | 106332.2 | 1504263.9 | 17482051.8 | 1143.86 | 45265.46 | 893623.2 |
| 48 | 101120.8 | 1403143.11 | 15977787.9 | 1141.22 | 44121.60 | 848357.7 |
| 49 | 96112.48 | 1307030.63 | 14574644.8 | 1140.51 | 42980.38 | 804230.1 |

FRENCH ACTUARIES' TABLE—ANNUITANTS. 219

TABLE II.—Cont.
COMMUTATION TABLES, FRENCH ACTUARIES' ANNUITY
(R. F.), FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 50 | 91297.51 | 1215733.12 | 13267614.2 | 1141.67 | 41839.87 | 761255.8 |
| 51 | 86666.56 | 1129066.56 | 12051881.1 | 1144.63 | 40698.20 | 719415.9 |
| 52 | 82210.85 | 1046855.71 | 10922814.5 | 1149.21 | 39553.57 | 677717.7 |
| 53 | 77922.00 | 958933.71 | 9875958.8 | 1155.36 | 38404.36 | 639164.1 |
| 54 | 73792.07 | 895141.64 | 8907025.1 | 1162.93 | 37249.00 | 600759.8 |
| 55 | 69813.58 | 825328.06 | 8011883.4 | 1171.77 | 36086.07 | 563510.8 |
| 56 | 65979.45 | 759348.61 | 7186555.4 | 1181.71 | 34914.30 | 527424.7 |
| 57 | 62283.01 | 697065.60 | 6427206.8 | 1192.56 | 33732.59 | 492510.4 |
| 58 | 58718.12 | 638347.48 | 5730141.2 | 1204.10 | 32540.03 | 458777.8 |
| 59 | 55279.01 | 583068.47 | 5091793.7 | 1216.13 | 31335.93 | 426237.8 |
| 60 | 51960.41 | 531108.06 | 4508725.2 | 1228.31 | 30119.80 | 394901.8 |
| 61 | 48757.47 | 482350.59 | 3977617.2 | 1240.41 | 28891.49 | 364782.0 |
| 62 | 45665.85 | 436684.73 | 3495266.6 | 1252.04 | 27651.08 | 335890.5 |
| 63 | 42681.76 | 394002.97 | 3058581.8 | 1262.86 | 26399.04 | 308239.5 |
| 64 | 39801.83 | 354201.14 | 2664578.9 | 1272.46 | 25136.18 | 281840.4 |
| 65 | 37023.25 | 517177.89 | 2310377.7 | 1280.40 | 23863.72 | 256704.2 |
| 66 | 34343.76 | 282834.13 | 1993199.8 | 1286.18 | 22583.32 | 232840.5 |
| 67 | 31761.65 | 251072.48 | 1710365.7 | 1289.33 | 21297.14 | 210257.2 |
| 68 | 29275.76 | 221796.72 | 1459293.2 | 1289.33 | 20007.81 | 188960.1 |
| 69 | 26885.48 | 194911.24 | 1237496.5 | 1285.60 | 18718.48 | 168952.3 |
| 70 | 24590.80 | 170320.44 | 1042585.3 | 1277.610 | 17432.88 | 150233.8 |
| 71 | 22392.21 | 147928.23 | 872264.8 | 1264.844 | 16155.27 | 132800.9 |
| 72 | 20290.70 | 127637.53 | 724336.6 | 1246.745 | 14890.42 | 116645.6 |
| 73 | 18287.76 | 109349.77 | 596699.1 | 1222.866 | 13613.68 | 101755.2 |
| 74 | 16385.27 | 92964.50 | 487349.3 | 1192.827 | 12420.81 | 88111.52 |
| 75 | 14585.42 | 78379.08 | 394384.8 | 1156.307 | 11227.98 | 75690.71 |
| 76 | 12890.60 | 65488.48 | 316005.7 | 1113.143 | 10071.68 | 64462.73 |
| 77 | 11303.20 | 54185.191 | 250517.24 | 1063.323 | 8958.533 | 54391.05 |
| 78 | 9825.882 | 44359.309 | 196332.05 | 1007.021 | 7895.210 | 45432.51 |
| 79 | 8460.500 | 35898.809 | 151972.74 | 944.628 | 6888.189 | 37537.30 |
| 80 | 7208.820 | 28689.989 | 116073.93 | 876.764 | 5943.561 | 30649.12 |
| 81 | 6071.825 | 22618.164 | 87383.95 | 804.287 | 5066.797 | 24705.55 |
| 82 | 5049.631 | 17568.533 | 64765.78 | 728.298 | 4262.510 | 19638.76 |
| 83 | 4141.268 | 13427.265 | 47197.25 | 650.104 | 3534.212 | 15376.25 |
| 84 | 3344.512 | 10082.753 | 33769.98 | 571.207 | 2884.108 | 11842.04 |
| 85 | 2655.766 | 7426.987 | 23687.23 | 493.210 | 2312.901 | 8957.927 |
| 86 | 2069.996 | 5356.991 | 16260.24 | 417.746 | 1819.691 | 6645.026 |
| 87 | 1580.749 | 3776.242 | 10903.25 | 346.410 | 1401.945 | 4825.335 |
| 88 | 1180.269 | 2595.9727 | 7127.010 | 280.633 | 1055.535 | 3423.390 |
| 89 | 859.6944 | 1786.2783 | 4531.0376 | 221.568 | 774.902 | 2367.855 |
| 90 | 609.3636 | 1126.9147 | 2794.7593 | 170.057 | 553.334 | 1592.953 |
| 91 | 419.1732 | 707.7415 | 1667.8446 | 126.517 | 383.277 | 1039.619 |
| 92 | 278.9919 | 428.7496 | 960.1031 | 90.952 | 256.760 | 656.342 |
| 93 | 179.0761 | 249.6735 | 531.3535 | 62.967 | 165.808 | 399.582 |
| 94 | 110.4472 | 139.22632 | 281.6800 | 41.816 | 102.841 | 233.774 |
| 95 | 65.19106 | 74.03226 | 142.45372 | 26.535 | 61.025 | 130.933 |
| 96 | 36.66811 | 37.36415 | 68.42146 | 16.011 | 34.490 | 69.908 |
| 97 | 19.55673 | 17.807419 | 31.05731 | 9.144 | 18.479 | 35.418 |
| 98 | 9.838400 | 7.969019 | 13.249892 | 4.914 | 9.335 | 16.939 |
| 99 | 4.641161 | 3.327858 | 5.280873 | 2.472 | 4.421 | 7.604 |

TABLE III.
 COMMUTATION TABLES, FRENCH ACTUARIES' ANNUITY (R F),
 THREE AND ONE-HALF PER CENT.

| Age. | D_x | N_x | S_x | C_x | M_x | R_x |
|------|----------|------------|-----------|---------|----------|---------|
| 0 | 100000.0 | 21093571.6 | 440158875 | 35400.8 | 257262.5 | 6573996 |
| 1 | 931386.6 | 20162185.0 | 419065304 | 25164.4 | 221861.7 | 6316733 |
| 2 | 875155.0 | 19287030.0 | 398903119 | 17938.0 | 196697.3 | 6094872 |
| 3 | 827928.4 | 18459101.6 | 379616089 | 12813.5 | 178759.3 | 5898174 |
| 4 | 787335.7 | 17671765.9 | 361156987 | 9183.4 | 165945.8 | 5719415 |
| 5 | 751684.4 | 16920081.5 | 343485221 | 6630.0 | 156762.4 | 5553469 |
| 6 | 719748.0 | 16200333.5 | 326565140 | 4860.1 | 150132.4 | 5396707 |
| 7 | 690631.4 | 15509702.1 | 310364806 | 3665.2 | 145272.3 | 5246574 |
| 8 | 663674.0 | 14846028.1 | 294855104 | 2893.3 | 141607.1 | 5101302 |
| 9 | 638387.0 | 14207641.1 | 280009070 | 2432.0 | 138713.8 | 4959695 |
| 10 | 614408.6 | 13593232.5 | 265801435 | 2198.5 | 136281.8 | 4820081 |
| 11 | 591470.5 | 13001762.0 | 252208202 | 2126.2 | 134083.3 | 4684699 |
| 12 | 569379.2 | 12432328.8 | 239206440 | 2164.9 | 131957.1 | 4556166 |
| 13 | 547996.9 | 11884385.9 | 226774058 | 2273.3 | 129792.2 | 4418659 |
| 14 | 527231.1 | 11357154.8 | 214889672 | 2416.9 | 127518.9 | 4288867 |
| 15 | 507026.4 | 10850128.4 | 203532517 | 2568.0 | 125102.0 | 4161348 |
| 16 | 487356.3 | 10362772.1 | 192682389 | 2704.5 | 122534.0 | 4036246 |
| 17 | 468217.3 | 9894554.8 | 182319016 | 2807.0 | 119829.5 | 3913712 |
| 18 | 449624.7 | 9444930.1 | 172425062 | 2863.4 | 117022.5 | 3792882 |
| 19 | 431605.4 | 9013324.7 | 162980132 | 2864.7 | 114159.1 | 3676860 |
| 20 | 414194.2 | 8599130.5 | 153966807 | 2809.9 | 111294.4 | 3562701 |
| 21 | 397425.8 | 8201704.7 | 145367676 | 2702.4 | 108484.5 | 3451406 |
| 22 | 381329.8 | 7820374.9 | 137165972 | 2553.9 | 105782.1 | 3342922 |
| 23 | 365924.4 | 7454450.5 | 129345597 | 2381.5 | 103228.2 | 3237140 |
| 24 | 351209.2 | 7103241.3 | 121891146 | 2212.7 | 100846.7 | 3133912 |
| 25 | 337157.7 | 6766083.6 | 114787905 | 2066.64 | 98634.05 | 3033965 |
| 26 | 323724.8 | 6442358.8 | 108021821 | 2005.40 | 96567.41 | 2934431 |
| 27 | 310806.4 | 6131552.4 | 101579463 | 1947.68 | 94562.01 | 2837863 |
| 28 | 298381.5 | 5833170.9 | 95447910 | 1893.48 | 92614.33 | 2743301 |
| 29 | 286430.2 | 5546740.7 | 89614739 | 1842.35 | 90720.85 | 2650687 |
| 30 | 274933.2 | 5271807.5 | 84067999 | 1794.76 | 88878.50 | 2559966 |
| 31 | 263871.8 | 5007935.7 | 78796191 | 1750.28 | 87083.74 | 2471088 |
| 32 | 253228.1 | 4754707.6 | 73788255 | 1708.87 | 85333.46 | 2384004 |
| 33 | 242985.2 | 4511722.4 | 69033548 | 1670.73 | 83624.59 | 2298671 |
| 34 | 233126.0 | 4278596.4 | 64521825 | 1635.44 | 81953.86 | 2215046 |
| 35 | 223635.0 | 4054961.4 | 60243229 | 1603.31 | 80318.42 | 2133092 |
| 36 | 214496.5 | 3840464.9 | 56188268 | 1574.10 | 78715.11 | 2052774 |
| 37 | 205605.8 | 3634769.1 | 52347803 | 1547.77 | 77141.01 | 1974059 |
| 38 | 197218.5 | 3437550.6 | 48713024 | 1524.34 | 75593.24 | 1896918 |
| 39 | 189050.9 | 3248499.7 | 45275483 | 1503.78 | 74068.90 | 1821324 |
| 40 | 181179.7 | 3067320.0 | 42026983 | 1486.02 | 72565.12 | 1747255 |
| 41 | 173592.2 | 2893727.8 | 38959663 | 1471.08 | 71079.10 | 1674690 |
| 42 | 166276.0 | 2727451.8 | 36065935 | 1458.88 | 69608.02 | 1603611 |
| 43 | 159219.2 | 2568232.6 | 33338484 | 1449.40 | 68149.14 | 1534003 |
| 44 | 152410.2 | 2415822.4 | 30770251 | 1442.60 | 66699.74 | 1465854 |
| 45 | 145838.3 | 2269984.1 | 28354429 | 1438.53 | 65257.14 | 1399154 |
| 46 | 139492.5 | 2130491.6 | 26084445 | 1436.98 | 63818.61 | 1333897 |
| 47 | 133362.9 | 1997128.7 | 23953953 | 1438.11 | 62381.63 | 1270079 |
| 48 | 127439.5 | 1869689.2 | 21956824 | 1441.72 | 60943.52 | 1207697 |
| 49 | 121712.8 | 1747976.4 | 20087135 | 1447.78 | 59501.80 | 1146753 |

FRENCH ACTUARIES' TABLE—ANNUITANTS. 221

TABLE III.—Cont.

COMMUTATION TABLES, FRENCH ACTUARIES' ANNUITY (R F),
THREE AND ONE-HALF PER CENT.

| x | D _x | N _x | S _x | C _x | M _x | R _x |
|----|----------------|----------------|----------------|----------------|----------------|----------------|
| 50 | 116173.9 | 1631802.5 | 18339159 | 1456.25 | 58054.02 | 1087252 |
| 51 | 110813.9 | 1520988.6 | 16707356.1 | 1467.08 | 56597.77 | 1029198 |
| 52 | 105624.5 | 1415364.10 | 15186367.5 | 1480.07 | 55130.69 | 972599.9 |
| 53 | 100597.82 | 1314766.28 | 13771003.4 | 1495.18 | 53650.62 | 917469.2 |
| 54 | 95726.29 | 1219039.99 | 12456237.1 | 1512.24 | 52155.44 | 863818.6 |
| 55 | 91002.73 | 1128 37.26 | 11237197.1 | 1531.09 | 50643.20 | 811663.1 |
| 56 | 86420.34 | 1041616.92 | 10109159.8 | 1551.55 | 49112.11 | 761019.9 |
| 57 | 81972.88 | 959644.04 | 9067542.9 | 1573.36 | 47560.56 | 711907.8 |
| 58 | 77654.32 | 881989.72 | 8107808.9 | 1596.26 | 45987.20 | 664347.2 |
| 59 | 73459.31 | 808530.41 | 7225909.1 | 1619.99 | 44390.94 | 618360.0 |
| 60 | 69382.81 | 739147.60 | 6417378.7 | 1644.13 | 42770.95 | 573969.1 |
| 61 | 65420.47 | 673727.13 | 5678231.1 | 1668.34 | 41126.82 | 531198.2 |
| 62 | 61568.30 | 612158.83 | 5004504.0 | 1692.12 | 39458.48 | 490071.3 |
| 63 | 57823.03 | 554335.80 | 4392345.2 | 1714.99 | 37760.36 | 450612.9 |
| 64 | 54181.93 | 500153.87 | 3838009.4 | 1736.37 | 36051.37 | 412846.5 |
| 65 | 50642.94 | 449510.93 | 3337855.5 | 1755.64 | 34315.00 | 376795.1 |
| 66 | 47204.68 | 402306.25 | 2888344.6 | 1772.09 | 32559.36 | 312480.1 |
| 67 | 43866.55 | 358439.70 | 2486038.3 | 1785.01 | 30787.27 | 309920.8 |
| 68 | 40628.56 | 317811.14 | 2127598.6 | 1793.63 | 29002.26 | 279133.5 |
| 69 | 37491.62 | 280319.52 | 1809787.5 | 1797.09 | 27208.63 | 250131.2 |
| 70 | 34457.36 | 245862.16 | 1420468.0 | 1794.546 | 25411.54 | 222922.6 |
| 71 | 31528.20 | 214333.96 | 1283605.8 | 1785.107 | 23616.99 | 197511.1 |
| 72 | 28707.30 | 185626.66 | 1069271.8 | 1768.153 | 21831.79 | 173894.1 |
| 73 | 25998.54 | 159628.12 | 883645.2 | 1742.660 | 20063.61 | 152062.3 |
| 74 | 23406.42 | 136221.70 | 724017.1 | 1708.071 | 18320.98 | 131998.6 |
| 75 | 20935.98 | 115285.72 | 587795.4 | 1663.775 | 16612.90 | 113677.7 |
| 76 | 18592.60 | 96693.12 | 472509.6 | 1609.404 | 14949.13 | 97064.76 |
| 77 | 16381.93 | 80311.10 | 375816.5 | 1544.802 | 13339.73 | 82115.63 |
| 78 | 14309.51 | 66001.68 | 295505.3 | 1470.073 | 11794.92 | 68775.91 |
| 79 | 12381.62 | 53621.063 | 229503.65 | 1385.652 | 10324.85 | 56980.98 |
| 80 | 10599.940 | 43021.123 | 175882.59 | 1292.318 | 8939.198 | 46655.13 |
| 81 | 8971.220 | 34049.903 | 132861.47 | 1191.218 | 7646.880 | 37716.94 |
| 82 | 7496.955 | 26552.948 | 98811.56 | 1083.882 | 6455.662 | 30070.06 |
| 83 | 6178.051 | 20374.897 | 72258.61 | 972.183 | 5371.780 | 23614.39 |
| 84 | 5013.532 | 15391.365 | 51883.72 | 858.325 | 4399.597 | 18242.61 |
| 85 | 4000.314 | 11361.051 | 36522.35 | 744.704 | 3541.272 | 13843.02 |
| 86 | 3133.044 | 8228.007 | 25161.30 | 633.807 | 2795.568 | 10301.74 |
| 87 | 2404.103 | 5823.904 | 16933.29 | 528.114 | 2162.761 | 7505.776 |
| 88 | 1803.699 | 4020.205 | 11109.39 | 429.902 | 1634.647 | 5342.415 |
| 89 | 1320.141 | 2700.0638 | 7089.1851 | 341.060 | 1204.745 | 3707.768 |
| 90 | 940.2449 | 1759.8089 | 4389.1213 | 263.034 | 863.685 | 2503.023 |
| 91 | 649.9136 | 1109.8953 | 2629.3124 | 196.633 | 600.651 | 1639.338 |
| 92 | 434.6570 | 675.2383 | 1519.4171 | 142.042 | 404.018 | 1038.687 |
| 93 | 280.3404 | 394.8979 | 844.1788 | 98.812 | 261.976 | 634.669 |
| 94 | 173.7384 | 221.1595 | 449.2810 | 65.937 | 163.164 | 372.693 |
| 95 | 103.0486 | 118.11087 | 228.12146 | 42.043 | 97.227 | 209.529 |
| 96 | 58.23921 | 59.87166 | 110.01059 | 25.491 | 55.184 | 112.302 |
| 97 | 31.21161 | 28.66005 | 50.13893 | 14.629 | 29.603 | 57.118 |
| 98 | 15.77747 | 12.882581 | 21.478881 | 7.899 | 15.064 | 27.425 |
| 99 | 7.478814 | 5.403767 | 8.596300 | 3.992 | 7.165 | 12.361 |

TABLE IV.
COMMUTATION TABLES, FRENCH ACTUARIES' ANNUITY (R. F.),
THREE PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 1000000.0 | 23420995.6 | 524197257.1 | 35486.6 | 293008.1 | 8657535 |
| 1 | 935907.9 | 22485087.7 | 500776261.5 | 25347.8 | 257521.5 | 8274527 |
| 2 | 883672.4 | 21601415.3 | 478291173.8 | 18156.5 | 232173.7 | 8017006 |
| 3 | 840044.1 | 20761371.2 | 456689758.5 | 13032.5 | 214017.2 | 7784832 |
| 4 | 802735.5 | 19958035.7 | 435928387.3 | 9325.7 | 200984.7 | 7570815 |
| 5 | 770107.0 | 19188528.7 | 415929751.6 | 6809.0 | 191599.0 | 7369830 |
| 6 | 740967.8 | 18447560.9 | 396781222.9 | 5015.6 | 184790.0 | 7178231 |
| 7 | 714444.0 | 17733116.9 | 378333662.0 | 3800.7 | 179774.4 | 6993441 |
| 8 | 689890.0 | 17043226.9 | 360600545.1 | 3014.9 | 175973.7 | 6813367 |
| 9 | 666825.5 | 16376401.4 | 343547318.2 | 2546.4 | 172958.8 | 6637693 |
| 10 | 644894.4 | 15731307.0 | 327180916.8 | 2319.8 | 170412.4 | 6464734 |
| 11 | 623831.7 | 15107675.3 | 311419409.8 | 2241.8 | 168092.6 | 6294321 |
| 12 | 603447.1 | 14504228.2 | 296341734.5 | 2299.9 | 165851.1 | 6126229 |
| 13 | 583604.6 | 13920623.6 | 281837506.3 | 2426.9 | 163551.2 | 5960378 |
| 14 | 564215.2 | 13356498.4 | 267916882.7 | 2592.6 | 161124.3 | 5796826 |
| 15 | 545227.2 | 12811181.2 | 254560474.3 | 2768.2 | 158531.7 | 5635702 |
| 16 | 526619.3 | 12284561.9 | 241749293.1 | 2929.5 | 155763.5 | 5477170 |
| 17 | 508394.3 | 11776167.6 | 229404731.2 | 3055.2 | 152834.0 | 5321407 |
| 18 | 490576.2 | 11285591.4 | 217688563.6 | 3131.8 | 149778.8 | 5168573 |
| 19 | 473201.7 | 10812389.7 | 206402972.2 | 3148.4 | 146647.0 | 5018794 |
| 20 | 456316.9 | 10356072.8 | 195590582.5 | 3103.1 | 143498.6 | 4872147 |
| 21 | 439968.6 | 9916104.2 | 185234509.7 | 2999.0 | 140395.5 | 4728618 |
| 22 | 424199.0 | 9491905.2 | 175318405.5 | 2847.8 | 137396.5 | 4588253 |
| 23 | 409037.5 | 9082867.7 | 165826500.3 | 2668.5 | 134518.7 | 4450856 |
| 24 | 394494.5 | 8688373.2 | 156743632.6 | 2491.4 | 131680.2 | 4316308 |
| 25 | 380549.6 | 8307823.6 | 148052559.4 | 2338.27 | 129388.8 | 4184428 |
| 26 | 367161.6 | 7940662.0 | 139747435.8 | 2279.99 | 127050.5 | 4055039 |
| 27 | 354221.1 | 7586440.9 | 131806773.8 | 2225.11 | 124770.5 | 3927988 |
| 28 | 341711.4 | 7244729.5 | 124220332.9 | 2173.70 | 122545.4 | 3803218 |
| 29 | 329616.9 | 6915112.6 | 116975603.4 | 2125.27 | 120371.7 | 3680672 |
| 30 | 317922.3 | 6597190.3 | 110060490.8 | 2080.42 | 118246.4 | 3560301 |
| 31 | 306612.6 | 6292577.7 | 103463300.5 | 2038.70 | 116166.0 | 3442054 |
| 32 | 295673.4 | 5994904.3 | 97172722.8 | 2001.14 | 114127.3 | 3325888 |
| 33 | 285090.7 | 5709813.6 | 91177818.5 | 1964.99 | 112127.2 | 3211761 |
| 34 | 274851.0 | 5434062.6 | 85468004.9 | 1932.82 | 110162.2 | 3099634 |
| 35 | 264941.1 | 5170021.5 | 80033042.3 | 1904.05 | 108229.4 | 2989472 |
| 36 | 255348.2 | 4914673.3 | 74863020.8 | 1878.44 | 106325.3 | 2881242 |
| 37 | 246060.1 | 4668613.2 | 69948347.5 | 1855.98 | 104446.9 | 2774917 |
| 38 | 237064.5 | 4431548.7 | 65279731.3 | 1836.76 | 102590.9 | 2670470 |
| 39 | 228349.9 | 4203198.8 | 60848185.6 | 1820.78 | 100754.1 | 2567879 |
| 40 | 219904.8 | 3983294.0 | 56644085.8 | 1808.01 | 98933.36 | 2467125 |
| 41 | 211718.4 | 3771575.6 | 52661692.8 | 1798.52 | 97125.35 | 2368192 |
| 42 | 203779.5 | 3567796.1 | 48890117.2 | 1792.26 | 95326.83 | 2271066 |
| 43 | 196078.5 | 3371717.6 | 45322321.1 | 1789.26 | 93534.57 | 2175739 |
| 44 | 188604.4 | 3183113.2 | 41950603.5 | 1789.51 | 91745.31 | 2082205 |
| 45 | 181347.8 | 3001765.4 | 38767490.3 | 1793.12 | 89955.80 | 1990560 |
| 46 | 174299.0 | 2827466.4 | 35765721.9 | 1799.89 | 88162.68 | 1900504 |
| 47 | 167418.9 | 2662017.5 | 32938258.5 | 1810.04 | 86362.79 | 1812341 |
| 48 | 160788.3 | 2499229.2 | 30278241.0 | 1823.40 | 84552.75 | 1725978 |
| 49 | 154308.4 | 2344920.8 | 27779011.8 | 1839.95 | 82729.35 | 1641425 |

FRENCH ACTUARIES' TABLE—ANNUITANTS. 223

TABLE IV.—Cont.

COMMUTATION TABLES, FRENCH ACTUARIES' ANNUITY (R. F.), THREE PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 50 | 148001.1 | 2196919.7 | 25434091.0 | 1859.70 | 80889.40 | 1558696 |
| 51 | 141857.9 | 2055061.8 | 23237171.3 | 1882.63 | 79029.70 | 1477807 |
| 52 | 135871.2 | 1919190.6 | 21182109.5 | 1908.51 | 77147.07 | 1398777 |
| 53 | 130033.2 | 1789157.4 | 19262918.9 | 1937.36 | 75238.56 | 1321630 |
| 54 | 124336.9 | 1664820.5 | 17473761.5 | 1968.98 | 73301.20 | 1240391 |
| 55 | 118775.4 | 1546045.1 | 15808941.0 | 2003.20 | 71332.22 | 1171099 |
| 56 | 113342.1 | 1432703.0 | 14262895.9 | 2039.82 | 69329.02 | 1101758 |
| 57 | 108031.0 | 1324672.0 | 12830192.9 | 2078.52 | 67289.20 | 1032429 |
| 58 | 102836.5 | 1221835.53 | 11505520.85 | 2119.01 | 65210.68 | 965139.8 |
| 59 | 97753.30 | 1124082.23 | 10283685.32 | 2160.96 | 63091.67 | 899929.1 |
| 60 | 92776.87 | 1031305.36 | 9159603.09 | 2203.80 | 60930.71 | 836837.4 |
| 61 | 87903.16 | 943402.20 | 8128297.73 | 2247.12 | 58726.91 | 775906.7 |
| 62 | 83128.74 | 860273.46 | 7184895.53 | 2290.20 | 56479.79 | 717179.8 |
| 63 | 78450.89 | 781822.57 | 6324622.07 | 2332.43 | 54189.59 | 660700.0 |
| 64 | 73867.72 | 707954.85 | 5542799.50 | 2372.97 | 51857.16 | 606510.4 |
| 65 | 69378.08 | 638576.77 | 4834844.65 | 2410.96 | 49484.19 | 554653.3 |
| 66 | 64981.79 | 573594.98 | 4196267.88 | 2445.36 | 47073.23 | 505109.1 |
| 67 | 60679.05 | 512915.33 | 3622672.90 | 2475.15 | 44627.87 | 458095.8 |
| 68 | 56473.43 | 456441.90 | 3109757.57 | 2499.17 | 42152.72 | 413468.0 |
| 69 | 52366.09 | 404075.81 | 2653315.67 | 2516.14 | 39653.55 | 371315.2 |
| 70 | 48361.04 | 355714.17 | 2249239.86 | 2524.776 | 37137.41 | 331661.7 |
| 71 | 44465.32 | 312248.85 | 1893525.69 | 2523.817 | 34612.64 | 294524.3 |
| 72 | 40683.44 | 270565.41 | 1582276.84 | 2511.857 | 32088.82 | 259911.6 |
| 73 | 37023.49 | 233541.92 | 1311711.43 | 2487.667 | 29576.96 | 227822.8 |
| 74 | 33493.97 | 200047.95 | 1078169.51 | 2450.115 | 27089.29 | 198245.9 |
| 75 | 30104.26 | 169943.69 | 878121.56 | 2398.162 | 24639.18 | 171156.6 |
| 76 | 26864.46 | 143079.23 | 708177.87 | 2331.053 | 22211.02 | 146517.4 |
| 77 | 23785.15 | 119294.08 | 565098.64 | 2248.344 | 19909.90 | 124276.4 |
| 78 | 20877.03 | 98417.05 | 445804.56 | 2149.969 | 17661.62 | 104366.4 |
| 79 | 18150.54 | 80266.51 | 347387.51 | 2036.341 | 15511.65 | 80704.79 |
| 80 | 15615.42 | 64651.09 | 267121.00 | 1908.398 | 13475.31 | 71193.14 |
| 81 | 13280.21 | 51370.88 | 202469.91 | 1767.639 | 11566.91 | 59577.83 |
| 82 | 11151.71 | 40219.169 | 151099.034 | 1616.172 | 9799.273 | 46150.92 |
| 83 | 9234.453 | 30984.716 | 110879.865 | 1456.655 | 8183.101 | 36351.65 |
| 84 | 7530.205 | 23454.511 | 79895.149 | 1292.309 | 6726.446 | 28168.55 |
| 85 | 6037.542 | 17416.999 | 56440.638 | 1126.675 | 5434.146 | 21442.10 |
| 86 | 4751.554 | 12695.415 | 39023.699 | 963.552 | 4307.471 | 16007.96 |
| 87 | 3663.745 | 9001.670 | 26358.254 | 806.769 | 3343.919 | 11700.48 |
| 88 | 2762.101 | 6239.569 | 17356.584 | 659.925 | 2537.150 | 8356.565 |
| 89 | 2031.416 | 4208.153 | 11117.015 | 526.088 | 1877.225 | 5819.415 |
| 90 | 1453.876 | 2754.277 | 6908.862 | 407.702 | 1351.137 | 3942.190 |
| 91 | 1009.812 | 1744.4651 | 4154.5855 | 306.261 | 943.435 | 2591.053 |
| 92 | 678.6325 | 1065.8326 | 2410.1201 | 222.307 | 637.174 | 1647.618 |
| 93 | 439.8217 | 620.0109 | 1344.2878 | 155.400 | 414.867 | 1010.444 |
| 94 | 273.8987 | 352.1122 | 718.2769 | 104.200 | 259.467 | 595.577 |
| 95 | 163.2448 | 188.86739 | 366.16469 | 66.764 | 155.267 | 336.110 |
| 96 | 92.70774 | 96.15965 | 177.29730 | 40.676 | 88.503 | 180.843 |
| 97 | 49.92520 | 46.23445 | 81.13795 | 23.457 | 47.827 | 92.340 |
| 98 | 25.35971 | 20.87474 | 34.90320 | 12.728 | 24.370 | 44.513 |
| 99 | 12.07932 | 8.79542 | 14.02846 | 6.404 | 11.642 | 20.143 |



INTRODUCTION TO AMERICAN TROPICAL
EXPERIENCE TABLE.

THIS table was graduated by Makeham's formula from the experience of the New York Life Insurance Company on lives in the tropics. It is the work of Messrs. Jones and Robertson of the New York Life's then actuarial force.

THIS table, with four per cent interest, has already been adopted as its standard by at least one South American company.



TABLE I.
AMERICAN TROPICAL EXPERIENCE TABLES.

| Age. | Living. | Dying. | Per Cent Surviving. | Per Cent Dying. | Age. | Living. | Dying. | Per Cent Surviving. | Per Cent Dying. |
|------|---------|--------|---------------------|-----------------|------|---------|--------|---------------------|-----------------|
| 20 | 100 000 | 1 174 | .98826 | 0.01174 | 59 | 47 925 | 1 948 | .95935 | 0.04065 |
| 21 | 98 826 | 1 168 | .98818 | .01182 | 60 | 45 977 | 1 999 | .95952 | .04348 |
| 22 | 97 658 | 1 163 | .98809 | .01191 | 61 | 43 978 | 2 048 | .95343 | .04657 |
| 23 | 96 495 | 1 158 | .98800 | .01200 | 62 | 41 930 | 2 093 | .95008 | .04972 |
| 24 | 95 337 | 1 155 | .98789 | .01211 | 63 | 39 837 | 2 136 | .94638 | .05362 |
| 25 | 94 182 | 1 151 | .98778 | .01222 | 64 | 37 701 | 2 173 | .94236 | .05764 |
| 26 | 93 031 | 1 149 | .98765 | .01235 | 65 | 35 528 | 2 203 | .93799 | .06201 |
| 27 | 91 882 | 1 148 | .98751 | .01249 | 66 | 33 325 | 2 227 | .93317 | .06683 |
| 28 | 90 734 | 1 148 | .98735 | .01255 | 67 | 31 098 | 2 240 | .92797 | .07203 |
| 29 | 89 586 | 1 147 | .98720 | .01280 | 68 | 28 858 | 2 243 | .92227 | .07773 |
| 30 | 88 439 | 1 150 | .98700 | .01300 | 69 | 26 615 | 2 234 | .91606 | .08394 |
| 31 | 87 289 | 1 151 | .98681 | .01319 | 70 | 24 381 | 2 211 | .90931 | .09069 |
| 32 | 86 138 | 1 156 | .98658 | .01342 | 71 | 22 170 | 2 174 | .90194 | .09806 |
| 33 | 84 982 | 1 161 | .98634 | .01366 | 72 | 19 996 | 2 120 | .89398 | .10602 |
| 34 | 83 821 | 1 167 | .98608 | .01392 | 73 | 17 876 | 2 050 | .88532 | .11468 |
| 35 | 82 654 | 1 175 | .98578 | .01422 | 74 | 15 826 | 1 965 | .87584 | .12416 |
| 36 | 81 479 | 1 184 | .98547 | .01453 | 75 | 13 861 | 1 862 | .86567 | .13433 |
| 37 | 80 295 | 1 195 | .98512 | .01483 | 76 | 11 999 | 1 744 | .85465 | .14535 |
| 38 | 79 100 | 1 207 | .98474 | .01526 | 77 | 10 255 | 1 614 | .84261 | .15739 |
| 39 | 77 893 | 1 222 | .98431 | .01569 | 78 | 8 641 | 1 472 | .82965 | .17035 |
| 40 | 76 671 | 1 237 | .98387 | .01613 | 79 | 7 169 | 1 320 | .81587 | .18413 |
| 41 | 75 434 | 1 256 | .98335 | .01665 | 80 | 5 849 | 1 166 | .80065 | .19935 |
| 42 | 74 178 | 1 276 | .98280 | .01720 | 81 | 4 683 | 1 009 | .78454 | .21546 |
| 43 | 72 902 | 1 298 | .98220 | .01780 | 82 | 3 674 | 855 | .76728 | .23272 |
| 44 | 71 604 | 1 322 | .98154 | .01846 | 83 | 2 819 | 708 | .74885 | .25115 |
| 45 | 70 282 | 1 349 | .98080 | .01920 | 84 | 2 111 | 573 | .72856 | .27144 |
| 46 | 68 933 | 1 377 | .98002 | .01998 | 85 | 1 538 | 449 | .70836 | .29194 |
| 47 | 67 556 | 1 409 | .97914 | .02086 | 86 | 1 089 | 343 | .68503 | .31497 |
| 48 | 66 147 | 1 443 | .97818 | .02182 | 87 | 746 | 253 | .66086 | .33914 |
| 49 | 64 704 | 1 479 | .97714 | .02286 | 88 | 493 | 179 | .63592 | .36308 |
| 50 | 63 225 | 1 518 | .97599 | .02401 | 89 | 314 | 123 | .61228 | .39172 |
| 51 | 61 707 | 1 559 | .97474 | .02526 | 90 | 191 | 80 | .58115 | .41885 |
| 52 | 60 148 | 1 602 | .97337 | .02663 | 91 | 111 | 49 | .55856 | .44144 |
| 53 | 58 545 | 1 647 | .97187 | .02813 | 92 | 62 | 30 | .51613 | .48387 |
| 54 | 56 899 | 1 694 | .97023 | .02977 | 93 | 32 | 18 | .43750 | .56250 |
| 55 | 55 205 | 1 744 | .96841 | .03159 | 94 | 14 | 9 | .35714 | .64286 |
| 56 | 53 461 | 1 794 | .96644 | .03356 | 95 | 5 | 4 | .20000 | .80000 |
| 57 | 51 667 | 1 845 | .96429 | .03571 | 96 | 1 | 1 | .00000 | 1.00000 |
| 58 | 49 822 | 1 897 | .96192 | .03808 | 97 | 0 | 0 | | |

| Constant. | Number. | Napierian Logarithm. | Common Logarithm. |
|-----------|-----------|----------------------|-------------------|
| <i>c</i> | 1.0964780 | + 0.0921034 | + 0.0400000 |
| <i>R</i> | 0.9986194 | - 0.0013816 | - 0.0006000 |
| <i>s</i> | 0.9890916 | - 0.0109684 | - 0.0047635 |
| <i>k</i> | 125,620. | + 11.7410196 | + 5.0990600 |

$$\log L_x = \log k + x \log s + c^x \log R.$$

$$\mu_x = -\frac{1}{M} \left\{ \log s + (\log c \log R) c^x \right\}$$

228 AMERICAN TROPICAL EXPERIENCE TABLE.

TABLE I.
COMMUTATION COLUMNS—AMERICAN TROPICAL EXPERIENCE TABLES, FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 20 | 45 639 | 769 547 | 11 648 619 | 515.19 | 14 285.36 | 335 809.33 |
| 21 | 43 368 | 726 179 | 10 879 072 | 492.84 | 13 770.17 | 321 523.97 |
| 22 | 41 207 | 684 972 | 10 152 893 | 471.86 | 13 277.33 | 307 753.80 |
| 23 | 39 151 | 645 821 | 9 467 921 | 451.76 | 12 805.47 | 294 476.47 |
| 24 | 37 193 | 608 628 | 8 822 100 | 433.26 | 12 353.71 | 281 671.00 |
| 25 | 35 329 | 573 299 | 8 213 472 | 415.15 | 11 920.45 | 269 317.29 |
| 26 | 33 555 | 539 744 | 7 640 173 | 398.49 | 11 505.30 | 257 396.84 |
| 27 | 31 866 | 507 878 | 7 100 429 | 382.83 | 11 106.81 | 245 891.54 |
| 28 | 30 258 | 477 620 | 6 592 551 | 368.11 | 10 723.98 | 234 784.73 |
| 29 | 28 726 | 448 894 | 6 114 931 | 353.64 | 10 355.87 | 224 066.75 |
| 30 | 27 267 | 421 627 | 5 666 037 | 340.93 | 10 002.23 | 213 704.88 |
| 31 | 25 878 | 395 749 | 5 244 410 | 328.10 | 9 661.30 | 203 702.65 |
| 32 | 24 554 | 371 195 | 4 848 661 | 316.85 | 9 333.20 | 194 041.35 |
| 33 | 23 293 | 347 902 | 4 477 466 | 305.98 | 9 016.35 | 184 708.15 |
| 34 | 22 091 | 325 811 | 4 129 564 | 295.74 | 8 710.37 | 175 691.80 |
| 35 | 20 946 | 304 865 | 3 803 753 | 286.31 | 8 414.63 | 166 981.43 |
| 36 | 19 854 | 285 011 | 3 498 888 | 277.41 | 8 128.32 | 158 566.80 |
| 37 | 18 813 | 266 198 | 3 213 877 | 269.22 | 7 850.91 | 150 438.48 |
| 38 | 17 820 | 248 378 | 2 947 679 | 261.46 | 7 581.69 | 142 587.57 |
| 39 | 16 873 | 231 595 | 2 699 301 | 254.53 | 7 320.23 | 135 005.88 |
| 40 | 15 970 | 215 535 | 2 467 796 | 247.74 | 7 065.70 | 127 685.65 |
| 41 | 15 108 | 200 427 | 2 252 261 | 241.87 | 6 817.96 | 120 619.95 |
| 42 | 14 285 | 186 142 | 2 051 834 | 236.27 | 6 576.09 | 113 801.99 |
| 43 | 13 499 | 172 6 3 | 1 865 692 | 231.10 | 6 339.82 | 107 225.99 |
| 44 | 12 749 | 159 894 | 1 693 049 | 226.32 | 6 108.72 | 100 886.08 |
| 45 | 12 032 | 147 862 | 1 533 155 | 222.06 | 5 882.40 | 94 777.36 |
| 46 | 11 347 | 136 515 | 1 385 293 | 217.96 | 5 660.34 | 88 894.96 |
| 47 | 10 693 | 125 822 | 1 248 778 | 214.44 | 5 442.38 | 83 234.62 |
| 48 | 10 067 | 115 755.0 | 1 122 955.7 | 211.17 | 5 227.94 | 77 792.24 |
| 49 | 9 468.9 | 106 286.1 | 1 007 200.7 | 208.11 | 5 016.77 | 72 564.30 |
| 50 | 8 896.6 | 97 389.5 | 900 914.6 | 205.39 | 4 808.66 | 67 547.53 |
| 51 | 8 349.0 | 89 040.5 | 803 525.1 | 202.82 | 4 603.27 | 62 738.87 |
| 52 | 7 825.1 | 81 215.4 | 714 484.6 | 200.40 | 4 400.45 | 58 135.60 |
| 53 | 7 323.7 | 73 891.7 | 633 269.2 | 198.10 | 4 200.05 | 53 735.15 |
| 54 | 6 843.9 | 67 047.8 | 559 377.5 | 195.92 | 4 001.95 | 49 535.10 |
| 55 | 6 384.8 | 60 663.0 | 492 329.7 | 193.95 | 3 806.03 | 45 533.15 |
| 56 | 5 945.2 | 54 717.8 | 431 666.7 | 191.83 | 3 612.08 | 41 727.12 |
| 57 | 5 524.8 | 49 193.0 | 376 948.9 | 189.70 | 3 420.25 | 38 115.04 |
| 58 | 5 122.6 | 44 070.4 | 327 755.9 | 187.54 | 3 230.55 | 34 694.79 |
| 59 | 4 738.0 | 39 332.4 | 283 685.5 | 185.18 | 3 043.01 | 31 464.24 |
| 60 | 4 370.6 | 34 961.8 | 244 353.1 | 182.72 | 2 857.83 | 28 421.23 |
| 61 | 4 019.8 | 30 942.0 | 209 391.3 | 180.00 | 2 675.11 | 25 563.40 |
| 62 | 3 685.2 | 27 256.8 | 178 449.3 | 176.88 | 2 495.11 | 22 888.29 |
| 63 | 3 366.6 | 23 890.2 | 151 192.5 | 173.57 | 2 318.23 | 20 393.18 |
| 64 | 3 063.5 | 20 826.7 | 127 302.3 | 169.78 | 2 144.66 | 18 074.95 |

TABLE I.—Cont.

COMMUTATION COLUMNS—AMERICAN TROPICAL EXPERIENCE TABLES, FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 65 | 2 775.9 | 18 050.8 | 106 475.6 | 165.51 | 1 974.88 | 15 930.29 |
| 66 | 2 503.6 | 15 547.2 | 88 424.8 | 160.87 | 1 809.37 | 13 955.41 |
| 67 | 2 246.5 | 13 300.7 | 72 877.6 | 155.59 | 1 648.50 | 12 146.04 |
| 68 | 2 004.5 | 11 296.2 | 59 576.9 | 149.81 | 1 492.91 | 10 497.54 |
| 69 | 1 777.6 | 9 518.6 | 48 280.7 | 143.47 | 1 343.10 | 9 004.63 |
| 70 | 1 565.7 | 7 952.9 | 38 762.1 | 136.53 | 1 199.63 | 7 661.53 |
| 71 | 1 369.0 | 6 583.9 | 30 809.2 | 129.08 | 1 063.10 | 6 461.90 |
| 72 | 1 187.3 | 5 396.6 | 24 225.3 | 121.03 | 934.02 | 5 398.80 |
| 73 | 1 020.6 | 4 375.97 | 18 828.74 | 112.53 | 812.99 | 4 464.78 |
| 74 | 868.77 | 3 507.20 | 14 452.77 | 103.72 | 700.46 | 3 651.79 |
| 75 | 731.63 | 2 775.57 | 10 945.57 | 94.503 | 596.740 | 2 951.332 |
| 76 | 608.99 | 2 166.58 | 8 170.00 | 85.110 | 502.237 | 2 354.592 |
| 77 | 500.46 | 1 666.12 | 6 003.42 | 75.736 | 417.127 | 1 852.355 |
| 78 | 405.47 | 1 260.65 | 4 337.30 | 66.416 | 341.391 | 1 435.228 |
| 79 | 323.46 | 937.19 | 3 076.05 | 57.227 | 274.975 | 1 093.837 |
| 80 | 253.75 | 683.44 | 2 139.46 | 48.641 | 217.708 | 818.862 |
| 81 | 195.35 | 488.09 | 1 456.02 | 40.472 | 169.067 | 601.154 |
| 82 | 147.37 | 340.72 | 967.93 | 32.976 | 128.595 | 432.087 |
| 83 | 108.72 | 231.997 | 627.206 | 26.256 | 95.619 | 303.492 |
| 84 | 78.287 | 153.710 | 395.209 | 20.432 | 69.363 | 207.873 |
| 85 | 54.843 | 98.867 | 241.499 | 15.395 | 48.931 | 138.510 |
| 86 | 37.339 | 61.528 | 142.632 | 11.308 | 33.536 | 89.579 |
| 87 | 24.595 | 36.933 | 81.104 | 8.0202 | 22.2281 | 56.0433 |
| 88 | 15.628 | 21.305 | 44.171 | 5.4561 | 14.2079 | 33.8152 |
| 89 | 9.571 | 11.734 | 22.866 | 3.6050 | 8.7518 | 19.6073 |
| 90 | 5.598 | 6.136 | 11.132 | 2.2545 | 5.1468 | 10.8555 |
| 91 | 3.128 | 3.008 | 4.996 | 1.3278 | 2.8923 | 5.7087 |
| 92 | 1.680 | 1.328 | 1.988 | 0.7817 | 1.5645 | 2.8164 |
| 93 | 0.834 | 0.494 | 0.660 | .4510 | 0.7828 | 1.2519 |
| 94 | .351 | .143 | .166 | .2168 | .3318 | 0.4691 |
| 95 | .120 | .023 | .023 | .0927 | .1150 | .1373 |
| 96 | .023 | .000 | .000 | .0223 | .0223 | .0223 |

| Constant. | Number. | Logarithm. |
|---------------|-----------|------------|
| i | .04 | 1.6020600 |
| $(1+i)$ | 1.04 | 0.0170333 |
| $(1+i)^{1/2}$ | 1.0198039 | 0.0085167 |
| v | .9615385 | 1.9829667 |
| $v^{1/2}$ | .9805807 | 1.9914833 |
| d | .0384615 | 1.5850267 |
| δ | .0392207 | 1.5935156 |
| $i^{(2)}$ | .0396078 | 1.5977807 |

TABLE II.
COMMUTATION COLUMNS—AMERICAN TROPICAL EXPERIENCE TABLES, THREE AND ONE-HALF PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 20 | 50 257 | 913 139 | 14 491 634 | 570.06 | 17 678.03 | 440 761.19 |
| 21 | 47 987 | 865 152 | 13 578 495 | 547.97 | 17 107.97 | 423 083.16 |
| 22 | 45 816 | 819 336 | 12 713 343 | 527.17 | 16 560.00 | 405 975.19 |
| 23 | 43 740 | 775 596 | 11 894 007 | 507.15 | 16 032.83 | 389 415.19 |
| 24 | 41 754 | 733 842 | 11 118 411 | 488.73 | 15 525.68 | 373 382.36 |
| 25 | 39 853 | 693 989 | 10 384 569 | 470.57 | 15 036.95 | 357 856.68 |
| 26 | 38 035 | 655 954 | 9 690 580 | 453.87 | 14 566.38 | 342 819.73 |
| 27 | 36 295 | 619 059 | 9 034 626 | 438.14 | 14 112.51 | 328 253.35 |
| 28 | 34 629 | 585 030 | 8 414 967 | 423.32 | 13 674.37 | 314 140.84 |
| 29 | 33 035 | 551 995 | 7 829 937 | 408.65 | 13 251.05 | 300 466.47 |
| 30 | 31 509 | 520 486 | 7 277 942 | 395.86 | 12 842.40 | 287 215.42 |
| 31 | 30 048 | 490 438 | 6 757 456 | 382.81 | 12 446.54 | 274 373.02 |
| 32 | 28 649 | 461 789 | 6 267 018 | 371.47 | 12 063.73 | 261 926.48 |
| 33 | 27 308 | 434 481 | 5 805 229 | 360.46 | 11 692.26 | 249 862.75 |
| 34 | 26 024 | 408 457 | 5 370 748 | 350.07 | 11 331.80 | 238 170.49 |
| 35 | 24 794 | 383 663 | 4 962 291 | 340.55 | 10 981.73 | 226 838.69 |
| 36 | 23 615 | 360 048 | 4 578 628 | 331.56 | 10 641.18 | 215 856.96 |
| 37 | 22 485 | 337 563 | 4 218 580 | 323.32 | 10 309.62 | 205 215.78 |
| 38 | 21 401 | 316 162 | 3 881 017 | 315.53 | 9 986.30 | 194 906.16 |
| 39 | 20 362 | 295 800 | 3 564 855 | 308.64 | 9 670.77 | 184 919.86 |
| 40 | 19 365 | 276 435 | 3 269 055 | 301.87 | 9 362.13 | 175 249.09 |
| 41 | 18 408 | 258 027 | 2 992 620 | 296.14 | 9 060.26 | 165 886.96 |
| 42 | 17 490 | 240 537 | 2 734 593 | 290.68 | 8 764.12 | 156 826.70 |
| 43 | 16 608 | 223 929 | 2 494 056 | 285.69 | 8 473.44 | 148 062.58 |
| 44 | 15 760 | 208 169 | 2 270 127 | 281.14 | 8 187.75 | 139 589.14 |
| 45 | 14 946 | 193 223 | 2 061 958 | 277.18 | 7 906.61 | 131 401.39 |
| 46 | 14 164 | 179 059 | 1 868 735 | 273.36 | 7 629.43 | 123 494.78 |
| 47 | 13 411 | 165 648 | 1 689 676 | 270.26 | 7 356.07 | 115 865.35 |
| 48 | 12 687 | 152 961 | 1 524 028 | 267.42 | 7 085.81 | 108 509.28 |
| 49 | 11 991 | 140 970 | 1 371 067 | 264.82 | 6 818.39 | 101 423.47 |
| 50 | 11 321 | 129 649 | 1 230 097 | 262.61 | 6 553.57 | 94 605.08 |
| 51 | 10 675 | 118 974 | 1 100 448 | 260.58 | 6 290.96 | 88 051.51 |
| 52 | 10 054 | 108 919.8 | 981 473.6 | 258.72 | 6 030.38 | 81 760.55 |
| 53 | 9 454.9 | 99 464.9 | 872 553.8 | 256.99 | 5 771.66 | 75 730.17 |
| 54 | 8 878.2 | 90 586.7 | 773 088.9 | 255.38 | 5 514.67 | 69 958.51 |
| 55 | 8 322.6 | 82 264.1 | 682 502.2 | 254.03 | 5 259.29 | 64 443.84 |
| 56 | 7 787.1 | 74 477.0 | 600 238.1 | 252.48 | 5 005.26 | 59 184.55 |
| 57 | 7 271.3 | 67 205.7 | 525 761.1 | 250.87 | 4 752.78 | 54 179.29 |
| 58 | 6 774.6 | 60 431.1 | 458 555.4 | 249.22 | 4 501.91 | 49 426.51 |
| 59 | 6 296.2 | 54 134.9 | 398 124.3 | 247.27 | 4 252.69 | 44 924.60 |
| 60 | 5 836.1 | 48 298.8 | 343 989.4 | 245.16 | 4 005.42 | 40 671.91 |
| 61 | 5 393.5 | 42 905.3 | 295 690.6 | 242.68 | 3 760.26 | 36 666.49 |
| 62 | 4 968.5 | 37 936.8 | 252 783.3 | 239.62 | 3 517.58 | 32 906.23 |
| 63 | 4 560.8 | 33 376.0 | 214 848.5 | 236.28 | 3 277.96 | 29 388.65 |
| 64 | 4 170.3 | 29 205.7 | 181 472.5 | 232.24 | 3 041.68 | 26 110.69 |

TABLE II.—Cont.

COMMUTATION COLUMNS—AMERICAN TROPICAL EXPERIENCE TABLES, THREE AND ONE-HALF PER CENT.

| Age. | D _r | N _r | S _r | C _r | M _r | R _r |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 65 | 3 797.1 | 25 408.6 | 152 266.8 | 227.48 | 2 809.44 | 23 069.01 |
| 66 | 3 441.2 | 21 967.4 | 126 858.2 | 222.19 | 2 581.96 | 20 259.57 |
| 67 | 3 102.6 | 18 864.8 | 104 890.8 | 215.93 | 2 359.77 | 17 677.61 |
| 68 | 2 781.8 | 16 083.0 | 86 026.0 | 208.90 | 2 143.84 | 15 317.84 |
| 69 | 2 478.8 | 13 604.2 | 69 943.0 | 201.03 | 1 934.94 | 13 174.00 |
| 70 | 2 194.0 | 11 410.2 | 56 338.8 | 192.23 | 1 733.91 | 11 239.06 |
| 71 | 1 927.5 | 9 482.7 | 44 928.6 | 182.62 | 1 541.68 | 9 505.15 |
| 72 | 1 679.7 | 7 803.0 | 35 445.9 | 172.06 | 1 359.06 | 7 963.47 |
| 73 | 1 450.9 | 6 352.1 | 27 642.9 | 160.76 | 1 187.00 | 6 604.41 |
| 74 | 1 241.0 | 5 111.1 | 21 290.8 | 148.88 | 1 026.24 | 5 417.41 |
| 75 | 1 050.2 | 4 060.93 | 16 179.67 | 136.31 | 877.36 | 4 391.17 |
| 76 | 878.37 | 3 182.56 | 12 118.74 | 123.35 | 741.05 | 3 513.81 |
| 77 | 725.32 | 2 457.24 | 8 936.18 | 110.30 | 617.70 | 2 772.76 |
| 78 | 590.50 | 1 866.74 | 6 478.94 | 97.190 | 507.402 | 2 155.057 |
| 79 | 473.34 | 1 393.40 | 4 612.20 | 84.207 | 410.212 | 1 647.655 |
| 80 | 373.12 | 1 020.28 | 3 218.80 | 71.867 | 326.005 | 1 237.441 |
| 81 | 288.64 | 731.64 | 2 108.52 | 60.087 | 254.138 | 911.438 |
| 82 | 218.79 | 512.85 | 1 466.88 | 49.195 | 194.051 | 657.300 |
| 83 | 162.20 | 350.65 | 954.03 | 39.359 | 144.856 | 463.249 |
| 84 | 117.35 | 233.297 | 603.382 | 30.777 | 105.497 | 318.393 |
| 85 | 82.609 | 150.688 | 370.085 | 23.301 | 74.720 | 212.896 |
| 86 | 56.514 | 94.174 | 219.397 | 17.198 | 51.419 | 138.176 |
| 87 | 37.405 | 56.769 | 125.223 | 12.257 | 34.221 | 86.757 |
| 88 | 23.883 | 32.886 | 68.454 | 8.3784 | 21.9636 | 52.5355 |
| 89 | 14.697 | 18.189 | 35.568 | 5.5625 | 13.5852 | 30.5719 |
| 90 | 8.638 | 9.551 | 17.379 | 3.4956 | 8.0227 | 16.9867 |
| 91 | 4.850 | 4.701 | 7.828 | 2.0686 | 4.5271 | 8.9640 |
| 92 | 2.617 | 2.084 | 3.127 | 1.2237 | 2.4585 | 4.4369 |
| 93 | 1.305 | .779 | 1.043 | .7094 | 1.2348 | 1.9784 |
| 94 | .552 | .227 | .264 | .3427 | .5254 | .7436 |
| 95 | .190 | .037 | .037 | .1472 | .1827 | .2182 |
| 96 | .037 | .000 | .000 | .0355 | .0355 | .0355 |

| Constant. | Number. | Logarithm. |
|---------------|-----------|--------------------|
| i | .035 | \bar{Y} 5440680 |
| $(1+i)$ | 1.035 | 0.0149403 |
| $(1+i)^{1/2}$ | 1.0173495 | 0.0074702 |
| v | .9661836 | \bar{Y} .9850597 |
| $v^{1/2}$ | .9829465 | \bar{Y} .9925298 |
| d | .0338164 | \bar{Y} .5291277 |
| δ | .0344014 | \bar{Y} .5365764 |
| $i^{(2)}$ | .0346990 | \bar{Y} .5403170 |

TABLE III.
COMMUTATION COLUMNS—AMERICAN TROPICAL EXPERIENCE
TABLE, THREE PER CENT.

| Age. | D _t | N _t | S _t | C _t | M _t | R _t |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 20 | 55 368 | I 088 402 | 18 124 163 | 631.08 | 22 053 87 | 582 569.81 |
| 21 | 53 124 | I 035 278 | 17 035 761 | 609.57 | 21 422.79 | 560 515.94 |
| 22 | 50 067 | 984 311 | 16 000 483 | 589.28 | 20 813.22 | 539 093.15 |
| 23 | 48 833 | 935 418 | 15 016 172 | 569.66 | 20 223.94 | 518 279.93 |
| 24 | 46 899 | 888 519 | 14 080 754 | 551.63 | 19 654.28 | 498 055.99 |
| 25 | 44 982 | 843 537 | 13 192 235 | 533.71 | 19 102.65 | 478 401.71 |
| 26 | 43 138 | 800 399 | 12 348 698 | 517.27 | 18 568.94 | 459 299.06 |
| 27 | 41 364 | 759 035 | 11 548 299 | 501.76 | 18 051.67 | 440 730.12 |
| 28 | 39 658 | 719 377 | 10 789 264 | 487.15 | 17 549.91 | 422 678.45 |
| 29 | 38 015 | 681 362 | 10 069 887 | 472.55 | 17 062.76 | 405 128.54 |
| 30 | 36 436 | 644 926 | 9 388 525 | 459.99 | 16 590.21 | 388 065.78 |
| 31 | 34 914 | 610 012 | 8 743 599 | 446.98 | 16 130.22 | 371 475.57 |
| 32 | 33 451 | 576 561 | 8 133 587 | 435.84 | 15 683.24 | 355 345.35 |
| 33 | 32 040 | 544 521 | 7 557 026 | 424.98 | 15 247.40 | 339 662.11 |
| 34 | 30 682 | 513 839 | 7 012 505 | 414.73 | 14 822.42 | 324 414.71 |
| 35 | 29 374 | 484 465 | 6 498 666 | 405.41 | 14 407.69 | 309 592.29 |
| 36 | 28 113 | 456 352 | 6 014 201 | 396.62 | 14 002.28 | 295 184.60 |
| 37 | 26 897 | 429 455 | 5 557 849 | 388.65 | 13 605.66 | 281 182.32 |
| 38 | 25 725 | 403 730 | 5 128 394 | 381.11 | 13 217.01 | 267 576.66 |
| 39 | 24 595 | 379 135 | 4 724 664 | 374.61 | 12 835.90 | 254 359.65 |
| 40 | 23 504 | 355 631 | 4 345 529 | 368.17 | 12 461.29 | 241 523.75 |
| 41 | 22 451 | 333 180 | 3 989 898 | 362.93 | 12 093.12 | 229 062.46 |
| 42 | 21 434 | 311 746 | 3 656 718 | 357.97 | 11 739.19 | 216 969.34 |
| 43 | 20 452 | 291 294 | 3 344 972 | 353.54 | 11 372.22 | 205 239.15 |
| 44 | 19 503 | 271 791 | 3 053 678 | 349.53 | 11 018.68 | 193 866.93 |
| 45 | 18 585 | 253 206 | 2 781 887 | 346.34 | 10 669.09 | 182 848.25 |
| 46 | 17 698 | 235 508 | 2 528 681 | 343.23 | 10 322.75 | 172 179.16 |
| 47 | 16 839 | 218 669 | 2 291 173 | 340.98 | 9 979.52 | 161 856.41 |
| 48 | 16 008 | 202 661 | 2 074 504 | 339.03 | 9 638.54 | 151 876.89 |
| 49 | 15 202 | 187 459 | 1 871 843 | 337.37 | 9 299.51 | 142 238.35 |
| 50 | 14 422 | 173 037 | 1 684 384 | 336.18 | 8 962.14 | 132 938.84 |
| 51 | 13 666 | 159 371 | 1 511 347 | 335.21 | 8 625.96 | 123 976.70 |
| 52 | 12 933 | 146 438 | 1 351 976 | 334.42 | 8 290.75 | 115 350.74 |
| 53 | 12 221 | 134 217 | 1 205 538 | 333.80 | 7 956.33 | 107 059.99 |
| 54 | 11 532 | 122 685 | 1 071 321 | 333.32 | 7 622.53 | 99 103.66 |
| 55 | 10 863 | 111 822 | 949 636 | 333.17 | 7 289.21 | 91 481.13 |
| 56 | 10 213 | 101 609.1 | 836 813.8 | 332.74 | 6 956.04 | 84 191.92 |
| 57 | 9 582.8 | 92 026.3 | 735 204.7 | 332.23 | 6 623.30 | 77 235.88 |
| 58 | 8 971.4 | 83 054.9 | 643 178.4 | 331.64 | 6 291.07 | 70 612.58 |
| 59 | 8 378.5 | 74 676.4 | 560 123.5 | 330.64 | 5 959.43 | 64 321.51 |
| 60 | 7 803.8 | 66 872.6 | 485 447.1 | 329.41 | 5 628.79 | 58 362.08 |
| 61 | 7 247.1 | 59 625.5 | 418 574.5 | 327.65 | 5 299.38 | 52 733.29 |
| 62 | 6 708.4 | 52 917.1 | 358 949.0 | 325.11 | 4 971.72 | 47 433.91 |
| 63 | 6 187.9 | 46 729.2 | 306 031.9 | 322.12 | 4 646.61 | 42 462.19 |
| 64 | 5 685.5 | 41 043.7 | 259 302.7 | 318.16 | 4 324.49 | 37 815.58 |

AMERICAN TROPICAL EXPERIENCE TABLE. 233

TABLE III.—Cont.
COMMUTATION COLUMNS—AMERICAN TROPICAL EXPERIENCE TABLE, THREE PER CENT.

| Age. | D_x | N_x | S_x | C_x | M_x | R_x |
|------|---------|----------|-----------|--------|----------|-----------|
| 65 | 5 201.8 | 35 841.9 | 218 259.0 | 313.15 | 4 006.33 | 33 491.09 |
| 66 | 4 737.1 | 31 104.8 | 182 417.1 | 307.34 | 3 693.18 | 29 484.76 |
| 67 | 4 291.8 | 26 813.0 | 151 312.3 | 300.14 | 3 385.84 | 25 791.58 |
| 68 | 3 866.7 | 22 940.3 | 124 499.3 | 291.78 | 3 085.70 | 22 405.74 |
| 69 | 3 462.2 | 19 484.1 | 101 553.0 | 282.15 | 2 793.92 | 19 320.04 |
| 70 | 3 079.3 | 16 404.8 | 82 068.9 | 271.11 | 2 511.77 | 16 526.12 |
| 71 | 2 718.5 | 13 686.3 | 65 664.1 | 258.81 | 2 240.66 | 14 014.35 |
| 72 | 2 380.5 | 11 395.8 | 51 977.8 | 245.03 | 1 981.85 | 11 773.69 |
| 73 | 2 066.1 | 9 239.7 | 40 672.0 | 230.04 | 1 736.82 | 9 791.84 |
| 74 | 1 775.9 | 7 463.8 | 31 432.3 | 214.08 | 1 506.78 | 8 055.02 |
| 75 | 1 510.1 | 5 953.7 | 23 968.5 | 196.95 | 1 292.70 | 6 548.24 |
| 76 | 1 269.2 | 4 684.5 | 18 014.8 | 179.00 | 1 095.75 | 5 255.54 |
| 77 | 1 053.1 | 3 631.38 | 13 330.32 | 160.92 | 916.66 | 4 159.79 |
| 78 | 861.51 | 2 769.87 | 9 698.94 | 142.48 | 755.74 | 3 243.13 |
| 79 | 693.93 | 2 075.94 | 6 929.07 | 124.05 | 613.26 | 2 487.39 |
| 80 | 549.67 | 1 526.27 | 4 853.13 | 106.39 | 489.21 | 1 874.13 |
| 81 | 427.28 | 1 098.99 | 3 326.86 | 89.380 | 382.822 | 1 384.916 |
| 82 | 325.45 | 773.54 | 2 227.87 | 73.532 | 293.442 | 1 002.094 |
| 83 | 242.44 | 531.10 | 1 454.33 | 59.116 | 219.910 | 708.652 |
| 84 | 176.26 | 354.84 | 923.23 | 46.451 | 160.794 | 488.742 |
| 85 | 124.68 | 230.160 | 568.389 | 35.338 | 114.343 | 327.948 |
| 86 | 85.709 | 144.451 | 338.229 | 26.209 | 79.005 | 213.605 |
| 87 | 57.003 | 87.448 | 193.778 | 18.769 | 52.796 | 134.600 |
| 88 | 36.574 | 50.874 | 106.330 | 12.893 | 34.027 | 81.804 |
| 89 | 22.616 | 28.258 | 55.456 | 8.6011 | 21.1344 | 47.7765 |
| 90 | 13.356 | 14.902 | 27.198 | 5.4313 | 12.5333 | 26.6421 |
| 91 | 7.536 | 7.366 | 12.296 | 3.2298 | 7.1020 | 14.1088 |
| 92 | 4.087 | 3.279 | 4.930 | 1.9198 | 3.8722 | 7.0068 |
| 93 | 2.048 | 1.231 | 1.651 | 1.1183 | 1.9524 | 3.1346 |
| 94 | .870 | .301 | .420 | .5429 | .8341 | 1.1822 |
| 95 | .302 | .059 | .059 | .2343 | .2912 | .3481 |
| 96 | .059 | .003 | .000 | .0569 | .0569 | .0569 |

| Constant. | Number. | Logarithm. |
|---------------|-----------|-------------------|
| i | .03 | $\bar{V}.4771213$ |
| $(1+i)$ | 1.03 | 0.0128372 |
| $(1+i)^{1/2}$ | 1.0148891 | 0.0064186 |
| v | .9708738 | $\bar{V}.9871628$ |
| $v^{1/2}$ | .9853293 | $\bar{V}.9935814$ |
| d | .0291262 | $\bar{V}.4642838$ |
| δ | .0295588 | $\bar{V}.4706867$ |
| $(^2)$ | .0297783 | $\bar{V}.4738999$ |

TABLE IV.

AMERICAN TROPICAL EXPERIENCE—JOINT LIFE (TWO LIVES)
COMMUTATION COLUMNS, FOUR PER CENT.

| Age. | D_{xx} | N_{xx} | M_{xx} | R_{xx} |
|------|---------------|----------------|---------------|----------------|
| 20 | 4 563 900 000 | 62 578 8 | 1 981 500 000 | 34 095 900 000 |
| 21 | 4 285 9 | 58 292 9 | 1 879 0 | 32 114 4 |
| 22 | 4 024 2 | 54 268 7 | 1 782 2 | 30 235 4 |
| 23 | 3 777 8 | 50 490 9 | 1 690 6 | 28 453 2 |
| 24 | 3 545 9 | 46 945 000 000 | 1 603 9 | 26 702 6 |
| 25 | 3 327 400 000 | 43 617 6 | 1 521 800 000 | 25 158 700 000 |
| 26 | 3 121 7 | 40 495 9 | 1 444 1 | 23 636 9 |
| 27 | 2 927 9 | 37 568 0 | 1 370 4 | 22 192 8 |
| 28 | 2 745 4 | 34 822 6 | 1 300 5 | 20 822 4 |
| 29 | 2 573 4 | 32 249 200 000 | 1 234 1 | 19 521 9 |
| 30 | 2 411 500 000 | 29 837 7 | 1 171 100 000 | 18 287 800 000 |
| 31 | 2 258 8 | 27 578 9 | 1 111 20 | 17 116 70 |
| 32 | 2 115 1 | 25 463 8 | 1 054 30 | 16 005 50 |
| 33 | 1 979 5 | 23 484 3 | 1 000 10 | 14 951 20 |
| 34 | 1 851 7 | 21 632 600 000 | 948 46 | 13 951 08 |
| 35 | 1 731 300 000 | 19 901 3 | 899 230 000 | 13 002 620 000 |
| 36 | 1 617 7 | 18 283 6 | 852 24 | 12 103 39 |
| 37 | 1 510 6 | 16 773 0 | 807 36 | 11 251 15 |
| 38 | 1 409 6 | 15 363 4 | 764 45 | 10 443 79 |
| 39 | 1 314 3 | 14 049 100 000 | 723 40 | 9 679 34 |
| 40 | 1 224 400 000 | 12 824 70 | 681 050 000 | 8 955 940 000 |
| 41 | 1 139 60 | 11 685 10 | 646 38 | 8 271 88 |
| 42 | 1 059 60 | 10 625 51 | 610 19 | 7 625 50 |
| 43 | 984 11 | 9 641 40 | 575 44 | 7 015 31 |
| 44 | 912 87 | 8 728 530 000 | 542 04 | 6 439 87 |
| 45 | 845 640 000 | 7 882 89 | 509 930 000 | 5 897 830 000 |
| 46 | 782 21 | 7 100 68 | 479 02 | 5 387 90 |
| 47 | 722 37 | 6 378 31 | 449 27 | 4 908 88 |
| 48 | 665 92 | 5 712 39 | 420 60 | 4 459 61 |
| 49 | 612 67 | 5 099 720 000 | 392 97 | 4 039 01 |
| 50 | 562 480 000 | 4 537 24 | 366 340 000 | 3 646 040 000 |
| 51 | 515 19 | 4 022 05 | 340 68 | 3 279 70 |
| 52 | 470 66 | 3 551 39 | 315 97 | 2 939 02 |
| 53 | 428 77 | 3 122 62 | 292 18 | 2 623 05 |
| 54 | 389 41 | 2 733 210 000 | 269 31 | 2 330 87 |
| 55 | 352 470 000 | 2 380 74 | 247 350 000 | 2 061 560 000 |
| 56 | 317 84 | 2 062 90 | 226 27 | 1 814 21 |
| 57 | 285 45 | 1 777 45 | 206 11 | 1 587 94 |
| 58 | 255 22 | 1 522 23 | 186 85 | 1 381 83 |
| 59 | 227 07 | 1 295 160 000 | 168 52 | 1 194 98 |
| 60 | 200 950 000 | 1 094 21 | 151 130 000 | 1 026 460 000 |
| 61 | 176 78 | 917 43 | 134 700 | 875 330 |
| 62 | 154 52 | 762 91 | 119 230 | 740 630 |
| 63 | 134 11 | 628 80 | 104 770 | 621 400 |
| 64 | 115 50 | 513 297 000 | 91 313 | 516 633 |

TABLE IV.—Cont.
 AMERICAN TROPICAL EXPERIENCE—JOINT LIFE (TWO LIVES),
 COMMUTATION COLUMNS, FOUR PER CENT.

| Age. | D _{xx} | N _{xx} | M _{xx} | R _{xx} |
|------|-----------------|-----------------|-----------------|-----------------|
| 65 | 98 622 000 | 414 675 | 78 880 000 | 425 320 000 |
| 66 | 84 433 | 331 242 | 67 484 | 340 440 |
| 67 | 69 860 | 261 382 | 57 120 | 278 956 |
| 68 | 57 845 | 203 537 | 47 792 | 221 836 |
| 69 | 47 310 | 156 227 000 | 39 482 | 174 044 |
| 70 | 38 174 000 | 118 053 | 32 165 000 | 134 562 000 |
| 71 | 30 350 0 | 87 703 | 25 810 | 102 397 |
| 72 | 23 740 | 63 963 | 20 367 | 76 587 |
| 73 | 18 243 | 45 720 | 15 783 | 56 220 |
| 74 | 13 749 | 31 971 000 | 11 991 | 40 437 |
| 75 | 10 141 000 | 21 830 0 | 8 911 500 | 28 446 300 |
| 76 | 7 307 3 | 14 522 7 | 6 467 7 | 19 534 8 |
| 77 | 5 132 2 | 9 390 5 | 4 573 6 | 13 067 1 |
| 78 | 3 503 7 | 5 886 8 | 3 142 5 | 8 493 5 |
| 79 | 2 318 9 | 3 567 900 | 2 092 5 | 5 351 0 |
| 80 | 1 484 200 | 2 083 65 | 1 347 000 | 1 258 500 |
| 81 | 914 85 | 1 168 80 | 834 71 | 1 911 46 |
| 82 | 541 43 | 627 37 | 496 48 | 1 076 75 |
| 83 | 306 49 | 320 88 | 282 36 | 580 27 |
| 84 | 165 26 | 155 622 | 152 92 | 297 91 |
| 85 | 84 349 | 71 273 | 78 363 | 144 985 |
| 86 | 40 662 | 30 611 | 37 921 | 66 622 |
| 87 | 18 348 | 12 262.9 | 17 170 | 28 701 |
| 88 | 7 704.8 | 4 558.1 | 7 233 1 | 11 530.9 |
| 89 | 3 005.3 | 1 552.8 | 2 830.0 | 4 297.8 |
| 90 | 1 069.2 | 483 61 | 1 009.5 | 1 467.8 |
| 91 | 347.23 | 136.38 | 328.63 | 458.29 |
| 92 | 104.16 | 32.216 | 98.918 | 129.658 |
| 93 | 26.681 | 5.535 | 25.442 | 30.740 |
| 94 | 4.310 | .625 | 4.6975 | 5.2980 |
| 95 | .602 | .023 | .5782 | .6005 |
| 96 | .023 | .000 | .0223 | .0223 |

| Constant. | Number. | Logarithm. |
|--------------------------------|-----------|------------|
| <i>i</i> | .04 | 1.6020600 |
| (1 + <i>i</i>) | 1.04 | 0.0170333 |
| (1 + <i>i</i>) ^{1/2} | 1.0198039 | 0.0085167 |
| <i>v</i> | .9615385 | 1.9829667 |
| <i>v</i> ^{1/2} | .9805807 | 1.9914833 |
| <i>d</i> | .0384615 | 1.5850267 |
| <i>δ</i> | .0392207 | 1.5935156 |
| <i>j</i> (8) | .0396078 | 1.5977807 |

TABLE V.
AMERICAN TROPICAL EXPERIENCE—FORCE OF MORTALITY (*u.*)

| Age. | μ_x | Age. | μ_x | Age. | μ_x |
|------|---------|------|---------|------|---------|
| 20 | .01177 | 46 | .01977 | 72 | .10750 |
| 21 | .01185 | 47 | .02062 | 73 | .11681 |
| 22 | .01193 | 48 | .02155 | 74 | .12702 |
| 23 | .01203 | 49 | .02257 | 75 | .13822 |
| 24 | .01213 | 50 | .02369 | 76 | .15049 |
| 25 | .01224 | 51 | .02492 | 77 | .16396 |
| 26 | .01236 | 52 | .02627 | 78 | .17872 |
| 27 | .01250 | 53 | .02774 | 79 | .19490 |
| 28 | .01265 | 54 | .02936 | 80 | .21265 |
| 29 | .01281 | 55 | .03114 | 81 | .23210 |
| 30 | .01299 | 56 | .03308 | 82 | .25344 |
| 31 | .01318 | 57 | .03522 | 83 | .27683 |
| 32 | .01339 | 58 | .03755 | 84 | .30248 |
| 33 | .01363 | 59 | .04012 | 85 | .33061 |
| 34 | .01388 | 60 | .04293 | 86 | .36144 |
| 35 | .01416 | 61 | .04602 | 87 | .39526 |
| 36 | .01447 | 62 | .04940 | 88 | .43233 |
| 37 | .01481 | 63 | .05310 | 89 | .47298 |
| 38 | .01518 | 64 | .05717 | 90 | .51756 |
| 39 | .01559 | 65 | .06163 | 91 | .56643 |
| 40 | .01603 | 66 | .06651 | 92 | .62002 |
| 41 | .01652 | 67 | .07187 | 93 | .67878 |
| 42 | .01706 | 68 | .07775 | 94 | .74321 |
| 43 | .01765 | 69 | .08419 | 95 | .81386 |
| 44 | .01829 | 70 | .09126 | 96 | .89132 |
| 45 | .01900 | 71 | .09900 | 97 | .00000 |

NATIONAL FRATERNAL CONGRESS TABLE.

INTRODUCTION.

This table was deduced from the mortality experience of the Massachusetts fraternal societies, the Royal Arcanum and the Pilgrim Fathers, with reference also to the published tables of the Canada Life Insurance Company and the Australian Mutual Provident Society.

The table was graduated by George Dyre Eldridge, actuary.

The commutation columns are here reproduced by the special permission of Abb Landis, consulting actuary; they are from his book, "Life Insurance Premiums," which also contains valuable tables of net premiums and terminal reserves.

This table has been approved by the National Fraternal Congress as a minimum standard for net rates of premium.

MORTALITY TABLE.

| Age | Living l _x | Dying d _x | PROBABILITIES | | Age | Living l _x | Dying d _x | PROBABILITIES | |
|-----|--------------------------|-------------------------|-----------------------------|-------------------------|-----|--------------------------|-------------------------|-----------------------------|-------------------------|
| | | | Surviving P _x | Dying q _x | | | | Surviving P _x | Dying q _x |
| 20 | 100000 | 500 | .9950000 | .0050000 | 60 | 69801 | 1588 | .9772496 | .0227504 |
| 21 | 99500 | 501 | .9949648 | .0050352 | 61 | 68213 | 1681 | .9753566 | .0246434 |
| 22 | 98999 | 502 | .9949292 | .0050708 | 62 | 66532 | 1778 | .9737760 | .0262240 |
| 23 | 98497 | 503 | .9948932 | .0051068 | 63 | 64754 | 1880 | .9720970 | .0290330 |
| 24 | 97994 | 505 | .9948465 | .0051535 | 64 | 62874 | 1985 | .9684289 | .0315711 |
| 25 | 97489 | 507 | .9947994 | .0052006 | 65 | 60889 | 2094 | .9656096 | .0343904 |
| 26 | 96982 | 510 | .9947413 | .0052587 | 66 | 58795 | 2206 | .9624798 | .0375202 |
| 27 | 96472 | 513 | .9946824 | .0053176 | 67 | 56589 | 2318 | .9590380 | .0409620 |
| 28 | 95959 | 517 | .9946123 | .0053877 | 68 | 54271 | 2430 | .9552247 | .0447758 |
| 29 | 95442 | 522 | .9945307 | .0054693 | 69 | 51841 | 2539 | .9510233 | .0489767 |
| 30 | 94920 | 527 | .9944480 | .0055520 | 70 | 49302 | 2645 | .9463511 | .0536489 |
| 31 | 94393 | 533 | .9943534 | .0056466 | 71 | 46657 | 2744 | .9411878 | .0588122 |
| 32 | 93860 | 540 | .9942468 | .0057532 | 72 | 43913 | 2832 | .9355088 | .0644912 |
| 33 | 93320 | 548 | .9941277 | .0058723 | 73 | 41081 | 2909 | .9291887 | .0708113 |
| 34 | 92772 | 557 | .9939960 | .0060040 | 74 | 38172 | 2969 | .9222205 | .0777795 |
| 35 | 92215 | 567 | .9938513 | .0061487 | 75 | 35203 | 3009 | .9145243 | .0854757 |
| 36 | 91648 | 578 | .9936933 | .0063067 | 76 | 32104 | 3026 | .9060073 | .0939927 |
| 37 | 91070 | 591 | .9935105 | .0064895 | 77 | 29168 | 3016 | .8965990 | .1034010 |
| 38 | 90479 | 606 | .9933023 | .0066977 | 78 | 26152 | 2977 | .8861655 | .1138345 |
| 39 | 89873 | 622 | .9930791 | .0069209 | 79 | 23175 | 2905 | .8746494 | .1253506 |
| 40 | 89251 | 640 | .9928202 | .0071708 | 80 | 20270 | 2799 | .8610142 | .1380858 |
| 41 | 88611 | 660 | .9925517 | .0074483 | 81 | 17471 | 2659 | .8478049 | .1521951 |
| 42 | 87951 | 683 | .9922313 | .0077657 | 82 | 14812 | 2485 | .8322306 | .1677694 |
| 43 | 87268 | 708 | .9918871 | .0081129 | 83 | 12327 | 2280 | .8150401 | .1849599 |
| 44 | 86560 | 734 | .9915203 | .0084797 | 84 | 10047 | 2050 | .7959590 | .2040410 |
| 45 | 85826 | 761 | .9911332 | .0088668 | 85 | 7997 | 1800 | .7749156 | .2250844 |
| 46 | 85065 | 790 | .9907130 | .0092870 | 86 | 6197 | 1539 | .7516540 | .2483460 |
| 47 | 84275 | 822 | .9902462 | .0097538 | 87 | 4658 | 1277 | .7258480 | .2741520 |
| 48 | 83453 | 857 | .9897307 | .0102693 | 88 | 3381 | 1023 | .6974268 | .3025732 |
| 49 | 82596 | 894 | .9891762 | .0108238 | 89 | 2358 | 788 | .6658185 | .3341815 |
| 50 | 81702 | 935 | .9885560 | .0114440 | 90 | 1570 | 579 | .6312102 | .3687898 |
| 51 | 80767 | 981 | .9878540 | .0121400 | 91 | 991 | 404 | .5923310 | .4076690 |
| 52 | 79786 | 1029 | .9871030 | .0128970 | 92 | 587 | 264 | .5502555 | .4497445 |
| 53 | 78757 | 1083 | .9862483 | .0137512 | 93 | 323 | 161 | .5015480 | .4984500 |
| 54 | 77674 | 1140 | .9852323 | .0146767 | 94 | 162 | 89 | .4500173 | .5493827 |
| 55 | 76534 | 1202 | .9842946 | .0157054 | 95 | 73 | 44 | .3972603 | .6027397 |
| 56 | 75332 | 1270 | .9831413 | .0168587 | 96 | 29 | 19 | .3448276 | .6551724 |
| 57 | 74062 | 1342 | .9818800 | .0181200 | 97 | 10 | 7 | .3000000 | .7000000 |
| 58 | 72720 | 1418 | .9805006 | .0194994 | 98 | 3 | 3 | .0000000 | 1.0000000 |
| 59 | 71302 | 1501 | .9789487 | .0210513 | | | | | |

COMMUTATION COLUMNS,
FOUR PER CENT.

| Age. | D ₁ | N ₁ | S ₁ | C ₁ | M ₁ | R ₁ |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 20 | 45638.7 | 889569.8 | 15263684 | 219.4168 | 9669.139 | 312174.1 |
| 21 | 43663.9 | 845905.8 | 14374114 | 211.3996 | 9449.722 | 302505.0 |
| 22 | 41773.2 | 804132.6 | 13528208 | 203.6746 | 9238.323 | 293055.3 |
| 23 | 39962.8 | 764169.8 | 12724076 | 196.2311 | 9034.648 | 283817.0 |
| 24 | 38230.0 | 725940.3 | 11959906 | 189.4340 | 8838.417 | 274782.3 |
| 25 | 36569.8 | 689370.5 | 11233966 | 182.8694 | 8648.983 | 265943.9 |
| 26 | 34980.4 | 654390.1 | 10544595 | 176.8765 | 8466.113 | 257294.9 |
| 27 | 33458.1 | 620932.0 | 9890205 | 171.0739 | 8289.237 | 248828.8 |
| 28 | 32000.2 | 588931.9 | 9269273 | 165.7768 | 8118.163 | 240530.5 |
| 29 | 30603.6 | 558328.3 | 8680341 | 160.9423 | 7952.386 | 232421.4 |
| 30 | 29265.6 | 529062.7 | 8122013 | 156.2346 | 7791.444 | 224460.0 |
| 31 | 27983.8 | 501078.9 | 7592950 | 151.9359 | 7635.209 | 216677.5 |
| 32 | 26755.5 | 474323.3 | 7091871 | 148.0109 | 7483.273 | 209042.3 |
| 33 | 25578.3 | 448744.9 | 6617548 | 144.4265 | 7335.263 | 201559.1 |
| 34 | 24450.3 | 424294.6 | 6168803 | 141.1524 | 7190.896 | 194223.8 |
| 35 | 23368.7 | 400925.9 | 5744509 | 138.1602 | 7049.684 | 187013.0 |
| 36 | 22331.8 | 378594.2 | 5343583 | 135.4236 | 6911.523 | 179983.3 |
| 37 | 21337.4 | 357256.8 | 4964988 | 133.1437 | 6776.100 | 173071.8 |
| 38 | 20383.6 | 336873.2 | 4607732 | 131.2721 | 6642.956 | 166295.7 |
| 39 | 19468.3 | 317404.8 | 4270859 | 129.5558 | 6511.684 | 159652.7 |
| 40 | 18590.0 | 298814.8 | 3953454 | 128.1779 | 6382.128 | 153141.0 |
| 41 | 17746.8 | 281068.0 | 3654639 | 127.0995 | 6253.950 | 146758.9 |
| 42 | 16937.2 | 264130.8 | 3373571 | 126.4699 | 6126.851 | 140504.9 |
| 43 | 16159.3 | 247971.6 | 3109440 | 126.0568 | 6000.381 | 134378.1 |
| 44 | 15411.7 | 232559.9 | 2861469 | 125.6596 | 5874.324 | 128377.7 |
| 45 | 14693.3 | 217866.6 | 2628909 | 125.2711 | 5748.665 | 122503.4 |
| 46 | 14002.9 | 203863.7 | 2411042 | 125.0432 | 5623.393 | 116754.7 |
| 47 | 13339.3 | 190524.5 | 2207178 | 125.1041 | 5498.350 | 111313.3 |
| 48 | 12701.1 | 177823.3 | 2016654 | 125.4143 | 5373.246 | 105633.0 |
| 49 | 12087.2 | 165736.2 | 1838831 | 125.7971 | 5247.832 | 100259.7 |
| 50 | 11496.5 | 154239.6 | 1673094 | 126.5061 | 5122.035 | 95011.90 |
| 51 | 10927.8 | 143311.8 | 1518855 | 127.6249 | 4995.529 | 89889.86 |
| 52 | 10379.9 | 132931.9 | 1375543 | 128.7207 | 4867.904 | 84894.33 |
| 53 | 9851.950 | 123080.0 | 1242611 | 130.2651 | 4739.184 | 80026.43 |
| 54 | 9342.763 | 113737.2 | 1119531 | 131.8472 | 4608.918 | 75287.25 |
| 55 | 8851.579 | 104885.6 | 1005794 | 133.6711 | 4477.071 | 70678.32 |
| 56 | 8377.463 | 96508.17 | 900908.2 | 135.8011 | 4343.400 | 66201.26 |
| 57 | 7919.451 | 88588.72 | 804400.0 | 137.9809 | 4207.599 | 61857.86 |
| 58 | 7476.876 | 81111.85 | 715811.3 | 140.1875 | 4069.617 | 57650.26 |
| 59 | 7049.117 | 74062.73 | 634699.5 | 142.6857 | 3929.430 | 53580.64 |
| 60 | 6635.311 | 67427.42 | 560636.7 | 145.1499 | 3786.745 | 49651.21 |
| 61 | 6234.957 | 61192.46 | 493209.3 | 147.7409 | 3641.595 | 45864.47 |
| 62 | 5847.410 | 55345.05 | 432016.9 | 150.2558 | 3493.854 | 42222.87 |
| 63 | 5472.254 | 49872.80 | 376671.8 | 152.7651 | 3343.598 | 38729.02 |
| 64 | 5109.017 | 44763.78 | 326799.0 | 155.0935 | 3190.833 | 35385.42 |

COMMUTATION COLUMNS.

FOUR PER CENT.—*Cont.*

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 65 | 4757.423 | 40006.36 | 282035.2 | 157.3172 | 3035.739 | 32194.59 |
| 66 | 4417.128 | 35589.23 | 242028.9 | 159.3572 | 2878.422 | 29158.85 |
| 67 | 4087.881 | 31501.35 | 206439.6 | 161.0076 | 2719.065 | 26280.43 |
| 68 | 3769.648 | 27731.70 | 174938.3 | 162.2953 | 2558.057 | 23561.36 |
| 69 | 3462.366 | 24269.33 | 147206.6 | 163.0531 | 2395.762 | 21003.30 |
| 70 | 3166.145 | 21103.19 | 122937.3 | 163.3272 | 2232.709 | 18607.54 |
| 71 | 2881.043 | 18222.15 | 101834.1 | 162.9235 | 2069.382 | 16374.83 |
| 72 | 2607.310 | 15614.84 | 83611.93 | 161.6812 | 1906.458 | 14305.45 |
| 73 | 2345.348 | 13269.49 | 67997.69 | 159.6896 | 1744.777 | 12398.99 |
| 74 | 2095.452 | 11174.04 | 54727.60 | 156.7147 | 1585.087 | 10654.22 |
| 75 | 1858.143 | 9315.893 | 43553.56 | 152.7174 | 1428.373 | 9069.129 |
| 76 | 1633.959 | 7681.934 | 34237.67 | 147.6732 | 1275.655 | 7640.756 |
| 77 | 1423.441 | 6258.493 | 26555.74 | 141.5243 | 1127.982 | 6365.101 |
| 78 | 1227.169 | 5031.324 | 20297.24 | 134.3213 | 986.4579 | 5237.119 |
| 79 | 1045.649 | 3985.675 | 15265.92 | 126.0315 | 852.1366 | 4250.661 |
| 80 | 879.4003 | 3106.275 | 11280.24 | 116.7622 | 726.1051 | 3398.524 |
| 81 | 728.8150 | 2377.460 | 8173.969 | 106.6558 | 609.3429 | 2672.419 |
| 82 | 594.1278 | 1783.332 | 5796.509 | 95.84274 | 502.6871 | 2063.076 |
| 83 | 475.4340 | 1307.898 | 4013.177 | 84.55404 | 406.8443 | 1560.389 |
| 84 | 372.5940 | 935.3040 | 2705.279 | 73.10045 | 322.2903 | 1153.545 |
| 85 | 285.1631 | 650.1409 | 1769.975 | 61.71707 | 249.1898 | 831.2547 |
| 86 | 212.4782 | 437.6627 | 1119.835 | 50.73856 | 187.4728 | 582.0619 |
| 87 | 153.5674 | 284.0951 | 682.1718 | 40.48154 | 136.7342 | 394.5922 |
| 88 | 107.1794 | 176.9160 | 398.0764 | 31.18232 | 96.25265 | 257.8580 |
| 89 | 71.87479 | 105.0412 | 221.1605 | 23.09541 | 65.07033 | 161.6053 |
| 90 | 46.01497 | 59.02610 | 116.1193 | 16.31716 | 41.97492 | 96.5350 |
| 91 | 27.92800 | 31.09810 | 57.0931 | 10.94748 | 25.65776 | 54.5601 |
| 92 | 15.90636 | 15.19183 | 25.9949 | 6.878653 | 14.71028 | 28.9023 |
| 93 | 8.415927 | 6.77590 | 10.8031 | 4.033592 | 7.83163 | 14.1920 |
| 94 | 4.058646 | 2.71726 | 4.0272 | 2.143990 | 3.79803 | 6.3604 |
| 95 | 1.758554 | 0.95870 | 1.3099 | 1.019183 | 1.65404 | 2.5624 |
| 96 | 0.671734 | 0.28697 | .3512 | 0.423175 | 0.63486 | .9083 |
| 97 | 0.222724 | 0.06425 | .0642 | 0.149910 | 0.21166 | .2735 |
| 98 | 0.064247 | ..... | ..... | 0.061776 | 0.06178 | .0618 |

COMMUTATION COLUMNS,
THREE AND ONE-HALF PER CENT.

| Age. | D _r | N _r | S _r | C _r | M _r | R _r |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 20 | 50256.6 | 1066360 | 19278800 | 242.786 | 12496.5 | 426927 |
| 21 | 48314.3 | 1016050 | 18212400 | 235.044 | 12253.7 | 414430 |
| 22 | 46445.4 | 971606 | 17194300 | 227.550 | 12018.7 | 402176 |
| 23 | 44647.3 | 926959 | 16222700 | 220.293 | 11791.2 | 390157 |
| 24 | 42917.2 | 884042 | 15295700 | 213.689 | 11570.9 | 378366 |
| 25 | 41252.2 | 842790 | 14411700 | 207.281 | 11357.2 | 366795 |
| 26 | 39649.9 | 803140 | 13568900 | 201.456 | 11149.9 | 355438 |
| 27 | 38107.6 | 765032 | 12765800 | 195.788 | 10948.4 | 344288 |
| 28 | 36623.1 | 728409 | 12000800 | 190.643 | 10752.6 | 333340 |
| 29 | 35194.0 | 693215 | 11272400 | 185.978 | 10562.0 | 322587 |
| 30 | 33818.0 | 659397 | 10579200 | 181.410 | 10376.0 | 312025 |
| 31 | 32492.9 | 626904 | 9919750 | 177.270 | 10194.6 | 301649 |
| 32 | 31216.9 | 595687 | 9292850 | 173.525 | 10017.3 | 291454 |
| 33 | 29987.7 | 565699 | 8697160 | 170.141 | 9843.74 | 281437 |
| 34 | 28803.5 | 536895 | 8131460 | 167.087 | 9673.60 | 271593 |
| 35 | 27662.4 | 509233 | 7594560 | 164.335 | 9506.51 | 261919 |
| 36 | 26562.6 | 482670 | 7085330 | 161.858 | 9342.18 | 252412 |
| 37 | 25502.5 | 457168 | 6602200 | 159.902 | 9180.32 | 243070 |
| 38 | 24480.2 | 432688 | 6145490 | 158.416 | 9020.42 | 233890 |
| 39 | 23493.9 | 409194 | 5712800 | 157.100 | 8862.00 | 224870 |
| 40 | 22542.3 | 386652 | 5303610 | 156.180 | 8704.90 | 216008 |
| 41 | 21623.9 | 365028 | 4916960 | 155.614 | 8548.72 | 207303 |
| 42 | 20737.0 | 344291 | 4551930 | 155.591 | 8393.11 | 198754 |
| 43 | 19880.2 | 324411 | 4207640 | 155.833 | 8237.52 | 190361 |
| 44 | 19052.1 | 305359 | 3883230 | 156.092 | 8081.69 | 182123 |
| 45 | 18251.7 | 287107 | 3577870 | 156.361 | 7925.60 | 174041 |
| 46 | 17478.1 | 269629 | 3290760 | 156.831 | 7769.24 | 166115 |
| 47 | 16730.3 | 252899 | 3021130 | 157.665 | 7612.41 | 158346 |
| 48 | 15006.8 | 236892 | 2768230 | 158.820 | 7454.74 | 150734 |
| 49 | 15306.7 | 221585 | 2531340 | 160.074 | 7295.92 | 143279 |
| 50 | 14629.1 | 206956 | 2300760 | 161.754 | 7135.85 | 135983 |
| 51 | 13972.6 | 192983 | 2102800 | 163.972 | 6974.10 | 128847 |
| 52 | 13336.1 | 179647 | 1909820 | 166.179 | 6810.13 | 121873 |
| 53 | 12718.9 | 166928 | 1730170 | 168.985 | 6643.95 | 115063 |
| 54 | 12119.8 | 154808 | 1563240 | 171.864 | 6474.90 | 108419 |
| 55 | 11538.1 | 143270 | 1408430 | 175.083 | 6303.10 | 101944 |
| 56 | 10972.9 | 132297 | 1265160 | 178.733 | 6128.02 | 95641.2 |
| 57 | 10423.1 | 121874 | 1132860 | 182.479 | 5949.29 | 89513.2 |
| 58 | 9888.16 | 111980 | 1010990 | 186.292 | 5766.81 | 83563.9 |
| 59 | 9367.46 | 102619 | 89900.4 | 190.529 | 5580.52 | 77797.1 |
| 60 | 8860.14 | 93758.5 | 796385 | 194.755 | 5389.99 | 72216.6 |
| 61 | 8365.79 | 85392.7 | 702626 | 199.190 | 5195.23 | 66826.6 |
| 62 | 7883.69 | 77509.0 | 617233 | 203.559 | 4996.04 | 61631.4 |
| 63 | 7413.54 | 70095.5 | 539724 | 207.958 | 4792.48 | 56635.4 |
| 64 | 6955.89 | 63139.6 | 469629 | 212.148 | 4584.52 | 51842.9 |

COMMUTATION COLUMNS,
THREE AND ONE-HALF PER CENT.—Cont.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 65 | 6507.54 | 56632.1 | 406489 | 216.229 | 4372.37 | 47258.4 |
| 66 | 6071.25 | 50560.9 | 349857 | 220.091 | 4156.14 | 42886.0 |
| 67 | 5645.86 | 44915.0 | 299296 | 223.444 | 3936.05 | 38729.9 |
| 68 | 5231.48 | 39683.5 | 254381 | 226.319 | 3712.61 | 34793.8 |
| 69 | 4828.26 | 34855.2 | 214697 | 228.475 | 3486.29 | 31081.2 |
| 70 | 4436.52 | 30418.7 | 179842 | 229.965 | 3257.82 | 27594.9 |
| 71 | 4056.51 | 26362.2 | 149423 | 230.504 | 3027.85 | 24337.1 |
| 72 | 3658.83 | 22673.4 | 123061 | 229.851 | 2797.35 | 21309.3 |
| 73 | 3334.23 | 19339.2 | 100388 | 228.117 | 2567.50 | 18511.9 |
| 74 | 2993.37 | 16345.8 | 81048.4 | 224.949 | 2339.38 | 15944.4 |
| 75 | 2667.20 | 13678.6 | 64702.6 | 220.270 | 2114.43 | 13605.0 |
| 76 | 2356.72 | 11321.9 | 51024.0 | 214.024 | 1894.16 | 11490.6 |
| 77 | 2063.00 | 9258.89 | 39702.1 | 206.103 | 1680.14 | 9596.43 |
| 78 | 1787.14 | 7471.75 | 30443.2 | 196.558 | 1474.04 | 7916.29 |
| 79 | 1530.15 | 5941.60 | 22971.4 | 185.318 | 1277.48 | 6442.25 |
| 80 | 1293.08 | 4648.52 | 17029.8 | 172.518 | 1092.16 | 5164.77 |
| 81 | 1076.84 | 3571.68 | 12381.3 | 158.347 | 919.640 | 4072.61 |
| 82 | 882.076 | 2689.60 | 8809.60 | 142.981 | 761.293 | 3152.97 |
| 83 | 709.266 | 1980.33 | 6120.00 | 126.749 | 618.312 | 2391.68 |
| 84 | 558.532 | 1421.80 | 4139.67 | 110.109 | 491.563 | 1773.37 |
| 85 | 429.535 | 992.266 | 2717.87 | 93.4121 | 381.454 | 1281.81 |
| 86 | 321.597 | 670.669 | 1725.60 | 77.1665 | 288.042 | 900.356 |
| 87 | 233.555 | 437.114 | 1054.93 | 61.8643 | 210.875 | 612.314 |
| 88 | 163.793 | 273.321 | 617.811 | 47.8834 | 149.011 | 401.439 |
| 89 | 110.371 | 162.950 | 344.490 | 35.6365 | 101.128 | 252.428 |
| 90 | 71.0020 | 91.9475 | 181.540 | 25.2992 | 65.4913 | 151.300 |
| 91 | 43.3015 | 48.6460 | 89.592 | 17.0557 | 40.1921 | 85.808 |
| 92 | 24.7815 | 23.8645 | 40.946 | 10.7684 | 23.1304 | 45.616 |
| 93 | 13.1750 | 10.6895 | 17.082 | 6.34501 | 12.3680 | 22.480 |
| 94 | 6.38444 | 4.3050 | 6.392 | 3.38888 | 6.0230 | 10.112 |
| 95 | 2.77965 | 1.5254 | 2.087 | 1.61875 | 2.6341 | 4.089 |
| 96 | 1.06690 | 0.4585 | 0.562 | 0.67537 | 1.0153 | 1.455 |
| 97 | 0.35546 | 0.1030 | 0.103 | 0.24041 | 0.3400 | 0.440 |
| 98 | 0.10303 | ..... | ..... | 0.09955 | 0.0995 | 0.100 |

COMMUTATION COLUMNS,
THREE PER CENT.

| Age. | D ₁ | N ₁ | S ₁ | C ₁ | M ₁ | R ₁ |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 20 | 55367.6 | 1285330 | 24500600 | 268.774 | 16318.2 | 588033 |
| 21 | 53486.2 | 1231840 | 23215300 | 261.467 | 16049.4 | 571715 |
| 22 | 51666.9 | 1180170 | 21983500 | 254.359 | 15788.0 | 555666 |
| 23 | 49907.6 | 1130270 | 20803300 | 247.442 | 15531.6 | 539878 |
| 24 | 48206.7 | 1082060 | 19673000 | 241.190 | 15286.2 | 524344 |
| 25 | 46561.3 | 1035500 | 18590900 | 235.092 | 15045.0 | 509058 |
| 26 | 44970.0 | 990527 | 17555400 | 229.566 | 14809.9 | 494013 |
| 27 | 43430.6 | 947097 | 16564900 | 224.220 | 14580.3 | 479203 |
| 28 | 41941.4 | 905155 | 15617800 | 219.387 | 14356.1 | 464623 |
| 29 | 40500.4 | 864655 | 14712700 | 215.057 | 14136.7 | 450267 |
| 30 | 39105.8 | 825549 | 13848000 | 210.793 | 13921.6 | 436130 |
| 31 | 37756.0 | 787793 | 13022500 | 206.983 | 13710.8 | 422208 |
| 32 | 36449.3 | 751344 | 12234700 | 203.594 | 13503.9 | 408497 |
| 33 | 35184.2 | 716160 | 11483400 | 200.593 | 13300.3 | 394993 |
| 34 | 33958.7 | 682201 | 10767200 | 197.948 | 13099.7 | 381693 |
| 35 | 32771.7 | 649420 | 10085000 | 195.631 | 12901.7 | 368593 |
| 36 | 31621.5 | 617808 | 9435580 | 193.620 | 12706.1 | 355691 |
| 37 | 30506.9 | 587301 | 8817770 | 192.208 | 12512.5 | 342985 |
| 38 | 29426.2 | 557875 | 8230470 | 191.347 | 12320.3 | 330473 |
| 39 | 28377.7 | 529497 | 7672600 | 190.678 | 12128.9 | 318153 |
| 40 | 27360.5 | 502136 | 7143100 | 190.482 | 11938.2 | 306024 |
| 41 | 26373.2 | 475763 | 6640960 | 190.713 | 11747.7 | 294086 |
| 42 | 25414.3 | 450349 | 6165200 | 191.011 | 11557.0 | 282338 |
| 43 | 24482.4 | 425877 | 5714850 | 192.830 | 11365.4 | 270781 |
| 44 | 23576.5 | 402290 | 5288980 | 194.097 | 11172.6 | 259416 |
| 45 | 22695.7 | 379594 | 4886690 | 195.376 | 10978.5 | 248243 |
| 46 | 21839.2 | 357755 | 4507100 | 196.914 | 10783.1 | 237264 |
| 47 | 21006.2 | 336749 | 4149340 | 198.923 | 10586.2 | 226481 |
| 48 | 20195.5 | 316553 | 3812590 | 201.353 | 10387.3 | 215895 |
| 49 | 19406.0 | 297147 | 3496040 | 203.923 | 10185.9 | 205508 |
| 50 | 18636.8 | 278511 | 3198800 | 207.068 | 9981.99 | 195322 |
| 51 | 17886.9 | 260624 | 2920380 | 210.927 | 9774.93 | 185340 |
| 52 | 17155.0 | 243469 | 2659760 | 214.801 | 9564.00 | 175565 |
| 53 | 16440.6 | 227023 | 2416290 | 219.491 | 9349.20 | 166001 |
| 54 | 15742.2 | 211286 | 2189260 | 224.314 | 9129.70 | 156652 |
| 55 | 15059.4 | 196227 | 1977970 | 229.625 | 8905.39 | 147522 |
| 56 | 14391.1 | 181835 | 1781740 | 235.549 | 8675.77 | 138617 |
| 57 | 13736.4 | 168099 | 1599910 | 241.654 | 8440.22 | 129941 |
| 58 | 13094.7 | 155004 | 1431810 | 247.902 | 8198.56 | 121501 |
| 59 | 12465.4 | 142539 | 1276810 | 254.770 | 7950.66 | 113302 |
| 60 | 11847.5 | 130691 | 1134270 | 261.685 | 7695.89 | 105351 |
| 61 | 11240.8 | 119411 | 1003580 | 268.943 | 7434.20 | 97655.0 |
| 62 | 10644.4 | 108806 | 884133 | 276.177 | 7165.26 | 90220.8 |
| 63 | 10058.2 | 98748.0 | 775327 | 283.515 | 6889.08 | 83055.5 |
| 64 | 9481.74 | 89266.2 | 676579 | 290.630 | 6655.57 | 76166.4 |

COMMUTATION COLUMNS,
THREE PER CENT.—Cont.

| Age. | D ₁ | N ₁ | S ₁ | C ₁ | M ₁ | R ₁ |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 65 | 8914.96 | 80351.3 | 587313 | 297.659 | 6314.94 | 69560.8 |
| 66 | 8357.63 | 71993.6 | 506962 | 304.447 | 6017.28 | 63245.9 |
| 67 | 7809.77 | 64183.9 | 434968 | 310.586 | 5712.83 | 57228.6 |
| 68 | 7271.72 | 59912.1 | 370784 | 316.110 | 5402.25 | 51515.8 |
| 69 | 6743.21 | 50168.9 | 313872 | 320.670 | 5086.14 | 46113.6 |
| 70 | 6226.71 | 43942.2 | 263703 | 324.327 | 4765.47 | 41027.5 |
| 71 | 5721.03 | 38221.2 | 219761 | 326.666 | 4441.14 | 36262.0 |
| 72 | 5227.28 | 32993.9 | 181540 | 327.323 | 4114.47 | 31820.9 |
| 73 | 4748.14 | 28245.8 | 148546 | 326.430 | 3787.15 | 27706.4 |
| 74 | 4283.42 | 23962.4 | 120300 | 323.458 | 3460.72 | 23919.2 |
| 75 | 3835.20 | 20127.2 | 96337.3 | 318.268 | 3137.26 | 20458.5 |
| 76 | 3405.22 | 16721.9 | 76210.1 | 310.744 | 2819.00 | 17321.2 |
| 77 | 2995.29 | 13726.6 | 59488.2 | 300.696 | 2508.25 | 14502.2 |
| 78 | 2607.36 | 11119.3 | 45761.6 | 288.163 | 2207.56 | 11994.0 |
| 79 | 2243.26 | 8876.02 | 34642.3 | 273.003 | 1919.39 | 9786.42 |
| 80 | 1904.92 | 6971.10 | 25766.3 | 255.381 | 1646.39 | 7867.03 |
| 81 | 1594.05 | 5377.05 | 18795.2 | 235.540 | 1391.01 | 6220.64 |
| 82 | 1312.08 | 4064.97 | 13418.2 | 213.715 | 1155.47 | 4829.63 |
| 83 | 1060.15 | 3004.82 | 9353.22 | 190.374 | 941.754 | 3674.46 |
| 84 | 838.900 | 2165.92 | 6348.40 | 166.184 | 751.380 | 2732.11 |
| 85 | 648.280 | 1517.64 | 4182.48 | 141.668 | 585.196 | 1981.03 |
| 86 | 487.729 | 1029.91 | 2664.84 | 117.198 | 443.528 | 1395.83 |
| 87 | 355.926 | 673.989 | 1634.93 | 94.7360 | 325.930 | 952.301 |
| 88 | 250.824 | 423.165 | 960.939 | 73.6822 | 231.194 | 626.371 |
| 89 | 169.836 | 253.329 | 537.774 | 55.1031 | 157.511 | 395.177 |
| 90 | 109.787 | 143.542 | 284.445 | 39.3090 | 102.408 | 237.666 |
| 91 | 67.2800 | 76.2623 | 140.903 | 26.6291 | 63.0992 | 135.258 |
| 92 | 38.6913 | 37.5710 | 64.6402 | 16.8944 | 36.4701 | 72.1584 |
| 93 | 20.6700 | 16.9010 | 27.0692 | 10.0029 | 19.5757 | 35.6883 |
| 94 | 10.0651 | 6.8359 | 10.1682 | 5.36851 | 9.5728 | 16.1126 |
| 95 | 4.40339 | 2.4325 | 3.3323 | 2.57680 | 4.2043 | 6.5398 |
| 96 | 1.69834 | 0.7342 | 0.8098 | 1.08030 | 1.6275 | 2.3355 |
| 97 | 0.56858 | 0.1656 | 0.1656 | 0.38641 | 0.5472 | 0.7080 |
| 98 | 0.16561 | ..... | ..... | 0.16078 | 0.1608 | 0.1608 |

DESPARCIEUX TABLE OF MORTALITY.

(Former French Standard for Insurances.)

THE Desparcieux Table of Mortality takes its name from its author, who published it in 1746 in a volume entitled, "Essai sur les probabilités de la vie humaine" (An Essay on the Probabilities of Human Life). Two tables were in fact published, one drawn from the experience of the "tonne funds" of 1689, 1696 and 1734, and one from the mortuary registers of fourteen monasteries covering 8700 male lives and twenty-six convents covering 1519 female lives. The latter table, somewhat adapted, became the French standard for life insurances, and is known as the Desparcieux Table practically to the exclusion of the other.

The tables here published are taken from "Theorie Mathematique des Livs Assurances," by Dennoy. The columns headed D_x and N_x are not by our formula. The values are progressed to the end of the table at compound interest instead of discounted to the age at compound discount. But they may be used precisely as D_x and N_x . The French symbols are:

T_x equivalent to D_x .

S_x equivalent to N_{x+1} .

TABLE I.
DESPARCIEUX TABLE OF MORTALITY.

| Age | Number Living. | Number Dying. | Probability of Dying. | Probability of Living. | Age | Number Living. | Number Dying. | Probability of Dying. | Probability of Living. |
|-----|----------------|---------------|-----------------------|------------------------|-----|----------------|---------------|-----------------------|------------------------|
| 0 | 1,359 | 267 | .19647 | .80353 | 48 | 599 | 9 | .01502 | .98498 |
| 1 | 1,092 | 49 | .04487 | .95513 | 49 | 590 | 9 | .01525 | .98475 |
| 2 | 1,043 | 43 | .04123 | .95877 | 50 | 581 | 10 | .01721 | .98279 |
| 3 | 1,000 | 30 | .03000 | .97000 | 51 | 571 | 11 | .01926 | .98074 |
| 4 | 970 | 22 | .02268 | .97732 | 52 | 560 | 11 | .01964 | .98036 |
| 5 | 948 | 18 | .01899 | .98101 | 53 | 549 | 11 | .02004 | .97996 |
| 6 | 930 | 15 | .01613 | .98387 | 54 | 538 | 12 | .02231 | .97769 |
| 7 | 915 | 13 | .01421 | .98579 | 55 | 526 | 12 | .02281 | .97719 |
| 8 | 902 | 12 | .01330 | .98670 | 56 | 514 | 12 | .02335 | .97665 |
| 9 | 890 | 10 | .01124 | .98876 | 57 | 502 | 12 | .02590 | .97410 |
| 10 | 880 | 8 | .00909 | .99091 | 58 | 489 | 13 | .02659 | .97341 |
| 11 | 872 | 6 | .00688 | .99312 | 59 | 476 | 13 | .02731 | .97269 |
| 12 | 866 | 6 | .00693 | .99307 | 60 | 463 | 13 | .02808 | .97192 |
| 13 | 860 | 6 | .00698 | .99301 | 61 | 450 | 13 | .02889 | .97111 |
| 14 | 854 | 6 | .00702 | .99298 | 62 | 437 | 13 | .03204 | .96795 |
| 15 | 848 | 6 | .00708 | .99292 | 63 | 423 | 14 | .03310 | .96690 |
| 16 | 842 | 7 | .00831 | .99169 | 64 | 409 | 14 | .03423 | .96577 |
| 17 | 835 | 7 | .00838 | .99162 | 65 | 395 | 15 | .03797 | .96203 |
| 18 | 828 | 7 | .00845 | .99155 | 66 | 380 | 16 | .04211 | .95789 |
| 19 | 821 | 7 | .00853 | .99147 | 67 | 364 | 17 | .04670 | .95330 |
| 20 | 814 | 8 | .00983 | .99017 | 68 | 347 | 18 | .05187 | .94813 |
| 21 | 806 | 8 | .00993 | .99007 | 69 | 329 | 19 | .05775 | .94225 |
| 22 | 798 | 8 | .01002 | .98998 | 70 | 310 | 19 | .06129 | .93871 |
| 23 | 790 | 8 | .01013 | .98987 | 71 | 291 | 20 | .06873 | .93127 |
| 24 | 782 | 8 | .01023 | .98977 | 72 | 271 | 20 | .07380 | .92620 |
| 25 | 774 | 8 | .01034 | .98966 | 73 | 251 | 20 | .07968 | .92032 |
| 26 | 766 | 8 | .01044 | .98956 | 74 | 231 | 20 | .08658 | .91342 |
| 27 | 758 | 8 | .01055 | .98945 | 75 | 211 | 19 | .09005 | .90995 |
| 28 | 750 | 8 | .01067 | .98933 | 76 | 192 | 19 | .09396 | .90104 |
| 29 | 742 | 8 | .01078 | .98922 | 77 | 173 | 19 | .10983 | .89017 |
| 30 | 734 | 8 | .01090 | .98910 | 78 | 154 | 18 | .11688 | .88312 |
| 31 | 726 | 8 | .01102 | .98898 | 79 | 136 | 18 | .13255 | .86745 |
| 32 | 718 | 8 | .01114 | .98886 | 80 | 118 | 17 | .14407 | .85593 |
| 33 | 710 | 8 | .01127 | .98873 | 81 | 101 | 16 | .15841 | .84159 |
| 34 | 702 | 8 | .01140 | .98860 | 82 | 85 | 14 | .16471 | .83529 |
| 35 | 694 | 8 | .01153 | .98847 | 83 | 71 | 12 | .16901 | .83099 |
| 36 | 686 | 8 | .01166 | .98834 | 84 | 59 | 11 | .18664 | .81336 |
| 37 | 678 | 7 | .01032 | .98968 | 85 | 48 | 10 | .20833 | .79167 |
| 38 | 671 | 7 | .01043 | .98957 | 86 | 38 | 9 | .23684 | .76316 |
| 39 | 664 | 7 | .01054 | .98946 | 87 | 29 | 7 | .24138 | .75862 |
| 40 | 657 | 7 | .01065 | .98935 | 88 | 22 | 6 | .27273 | .72727 |
| 41 | 650 | 7 | .01077 | .98923 | 89 | 16 | 5 | .31250 | .68750 |
| 42 | 643 | 7 | .01089 | .98911 | 90 | 11 | 4 | .36364 | .63636 |
| 43 | 636 | 7 | .01101 | .98899 | 91 | 7 | 3 | .42857 | .57143 |
| 44 | 629 | 7 | .01113 | .98887 | 92 | 4 | 2 | .50000 | .50000 |
| 45 | 622 | 7 | .01125 | .98875 | 93 | 2 | 1 | .50000 | .50000 |
| 46 | 615 | 8 | .01301 | .98609 | 94 | 1 | 1 | 1.00000 | .00000 |
| 47 | 607 | 8 | .01318 | .98682 | | | | | |

TABLE II.
DESPARCIEUX TABLE OF MORTALITY—COMMUTATION TABLES,
FOUR PER CENT.*

| Age. | D _x | N _x | Age. | D _x | N _x |
|------|----------------|----------------|------|----------------|----------------|
| 0 | 54244.23 | 763202.83 | 48 | 3638.82 | 47583.04 |
| 1 | 41910.53 | 721292.30 | 49 | 3446.29 | 44136.75 |
| 2 | 38490.34 | 682801.96 | 50 | 3263.20 | 40873.55 |
| 3 | 35484.11 | 647317.85 | 51 | 3083.68 | 37789.87 |
| 4 | 33095.75 | 614222.10 | 52 | 2907.96 | 34881.91 |
| 5 | 31101.09 | 583121.01 | 53 | 2741.19 | 32140.72 |
| 6 | 29337.07 | 553783.94 | 54 | 2582.95 | 29557.77 |
| 7 | 27753.75 | 526030.19 | 55 | 2428.21 | 27129.56 |
| 8 | 26307.14 | 499723.05 | 56 | 2281.56 | 24848.00 |
| 9 | 24958.81 | 474764.24 | 57 | 2142.57 | 22705.43 |
| 10 | 23729.21 | 451035.03 | 58 | 2006.82 | 20698.61 |
| 11 | 22609.12 | 428425.91 | 59 | 1878.34 | 18820.27 |
| 12 | 21589.95 | 406835.96 | 60 | 1756.77 | 17063.50 |
| 13 | 20615.74 | 386220.22 | 61 | 1641.77 | 15421.73 |
| 14 | 19684.52 | 366535.70 | 62 | 1533.03 | 13888.70 |
| 15 | 18794.46 | 347721.24 | 63 | 1426.84 | 12461.86 |
| 16 | 17943.73 | 329797.51 | 64 | 1326.55 | 11135.31 |
| 17 | 17110.15 | 312687.37 | 65 | 1231.87 | 9903.44 |
| 18 | 16314.13 | 296373.24 | 66 | 1139.51 | 8763.93 |
| 19 | 15554.05 | 280819.19 | 67 | 1049.54 | 7714.39 |
| 20 | 14828.31 | 265990.88 | 68 | 962.05 | 6752.34 |
| 21 | 14117.86 | 251873.02 | 69 | 877.06 | 5875.28 |
| 22 | 13440.13 | 238432.89 | 70 | 794.63 | 5080.65 |
| 23 | 12793.64 | 225639.25 | 71 | 717.23 | 4363.42 |
| 24 | 12177.01 | 213462.24 | 72 | 642.25 | 3721.17 |
| 25 | 11588.87 | 201873.37 | 73 | 571.97 | 3149.20 |
| 26 | 11027.97 | 190845.40 | 74 | 506.15 | 2643.05 |
| 27 | 10493.08 | 180352.32 | 75 | 444.54 | 2198.51 |
| 28 | 9983.01 | 170369.31 | 76 | 388.96 | 1809.55 |
| 29 | 9496.66 | 160872.65 | 77 | 336.99 | 1472.56 |
| 30 | 9032.95 | 151839.70 | 78 | 288.44 | 1184.12 |
| 31 | 8590.87 | 143248.83 | 79 | 244.93 | 939.19 |
| 32 | 8169.41 | 135279.42 | 80 | 204.34 | 734.85 |
| 33 | 7767.69 | 127311.72 | 81 | 168.17 | 566.68 |
| 34 | 7384.78 | 119926.94 | 82 | 136.09 | 439.59 |
| 35 | 7019.83 | 112907.11 | 83 | 109.30 | 321.29 |
| 36 | 6672.03 | 106235.08 | 84 | 87.34 | 233.95 |
| 37 | 6340.59 | 99894.19 | 85 | 68.32 | 165.63 |
| 38 | 6033.78 | 93860.71 | 86 | 52.01 | 113.62 |
| 39 | 5741.19 | 88119.52 | 87 | 38.16 | 75.46 |
| 40 | 5462.18 | 82657.34 | 88 | 27.84 | 47.62 |
| 41 | 5196.13 | 77461.21 | 89 | 19.47 | 28.15 |
| 42 | 5942.47 | 72518.74 | 90 | 12.87 | 15.28 |
| 43 | 4700.65 | 67818.09 | 91 | 7.87 | 7.41 |
| 44 | 4470.10 | 63347.99 | 92 | 4.33 | 3.08 |
| 45 | 4250.34 | 59097.65 | 93 | 2.08 | 1.00 |
| 46 | 4040.88 | 55056.77 | 94 | 1.00 | 0.00 |
| 47 | 3834.91 | 51221.86 | 95 | 0.00 | 0.00 |

(* See Introduction.)



DUVILLARD TABLE OF MORTALITY.

(Former French Standard for Annuities.)

THE Duvillard Table of Mortality takes its name from its author, who published it in 1806 in a work entitled "Analyse de l'influence de la petite vesole sur la Mortalite" (Analysis of the influence of smallpox upon the mortality). This table was constructed to show the normal mortality by way of contrast. It was drawn from population statistics embracing 101,542 deaths in a population of 2,920,672.

The columns headed D_x and N_x are not by our formula. The values are progressed to the end of the table at compound interest instead of discounted to the age at entry at compound discount. But they may be used precisely as D_x and N_x .

The French symbols are:

T_x equivalent to D_x .

S_x equivalent to N_{x+} .

TABLE I.
DUVILLARD TABLE OF MORTALITY.

| Age. | Number Living. | Number Dying. | Probability of Dying. | Probability of Living. |
|------|----------------|---------------|-----------------------|------------------------|
| 0 | 1,000,000 | 232,475 | .23248 | .76752 |
| 1 | 767,525 | 95,691 | .12467 | .87533 |
| 2 | 671,834 | 47,166 | .07020 | .92980 |
| 3 | 624,668 | 25,955 | .04155 | .95845 |
| 4 | 598,713 | 15,562 | .02599 | .97401 |
| 5 | 583,151 | 10,126 | .01736 | .98264 |
| 6 | 573,025 | 7,187 | .01254 | .98746 |
| 7 | 565,838 | 5,593 | .00988 | .99012 |
| 8 | 560,245 | 4,759 | .00849 | .99151 |
| 9 | 555,486 | 4,364 | .00786 | .99214 |
| 10 | 551,122 | 4,234 | .00768 | .99232 |
| 11 | 546,888 | 4,258 | .00779 | .99221 |
| 12 | 542,630 | 4,375 | .00806 | .99194 |
| 13 | 538,255 | 4,544 | .00844 | .99156 |
| 14 | 533,711 | 4,742 | .00889 | .99111 |
| 15 | 528,969 | 4,949 | .00936 | .99064 |
| 16 | 524,020 | 5,157 | .00984 | .99016 |
| 17 | 518,863 | 5,361 | .01033 | .98967 |
| 18 | 513,502 | 5,553 | .01081 | .98919 |
| 19 | 507,949 | 5,733 | .01129 | .98871 |
| 20 | 502,216 | 5,889 | .01175 | .98825 |
| 21 | 496,317 | 6,050 | .01219 | .98781 |
| 22 | 490,267 | 6,184 | .01262 | .98738 |
| 23 | 484,083 | 6,306 | .01303 | .98697 |
| 24 | 477,777 | 6,411 | .01342 | .98658 |
| 25 | 471,366 | 6,503 | .01380 | .98620 |
| 26 | 464,863 | 6,581 | .01416 | .98584 |
| 27 | 458,282 | 6,647 | .01450 | .98550 |
| 28 | 451,635 | 6,703 | .01484 | .98516 |
| 29 | 444,932 | 6,749 | .01517 | .98483 |
| 30 | 438,183 | 6,785 | .01548 | .98452 |
| 31 | 431,398 | 6,815 | .01580 | .98422 |
| 32 | 424,583 | 6,839 | .01611 | .98389 |
| 33 | 417,744 | 6,858 | .01642 | .98358 |
| 34 | 410,886 | 6,874 | .01673 | .98327 |
| 35 | 404,012 | 6,889 | .01705 | .98295 |
| 36 | 397,123 | 6,904 | .01739 | .98261 |
| 37 | 390,219 | 6,919 | .01773 | .98227 |
| 38 | 383,300 | 6,937 | .01810 | .98190 |
| 39 | 376,363 | 6,959 | .01849 | .98151 |
| 40 | 369,404 | 6,985 | .01891 | .98109 |
| 41 | 362,419 | 7,019 | .01937 | .98063 |
| 42 | 355,400 | 7,058 | .01985 | .98015 |
| 43 | 348,342 | 7,107 | .02040 | .97960 |
| 44 | 341,235 | 7,163 | .02099 | .97901 |
| 45 | 334,072 | 7,229 | .02164 | .97836 |
| 46 | 326,843 | 7,304 | .02235 | .97765 |
| 47 | 319,539 | 7,391 | .02313 | .97687 |
| 48 | 312,148 | 7,486 | .02398 | .97602 |
| 49 | 304,662 | 7,592 | .02492 | .97508 |
| 50 | 297,070 | 7,709 | .02595 | .97405 |
| 51 | 289,361 | 7,834 | .02707 | .97293 |
| 52 | 281,527 | 7,967 | .02830 | .97170 |
| 53 | 273,560 | 8,110 | .02965 | .97035 |
| 54 | 265,450 | 8,257 | .03111 | .96889 |

TABLE I.—*Cont.*
 DUVILLARD TABLE OF MORTALITY

| Age. | Number Living. | Number Dying. | Probability of Dying. | Probability of Living. |
|------|----------------|---------------|-----------------------|------------------------|
| 55 | 257,193 | 8,411 | .03270 | .96730 |
| 56 | 248,782 | 8,568 | .03444 | .96556 |
| 57 | 240,214 | 8,726 | .03633 | .96367 |
| 58 | 231,488 | 8,883 | .03837 | .96163 |
| 59 | 222,605 | 9,038 | .04060 | .95940 |
| 60 | 213,567 | 9,187 | .04302 | .95698 |
| 61 | 204,380 | 9,326 | .04563 | .95437 |
| 62 | 195,054 | 9,454 | .04847 | .95153 |
| 63 | 185,600 | 9,565 | .05154 | .94846 |
| 64 | 176,035 | 9,658 | .05487 | .94513 |
| 65 | 166,377 | 9,726 | .05846 | .94154 |
| 66 | 156,651 | 9,769 | .06236 | .93764 |
| 67 | 146,882 | 9,780 | .06658 | .93342 |
| 68 | 137,102 | 9,755 | .07115 | .92885 |
| 69 | 127,347 | 9,691 | .07610 | .92390 |
| 70 | 117,656 | 9,586 | .08148 | .91852 |
| 71 | 108,070 | 9,433 | .08729 | .91271 |
| 72 | 98,637 | 9,233 | .09361 | .90639 |
| 73 | 89,404 | 8,981 | .10045 | .89955 |
| 74 | 80,423 | 8,678 | .10791 | .89209 |
| 75 | 71,745 | 8,321 | .11598 | .88402 |
| 76 | 63,424 | 7,913 | .12476 | .87524 |
| 77 | 55,511 | 7,451 | .13428 | .86572 |
| 78 | 48,057 | 6,950 | .14462 | .85538 |
| 79 | 41,107 | 6,401 | .15574 | .84426 |
| 80 | 34,705 | 5,911 | .16767 | .83233 |
| 81 | 28,886 | 5,205 | .18023 | .81977 |
| 82 | 23,680 | 4,574 | .19316 | .80684 |
| 83 | 19,106 | 3,931 | .20593 | .79407 |
| 84 | 15,175 | 3,289 | .21674 | .78226 |
| 85 | 11,886 | 2,662 | .22383 | .77617 |
| 86 | 9,224 | 2,059 | .22322 | .77678 |
| 87 | 7,165 | 1,495 | .20865 | .79135 |
| 88 | 5,570 | 984 | .17355 | .82645 |
| 89 | 4,686 | 856 | .18267 | .81733 |
| 90 | 3,830 | 737 | .19243 | .80757 |
| 91 | 3,093 | 627 | .20272 | .79728 |
| 92 | 2,466 | 528 | .21411 | .78589 |
| 93 | 1,938 | 438 | .22652 | .77348 |
| 94 | 1,499 | 359 | .23949 | .76050 |
| 95 | 1,140 | 290 | .25351 | .74649 |
| 96 | 850 | 229 | .27145 | .72855 |
| 97 | 621 | 179 | .28710 | .71290 |
| 98 | 442 | 135 | .30545 | .69455 |
| 99 | 307 | 100 | .32573 | .67427 |
| 100 | 207 | 72 | .34783 | .65217 |
| 101 | 135 | 51 | .37778 | .62222 |
| 102 | 81 | 33 | .39286 | .60714 |
| 103 | 51 | 22 | .43137 | .56863 |
| 104 | 29 | 13 | .44828 | .55172 |
| 105 | 16 | 8 | .50000 | .50000 |
| 106 | 8 | 4 | .50000 | .50000 |
| 107 | 4 | 2 | .50000 | .50000 |
| 108 | 1 | 1 | 1.00000 | .00000 |
| 109 | | | | |

TABLE II.
 DUVILLARD TABLE OF MORTALITY—COMMUTATION TABLES—
 FOUR PER CENT.*

| Age. | D _x | N _x | Age. | D _x | N _x |
|------|----------------|----------------|------|----------------|----------------|
| 0 | 71,884,311 | 835,173,161 | 56 | 1,988,776 | 18,772,299 |
| 1 | 53,050,964 | 782,122,197 | 57 | 1,846,426 | 16,925,873 |
| 2 | 44,650,806 | 737,471,391 | 58 | 1,710,916 | 15,214,957 |
| 3 | 39,919,330 | 697,552,061 | 59 | 1,581,983 | 13,632,974 |
| 4 | 36,789,119 | 660,762,942 | 60 | 1,459,378 | 12,173,596 |
| 5 | 34,454,706 | 626,308,236 | 61 | 1,342,885 | 10,830,711 |
| 6 | 32,554,239 | 593,753,997 | 62 | 1,232,316 | 9,598,395 |
| 7 | 30,909,560 | 562,844,437 | 63 | 1,127,487 | 8,470,908 |
| 8 | 29,426,953 | 533,417,484 | 64 | 1,028,252 | 7,442,656 |
| 9 | 28,054,793 | 505,362,601 | 65 | 934,459 | 6,508,197 |
| 10 | 26,763,840 | 478,598,851 | 66 | 845,993 | 5,662,204 |
| 11 | 25,536,753 | 453,062,098 | 67 | 762,727 | 4,899,477 |
| 12 | 24,363,393 | 428,698,705 | 68 | 684,559 | 4,214,919 |
| 13 | 23,237,459 | 405,461,246 | 69 | 611,396 | 3,603,523 |
| 14 | 22,155,082 | 383,306,164 | 70 | 543,143 | 3,060,380 |
| 15 | 21,113,694 | 362,192,470 | 71 | 479,703 | 2,580,677 |
| 16 | 20,111,685 | 342,080,785 | 72 | 420,922 | 2,159,686 |
| 17 | 19,147,850 | 322,932,935 | 73 | 366,908 | 1,792,778 |
| 18 | 18,221,159 | 304,711,776 | 74 | 317,357 | 1,475,421 |
| 19 | 17,330,880 | 287,380,896 | 75 | 272,223 | 1,203,198 |
| 20 | 16,476,231 | 270,904,665 | 76 | 231,395 | 971,803 |
| 21 | 15,656,442 | 255,248,223 | 77 | 194,736 | 777,067 |
| 22 | 14,870,764 | 240,377,459 | 78 | 162,101 | 614,066 |
| 23 | 14,118,448 | 226,259,011 | 79 | 133,326 | 481,640 |
| 24 | 13,398,592 | 212,860,419 | 80 | 108,233 | 373,407 |
| 25 | 12,710,389 | 200,150,030 | 81 | 86,621 | 286,786 |
| 26 | 12,052,917 | 188,007,113 | 82 | 68,278 | 218,508 |
| 27 | 11,425,276 | 176,671,837 | 83 | 52,971 | 165,537 |
| 28 | 10,826,500 | 165,845,337 | 84 | 40,454 | 125,083 |
| 29 | 10,255,596 | 155,589,741 | 85 | 30,467 | 94,616 |
| 30 | 9,711,571 | 145,878,170 | 86 | 22,735 | 71,881 |
| 31 | 9,193,452 | 136,684,718 | 87 | 16,980 | 54,901 |
| 32 | 8,700,212 | 127,984,506 | 88 | 12,921 | 41,980 |
| 33 | 8,230,840 | 119,753,666 | 89 | 10,268 | 31,712 |
| 34 | 7,784,341 | 111,969,325 | 90 | 8,069 | 23,643 |
| 35 | 7,359,723 | 104,609,602 | 91 | 6,266 | 17,377 |
| 36 | 6,955,989 | 97,653,613 | 92 | 4,804 | 12,573 |
| 37 | 6,572,170 | 91,081,443 | 93 | 3,630 | 8,943 |
| 38 | 6,207,361 | 84,874,082 | 94 | 2,700 | 6,243 |
| 39 | 5,860,582 | 79,013,500 | 95 | 1,974 | 4,269 |
| 40 | 5,530,980 | 73,482,520 | 96 | 1,417 | 2,852 |
| 41 | 5,217,687 | 68,264,833 | 97 | 993 | 1,859 |
| 42 | 4,919,843 | 63,344,990 | 98 | 680 | 1,179 |
| 43 | 4,636,670 | 58,708,320 | 99 | 454 | 725 |
| 44 | 4,367,377 | 54,340,943 | 100 | 295 | 430 |
| 45 | 4,111,250 | 50,229,693 | 101 | 185 | 245 |
| 46 | 3,867,582 | 46,362,111 | 102 | 110 | 135 |
| 47 | 3,635,724 | 42,726,387 | 103 | 65 | 70 |
| 48 | 3,415,028 | 39,311,359 | 104 | 35 | 35 |
| 49 | 3,204,931 | 36,106,428 | 105 | 19 | 16 |
| 50 | 3,004,870 | 33,101,558 | 106 | 9 | 7 |
| 51 | 2,814,321 | 30,287,237 | 107 | 4 | 3 |
| 52 | 2,632,816 | 27,654,421 | 108 | 2 | 1 |
| 53 | 2,459,912 | 25,194,509 | 109 | 1 | 0 |
| 54 | 2,295,178 | 22,899,331 | 110 | 0 | 0 |
| 55 | 2,138,256 | 20,761,075 | | | |

* See Introduction.

SCANDINAVIAN COMPANIES' TABLES.

INTRODUCTION.

THESE tables were published in 1904 by the Scandinavian Life Insurance Companies' Congress. They were constructed by a committee from the experience of the companies on male and female lives, separately. The graduation was by the principle of moments, Makeham's first law being assumed. Only lives which were accepted as first-class were considered.

The number of lives was 181,533, and the number of deaths 12,437.

256 SCANDINAVIAN EXPERIENCE MORTALITY TABLE.

SCANDINAVIAN COMPANIES' EXPERIENCE MORTALITY TABLE
(1904) MALES.

| Age. | Number Living. | Number Dying. | Probability of Living. | Probability of Dying. | Age | Number Living. | Number Dying. | Probability of Living. | Probability of Dying. |
|------|----------------|---------------|------------------------|-----------------------|-----|----------------|---------------|------------------------|-----------------------|
| 20 | 100,000 | 428 | .99572 | .00428 | 61 | 66,925 | 2,001 | .97010 | .02990 |
| 21 | 99,572 | 425 | .99573 | .00427 | 62 | 64,924 | 2,104 | .96760 | .03240 |
| 22 | 99,147 | 422 | .99575 | .00425 | 63 | 62,820 | 2,207 | .96487 | .03513 |
| 23 | 98,725 | 420 | .99575 | .00425 | 64 | 60,613 | 2,309 | .96190 | .03810 |
| 24 | 98,305 | 418 | .99575 | .00425 | 65 | 58,304 | 2,410 | .95867 | .04133 |
| 25 | 97,887 | 417 | .99574 | .00426 | 66 | 55,804 | 2,506 | .95516 | .04484 |
| 26 | 97,470 | 417 | .99572 | .00428 | 67 | 53,388 | 2,598 | .95134 | .04876 |
| 27 | 97,053 | 419 | .99568 | .00432 | 68 | 50,791 | 2,682 | .94719 | .05281 |
| 28 | 96,634 | 423 | .99563 | .00437 | 69 | 48,108 | 2,758 | .94268 | .05732 |
| 29 | 96,211 | 427 | .99556 | .00444 | 70 | 45,350 | 2,822 | .93778 | .06222 |
| 30 | 95,784 | 434 | .99547 | .00453 | 71 | 42,528 | 2,871 | .93248 | .06752 |
| 31 | 95,357 | 442 | .99536 | .00464 | 72 | 39,657 | 2,906 | .92673 | .07327 |
| 32 | 94,908 | 453 | .99523 | .00477 | 73 | 36,751 | 2,922 | .92050 | .07950 |
| 33 | 94,455 | 465 | .99508 | .00492 | 74 | 33,829 | 2,917 | .91377 | .08623 |
| 34 | 93,990 | 479 | .99490 | .00510 | 75 | 30,912 | 2,891 | .90649 | .09351 |
| 35 | 93,511 | 495 | .99471 | .00529 | 76 | 28,021 | 2,840 | .89863 | .10137 |
| 36 | 93,016 | 514 | .99448 | .00552 | 77 | 25,181 | 2,766 | .89015 | .10985 |
| 37 | 92,502 | 535 | .99422 | .00578 | 78 | 22,415 | 2,667 | .88103 | .11867 |
| 38 | 91,967 | 558 | .99393 | .00607 | 79 | 19,748 | 2,543 | .87121 | .12779 |
| 39 | 91,409 | 584 | .99361 | .00639 | 80 | 17,205 | 2,397 | .86066 | .13734 |
| 40 | 90,825 | 612 | .99326 | .00674 | 81 | 14,808 | 2,231 | .84934 | .14765 |
| 41 | 90,213 | 643 | .99287 | .00713 | 82 | 12,577 | 2,047 | .83722 | .15878 |
| 42 | 89,570 | 678 | .99241 | .00756 | 83 | 10,530 | 1,851 | .82425 | .17175 |
| 43 | 88,892 | 715 | .99196 | .00804 | 84 | 8,679 | 1,646 | .81040 | .18690 |
| 44 | 88,177 | 755 | .99144 | .00856 | 85 | 7,033 | 1,437 | .79565 | .20435 |
| 45 | 87,422 | 798 | .99087 | .00913 | 86 | 5,596 | 1,231 | .77995 | .22405 |
| 46 | 86,624 | 845 | .99025 | .00975 | 87 | 4,365 | 1,013 | .76328 | .24672 |
| 47 | 85,779 | 895 | .98957 | .01043 | 88 | 3,332 | 848 | .74562 | .27338 |
| 48 | 84,884 | 948 | .98883 | .01117 | 89 | 2,484 | 678 | .72695 | .29705 |
| 49 | 83,936 | 1,006 | .98802 | .01198 | 90 | 1,806 | 529 | .70727 | .32873 |
| 50 | 82,930 | 1,067 | .98713 | .01287 | 91 | 1,277 | 400 | .68657 | .36134 |
| 51 | 81,863 | 1,133 | .98616 | .01384 | 92 | 877 | 294 | .66486 | .39514 |
| 52 | 80,730 | 1,202 | .98511 | .01489 | 93 | 583 | 209 | .64215 | .43085 |
| 53 | 79,528 | 1,276 | .98396 | .01604 | 94 | 374 | 143 | .61818 | .46882 |
| 54 | 78,252 | 1,354 | .98270 | .01730 | 95 | 231 | 94 | .59388 | .50912 |
| 55 | 76,898 | 1,436 | .98133 | .01867 | 96 | 137 | 59 | .56840 | .54160 |
| 56 | 75,462 | 1,521 | .97984 | .02016 | 97 | 78 | 36 | .54212 | .57888 |
| 57 | 73,941 | 1,611 | .97821 | .02179 | 98 | 42 | 20 | .51512 | .62488 |
| 58 | 72,337 | 1,704 | .97644 | .02356 | 99 | 22 | 11 | .48749 | .68251 |
| 59 | 70,626 | 1,801 | .97450 | .02550 | 100 | 11 | 6 | .45936 | .74064 |
| 60 | 68,825 | 1,900 | .97240 | .02760 | | | | | |

SCANDINAVIAN EXPERIENCE MORTALITY TABLE. 257

SCANDINAVIAN COMPANIES' EXPERIENCE MORTALITY TABLE.
(1904) FEMALES.

| Age. | Number Living. | Number Dying. | Probability of Living. | Probability of Dying. | Age | Number Living. | Number Dy. ng. | Probability of Living. | Probability of Dying. |
|------|----------------|---------------|------------------------|-----------------------|-----|----------------|----------------|------------------------|-----------------------|
| 20 | 100,000 | 471 | .99529 | .00471 | 61 | 70,483 | 1,470 | .97914 | .02086 |
| 21 | 99,529 | 471 | .99527 | .00473 | 62 | 69,013 | 1,578 | .97714 | .02286 |
| 22 | 99,058 | 473 | .99523 | .00477 | 63 | 67,435 | 1,692 | .97491 | .02509 |
| 23 | 98,585 | 476 | .99517 | .00483 | 64 | 65,743 | 1,813 | .97242 | .02758 |
| 24 | 98,109 | 481 | .99510 | .00490 | 65 | 63,930 | 1,940 | .96966 | .03034 |
| 25 | 97,628 | 487 | .99501 | .00499 | 66 | 61,990 | 2,069 | .96662 | .03338 |
| 26 | 97,141 | 495 | .99490 | .00510 | 67 | 59,921 | 2,200 | .96328 | .03672 |
| 27 | 96,646 | 504 | .99478 | .00522 | 68 | 57,721 | 2,330 | .95963 | .04037 |
| 28 | 96,142 | 514 | .99465 | .00535 | 69 | 55,391 | 2,457 | .95565 | .04435 |
| 29 | 95,628 | 526 | .99450 | .00550 | 70 | 52,934 | 2,576 | .95133 | .04867 |
| 30 | 95,102 | 538 | .99434 | .00566 | 71 | 50,358 | 2,686 | .94667 | .05333 |
| 31 | 94,564 | 550 | .99418 | .00582 | 72 | 47,672 | 2,782 | .94164 | .05836 |
| 32 | 94,014 | 564 | .99400 | .00600 | 73 | 44,890 | 2,862 | .93624 | .06376 |
| 33 | 93,450 | 578 | .99382 | .00618 | 74 | 42,028 | 2,923 | .93045 | .06955 |
| 34 | 92,872 | 592 | .99363 | .00637 | 75 | 39,105 | 2,961 | .92428 | .07572 |
| 35 | 92,280 | 605 | .99344 | .00656 | 76 | 36,144 | 2,975 | .91770 | .08230 |
| 36 | 91,675 | 618 | .99326 | .00674 | 77 | 33,169 | 2,962 | .91071 | .08929 |
| 37 | 91,057 | 631 | .99307 | .00693 | 78 | 30,207 | 2,921 | .90330 | .09670 |
| 38 | 90,426 | 644 | .99288 | .00712 | 79 | 27,286 | 2,852 | .89546 | .10454 |
| 39 | 89,782 | 656 | .99269 | .00731 | 80 | 24,434 | 2,757 | .88718 | .11282 |
| 40 | 89,126 | 668 | .99251 | .00749 | 81 | 21,677 | 2,635 | .87845 | .12155 |
| 41 | 88,458 | 679 | .99232 | .00768 | 82 | 19,042 | 2,489 | .86927 | .13073 |
| 42 | 87,779 | 690 | .99214 | .00786 | 83 | 16,553 | 2,324 | .85962 | .14038 |
| 43 | 87,089 | 701 | .99195 | .00805 | 84 | 14,229 | 2,141 | .84950 | .15050 |
| 44 | 86,388 | 713 | .99175 | .00825 | 85 | 12,088 | 1,948 | .83888 | .16112 |
| 45 | 85,675 | 725 | .99154 | .00846 | 86 | 10,140 | 1,747 | .82776 | .17224 |
| 46 | 84,950 | 738 | .99131 | .00869 | 87 | 8,393 | 1,543 | .81613 | .18387 |
| 47 | 84,212 | 753 | .99106 | .00894 | 88 | 6,850 | 1,343 | .80396 | .19604 |
| 48 | 83,459 | 770 | .99078 | .00922 | 89 | 5,507 | 1,150 | .79124 | .20876 |
| 49 | 82,689 | 790 | .99045 | .00955 | 90 | 4,357 | 967 | .77796 | .22204 |
| 50 | 81,899 | 812 | .99008 | .00992 | 91 | 3,390 | 800 | .76410 | .23590 |
| 51 | 81,087 | 839 | .98965 | .01035 | 92 | 2,590 | 648 | .74973 | .25037 |
| 52 | 80,248 | 871 | .98914 | .01086 | 93 | 1,942 | 516 | .73454 | .26546 |
| 53 | 79,377 | 908 | .98856 | .01144 | 94 | 1,426 | 401 | .71882 | .28118 |
| 54 | 78,469 | 952 | .98793 | .01213 | 95 | 1,025 | 305 | .70243 | .29757 |
| 55 | 77,517 | 1,002 | .98708 | .01292 | 96 | 720 | 227 | .68537 | .31463 |
| 56 | 76,515 | 1,059 | .98616 | .01384 | 97 | 493 | 167 | .66762 | .33238 |
| 57 | 75,450 | 1,124 | .98510 | .01490 | 98 | 329 | 115 | .64917 | .35083 |
| 58 | 74,332 | 1,198 | .98388 | .01612 | 99 | 214 | 79 | .63001 | .36999 |
| 59 | 73,134 | 1,280 | .98250 | .01750 | 100 | 135 | 53 | .61013 | .38987 |
| 60 | 71,854 | 1,371 | .98092 | .01908 | | | | | |

TABLE I.
AUSTRALIAN MUT. PROVIDENT SOCIETY'S EXPERIENCE TABLE.

| Age. | Living. | Dying. | Prob-ability of Dying. | Prob-ability of Living. | Age. | Living. | Dying. | Prob-ability of Dying. | Prob-ability of Living. |
|------|---------|--------|------------------------|-------------------------|------|---------|--------|------------------------|-------------------------|
| 0 | 100,000 | 2,842 | .028420 | .971580 | 50 | 72,262 | 831 | .011500 | .988500 |
| 1 | 97,158 | 2,249 | .023148 | .976852 | 51 | 71,431 | 863 | .012082 | .987918 |
| 2 | 94,909 | 1,732 | .018249 | .981751 | 52 | 70,568 | 885 | .012541 | .987459 |
| 3 | 93,177 | 1,291 | .013855 | .986145 | 53 | 69,683 | 905 | .012987 | .987013 |
| 4 | 91,886 | 929 | .010110 | .989290 | 54 | 68,778 | 934 | .013580 | .986420 |
| 5 | 90,957 | 641 | .007047 | .992953 | 55 | 67,844 | 969 | .014281 | .985719 |
| 6 | 90,316 | 432 | .004783 | .995217 | 56 | 66,875 | 1,013 | .015148 | .984852 |
| 7 | 89,884 | 299 | .003327 | .996673 | 57 | 65,862 | 1,064 | .016155 | .983845 |
| 8 | 89,585 | 243 | .002713 | .997287 | 58 | 64,798 | 1,125 | .017362 | .982638 |
| 9 | 89,342 | 205 | .002295 | .997705 | 59 | 63,673 | 1,186 | .018626 | .981374 |
| 10 | 89,137 | 190 | .002132 | .997868 | 60 | 62,487 | 1,246 | .019940 | .980060 |
| 11 | 88,947 | 161 | .001799 | .998201 | 61 | 61,241 | 1,315 | .021473 | .978527 |
| 12 | 88,787 | 181 | .002039 | .997961 | 62 | 59,926 | 1,397 | .023112 | .976888 |
| 13 | 88,606 | 202 | .002230 | .997720 | 63 | 58,529 | 1,529 | .026073 | .973927 |
| 14 | 88,404 | 232 | .002624 | .997376 | 64 | 57,003 | 1,674 | .029367 | .970633 |
| 15 | 88,172 | 260 | .002949 | .997051 | 65 | 55,329 | 1,848 | .033400 | .966600 |
| 16 | 87,912 | 291 | .003310 | .996690 | 66 | 53,481 | 1,991 | .037228 | .962772 |
| 17 | 87,621 | 296 | .003378 | .996622 | 67 | 51,490 | 2,169 | .041225 | .957875 |
| 18 | 87,325 | 304 | .003481 | .996519 | 68 | 49,321 | 2,203 | .044667 | .952333 |
| 19 | 87,021 | 304 | .003493 | .996507 | 69 | 47,118 | 2,229 | .047307 | .945293 |
| 20 | 86,717 | 302 | .003483 | .996517 | 70 | 44,889 | 2,247 | .050057 | .949943 |
| 21 | 86,415 | 294 | .003402 | .996598 | 71 | 42,642 | 2,276 | .053375 | .946625 |
| 22 | 86,121 | 296 | .003437 | .996563 | 72 | 40,366 | 2,141 | .053040 | .946960 |
| 23 | 85,825 | 297 | .003461 | .996539 | 73 | 38,225 | 2,210 | .057816 | .942184 |
| 24 | 85,528 | 297 | .003473 | .996527 | 74 | 36,015 | 2,274 | .063140 | .936860 |
| 25 | 85,231 | 302 | .003543 | .996457 | 75 | 33,741 | 2,238 | .066329 | .933671 |
| 26 | 84,929 | 312 | .003674 | .996326 | 76 | 31,503 | 2,273 | .072152 | .927848 |
| 27 | 84,617 | 325 | .003841 | .996159 | 77 | 29,230 | 2,553 | .087342 | .912658 |
| 28 | 84,292 | 332 | .003949 | .996061 | 78 | 26,677 | 2,672 | .100161 | .899839 |
| 29 | 83,960 | 351 | .004181 | .995819 | 79 | 24,005 | 2,744 | .114310 | .885990 |
| 30 | 83,600 | 369 | .004413 | .995587 | 80 | 21,261 | 2,898 | .136306 | .863694 |
| 31 | 83,240 | 392 | .004709 | .995291 | 81 | 18,363 | 2,995 | .158199 | .841801 |
| 32 | 82,848 | 407 | .004913 | .995087 | 82 | 15,458 | 2,662 | .172209 | .827791 |
| 33 | 82,441 | 433 | .005252 | .994748 | 83 | 12,796 | 2,396 | .187246 | .812754 |
| 34 | 82,008 | 450 | .005487 | .994513 | 84 | 10,400 | 2,111 | .202981 | .797019 |
| 35 | 81,558 | 463 | .005677 | .994323 | 85 | 8,289 | 1,759 | .212209 | .787791 |
| 36 | 81,095 | 473 | .005813 | .994167 | 86 | 6,530 | 1,435 | .219755 | .780245 |
| 37 | 80,622 | 491 | .006000 | .993910 | 87 | 5,095 | 1,182 | .231992 | .768008 |
| 38 | 80,131 | 503 | .006277 | .993723 | 88 | 3,913 | 965 | .246614 | .753386 |
| 39 | 79,628 | 527 | .006618 | .993382 | 89 | 2,948 | 775 | .262890 | .737110 |
| 40 | 79,101 | 555 | .007016 | .992984 | 90 | 2,173 | 615 | .283019 | .716981 |
| 41 | 78,546 | 587 | .007473 | .992527 | 91 | 1,558 | 487 | .312580 | .687420 |
| 42 | 77,959 | 617 | .007914 | .992086 | 92 | 1,071 | 378 | .352941 | .647959 |
| 43 | 77,342 | 648 | .008378 | .991622 | 93 | 693 | 282 | .406926 | .593074 |
| 44 | 76,694 | 675 | .008801 | .991199 | 94 | 411 | 199 | .484185 | .515815 |
| 45 | 76,019 | 699 | .009195 | .990805 | 95 | 212 | 129 | .608491 | .391509 |
| 46 | 75,320 | 722 | .009586 | .990414 | 96 | 83 | 72 | .867470 | .132530 |
| 47 | 74,598 | 751 | .010067 | .989933 | 97 | 11 | 11 | 1.000000 | .000000 |
| 48 | 73,847 | 779 | .010549 | .989451 | 98 | 0 | .... | ..... | ..... |
| 49 | 73,068 | 806 | .011031 | .988969 | | | | | |

TABLE I.

CANADA LIFE ASSURANCE COMPANY'S EXPERIENCE TABLE.

| Age. | Number Living. | Number Dying. | Probability of Living. | Probability of Dying. | Age. | Number Living. | Number Dying. | Probability of Living. | Probability of Dying. |
|------|----------------|---------------|------------------------|-----------------------|------|----------------|---------------|------------------------|-----------------------|
| 20 | 100,000 | 463 | .995373 | .004627 | 63 | 65,650 | 1,880 | .971374 | .028626 |
| 21 | 99,537 | 464 | .995335 | .004665 | 64 | 63,770 | 1,983 | .968901 | .031099 |
| 22 | 99,073 | 466 | .995294 | .004706 | 65 | 61,787 | 2,089 | .966181 | .033819 |
| 23 | 98,607 | 469 | .995248 | .004752 | 66 | 59,698 | 2,198 | .963189 | .036811 |
| 24 | 98,138 | 471 | .995197 | .004803 | 67 | 57,500 | 2,306 | .959901 | .040099 |
| 25 | 97,667 | 475 | .995142 | .004858 | 68 | 55,194 | 2,412 | .956287 | .043713 |
| 26 | 97,192 | 478 | .995080 | .004920 | 69 | 52,782 | 2,517 | .952318 | .047582 |
| 27 | 96,714 | 482 | .995013 | .004987 | 70 | 50,265 | 2,616 | .947959 | .052041 |
| 28 | 95,232 | 487 | .994938 | .005062 | 71 | 47,649 | 2,707 | .943175 | .056825 |
| 29 | 95,745 | 493 | .994856 | .005144 | 72 | 44,942 | 2,790 | .937926 | .062074 |
| 30 | 95,252 | 499 | .994765 | .005235 | 73 | 42,152 | 2,859 | .932172 | .067828 |
| 31 | 94,753 | 505 | .994665 | .005335 | 74 | 39,293 | 2,913 | .925866 | .074134 |
| 32 | 94,248 | 513 | .994555 | .005445 | 75 | 36,380 | 2,948 | .918959 | .081041 |
| 33 | 93,735 | 522 | .994433 | .005567 | 76 | 33,432 | 2,962 | .911402 | .088598 |
| 34 | 93,213 | 532 | .994298 | .005702 | 77 | 30,470 | 2,952 | .903140 | .096860 |
| 35 | 92,681 | 542 | .994150 | .005850 | 78 | 27,518 | 2,913 | .894115 | .105885 |
| 36 | 92,139 | 554 | .993987 | .006013 | 79 | 24,605 | 2,848 | .884266 | .115734 |
| 37 | 91,585 | 567 | .993807 | .006193 | 80 | 21,757 | 2,752 | .873529 | .126471 |
| 38 | 91,018 | 582 | .993609 | .006391 | 81 | 19,005 | 2,625 | .861839 | .138161 |
| 39 | 90,436 | 597 | .993390 | .006610 | 82 | 16,380 | 2,472 | .849127 | .150873 |
| 40 | 89,839 | 616 | .993148 | .006852 | 83 | 13,908 | 2,290 | .835324 | .164676 |
| 41 | 89,223 | 635 | .992882 | .007118 | 84 | 11,618 | 2,087 | .820362 | .179638 |
| 42 | 88,588 | 657 | .992590 | .007410 | 85 | 9,531 | 1,867 | .804170 | .195830 |
| 43 | 87,931 | 680 | .992265 | .007735 | 86 | 7,604 | 1,634 | .786682 | .213318 |
| 44 | 87,251 | 706 | .991909 | .008091 | 87 | 6,030 | 1,400 | .767835 | .232165 |
| 45 | 86,545 | 734 | .991516 | .008484 | 88 | 4,630 | 1,169 | .747573 | .252427 |
| 46 | 85,811 | 765 | .991082 | .008918 | 89 | 3,461 | 949 | .725845 | .274155 |
| 47 | 85,046 | 799 | .990604 | .009306 | 90 | 2,512 | 747 | .702613 | .297387 |
| 48 | 84,247 | 836 | .990078 | .009622 | 91 | 1,765 | 569 | .677852 | .322148 |
| 49 | 83,411 | 876 | .989497 | .010503 | 92 | 1,196 | 416 | .651554 | .348446 |
| 50 | 82,535 | 920 | .988857 | .011143 | 93 | 780 | 294 | .623731 | .376269 |
| 51 | 81,615 | 967 | .988151 | .011849 | 94 | 486 | 197 | .594421 | .405579 |
| 52 | 80,648 | 1,018 | .987374 | .012626 | 95 | 289 | 126 | .563690 | .436310 |
| 53 | 79,630 | 1,074 | .986518 | .013482 | 96 | 163 | 76 | .531635 | .468465 |
| 54 | 78,556 | 1,133 | .985574 | .014426 | 97 | 87 | 44 | .498392 | .501608 |
| 55 | 77,423 | 1,198 | .984534 | .015456 | 98 | 43 | 23 | .464134 | .535866 |
| 56 | 76,225 | 1,266 | .983388 | .016612 | 99 | 20 | 12 | .429075 | .570025 |
| 57 | 74,959 | 1,340 | .982126 | .017874 | 100 | 8 | 5 | .393471 | .605529 |
| 58 | 73,619 | 1,418 | .980736 | .019264 | 101 | 3 | 2 | .357620 | .642380 |
| 59 | 72,201 | 1,501 | .979208 | .020792 | 102 | 1 | 1 | .000000 | 1.000000 |
| 60 | 70,700 | 1,590 | .977520 | .022480 | | | | | |
| 61 | 69,110 | 1,682 | .975664 | .024336 | | | | | |
| 62 | 67,428 | 1,778 | .973622 | .026378 | | | | | |

SELECT.

| Age x | $l[x]$ | $l[x-1] + 1$ | $l[x-2] + 2$ | $l[x-3] + 3$ | $l[x-4] + 4$ | $l_x (s)$ | Age x | $l_x (s)$ |
|------------|--------|--------------|--------------|--------------|--------------|-----------|------------|-----------|
| 20 | 103679 | ..... | ..... | ..... | ..... | ..... | 62 | 67704 |
| 21 | 103031 | 103433 | ..... | ..... | ..... | ..... | 63 | 65880 |
| 22 | 102385 | 102786 | 103041 | ..... | ..... | ..... | 64 | 63957 |
| 23 | 101741 | 102139 | 102392 | 102533 | ..... | ..... | 65 | 61935 |
| 24 | 101101 | 101494 | 101745 | 101883 | 101946 | ..... | 66 | 59811 |
| 25 | 100463 | 100853 | 101099 | 101236 | 101296 | 101314 | 67 | 57583 |
| 26 | 99828 | 100212 | 100456 | 100590 | 100650 | 100666 | 68 | 55251 |
| 27 | 99193 | 99574 | 99814 | 99947 | 100005 | 100021 | 69 | 52817 |
| 28 | 98560 | 98934 | 99173 | 99304 | 99361 | 99377 | 70 | 50285 |
| 29 | 97928 | 98297 | 98532 | 98662 | 98718 | 98733 | 71 | 47658 |
| 30 | 97298 | 97661 | 97891 | 98018 | 98074 | 98089 | 72 | 44945 |
| 31 | 96665 | 97024 | 97251 | 97375 | 97430 | 97445 | 73 | 42152 |
| 32 | 96033 | 96386 | 96609 | 96732 | 96785 | 96800 | 74 | 39293 |
| 33 | 95395 | 95747 | 95966 | 96086 | 96139 | 96153 | 75 | 36380 |
| 34 | 94753 | 95102 | 95322 | 95440 | 95491 | 95505 | 76 | 33432 |
| 35 | 94105 | 94453 | 94672 | 94791 | 94840 | 94855 | 77 | 30470 |
| 36 | 93448 | 93796 | 94017 | 94137 | 94187 | 94200 | 78 | 27518 |
| 37 | 92779 | 93130 | 93354 | 93475 | 93527 | 93540 | 79 | 24605 |
| 38 | 92097 | 92452 | 92681 | 92806 | 92857 | 92871 | 80 | 21757 |
| 39 | 91401 | 91761 | 91996 | 92124 | 92178 | 92192 | 81 | 19005 |
| 40 | 90690 | 91056 | 91297 | 91431 | 91487 | 91502 | 82 | 16380 |
| 41 | 89962 | 90335 | 90584 | 90722 | 90781 | 90797 | 83 | 13908 |
| 42 | 89212 | 89596 | 89854 | 89998 | 90060 | 90076 | 84 | 11618 |
| 43 | 88436 | 88835 | 89105 | 89256 | 89320 | 89337 | 85 | 9531 |
| 44 | 87633 | 88048 | 88335 | 88493 | 88561 | 88579 | 86 | 7664 |
| 45 | 86802 | 87234 | 87537 | 87707 | 87779 | 87798 | 87 | 6030 |
| 46 | 85910 | 86391 | 86711 | 86893 | 86972 | 86991 | 88 | 4630 |
| 47 | 85043 | 85489 | 85855 | 86051 | 86134 | 86156 | 89 | 3461 |
| 48 | 84106 | 84603 | 84943 | 85175 | 85266 | 85289 | 90 | 2512 |
| 49 | 83125 | 83659 | 84044 | 84246 | 84363 | 84388 | 91 | 1765 |
| 50 | 82094 | 82667 | 83080 | 83318 | 83411 | 83450 | 92 | 1196 |
| 51 | ..... | 81626 | 82071 | 82328 | 82440 | 82470 | 93 | 780 |
| 52 | ..... | ..... | 81013 | 81291 | 81413 | 81445 | 94 | 486 |
| 53 | ..... | ..... | ..... | 80204 | 80336 | 80371 | 95 | 289 |
| 54 | ..... | ..... | ..... | ..... | 79205 | 79242 | 96 | 163 |
| 55 | ..... | ..... | ..... | ..... | ..... | 78055 | 97 | 87 |
| 56 | ..... | ..... | ..... | ..... | ..... | 76905 | 98 | 43 |
| 57 | ..... | ..... | ..... | ..... | ..... | 75487 | 99 | 20 |
| 58 | ..... | ..... | ..... | ..... | ..... | 74096 | 100 | 8 |
| 59 | ..... | ..... | ..... | ..... | ..... | 72626 | 101 | 3 |
| 60 | ..... | ..... | ..... | ..... | ..... | 71074 | 102 | 1 |
| 61 | ..... | ..... | ..... | ..... | ..... | 69435 | | |

SELECT.

| Age. x | $d[x]$ | $d[x-1] + 1$ | $d[x-2] + 2$ | $d[x-3] + 3$ | $d[x-4] + 4$ | $d_x (s)$ | Age | d_x |
|-------------|--------|--------------|--------------|--------------|--------------|-----------|-----|-------|
| 20 | 246 | .... | .... | .... | .... | .... | 55 | 1,250 |
| 21 | 245 | 392 | .... | .... | .... | .... | 56 | 1,318 |
| 22 | 246 | 394 | 508 | .... | .... | .... | 57 | 1,391 |
| 23 | 247 | 394 | 509 | 587 | .... | .... | 58 | 1,470 |
| 24 | 248 | 395 | 509 | 587 | 632 | .... | 59 | 1,552 |
| 25 | 251 | 397 | 509 | 586 | 630 | 648 | 60 | 1,639 |
| 26 | 254 | 398 | 509 | 585 | 629 | 645 | 61 | 1,731 |
| 27 | 259 | 401 | 510 | 586 | 628 | 644 | 62 | 1,824 |
| 28 | 263 | 402 | 511 | 586 | 628 | 644 | 63 | 1,923 |
| 29 | 267 | 406 | 514 | 588 | 629 | 644 | 64 | 2,022 |
| 30 | 274 | 410 | 516 | 588 | 629 | 644 | 65 | 2,124 |
| 31 | 279 | 415 | 519 | 590 | 630 | 645 | 66 | 2,228 |
| 32 | 286 | 420 | 523 | 593 | 632 | 647 | 67 | 2,332 |
| 33 | 293 | 425 | 526 | 595 | 634 | 648 | 68 | 2,434 |
| 34 | 300 | 430 | 531 | 600 | 636 | 650 | 69 | 2,532 |
| 35 | 309 | 436 | 535 | 604 | 640 | 655 | 70 | 2,627 |
| 36 | 318 | 442 | 542 | 610 | 647 | 660 | 71 | 2,713 |
| 37 | 327 | 449 | 548 | 618 | 656 | 669 | 72 | 2,793 |
| 38 | 336 | 456 | 557 | 628 | 665 | 679 | 73 | 2,859 |
| 39 | 345 | 464 | 565 | 637 | 676 | 690 | 74 | 2,913 |
| 40 | 355 | 472 | 575 | 650 | 690 | 705 | 75 | 2,948 |
| 41 | 366 | 481 | 586 | 662 | 705 | 721 | 76 | 2,962 |
| 42 | 377 | 491 | 598 | 678 | 723 | 739 | 77 | 2,952 |
| 43 | 388 | 500 | 612 | 695 | 741 | 758 | 78 | 2,913 |
| 44 | 399 | 511 | 628 | 714 | 763 | 781 | 79 | 2,848 |
| 45 | 411 | 523 | 644 | 735 | 788 | 807 | 80 | 2,752 |
| 46 | 421 | 536 | 660 | 759 | 816 | 835 | 81 | 2,625 |
| 47 | 435 | 546 | 680 | 785 | 845 | 867 | 82 | 2,472 |
| 48 | 447 | 564 | 697 | 812 | 878 | 901 | 83 | 2,290 |
| 49 | 458 | 579 | 726 | 835 | 913 | 938 | 84 | 2,087 |
| 50 | 468 | 596 | 752 | 878 | 941 | 980 | 85 | 1,867 |
| 51 | .... | 613 | 780 | 915 | 995 | 1,025 | 86 | 1,634 |
| 52 | .... | .... | 809 | 955 | 1,042 | 1,074 | 87 | 1,400 |
| 53 | .... | .... | .... | 999 | 1,094 | 1,129 | 88 | 1,169 |
| 54 | .... | .... | .... | .... | 1,150 | 1,187 | 89 | 949 |
| | | | | | | | 90 | 747 |
| | | | | | | | 91 | 569 |
| | | | | | | | 92 | 416 |
| | | | | | | | 93 | 294 |
| | | | | | | | 94 | 197 |
| | | | | | | | 95 | 126 |
| | | | | | | | 96 | 76 |
| | | | | | | | 97 | 44 |
| | | | | | | | 98 | 23 |
| | | | | | | | 99 | 12 |
| | | | | | | | 100 | 5 |
| | | | | | | | 101 | 2 |
| | | | | | | | 102 | 1 |

l_x Means age at entry. s_x Means attained age.

SELECT.

| Age x | $p[x]$ | $p[x-1]+_1$ | $p[x-2]+_2$ | $p[x-3]+_3$ | $p[x-4]+_4$ | $p_x (a)$ | Age. | p_x |
|------------|--------|-------------|-------------|-------------|-------------|-----------|------|--------|
| 20 | .99763 | ..... | ..... | ..... | ..... | ..... | 55 | .98398 |
| 21 | .99762 | .99621 | ..... | ..... | ..... | ..... | 56 | .98284 |
| 22 | .99760 | .99617 | .99507 | ..... | ..... | ..... | 57 | .98157 |
| 23 | .99757 | .99614 | .99503 | .99427 | ..... | ..... | 58 | .98017 |
| 24 | .99754 | .99611 | .99500 | .99424 | .99380 | ..... | 59 | .97863 |
| 25 | .99750 | .99607 | .99497 | .99421 | .99378 | .99361 | 60 | .97693 |
| 26 | .99745 | .99603 | .99493 | .99418 | .99375 | .99359 | 61 | .97508 |
| 27 | .99739 | .99598 | .99489 | .99414 | .99372 | .99356 | 62 | .97305 |
| 28 | .99733 | .99593 | .99484 | .99410 | .99368 | .99352 | 63 | .97082 |
| 29 | .99727 | .99587 | .99479 | .99405 | .99363 | .99348 | 64 | .96838 |
| 30 | .99719 | .99580 | .99473 | .99400 | .99358 | .99343 | 65 | .96570 |
| 31 | .99711 | .99572 | .99466 | .99394 | .99353 | .99338 | 66 | .96275 |
| 32 | .99702 | .99564 | .99459 | .99387 | .99347 | .99332 | 67 | .95951 |
| 33 | .99693 | .99556 | .99452 | .99380 | .99341 | .99326 | 68 | .95595 |
| 34 | .99683 | .99548 | .99443 | .99372 | .99334 | .99319 | 69 | .95205 |
| 35 | .99672 | .99539 | .99434 | .99363 | .99325 | .99310 | 70 | .94777 |
| 36 | .99660 | .99529 | .99423 | .99352 | .99313 | .99299 | 71 | .94306 |
| 37 | .99648 | .99518 | .99412 | .99339 | .99299 | .99285 | 72 | .93787 |
| 38 | .99635 | .99507 | .99399 | .99324 | .99284 | .99269 | 73 | .93216 |
| 39 | .99622 | .99495 | .99385 | .99308 | .99266 | .99251 | 74 | .92587 |
| 40 | .99608 | .99482 | .99370 | .99290 | .99246 | .99230 | 75 | .91896 |
| 41 | .99593 | .99468 | .99353 | .99270 | .99223 | .99206 | 76 | .91140 |
| 42 | .99577 | .99453 | .99334 | .99247 | .99198 | .99180 | 77 | .90314 |
| 43 | .99561 | .99437 | .99313 | .99222 | .99170 | .99151 | 78 | .89411 |
| 44 | .99544 | .99420 | .99290 | .99193 | .99138 | .99118 | 79 | .88427 |
| 45 | .99527 | .99401 | .99265 | .99161 | .99102 | .99081 | 80 | .87353 |
| 46 | .99508 | .99380 | .99238 | .99126 | .99062 | .99040 | 81 | .86184 |
| 47 | .99489 | .99357 | .99207 | .99088 | .99019 | .98994 | 82 | .84913 |
| 48 | .99469 | .99333 | .99173 | .99046 | .98971 | .98944 | 83 | .83532 |
| 49 | .99449 | .99307 | .99136 | .98999 | .98918 | .98888 | 84 | .82036 |
| 50 | .99427 | .99279 | .99095 | .98947 | .98859 | .98826 | 85 | .80417 |
| 51 | ..... | .99250 | .99050 | .98889 | .98793 | .98757 | 86 | .78668 |
| 52 | ..... | ..... | .99001 | .98825 | .98720 | .98681 | 87 | .76783 |
| 53 | ..... | ..... | ..... | .98754 | .98639 | .98596 | 88 | .74757 |
| 54 | ..... | ..... | ..... | ..... | .98549 | .98502 | 89 | .72584 |
| | | | | | | | 90 | .70261 |
| | | | | | | | 91 | .67785 |
| | | | | | | | 92 | .65155 |
| | | | | | | | 93 | .62373 |
| | | | | | | | 94 | .59442 |
| | | | | | | | 95 | .56369 |
| | | | | | | | 96 | .53163 |
| | | | | | | | 97 | .49839 |
| | | | | | | | 98 | .46413 |
| | | | | | | | 99 | .42907 |
| | | | | | | | 100 | .39347 |
| | | | | | | | 101 | .35762 |
| | | | | | | | 102 | ..... |

[x] Means age at entry. x Means attained age.

SELECT.

| Age x | $q[x]$ | $q[x-1] +_1$ | $q[x-2] +_2$ | $q[x-3] +_3$ | $q[x-4] +_4$ | $q_x (s)$ | Age x | $q_x (s)$ |
|------------|--------|--------------|--------------|--------------|--------------|-----------|------------|-----------|
| 20 | .00237 | ..... | ..... | ..... | ..... | ..... | 62 | .02695 |
| 21 | .00238 | .00379 | ..... | ..... | ..... | ..... | 63 | .02918 |
| 22 | .00240 | .00383 | .00493 | ..... | ..... | ..... | 64 | .03162 |
| 23 | .00243 | .00386 | .00497 | .00573 | ..... | ..... | 65 | .03430 |
| 24 | .00246 | .00389 | .00500 | .00576 | .00620 | ..... | 66 | .03725 |
| 25 | .00250 | .00393 | .00503 | .00579 | .00622 | .00639 | 67 | .04049 |
| 26 | .00255 | .00397 | .00507 | .00582 | .00625 | .00641 | 68 | .04405 |
| 27 | .00261 | .00402 | .00511 | .00586 | .00628 | .00644 | 69 | .04795 |
| 28 | .00267 | .00407 | .00516 | .00590 | .00632 | .00648 | 70 | .05223 |
| 29 | .00273 | .00413 | .00521 | .00595 | .00637 | .00652 | 71 | .05694 |
| 30 | .00281 | .00420 | .00527 | .00600 | .00642 | .00657 | 72 | .06213 |
| 31 | .00289 | .00428 | .00534 | .00606 | .00647 | .00662 | 73 | .06784 |
| 32 | .00298 | .00436 | .00541 | .00613 | .00653 | .00668 | 74 | .07413 |
| 33 | .00307 | .00444 | .00548 | .00620 | .00659 | .00674 | 75 | .08104 |
| 34 | .00317 | .00452 | .00557 | .00628 | .00666 | .00681 | 76 | .08860 |
| 35 | .00328 | .00461 | .00566 | .00637 | .00675 | .00690 | 77 | .09686 |
| 36 | .00340 | .00471 | .00577 | .00648 | .00687 | .00701 | 78 | .10589 |
| 37 | .00352 | .00482 | .00588 | .00661 | .00701 | .00715 | 79 | .11573 |
| 38 | .00365 | .00493 | .00601 | .00676 | .00716 | .00731 | 80 | .12647 |
| 39 | .00378 | .00505 | .00615 | .00692 | .00734 | .00749 | 81 | .13816 |
| 40 | .00392 | .00518 | .00630 | .00710 | .00754 | .00770 | 82 | .15087 |
| 41 | .00407 | .00532 | .00647 | .00730 | .00777 | .00794 | 83 | .16468 |
| 42 | .00423 | .00547 | .00666 | .00753 | .00802 | .00820 | 84 | .17964 |
| 43 | .00439 | .00563 | .00687 | .00778 | .00830 | .00849 | 85 | .19583 |
| 44 | .00456 | .00580 | .00710 | .00807 | .00862 | .00882 | 86 | .21332 |
| 45 | .00473 | .00599 | .00735 | .00839 | .00898 | .00919 | 87 | .23217 |
| 46 | .00492 | .00620 | .00762 | .00874 | .00938 | .00960 | 88 | .25243 |
| 47 | .00511 | .00643 | .00793 | .00912 | .00981 | .01006 | 89 | .27416 |
| 48 | .00531 | .00667 | .00827 | .00954 | .01029 | .01056 | 90 | .29739 |
| 49 | .00551 | .00693 | .00864 | .01001 | .01082 | .01112 | 91 | .32215 |
| 50 | .00573 | .00721 | .00905 | .01053 | .01141 | .01174 | 92 | .34845 |
| 51 | ..... | .00750 | .00950 | .01111 | .01207 | .01243 | 93 | .37627 |
| 52 | ..... | ..... | .00999 | .01175 | .01280 | .01319 | 94 | .40558 |
| 53 | ..... | ..... | ..... | .01246 | .01361 | .01404 | 95 | .43631 |
| 54 | ..... | ..... | ..... | ..... | .01451 | .01498 | 96 | .46837 |
| 55 | ..... | ..... | ..... | ..... | ..... | .01602 | 97 | .50161 |
| 56 | ..... | ..... | ..... | ..... | ..... | .01716 | 98 | .53587 |
| 57 | ..... | ..... | ..... | ..... | ..... | .01843 | 99 | .57093 |
| 58 | ..... | ..... | ..... | ..... | ..... | .01983 | 100 | .60653 |
| 59 | ..... | ..... | ..... | ..... | ..... | .02137 | 101 | .64238 |
| 60 | ..... | ..... | ..... | ..... | ..... | .02307 | 102 | 1.00000 |
| 61 | ..... | ..... | ..... | ..... | ..... | .02492 | | |

(1882-1895)—SELECT.

| Age x | l_x | l_{x-1} | l_{x-2} | l_{x-3} | l_{x-4} | l_{x-5} | l_{x-6} | l_x | Age x | l_x |
|-------|--------|-----------|-----------|-----------|-----------|-----------|-----------|--------|-------|-------|
| 15 | 105707 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 74 | 22965 |
| 16 | 105058 | 105207 | ..... | ..... | ..... | ..... | ..... | ..... | 75 | 26140 |
| 17 | 104409 | 104567 | 104632 | ..... | ..... | ..... | ..... | ..... | 76 | 22365 |
| 18 | 103761 | 103929 | 104000 | 104084 | ..... | ..... | ..... | ..... | 77 | 20660 |
| 19 | 103120 | 103297 | 103374 | 103411 | 103427 | ..... | ..... | ..... | 78 | 18049 |
| 20 | 102482 | 102678 | 102758 | 102797 | 102814 | 102831 | ..... | ..... | 79 | 15562 |
| 21 | 101875 | 102073 | 102157 | 102197 | 102214 | 102230 | 102244 | ..... | 80 | 13233 |
| 22 | 101273 | 101479 | 101571 | 101613 | 101632 | 101638 | 101641 | 101643 | 81 | 11091 |
| 23 | 100681 | 100899 | 100998 | 101047 | 101066 | 101074 | 101077 | 101078 | 82 | 9158 |
| 24 | 100097 | 100328 | 100438 | 100493 | 100519 | 100537 | 100530 | 100531 | 83 | 7445 |
| 25 | 99519 | 99763 | 99887 | 99951 | 99989 | 99995 | 99999 | 100000 | 84 | 5953 |
| 26 | 98950 | 99300 | 99389 | 99414 | 99452 | 99471 | 99478 | 99479 | 85 | 4670 |
| 27 | 98390 | 98844 | 98791 | 98876 | 98924 | 98948 | 98960 | 98962 | 86 | 3588 |
| 28 | 97831 | 98092 | 98242 | 98334 | 98390 | 98421 | 98437 | 98440 | 87 | 2699 |
| 29 | 97270 | 97536 | 97693 | 97790 | 97848 | 97886 | 97906 | 97911 | 88 | 1980 |
| 30 | 96706 | 96976 | 97139 | 97240 | 97300 | 97340 | 97368 | 97369 | 89 | 1363 |
| 31 | 96135 | 96410 | 96578 | 96683 | 96745 | 96785 | 96809 | 96817 | 90 | 941 |
| 32 | 95552 | 95834 | 96007 | 96116 | 96181 | 96223 | 96247 | 96255 | 91 | 614 |
| 33 | 94952 | 95242 | 95423 | 95539 | 95607 | 95650 | 95676 | 95684 | 92 | 384 |
| 34 | 94333 | 94632 | 94821 | 94946 | 95021 | 95067 | 95096 | 95104 | 93 | 226 |
| 35 | 93692 | 94001 | 94199 | 94333 | 94417 | 94470 | 94501 | 94511 | 94 | 138 |
| 36 | 93030 | 93347 | 93553 | 93696 | 93790 | 93852 | 93889 | 93901 | 95 | 67 |
| 37 | 92343 | 92669 | 92881 | 93032 | 93136 | 93208 | 93250 | 93266 | 96 | 33 |
| 38 | 91628 | 91965 | 92183 | 92338 | 92449 | 92528 | 92580 | 92599 | 97 | 14 |
| 39 | 90881 | 91232 | 91456 | 91616 | 91731 | 91815 | 91872 | 91896 | 98 | 6 |
| 40 | 90101 | 90466 | 90698 | 90862 | 90979 | 91065 | 91125 | 91152 | 99 | 2 |
| 41 | 89292 | 89666 | 89906 | 90074 | 90193 | 90279 | 90340 | 90368 | 100 | 1 |
| 42 | 88446 | 88835 | 89079 | 89251 | 89372 | 89457 | 89518 | 89546 | | |
| 43 | 87558 | 87968 | 88221 | 88394 | 88515 | 88601 | 88661 | 88689 | | |
| 44 | 86620 | 87050 | 87325 | 87504 | 87625 | 87712 | 87778 | 87799 | | |
| 45 | 85630 | 86102 | 86387 | 86578 | 86670 | 86791 | 86853 | 86879 | | |
| 46 | 84578 | 85089 | 85400 | 85608 | 85744 | 85837 | 85899 | 85927 | | |
| 47 | 83456 | 84015 | 84334 | 84586 | 84739 | 84840 | 84908 | 84937 | | |
| 48 | 82261 | 82872 | 83245 | 83502 | 83676 | 83793 | 83869 | 83908 | | |
| 49 | 80987 | 81654 | 82064 | 82351 | 82546 | 82684 | 82775 | 82814 | | |
| 50 | 79629 | 80356 | 80806 | 81125 | 81346 | 81504 | 81614 | 81660 | | |
| 51 | 78181 | 78974 | 79467 | 79830 | 80070 | 80251 | 80372 | 80435 | | |
| 52 | 76641 | 77503 | 78043 | 78432 | 78714 | 78920 | 79066 | 79132 | | |
| 53 | 75002 | 75939 | 76529 | 76957 | 77272 | 77506 | 77672 | 77747 | | |
| 54 | 73262 | 74277 | 74921 | 75391 | 75741 | 76005 | 76193 | 76277 | | |
| 55 | 71419 | 72512 | 73214 | 73780 | 74117 | 74414 | 74684 | 74719 | | |
| 56 | 69477 | 70646 | 71405 | 71969 | 72398 | 72728 | 72962 | 73070 | | |
| 57 | 67437 | 68679 | 69495 | 70108 | 70580 | 70945 | 71208 | 71325 | | |
| 58 | 65297 | 66615 | 67486 | 68148 | 68663 | 69064 | 69347 | 69480 | | |
| 59 | 63051 | 64450 | 65382 | 66091 | 66649 | 67083 | 67390 | 67535 | | |
| 60 | 60693 | 62179 | 63180 | 63941 | 64541 | 65007 | 65336 | 65490 | | |
| 61 | 58223 | 59799 | 60877 | 61699 | 62344 | 62840 | 63190 | 63352 | | |
| 62 | 55613 | 57308 | 58469 | 59359 | 60056 | 60546 | 60958 | 61126 | | |
| 63 | 52962 | 54710 | 55955 | 56919 | 57676 | 58247 | 58644 | 58818 | | |
| 64 | 50192 | 52014 | 53339 | 54379 | 55200 | 55819 | 56249 | 56431 | | |
| 65 | 47348 | 49233 | 50629 | 51742 | 52628 | 53302 | 53 69 | 53965 | | |
| 66 | 44443 | 46382 | 47840 | 49017 | 50065 | 50994 | 51802 | 51418 | | |
| 67 | 41484 | 43473 | 44985 | 46219 | 47280 | 48000 | 48549 | 48769 | | |
| 68 | ..... | 40515 | 42040 | 43362 | 44407 | 45232 | 45817 | 46161 | | |
| 69 | ..... | ..... | 39132 | 40462 | 41545 | 42405 | 43017 | 43302 | | |
| 70 | ..... | ..... | ..... | 37527 | 38647 | 39537 | 40169 | 40467 | | |
| 71 | ..... | ..... | ..... | ..... | 35726 | 36643 | 37290 | 37595 | | |
| 72 | ..... | ..... | ..... | ..... | ..... | 33738 | 34399 | 34708 | | |
| 73 | ..... | ..... | ..... | ..... | ..... | ..... | 31511 | 31846 | | |

[x] means age at entry. x means attained age.

(1852-1895)—SELECT.

| Age x | d(x) | d(x-1) + | d(x-2) + + | d(x-3) + + + | d(x-4) + + + + | d(x-5) + + + + + | d(x-6) + + + + + + | d _x | Age x | d _x |
|-------|------|----------|------------|--------------|----------------|------------------|--------------------|----------------|-------|----------------|
| 15 | 800 | ... | ... | ... | ... | ... | ... | ... | 74 | 3825 |
| 16 | 491 | 575 | ... | ... | ... | ... | ... | ... | 75 | 2775 |
| 17 | 480 | 567 | 598 | ... | ... | ... | ... | ... | 76 | 2705 |
| 18 | 464 | 555 | 589 | 607 | ... | ... | ... | ... | 77 | 2611 |
| 19 | 442 | 539 | 577 | 597 | 606 | ... | ... | ... | 78 | 2487 |
| 20 | 419 | 521 | 561 | 588 | 594 | 597 | ... | ... | 79 | 2329 |
| 21 | 396 | 502 | 544 | 565 | 576 | 579 | 581 | ... | 80 | 2142 |
| 22 | 374 | 481 | 524 | 547 | 558 | 561 | 563 | 565 | 81 | 1933 |
| 23 | 353 | 461 | 506 | 528 | 539 | 544 | 546 | 547 | 82 | 1713 |
| 24 | 334 | 441 | 487 | 511 | 524 | 528 | 530 | 531 | 83 | 1493 |
| 25 | 319 | 424 | 473 | 499 | 511 | 517 | 520 | 521 | 84 | 1262 |
| 26 | 306 | 409 | 463 | 490 | 504 | 511 | 516 | 517 | 85 | 1062 |
| 27 | 298 | 402 | 457 | 486 | 508 | 511 | 520 | 522 | 86 | 899 |
| 28 | 296 | 399 | 452 | 486 | 504 | 515 | 526 | 528 | 87 | 729 |
| 29 | 294 | 397 | 453 | 490 | 508 | 528 | 537 | 542 | 88 | 577 |
| 30 | 296 | 398 | 456 | 495 | 515 | 531 | 546 | 552 | 89 | 442 |
| 31 | 301 | 408 | 462 | 502 | 522 | 538 | 554 | 562 | 90 | 337 |
| 32 | 310 | 411 | 468 | 509 | 531 | 547 | 563 | 571 | 91 | 230 |
| 33 | 320 | 421 | 477 | 518 | 540 | 555 | 572 | 580 | 92 | 156 |
| 34 | 332 | 433 | 488 | 529 | 551 | 566 | 584 | 593 | 93 | 100 |
| 35 | 345 | 448 | 503 | 543 | 565 | 581 | 600 | 610 | 94 | 61 |
| 36 | 361 | 466 | 521 | 560 | 584 | 602 | 623 | 635 | 95 | 34 |
| 37 | 378 | 486 | 543 | 588 | 608 | 626 | 651 | 667 | 96 | 19 |
| 38 | 396 | 509 | 567 | 607 | 634 | 656 | 684 | 708 | 97 | 8 |
| 39 | 415 | 534 | 594 | 637 | 666 | 690 | 720 | 744 | 98 | 4 |
| 40 | 435 | 560 | 624 | 669 | 700 | 725 | 757 | 784 | 99 | 1 |
| 41 | 457 | 587 | 655 | 702 | 736 | 761 | 794 | 822 | 100 | 1 |
| 42 | 478 | 614 | 685 | 736 | 771 | 796 | 829 | 867 | | |
| 43 | 499 | 643 | 717 | 769 | 803 | 828 | 862 | 890 | | |
| 44 | 520 | 672 | 747 | 801 | 834 | 859 | 894 | 920 | | |
| 45 | 541 | 702 | 779 | 834 | 866 | 892 | 926 | 952 | | |
| 46 | 563 | 735 | 814 | 869 | 904 | 929 | 962 | 990 | | |
| 47 | 584 | 770 | 852 | 910 | 946 | 971 | 1005 | 1034 | | |
| 48 | 607 | 806 | 894 | 956 | 992 | 1018 | 1055 | 1089 | | |
| 49 | 631 | 848 | 939 | 1005 | 1042 | 1070 | 1115 | 1154 | | |
| 50 | 655 | 899 | 996 | 1055 | 1095 | 1125 | 1179 | 1225 | | |
| 51 | 678 | 951 | 1055 | 1106 | 1150 | 1185 | 1247 | 1303 | | |
| 52 | 702 | 974 | 1086 | 1160 | 1208 | 1248 | 1319 | 1385 | | |
| 53 | 725 | 1018 | 1138 | 1216 | 1267 | 1313 | 1386 | 1470 | | |
| 54 | 750 | 1063 | 1191 | 1274 | 1327 | 1381 | 1474 | 1558 | | |
| 55 | 773 | 1107 | 1245 | 1332 | 1389 | 1452 | 1554 | 1649 | | |
| 56 | 796 | 1151 | 1297 | 1389 | 1453 | 1525 | 1637 | 1745 | | |
| 57 | 822 | 1193 | 1347 | 1445 | 1516 | 1598 | 1723 | 1845 | | |
| 58 | 847 | 1238 | 1395 | 1499 | 1580 | 1674 | 1812 | 1945 | | |
| 59 | 872 | 1270 | 1441 | 1550 | 1642 | 1747 | 1900 | 2045 | | |
| 60 | 894 | 1302 | 1481 | 1597 | 1701 | 1817 | 1984 | 2138 | | |
| 61 | 915 | 1330 | 1518 | 1643 | 1758 | 1882 | 2064 | 2226 | | |
| 62 | 938 | 1353 | 1550 | 1688 | 1809 | 1942 | 2140 | 2306 | | |
| 63 | 948 | 1371 | 1576 | 1719 | 1857 | 1996 | 2213 | 2387 | | |
| 64 | 959 | 1385 | 1597 | 1751 | 1898 | 2050 | 2284 | 2466 | | |
| 65 | 966 | 1398 | 1612 | 1777 | 1934 | 2100 | 2351 | 2547 | | |
| 66 | 970 | 1397 | 1621 | 1797 | 1965 | 2145 | 2413 | 2629 | | |
| 67 | 969 | 1398 | 1623 | 1812 | 1988 | 2188 | 2468 | 2708 | | |
| 68 | ... | 1383 | 1618 | 1817 | 2002 | 2215 | 2515 | 2779 | | |
| 69 | ... | ... | 1605 | 1815 | 2006 | 2236 | 2550 | 2835 | | |
| 70 | ... | ... | ... | 1801 | 2004 | 2247 | 2574 | 2872 | | |
| 71 | ... | ... | ... | ... | 1988 | 2244 | 2582 | 2887 | | |
| 72 | ... | ... | ... | ... | ... | 2227 | 2573 | 2869 | | |
| 73 | ... | ... | ... | ... | ... | ... | 2546 | 2861 | | |

[x] means age at entry. x means attained age.

(1852-1895)-SELECT.

| Age. | $p(x)$ | $b[x-1] + 1$ | $p[x-2] + 2$ | $p[x-3] + 3$ | $p[x-4] + 4$ | $p[x-5] + 5$ | $p[x-6] + 6$ | P_x | Age x | P_x |
|------|--------|--------------|--------------|--------------|--------------|--------------|--------------|--------|-------|--------|
| 15 | .99527 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 74 | .90246 |
| 16 | .99532 | .99453 | ..... | ..... | ..... | ..... | ..... | ..... | 75 | .89386 |
| 17 | .99540 | .99458 | .99429 | ..... | ..... | ..... | ..... | ..... | 76 | .88423 |
| 18 | .99553 | .99466 | .99434 | .99416 | ..... | ..... | ..... | ..... | 77 | .87361 |
| 19 | .99572 | .99478 | .99442 | .99422 | .99414 | ..... | ..... | ..... | 78 | .86222 |
| 20 | .99592 | .99492 | .99454 | .99433 | .99423 | .99420 | ..... | ..... | 79 | .85021 |
| 21 | .99612 | .99508 | .99468 | .99447 | .99436 | .99433 | .99431 | ..... | 80 | .83812 |
| 22 | .99631 | .99526 | .99484 | .99462 | .99451 | .99448 | .99446 | .99444 | 81 | .82574 |
| 23 | .99649 | .99543 | .99500 | .99477 | .99466 | .99462 | .99460 | .99450 | 82 | .81297 |
| 24 | .99666 | .99560 | .99515 | .99491 | .99479 | .99475 | .99473 | .99472 | 83 | .79946 |
| 25 | .99680 | .99575 | .99527 | .99501 | .99489 | .99483 | .99480 | .99479 | 84 | .78461 |
| 26 | .99691 | .99587 | .99534 | .99507 | .99493 | .99486 | .99481 | .99480 | 85 | .76927 |
| 27 | .99697 | .99593 | .99538 | .99508 | .99492 | .99484 | .99475 | .99473 | 86 | .74956 |
| 28 | .99699 | .99594 | .99539 | .99505 | .99488 | .99476 | .99465 | .99462 | 87 | .72967 |
| 29 | .99698 | .99593 | .99536 | .99499 | .99481 | .99466 | .99452 | .99447 | 88 | .70556 |
| 30 | .99694 | .99589 | .99530 | .99491 | .99471 | .99455 | .99439 | .99433 | 89 | .68323 |
| 31 | .99687 | .99582 | .99522 | .99481 | .99460 | .99444 | .99427 | .99419 | 90 | .65282 |
| 32 | .99676 | .99571 | .99512 | .99470 | .99448 | .99432 | .99415 | .99407 | 91 | .62434 |
| 33 | .99663 | .99558 | .99500 | .99458 | .99435 | .99420 | .99402 | .99394 | 92 | .59856 |
| 34 | .99648 | .99542 | .99485 | .99443 | .99420 | .99405 | .99386 | .99377 | 93 | .56046 |
| 35 | .99631 | .99523 | .99466 | .99425 | .99401 | .99385 | .99365 | .99354 | 94 | .52466 |
| 36 | .99613 | .99501 | .99443 | .99402 | .99377 | .99359 | .99337 | .99324 | 95 | .48560 |
| 37 | .99591 | .99476 | .99416 | .99374 | .99348 | .99328 | .99302 | .99285 | 96 | .44256 |
| 38 | .99568 | .99447 | .99385 | .99342 | .99314 | .99291 | .99261 | .99240 | 97 | .39506 |
| 39 | .99543 | .99415 | .99350 | .99305 | .99274 | .99249 | .99216 | .99191 | 98 | .34335 |
| 40 | .99517 | .99381 | .99312 | .99264 | .99230 | .99194 | .99169 | .99140 | 99 | .28748 |
| 41 | .99489 | .99345 | .99272 | .99220 | .99184 | .99157 | .99121 | .99090 | 100 | .22945 |
| 42 | .99460 | .99308 | .99231 | .99175 | .99138 | .99110 | .99074 | .99043 | | |
| 43 | .99430 | .99269 | .99188 | .99130 | .99093 | .99065 | .99028 | .98997 | | |
| 44 | .99400 | .99228 | .99144 | .99084 | .99049 | .99020 | .98982 | .98952 | | |
| 45 | .99368 | .99184 | .99098 | .99037 | .99001 | .98972 | .98934 | .98904 | | |
| 46 | .99335 | .99136 | .99047 | .98985 | .98946 | .98918 | .98880 | .98848 | | |
| 47 | .99300 | .99093 | .98990 | .98924 | .98884 | .98856 | .98816 | .98782 | | |
| 48 | .99262 | .99025 | .98926 | .98855 | .98815 | .98785 | .98741 | .98702 | | |
| 49 | .99221 | .98962 | .98856 | .98780 | .98738 | .98706 | .98653 | .98607 | | |
| 50 | .99178 | .98894 | .98780 | .98700 | .98654 | .98619 | .98555 | .98500 | | |
| 51 | .99133 | .98821 | .98698 | .98614 | .98563 | .98523 | .98449 | .98380 | | |
| 52 | .99085 | .98743 | .98609 | .98521 | .98465 | .98419 | .98332 | .98250 | | |
| 53 | .99033 | .98659 | .98513 | .98420 | .98360 | .98316 | .98230 | .98108 | | |
| 54 | .98977 | .98569 | .98410 | .98311 | .98247 | .98183 | .98066 | .97958 | | |
| 55 | .98917 | .98473 | .98300 | .98194 | .98125 | .98049 | .97918 | .97793 | | |
| 56 | .98852 | .98371 | .98184 | .98070 | .97993 | .97904 | .97757 | .97612 | | |
| 57 | .98781 | .98263 | .98061 | .97939 | .97851 | .97747 | .97580 | .97413 | | |
| 58 | .98703 | .98149 | .97922 | .97780 | .97699 | .97577 | .97387 | .97200 | | |
| 59 | .98618 | .98030 | .97797 | .97635 | .97537 | .97395 | .97180 | .96972 | | |
| 60 | .98527 | .97906 | .97655 | .97501 | .97384 | .97204 | .96963 | .96735 | | |
| 61 | .98429 | .97776 | .97506 | .97328 | .97181 | .97005 | .96734 | .96487 | | |
| 62 | .98324 | .97639 | .97349 | .97165 | .96987 | .96795 | .96490 | .96234 | | |
| 63 | .98211 | .97493 | .97183 | .96980 | .96781 | .96570 | .96226 | .95942 | | |
| 64 | .98091 | .97337 | .97006 | .96781 | .96581 | .96326 | .95940 | .95530 | | |
| 65 | .97961 | .97169 | .96816 | .96566 | .96334 | .96060 | .95629 | .95221 | | |
| 66 | .97819 | .96988 | .96612 | .96333 | .96068 | .95769 | .95289 | .94827 | | |
| 67 | .97666 | .96794 | .96392 | .96081 | .95791 | .95451 | .94917 | .94449 | | |
| 68 | ..... | .96586 | .96155 | .95800 | .95491 | .95104 | .94511 | .93969 | | |
| 69 | ..... | ..... | .95899 | .95516 | .95166 | .94727 | .94070 | .93452 | | |
| 70 | ..... | ..... | ..... | .95201 | .94814 | .94315 | .93592 | .92904 | | |
| 71 | ..... | ..... | ..... | ..... | .94433 | .93876 | .93076 | .92321 | | |
| 72 | ..... | ..... | ..... | ..... | ..... | .93209 | .92230 | .91696 | | |
| 73 | ..... | ..... | ..... | ..... | ..... | ..... | .91222 | .91011 | | |

(1852-1895)—SELECT.

| Age x | $q(x)$ | $q(x-1) + 1$ | $q(x-2) + 2$ | $q(x-3) + 3$ | $q(x-4) + 4$ | $q(x-5) + 5$ | $l(x-6) + 6$ | $l(x)$ | Age x | q^* |
|-------|--------|--------------|--------------|--------------|--------------|--------------|--------------|--------|-------|--------|
| 15 | .00473 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 74 | .09754 |
| 16 | .00488 | .00547 | ..... | ..... | ..... | ..... | ..... | ..... | 75 | .10614 |
| 17 | .00480 | .00542 | .00571 | ..... | ..... | ..... | ..... | ..... | 76 | .11577 |
| 18 | .00447 | .00534 | .00566 | .00584 | ..... | ..... | ..... | ..... | 77 | .12539 |
| 19 | .00428 | .00522 | .00558 | .00578 | .00586 | ..... | ..... | ..... | 78 | .13778 |
| 20 | .00408 | .00508 | .00546 | .00567 | .00577 | .00580 | ..... | ..... | 79 | .14969 |
| 21 | .00388 | .00492 | .00532 | .00553 | .00564 | .00567 | .00569 | ..... | 80 | .16188 |
| 22 | .00369 | .00474 | .00516 | .00538 | .00549 | .00552 | .00554 | .00556 | 81 | .17426 |
| 23 | .00351 | .00457 | .00500 | .00523 | .00534 | .00538 | .00540 | .00541 | 82 | .18708 |
| 24 | .00334 | .00440 | .00485 | .00509 | .00521 | .00525 | .00527 | .00528 | 83 | .20054 |
| 25 | .00320 | .00425 | .00473 | .00499 | .00511 | .00517 | .00520 | .00521 | 84 | .21528 |
| 26 | .00309 | .00413 | .00466 | .00493 | .00507 | .00514 | .00519 | .00520 | 85 | .23179 |
| 27 | .00303 | .00407 | .00462 | .00492 | .00506 | .00516 | .00525 | .00527 | 86 | .25044 |
| 28 | .00301 | .00406 | .00461 | .00495 | .00512 | .00524 | .00535 | .00538 | 87 | .27133 |
| 29 | .00302 | .00407 | .00464 | .00501 | .00519 | .00534 | .00548 | .00558 | 88 | .29444 |
| 30 | .00306 | .00411 | .00470 | .00509 | .00529 | .00545 | .00561 | .00567 | 89 | .31967 |
| 31 | .00313 | .00418 | .00478 | .00519 | .00540 | .00556 | .00573 | .00581 | 90 | .34574 |
| 32 | .00324 | .00429 | .00488 | .00530 | .00552 | .00568 | .00585 | .00593 | 91 | .37566 |
| 33 | .00337 | .00442 | .00500 | .00542 | .00565 | .00580 | .00598 | .00606 | 92 | .40644 |
| 34 | .00352 | .00458 | .00515 | .00557 | .00580 | .00595 | .00614 | .00623 | 93 | .43864 |
| 35 | .00369 | .00477 | .00534 | .00575 | .00599 | .00615 | .00635 | .00646 | 94 | .47534 |
| 36 | .00388 | .00499 | .00557 | .00598 | .00623 | .00641 | .00663 | .00676 | 95 | .51440 |
| 37 | .00409 | .00524 | .00584 | .00626 | .00652 | .00672 | .00698 | .00715 | 96 | .55744 |
| 38 | .00432 | .00553 | .00615 | .00658 | .00686 | .00709 | .00739 | .00760 | 97 | .60492 |
| 39 | .00457 | .00585 | .00650 | .00695 | .00726 | .00751 | .00784 | .00809 | 98 | .65675 |
| 40 | .00488 | .00619 | .00688 | .00736 | .00770 | .00796 | .00831 | .00860 | 99 | .71252 |
| 41 | .00511 | .00655 | .00728 | .00780 | .00816 | .00843 | .00879 | .00910 | 100 | .77355 |
| 42 | .00570 | .00731 | .00812 | .00870 | .00907 | .00935 | .00972 | .00997 | | |
| 43 | .00600 | .00772 | .00856 | .00916 | .00951 | .00980 | .01018 | .01048 | | |
| 44 | .00632 | .00816 | .00902 | .00963 | .00999 | .01028 | .01066 | .01096 | | |
| 45 | .00665 | .00864 | .00953 | .01015 | .01054 | .01082 | .01120 | .01152 | | |
| 46 | .00700 | .00917 | .01010 | .01076 | .01116 | .01144 | .01184 | .01218 | | |
| 47 | .00738 | .00975 | .01074 | .01145 | .01185 | .01215 | .01259 | .01298 | | |
| 48 | .00779 | .01038 | .01144 | .01220 | .01262 | .01294 | .01347 | .01393 | | |
| 49 | .00822 | .01106 | .01220 | .01300 | .01346 | .01381 | .01445 | .01500 | | |
| 50 | .00867 | .01179 | .01302 | .01386 | .01437 | .01477 | .01551 | .01620 | | |
| 51 | .00915 | .01257 | .01391 | .01479 | .01535 | .01581 | .01668 | .01750 | | |
| 52 | .00967 | .01341 | .01487 | .01580 | .01640 | .01694 | .01796 | .01891 | | |
| 53 | .01028 | .01481 | .01639 | .01739 | .01806 | .01875 | .01984 | .02042 | | |
| 54 | .01088 | .01527 | .01700 | .01806 | .01875 | .01951 | .02062 | .02207 | | |
| 55 | .01148 | .01629 | .01816 | .01930 | .02007 | .02096 | .02243 | .02389 | | |
| 56 | .01219 | .01737 | .01939 | .02061 | .02149 | .02253 | .02420 | .02587 | | |
| 57 | .01297 | .01851 | .02068 | .02199 | .02301 | .02423 | .02613 | .02800 | | |
| 58 | .01382 | .01970 | .02203 | .02345 | .02463 | .02605 | .02820 | .03028 | | |
| 59 | .01473 | .02094 | .02345 | .02499 | .02636 | .02796 | .03037 | .03265 | | |
| 60 | .01571 | .02224 | .02494 | .02662 | .02819 | .02995 | .03268 | .03513 | | |
| 61 | .01676 | .02361 | .02651 | .02835 | .03013 | .03205 | .03510 | .03776 | | |
| 62 | .01789 | .02507 | .02817 | .03020 | .03219 | .03430 | .03774 | .04058 | | |
| 63 | .01909 | .02663 | .02994 | .03219 | .03439 | .03674 | .04060 | .04370 | | |
| 64 | .02039 | .02831 | .03184 | .03434 | .03676 | .03940 | .04371 | .04719 | | |
| 65 | .02181 | .03012 | .03388 | .03667 | .03932 | .04231 | .04711 | .05113 | | |
| 66 | .02334 | .03206 | .03606 | .03919 | .04209 | .04549 | .05083 | .05511 | | |
| 67 | ..... | .03414 | .03845 | .04191 | .04509 | .04896 | .05489 | .06031 | | |
| 68 | ..... | ..... | .04101 | .04484 | .04834 | .05273 | .05930 | .06542 | | |
| 69 | ..... | ..... | ..... | .04799 | .05186 | .05682 | .06408 | .07096 | | |
| 70 | ..... | ..... | ..... | ..... | .05567 | .06124 | .06924 | .07679 | | |
| 71 | ..... | ..... | ..... | ..... | ..... | .06601 | .07480 | .08304 | | |
| 72 | ..... | ..... | ..... | ..... | ..... | ..... | .08078 | .08989 | | |

[x] means age at entry. x means attained age.

CATHOLIC BENEVOLENT LEGION.

SELECT.

| Age [i] | $l(x + \frac{1}{2})$ | $l(x + \frac{1}{2}) + \frac{1}{2}$ | $l(x + \frac{1}{2}) + \frac{1}{4}$ | $l(x + \frac{1}{2}) + \frac{3}{4}$ | $l(x + \frac{1}{2}) + \frac{1}{2}$ | $l(x + \frac{1}{2}) + \frac{1}{4}$ | $l(x + \frac{1}{2}) + \frac{3}{4}$ | l_{x+a} | Age $x+a$ | Age x | l_x |
|------------|----------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------|--------------|------------|-------|
| 18 | 98844 | 98796 | 98410 | 97845 | 97152 | 96452 | 95728 | 23 | 61 | 54067 | |
| 19 | 98125 | 98075 | 97688 | 97127 | 96432 | 95728 | 95000 | 24 | 62 | 52208 | |
| 20 | 97396 | 97346 | 96957 | 96394 | 95700 | 94990 | 94241 | 25 | 63 | 50286 | |
| 21 | 96643 | 96592 | 96206 | 95647 | 94953 | 94241 | 93476 | 26 | 64 | 48300 | |
| 22 | 95880 | 95825 | 95442 | 94883 | 94191 | 93476 | | 27 | 65 | 46252 | |
| 23 | 95102 | 95045 | 94665 | 94107 | 93416 | 92696 | | 28 | 66 | 44143 | |
| 24 | 94310 | 94252 | 93875 | 93317 | 92625 | 91903 | | 29 | 67 | 41978 | |
| 25 | 93508 | 93446 | 93072 | 92515 | 91821 | 91106 | | 30 | 68 | 39761 | |
| 26 | 92694 | 92630 | 92259 | 91700 | 91004 | 90276 | | 31 | 69 | 37499 | |
| 27 | 91840 | 91774 | 91407 | 90849 | 90149 | 89415 | | 32 | 70 | 35198 | |
| 28 | 90987 | 90918 | 90554 | 89997 | 89296 | 88556 | | 33 | 71 | 32869 | |
| 29 | 90118 | 90045 | 89685 | 89129 | 88426 | 87680 | | 34 | 72 | 30520 | |
| 30 | 89234 | 89160 | 88803 | 88245 | 87539 | 86786 | | 35 | 73 | 28166 | |
| 31 | 88351 | 88273 | 87920 | 87349 | 86638 | 85876 | | 36 | 74 | 25819 | |
| 32 | 87468 | 87388 | 87034 | 86451 | 85729 | 84947 | | 37 | 75 | 23494 | |
| 33 | 86551 | 86469 | 86115 | 85520 | 84789 | 84004 | | 38 | 76 | 21208 | |
| 34 | 85639 | 85554 | 85198 | 84584 | 83840 | 83042 | | 39 | 77 | 18976 | |
| 35 | 84707 | 84619 | 84264 | 83632 | 82871 | 82058 | | 40 | 78 | 16818 | |
| 36 | 83761 | 83670 | 83311 | 82661 | 81884 | 81049 | | 41 | 79 | 14750 | |
| 37 | 82798 | 82705 | 82340 | 81664 | 80870 | 80013 | | 42 | 80 | 12769 | |
| 38 | 81807 | 81711 | 81339 | 80631 | 79822 | 78944 | | 43 | 81 | 10951 | |
| 39 | 80776 | 80675 | 80295 | 79572 | 78744 | 77847 | | 44 | 82 | 9250 | |
| 40 | 79733 | 79631 | 79241 | 78487 | 77639 | 76722 | | 45 | 83 | 7698 | |
| 41 | 78676 | 78567 | 78159 | 77378 | 76512 | 75572 | | 46 | 84 | 6303 | |
| 42 | 77609 | 77496 | 77069 | 76252 | 75360 | 74396 | | 47 | 85 | 5070 | |
| 43 | 76530 | 76413 | 75963 | 75112 | 74189 | 73195 | | 48 | 86 | 3999 | |
| 44 | 75443 | 75322 | 74839 | 73955 | 72994 | 71965 | | 49 | 87 | 3089 | |
| 45 | 74333 | 74204 | 73685 | 72765 | 71768 | 70705 | | 50 | 88 | 2331 | |
| 46 | 73213 | 73079 | 72515 | 71558 | 70521 | 69414 | | 51 | 89 | 1715 | |
| 47 | 72083 | 71942 | 71330 | 70332 | 69248 | 68093 | | 52 | 90 | 1228 | |
| 48 | 70946 | 70798 | 70125 | 69080 | 67947 | 66738 | | 53 | 91 | 852 | |
| 49 | 69789 | 69632 | 68894 | 67798 | 66612 | 65346 | | 54 | 92 | 573 | |
| 50 | 68609 | 68442 | 67633 | 66483 | 65239 | 63915 | | 55 | 93 | 371 | |
| 51 | 67388 | 67209 | 66328 | 65121 | 63819 | 62428 | | 56 | 94 | 231 | |
| 52 | 66106 | 65914 | 64959 | 63693 | 62330 | 60865 | | 57 | 95 | 138 | |
| 53 | 64799 | 64595 | 63555 | 62229 | 60802 | 59258 | | 58 | 96 | 79 | |
| 54 | 63442 | 63222 | 62097 | 60706 | 59219 | 57590 | | 59 | 97 | 43 | |
| 55 | 62033 | 61796 | 60579 | 59125 | 57576 | 55861 | | 60 | 98 | 22 | |
| | | | | | | | | | 99 | 10 | |
| | | | | | | | | | 100 | 5 | |
| | | | | | | | | | 101 | 2 | |

CATHOLIC BENEVOLENT LEGION.

SELECT.

| Age [x] | $\frac{1}{2}p[x+\frac{1}{2}]$ | $\frac{1}{2}p[x+\frac{1}{2}] + \frac{1}{2}$ | $p[x+\frac{1}{2}] + \frac{1}{2}$ | $p[x+\frac{1}{2}] + \frac{2}{3}$ | $p[x+\frac{1}{2}] + \frac{3}{4}$ | $p[x+\frac{1}{2}] + \frac{7}{8}$ | P_{x+s} | Age x+s | Age x | P_x |
|------------|-------------------------------|---------------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------|------------|----------|--------|
| 18 | .99951 | .99610 | .99425 | .99290 | .99280 | .99250 | | 23 | 61 | .96563 |
| 19 | .99950 | .99605 | .99425 | .99285 | .99270 | .99230 | | 24 | 62 | .96319 |
| 20 | .99949 | .99600 | .99420 | .99280 | .99260 | .99210 | | 25 | 63 | .96051 |
| 21 | .99946 | .99600 | .99420 | .99275 | .99250 | .99188 | | 26 | 64 | .95759 |
| 22 | .99943 | .99600 | .99415 | .99270 | .99240 | .99166 | | 27 | 65 | .95440 |
| 23 | .99940 | .99600 | .99410 | .99265 | .99230 | .99144 | | 28 | 66 | .95096 |
| 24 | .99937 | .99600 | .99405 | .99260 | .99220 | .99122 | | 29 | 67 | .94720 |
| 25 | .99934 | .99600 | .99400 | .99250 | .99210 | .99100 | | 30 | 68 | .94310 |
| 26 | .99931 | .99600 | .99395 | .99240 | .99199 | .99070 | | 31 | 69 | .93864 |
| 27 | .99928 | .99600 | .99390 | .99230 | .99187 | .99040 | | 32 | 70 | .93381 |
| 28 | .99924 | .99600 | .99385 | .99220 | .99173 | .99010 | | 33 | 71 | .92856 |
| 29 | .99920 | .99600 | .99380 | .99210 | .99157 | .98980 | | 34 | 72 | .92287 |
| 30 | .99916 | .99600 | .99370 | .99200 | .99140 | .98950 | | 35 | 73 | .91666 |
| 31 | .99913 | .99600 | .99350 | .99185 | .99120 | .98920 | | 36 | 74 | .90996 |
| 32 | .99909 | .99595 | .99330 | .99166 | .99098 | .98890 | | 37 | 75 | .90267 |
| 33 | .99905 | .99590 | .99310 | .99144 | .99074 | .98855 | | 38 | 76 | .89470 |
| 34 | .99901 | .99585 | .99280 | .99119 | .99048 | .98815 | | 39 | 77 | .88626 |
| 35 | .99897 | .99580 | .99250 | .99090 | .99020 | .98770 | | 40 | 78 | .87702 |
| 36 | .99892 | .99570 | .99220 | .99060 | .98980 | .98720 | | 41 | 79 | .86706 |
| 37 | .99887 | .99560 | .99180 | .99029 | .98940 | .98665 | | 42 | 80 | .85631 |
| 38 | .99882 | .99545 | .99140 | .98996 | .98900 | .98610 | | 43 | 81 | .84470 |
| 39 | .99876 | .99530 | .99100 | .98961 | .98860 | .98555 | | 44 | 82 | .83220 |
| 40 | .99870 | .99510 | .99050 | .98920 | .98820 | .98500 | | 45 | 83 | .81877 |
| 41 | .99863 | .99480 | .99000 | .98880 | .98770 | .98445 | | 46 | 84 | .80434 |
| 42 | .99855 | .99450 | .98940 | .98830 | .98720 | .98385 | | 47 | 85 | .78886 |
| 43 | .99847 | .99410 | .98880 | .98770 | .98660 | .98320 | | 48 | 86 | .77232 |
| 44 | .99838 | .99360 | .98820 | .98700 | .98590 | .98250 | | 49 | 87 | .75464 |
| 45 | .99828 | .99300 | .98750 | .98630 | .98520 | .98175 | | 50 | 88 | .73578 |
| 46 | .99817 | .99230 | .98680 | .98550 | .98430 | .98095 | | 51 | 89 | .71571 |
| 47 | .99804 | .99150 | .98600 | .98460 | .98330 | .98010 | | 52 | 90 | .69438 |
| 48 | .99790 | .99050 | .98510 | .98360 | .98220 | .97915 | | 53 | 91 | .67180 |
| 49 | .99774 | .98970 | .98410 | .98250 | .98100 | .97810 | | 54 | 92 | .64813 |
| 50 | .99756 | .98820 | .98300 | .98130 | .97970 | .97675 | | 55 | 93 | .62312 |
| 51 | .99735 | .98690 | .98180 | .98000 | .97820 | .97519 | | 56 | 94 | .59690 |
| 52 | .99711 | .98550 | .98050 | .97860 | .97650 | .97360 | | 57 | 95 | .56952 |
| 53 | .99684 | .98390 | .97910 | .97710 | .97460 | .97185 | | 58 | 96 | .54105 |
| 54 | .99653 | .98220 | .97760 | .97550 | .97250 | .96995 | | 59 | 97 | .51158 |
| 55 | .99618 | .98030 | .97600 | .97380 | .97020 | .96790 | | 60 | 98 | .48109 |
| | | | | | | | | 99 | | .45009 |
| | | | | | | | | 100 | | .41840 |
| | | | | | | | | 101 | | 0.0000 |

SELECT.

| Age [x] | $\frac{1}{2}q[x+\frac{1}{2}]$ | $q[x+\frac{1}{2}]+\frac{1}{2}$ | $q[x+\frac{1}{2}]+\frac{2}{3}$ | $q[x+\frac{1}{2}]+\frac{3}{4}$ | $q[x+\frac{1}{2}]+\frac{4}{5}$ | q_{x+s} | Age x+s | Age x | q_x |
|------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------|------------|----------|---------|
| 18 | .00049 | .00390 | .00575 | .00710 | .00720 | .00750 | 23 | 61 | .03437 |
| 19 | .00050 | .00395 | .00575 | .00715 | .00730 | .00770 | 24 | 62 | .03651 |
| 20 | .00051 | .00400 | .00580 | .00720 | .00740 | .00790 | 25 | 63 | .03949 |
| 21 | .00054 | .00400 | .00580 | .00725 | .00750 | .00812 | 26 | 64 | .04241 |
| 22 | .00057 | .00400 | .00585 | .00730 | .00760 | .00834 | 27 | 65 | .04560 |
| 23 | .00060 | .00400 | .00590 | .00735 | .00770 | .00856 | 28 | 66 | .04904 |
| 24 | .00063 | .00400 | .00595 | .00740 | .00780 | .00878 | 29 | 67 | .05280 |
| 25 | .00066 | .00400 | .00600 | .00750 | .00790 | .00900 | 30 | 68 | .05690 |
| 26 | .00069 | .00400 | .00605 | .00760 | .00801 | .00930 | 31 | 69 | .06136 |
| 27 | .00072 | .00400 | .00610 | .00770 | .00813 | .00960 | 32 | 70 | .06619 |
| 28 | .00076 | .00400 | .00615 | .00780 | .00827 | .00990 | 33 | 71 | .07144 |
| 29 | .00080 | .00400 | .00620 | .00790 | .00843 | .01020 | 34 | 72 | .07713 |
| 30 | .00084 | .00400 | .00630 | .00800 | .00860 | .01050 | 35 | 73 | .08334 |
| 31 | .00087 | .00400 | .00650 | .00815 | .00880 | .01080 | 36 | 74 | .09004 |
| 32 | .00091 | .00405 | .00670 | .00834 | .00902 | .01110 | 37 | 75 | .09733 |
| 33 | .00095 | .00410 | .00690 | .00856 | .00926 | .01145 | 38 | 76 | .10521 |
| 34 | .00099 | .00415 | .00720 | .00881 | .00952 | .01185 | 39 | 77 | .11374 |
| 35 | .00103 | .00420 | .00750 | .00910 | .00980 | .01230 | 40 | 78 | .12298 |
| 36 | .00108 | .00430 | .00780 | .00940 | .01020 | .01280 | 41 | 79 | .13294 |
| 37 | .00113 | .00440 | .00820 | .00971 | .01060 | .01335 | 42 | 80 | .14369 |
| 38 | .00118 | .00455 | .00860 | .01004 | .01100 | .01390 | 43 | 81 | .15530 |
| 39 | .00124 | .00470 | .00900 | .01039 | .01140 | .01445 | 44 | 82 | .16780 |
| 40 | .00130 | .00490 | .00950 | .01080 | .01180 | .01550 | 45 | 83 | .18123 |
| 41 | .00137 | .00520 | .01000 | .01120 | .01230 | .01555 | 46 | 84 | .19566 |
| 42 | .00145 | .00550 | .01060 | .01170 | .01280 | .01615 | 47 | 85 | .21114 |
| 43 | .00153 | .00590 | .01120 | .01230 | .01340 | .01680 | 48 | 86 | .22768 |
| 44 | .00162 | .00640 | .01180 | .01300 | .01410 | .01750 | 49 | 87 | .24536 |
| 45 | .00172 | .00700 | .01250 | .01370 | .01480 | .01825 | 50 | 88 | .26422 |
| 46 | .00183 | .00770 | .01320 | .01450 | .01570 | .01905 | 51 | 89 | .28429 |
| 47 | .00196 | .00850 | .01400 | .01540 | .01670 | .01990 | 52 | 90 | .30562 |
| 48 | .00210 | .00950 | .01490 | .01640 | .01780 | .02085 | 53 | 91 | .32811 |
| 49 | .00226 | .01060 | .01590 | .01750 | .01900 | .02190 | 54 | 92 | .35187 |
| 50 | .00244 | .01180 | .01700 | .01870 | .02030 | .02325 | 55 | 93 | .37688 |
| 51 | .00265 | .01310 | .01820 | .02000 | .02180 | .02481 | 56 | 94 | .40310 |
| 52 | .00289 | .01450 | .01950 | .02140 | .02350 | .02640 | 57 | 95 | .43048 |
| 53 | .00316 | .01610 | .02090 | .02290 | .02540 | .02815 | 58 | 96 | .45895 |
| 54 | .00347 | .01780 | .02240 | .02450 | .02750 | .03005 | 59 | 97 | .48842 |
| 55 | .00382 | .01970 | .02400 | .02620 | .02980 | .03210 | 60 | 98 | .51891 |
| | | | | | | | | 99 | .54991 |
| | | | | | | | | 100 | .58160 |
| | | | | | | | | 101 | 1.00000 |

A. O. U. W., ULTIMATE TABLE.

A. O. U. W.,⁽⁶⁾ MORTALITY TABLE.

| A _k | Living l _x | Dying d _x | PROBABILITIES | | Age | Living l _x | Dying d _x | PROBABILITIES | |
|----------------|--------------------------|-------------------------|-----------------------------|-------------------------|-----|--------------------------|-------------------------|-----------------------------|-------------------------|
| | | | Surviving p _x | Dying q _x | | | | Surviving p _x | Dying q _x |
| 10 | 100000 | 522 | .994780 | .005220 | 50 | 72948 | 1065 | .985401 | .014599 |
| 11 | 99478 | 528 | .994692 | .005308 | 51 | 71883 | 1107 | .984600 | .015400 |
| 12 | 98950 | 533 | .994612 | .005388 | 52 | 70776 | 1148 | .983780 | .016220 |
| 13 | 98417 | 539 | .994523 | .005477 | 53 | 69628 | 1189 | .982924 | .017076 |
| 14 | 97878 | 545 | .994432 | .005568 | 54 | 68439 | 1229 | .982042 | .017958 |
| 15 | 97333 | 550 | .994349 | .005651 | 55 | 67210 | 1267 | .981149 | .018851 |
| 16 | 96783 | 556 | .994255 | .005745 | 56 | 65943 | 1311 | .980119 | .019881 |
| 17 | 96227 | 562 | .994160 | .005840 | 57 | 64632 | 1369 | .978819 | .021181 |
| 18 | 95665 | 567 | .994073 | .005927 | 58 | 63263 | 1466 | .977827 | .023173 |
| 19 | 95098 | 573 | .993975 | .006025 | 59 | 61797 | 1594 | .974206 | .025794 |
| 20 | 94525 | 579 | .993875 | .006125 | 60 | 60203 | 1750 | .970932 | .029068 |
| 21 | 93946 | 585 | .993773 | .006227 | 61 | 58453 | 1932 | .966948 | .033052 |
| 22 | 93361 | 590 | .993680 | .006320 | 62 | 56521 | 2114 | .962598 | .037402 |
| 23 | 92771 | 597 | .993565 | .006435 | 63 | 54407 | 2291 | .957892 | .042108 |
| 24 | 92174 | 603 | .993458 | .006542 | 64 | 52116 | 2450 | .952990 | .047010 |
| 25 | 91571 | 609 | .993349 | .006651 | 65 | 49666 | 2595 | .947751 | .052249 |
| 26 | 90962 | 615 | .993239 | .006761 | 66 | 47071 | 2713 | .942304 | .057836 |
| 27 | 90347 | 622 | .993115 | .006885 | 67 | 44358 | 2811 | .936629 | .063371 |
| 28 | 89725 | 628 | .994012 | .006988 | 68 | 41547 | 2885 | .930563 | .069437 |
| 29 | 89097 | 635 | .992873 | .007127 | 69 | 38662 | 2939 | .923983 | .076017 |
| 30 | 88462 | 643 | .992731 | .007269 | 70 | 35723 | 2952 | .917364 | .082666 |
| 31 | 87819 | 651 | .992587 | .007413 | 71 | 32771 | 2933 | .910512 | .089488 |
| 32 | 87168 | 661 | .992417 | .007583 | 72 | 29838 | 2884 | .903345 | .096655 |
| 33 | 86507 | 670 | .992255 | .007745 | 73 | 26954 | 2802 | .896045 | .103955 |
| 34 | 85837 | 681 | .992065 | .007935 | 74 | 24152 | 2698 | .888291 | .111709 |
| 35 | 85156 | 692 | .991874 | .008126 | 75 | 21454 | 2582 | .879150 | .120850 |
| 36 | 84464 | 704 | .991665 | .008335 | 76 | 18872 | 2433 | .871079 | .128321 |
| 37 | 83760 | 716 | .991452 | .008548 | 77 | 16439 | 2283 | .861123 | .138877 |
| 38 | 83044 | 729 | .991221 | .008779 | 78 | 14156 | 2138 | .848969 | .151031 |
| 39 | 82315 | 743 | .990974 | .009026 | 79 | 12018 | 1996 | .833916 | .166084 |
| 40 | 81572 | 758 | .990708 | .009292 | 80 | 10022 | 1854 | .815007 | .184993 |
| 41 | 80814 | 774 | .990422 | .009578 | 81 | 8168 | 1702 | .791626 | .208374 |
| 42 | 80040 | 790 | .990130 | .009870 | 82 | 6466 | 1534 | .762759 | .237241 |
| 43 | 79250 | 806 | .989830 | .010170 | 83 | 4932 | 1343 | .727697 | .272303 |
| 44 | 78444 | 825 | .989483 | .010517 | 84 | 3589 | 1128 | .685707 | .314293 |
| 45 | 77619 | 852 | .989023 | .010977 | 85 | 2461 | 896 | .635921 | .364079 |
| 46 | 76767 | 886 | .988459 | .011541 | 86 | 1565 | 661 | .577636 | .422364 |
| 47 | 75881 | 933 | .987705 | .012295 | 87 | 904 | 443 | .500956 | .490044 |
| 48 | 74948 | 978 | .986951 | .013049 | 88 | 461 | 262 | .431670 | .568330 |
| 49 | 73970 | 1022 | .986184 | .013816 | 89 | 199 | 130 | .346734 | .653266 |
| | | | | | 90 | 69 | 52 | .246377 | .753623 |
| | | | | | 91 | 17 | 14 | .176471 | .823529 |
| | | | | | 92 | 3 | 3 | .000000 | 1.000000 |

POPULATION TABLES.

INTRODUCTION.

Of these tables, the Swedish is one of the earliest reliable population tables. The New Zealand table is given because of the evidence which it furnishes of the superior conditions, favorable to longevity, in that country.

The Belgian table appeared in 1904. It was graduated by M. Omer Le Preux, President of the Permanent Committee of the International Congress of Actuaries, according to Makeham's first law, and has been adopted for the use of the State Insurance Bureau of the Belgian government.

TABLE I.
MILNE'S SWEDISH POPULATION TABLE—MALES.

| Age. | Living. | Dying. | Age. | Living. | Dying. |
|------|---------|--------|------|---------|--------|
| 0 | 10,210 | 2,169 | 50 | 3,067 | 86 |
| 1 | 8,041 | 554 | 51 | 3,881 | 89 |
| 2 | 7,487 | 317 | 52 | 3,792 | 90 |
| 3 | 7,170 | 228 | 53 | 3,702 | 92 |
| 4 | 6,942 | 169 | 54 | 3,610 | 93 |
| 5 | 6,773 | 154 | 55 | 3,517 | 94 |
| 6 | 6,619 | 114 | 56 | 3,423 | 97 |
| 7 | 6,505 | 83 | 57 | 3,326 | 99 |
| 8 | 6,422 | 61 | 58 | 3,227 | 100 |
| 9 | 6,361 | 51 | 59 | 3,127 | 101 |
| 10 | 6,310 | 47 | 60 | 3,026 | 108 |
| 11 | 6,263 | 44 | 61 | 2,918 | 116 |
| 12 | 6,219 | 42 | 62 | 2,802 | 124 |
| 13 | 6,177 | 40 | 63 | 2,678 | 126 |
| 14 | 6,137 | 39 | 64 | 2,552 | 127 |
| 15 | 6,098 | 39 | 65 | 2,425 | 132 |
| 16 | 6,059 | 39 | 66 | 2,293 | 138 |
| 17 | 6,020 | 40 | 67 | 2,155 | 141 |
| 18 | 5,980 | 42 | 68 | 2,014 | 141 |
| 19 | 5,938 | 44 | 69 | 1,873 | 139 |
| 20 | 5,894 | 48 | 70 | 1,734 | 136 |
| 21 | 5,846 | 50 | 71 | 1,598 | 133 |
| 22 | 5,796 | 52 | 72 | 1,465 | 131 |
| 23 | 5,744 | 54 | 73 | 1,334 | 127 |
| 24 | 5,690 | 55 | 74 | 1,207 | 124 |
| 25 | 5,635 | 56 | 75 | 1,083 | 119 |
| 26 | 5,579 | 57 | 76 | 964 | 113 |
| 27 | 5,522 | 58 | 77 | 851 | 106 |
| 28 | 5,464 | 59 | 78 | 745 | 99 |
| 29 | 5,405 | 60 | 79 | 646 | 96 |
| 30 | 5,345 | 61 | 80 | 550 | 86 |
| 31 | 5,284 | 61 | 81 | 464 | 76 |
| 32 | 5,223 | 61 | 82 | 388 | 66 |
| 33 | 5,162 | 61 | 83 | 322 | 58 |
| 34 | 5,101 | 61 | 84 | 264 | 53 |
| 35 | 5,040 | 61 | 85 | 211 | 45 |
| 36 | 4,979 | 61 | 86 | 166 | 37 |
| 37 | 4,918 | 61 | 87 | 129 | 29 |
| 38 | 4,857 | 61 | 88 | 100 | 21 |
| 39 | 4,796 | 64 | 89 | 79 | 19 |
| 40 | 4,732 | 71 | 90 | 60 | 14 |
| 41 | 4,661 | 73 | 91 | 46 | 12 |
| 42 | 4,588 | 73 | 92 | 34 | 9 |
| 43 | 4,515 | 73 | 93 | 25 | 8 |
| 44 | 4,442 | 74 | 94 | 17 | 6 |
| 45 | 4,368 | 78 | 95 | 11 | 4 |
| 46 | 4,290 | 80 | 96 | 7 | 3 |
| 47 | 4,210 | 80 | 97 | 4 | 2 |
| 48 | 4,130 | 80 | 98 | 2 | 1 |
| 49 | 4,050 | 83 | 99 | 1 | 1 |

TABLE II.
MILNE'S SWEDISH POPULATION TABLE—FEMALES.

| Age. | Living. | Dying. | Age. | Living. | Dying |
|------|---------|--------|------|---------|-------|
| 0 | 9,790 | 1,861 | 50 | 4,206 | 73 |
| 1 | 7,929 | 534 | 51 | 4,133 | 75 |
| 2 | 7,395 | 297 | 52 | 4,058 | 76 |
| 3 | 7,098 | 219 | 53 | 3,982 | 78 |
| 4 | 6,879 | 159 | 54 | 3,904 | 79 |
| 5 | 6,720 | 141 | 55 | 3,825 | 81 |
| 6 | 6,579 | 105 | 56 | 3,744 | 86 |
| 7 | 6,474 | 73 | 57 | 3,658 | 89 |
| 8 | 6,401 | 56 | 58 | 3,569 | 92 |
| 9 | 6,345 | 49 | 59 | 3,477 | 95 |
| 10 | 6,296 | 45 | 60 | 3,382 | 105 |
| 11 | 6,251 | 41 | 61 | 3,277 | 113 |
| 12 | 6,210 | 39 | 62 | 3,164 | 119 |
| 13 | 6,171 | 37 | 63 | 3,045 | 125 |
| 14 | 6,134 | 36 | 64 | 2,920 | 129 |
| 15 | 6,098 | 36 | 65 | 2,791 | 134 |
| 16 | 6,062 | 36 | 66 | 2,657 | 138 |
| 17 | 6,026 | 37 | 67 | 2,519 | 144 |
| 18 | 5,989 | 38 | 68 | 2,375 | 148 |
| 19 | 5,951 | 39 | 69 | 2,227 | 151 |
| 20 | 5,912 | 40 | 70 | 2,076 | 151 |
| 21 | 5,872 | 41 | 71 | 1,925 | 154 |
| 22 | 5,831 | 43 | 72 | 1,771 | 156 |
| 23 | 5,788 | 44 | 73 | 1,615 | 152 |
| 24 | 5,744 | 45 | 74 | 1,463 | 148 |
| 25 | 5,699 | 48 | 75 | 1,315 | 140 |
| 26 | 5,651 | 49 | 76 | 1,175 | 133 |
| 27 | 5,602 | 50 | 77 | 1,042 | 125 |
| 28 | 5,552 | 51 | 78 | 917 | 115 |
| 29 | 5,501 | 53 | 79 | 802 | 105 |
| 30 | 5,448 | 56 | 80 | 697 | 95 |
| 31 | 5,392 | 57 | 81 | 602 | 92 |
| 32 | 5,335 | 58 | 82 | 510 | 88 |
| 33 | 5,277 | 57 | 83 | 422 | 79 |
| 34 | 5,220 | 56 | 84 | 343 | 69 |
| 35 | 5,164 | 56 | 85 | 274 | 59 |
| 36 | 5,108 | 56 | 86 | 215 | 44 |
| 37 | 5,052 | 56 | 87 | 171 | 34 |
| 38 | 4,996 | 57 | 88 | 137 | 28 |
| 39 | 4,939 | 61 | 89 | 109 | 24 |
| 40 | 4,878 | 67 | 90 | 85 | 19 |
| 41 | 4,811 | 68 | 91 | 66 | 16 |
| 42 | 4,743 | 68 | 92 | 50 | 13 |
| 43 | 4,675 | 67 | 93 | 37 | 10 |
| 44 | 4,608 | 67 | 94 | 27 | 8 |
| 45 | 4,541 | 67 | 95 | 19 | 7 |
| 46 | 4,474 | 66 | 96 | 12 | 6 |
| 47 | 4,408 | 66 | 97 | 6 | 3 |
| 48 | 4,342 | 67 | 98 | 3 | 2 |
| 49 | 4,275 | 69 | 99 | 1 | 1 |

TABLE I.
POPULATION TABLE—NEW ZEALAND, MALES.

| Ages. | No. Living. | No. Dying. | Prob-ability of Living. | Prob-ability of Dying. | Ages. | No. Living. | No. Dying. | Prob-ability of Living. | Prob-ability of Dying. |
|-------|-------------|------------|-------------------------|------------------------|-------|-------------|------------|-------------------------|------------------------|
| 0 | 100,000 | 9,492 | .90508 | .09492 | 51 | 65,377 | 939 | .98562 | .01438 |
| 1 | 90,508 | 1,620 | .98209 | .01791 | 52 | 64,438 | 967 | .98501 | .01499 |
| 2 | 88,888 | 685 | .99229 | .00771 | 53 | 63,471 | 1,002 | .98419 | .01581 |
| 3 | 88,203 | 450 | .99490 | .00510 | 54 | 62,469 | 1,053 | .98315 | .01685 |
| 4 | 87,753 | 372 | .99577 | .00423 | 55 | 61,416 | 1,120 | .98177 | .01823 |
| 5 | 87,381 | 349 | .99600 | .00400 | 56 | 60,296 | 1,198 | .98012 | .01988 |
| 6 | 87,032 | 326 | .99625 | .00375 | 57 | 59,098 | 1,281 | .97834 | .02166 |
| 7 | 86,706 | 293 | .99662 | .00338 | 58 | 57,817 | 1,356 | .97654 | .02346 |
| 8 | 86,413 | 260 | .99699 | .00301 | 59 | 56,461 | 1,421 | .97483 | .02517 |
| 9 | 86,153 | 221 | .99742 | .00258 | 60 | 55,040 | 1,477 | .97315 | .02685 |
| 10 | 85,932 | 193 | .99777 | .00223 | 61 | 53,563 | 1,527 | .97149 | .02851 |
| 11 | 85,739 | 171 | .99800 | .00200 | 62 | 52,036 | 1,584 | .96957 | .03043 |
| 12 | 85,568 | 183 | .99786 | .00214 | 63 | 50,452 | 1,654 | .96721 | .03279 |
| 13 | 85,385 | 194 | .99772 | .00228 | 64 | 48,798 | 1,738 | .96438 | .03562 |
| 14 | 85,191 | 216 | .99747 | .00253 | 65 | 47,060 | 1,823 | .96126 | .03874 |
| 15 | 84,975 | 246 | .99710 | .00290 | 66 | 45,237 | 1,899 | .95803 | .04197 |
| 16 | 84,729 | 283 | .99544 | .00356 | 67 | 43,338 | 1,942 | .95519 | .04481 |
| 17 | 84,446 | 323 | .99616 | .00384 | 68 | 41,396 | 1,953 | .95282 | .04718 |
| 18 | 84,123 | 363 | .99570 | .00430 | 69 | 39,443 | 1,976 | .94990 | .05010 |
| 19 | 83,760 | 397 | .99524 | .00475 | 70 | 37,467 | 2,000 | .94661 | .05339 |
| 20 | 83,363 | 423 | .99492 | .00508 | 71 | 35,467 | 2,033 | .94269 | .05731 |
| 21 | 82,940 | 438 | .99472 | .00528 | 72 | 33,434 | 2,081 | .93776 | .06224 |
| 22 | 82,502 | 445 | .99463 | .00537 | 73 | 31,353 | 2,137 | .93184 | .06816 |
| 23 | 82,057 | 444 | .99458 | .00542 | 74 | 29,216 | 2,189 | .92508 | .07492 |
| 24 | 81,613 | 438 | .99463 | .00537 | 75 | 27,027 | 2,227 | .91759 | .08241 |
| 25 | 81,175 | 433 | .99467 | .00533 | 76 | 24,800 | 2,240 | .90968 | .09032 |
| 26 | 80,742 | 429 | .99470 | .00530 | 77 | 22,560 | 2,223 | .90147 | .09853 |
| 27 | 80,313 | 432 | .99460 | .00540 | 78 | 20,337 | 2,175 | .89304 | .10696 |
| 28 | 79,881 | 437 | .99453 | .00547 | 79 | 18,162 | 2,102 | .88428 | .11572 |
| 29 | 79,444 | 448 | .99437 | .00563 | 80 | 16,060 | 2,006 | .87508 | .12492 |
| 30 | 78,996 | 461 | .99415 | .00585 | 81 | 14,054 | 1,893 | .86531 | .13469 |
| 31 | 78,535 | 476 | .99394 | .00606 | 82 | 12,161 | 1,766 | .85477 | .14523 |
| 32 | 78,059 | 491 | .99371 | .00629 | 83 | 10,395 | 1,626 | .84359 | .15641 |
| 33 | 77,568 | 503 | .99353 | .00647 | 84 | 8,769 | 1,473 | .83201 | .16799 |
| 34 | 77,065 | 517 | .99328 | .00672 | 85 | 7,296 | 1,315 | .81977 | .18023 |
| 35 | 76,548 | 530 | .99309 | .00691 | 86 | 5,981 | 1,156 | .80673 | .19327 |
| 36 | 76,018 | 543 | .99284 | .00716 | 87 | 4,825 | 997 | .79336 | .20644 |
| 37 | 75,475 | 559 | .99259 | .00741 | 88 | 3,828 | 845 | .77926 | .22074 |
| 38 | 74,916 | 577 | .99232 | .00768 | 89 | 2,983 | 703 | .76433 | .23507 |
| 39 | 74,339 | 597 | .99195 | .00805 | 90 | 2,280 | 572 | .74913 | .25087 |
| 40 | 73,742 | 618 | .99193 | .00837 | 91 | 1,708 | 453 | .73477 | .26523 |
| 41 | 73,124 | 641 | .99124 | .00876 | 92 | 1,255 | 355 | .71713 | .28287 |
| 42 | 72,483 | 666 | .99081 | .00919 | 93 | 900 | 269 | .70112 | .29888 |
| 43 | 71,817 | 692 | .99035 | .00965 | 94 | 631 | 200 | .68305 | .31695 |
| 44 | 71,125 | 721 | .98987 | .01013 | 95 | 431 | 149 | .65429 | .34571 |
| 45 | 70,404 | 754 | .98928 | .01072 | 96 | 282 | 112 | .62284 | .39716 |
| 46 | 69,650 | 787 | .98871 | .01129 | 97 | 170 | 83 | .51176 | .48824 |
| 47 | 68,863 | 824 | .98803 | .01197 | 98 | 87 | 53 | .39080 | .60920 |
| 48 | 68,039 | 857 | .98739 | .01261 | 99 | 34 | 28 | .17647 | .82353 |
| 49 | 67,182 | 889 | .98678 | .01322 | 100 | 6 | 6 | | 1.000.0 |
| 50 | 66,293 | 916 | .98619 | .01381 | | | | | |

NEW ZEALAND POPULATION TABLE.

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TABLE II.
POPULATION TABLE—NEW ZEALAND, FEMALES.

| Age. | No. Living. | No. Dying. | Prob-ability of Living. | Prob-ability of Dying. | Age. | No. Living. | No. Dying. | Prob-ability of Living. | Prob-ability of Dying. |
|------|-------------|------------|-------------------------|------------------------|------|-------------|------------|-------------------------|------------------------|
| 0 | 100,000 | 8,027 | .91973 | .08027 | 53 | 66,543 | 828 | .98755 | .01245 |
| 1 | 91,973 | 1,498 | .98372 | .01628 | 54 | 65,715 | 868 | .9868c | .01320 |
| 2 | 90,475 | 635 | .99298 | .00702 | 55 | 64,847 | 911 | .98596 | .01404 |
| 3 | 89,840 | 425 | .99527 | .00473 | 56 | 63,936 | 955 | .98505 | .01495 |
| 4 | 89,415 | 321 | .99641 | .00359 | 57 | 62,981 | 1,004 | .98406 | .01594 |
| 5 | 89,094 | 295 | .99669 | .00331 | 58 | 61,977 | 1,057 | .98295 | .01705 |
| 6 | 88,799 | 271 | .99694 | .00306 | 59 | 60,920 | 1,116 | .98168 | .01832 |
| 7 | 88,528 | 248 | .99719 | .00281 | 60 | 59,804 | 1,178 | .98030 | .01970 |
| 8 | 88,280 | 226 | .99745 | .00255 | 61 | 58,626 | 1,255 | .97859 | .02141 |
| 9 | 88,054 | 205 | .99768 | .00232 | 62 | 57,371 | 1,343 | .97661 | .02330 |
| 10 | 87,849 | 186 | .99788 | .00212 | 63 | 56,028 | 1,439 | .97432 | .02568 |
| 11 | 87,663 | 180 | .99793 | .00207 | 64 | 54,589 | 1,535 | .97187 | .02813 |
| 12 | 87,483 | 189 | .99784 | .00216 | 65 | 53,054 | 1,623 | .96942 | .03058 |
| 13 | 87,294 | 203 | .99762 | .00232 | 66 | 51,431 | 1,697 | .96699 | .03301 |
| 14 | 87,091 | 225 | .99742 | .00258 | 67 | 49,734 | 1,763 | .96456 | .03544 |
| 15 | 86,866 | 250 | .99713 | .00287 | 68 | 47,971 | 1,815 | .96217 | .03783 |
| 16 | 86,616 | 275 | .99683 | .00317 | 69 | 46,156 | 1,871 | .95947 | .04053 |
| 17 | 86,341 | 302 | .99651 | .00349 | 70 | 44,285 | 1,938 | .95622 | .04378 |
| 18 | 86,039 | 328 | .99619 | .00381 | 71 | 42,347 | 2,014 | .95245 | .04755 |
| 19 | 85,711 | 352 | .99589 | .00411 | 72 | 40,333 | 2,098 | .94798 | .05202 |
| 20 | 85,359 | 374 | .99551 | .00439 | 73 | 38,235 | 2,183 | .94291 | .05709 |
| 21 | 84,985 | 394 | .99513 | .00464 | 74 | 36,052 | 2,307 | .93661 | .06399 |
| 22 | 84,591 | 413 | .99513 | .00487 | 75 | 33,745 | 2,420 | .92828 | .07172 |
| 23 | 84,178 | 431 | .99488 | .00512 | 76 | 31,325 | 2,503 | .92079 | .07991 |
| 24 | 83,747 | 447 | .99467 | .00533 | 77 | 28,822 | 2,552 | .91147 | .08853 |
| 25 | 83,300 | 462 | .99444 | .00556 | 78 | 26,270 | 2,565 | .90236 | .09764 |
| 26 | 82,838 | 476 | .99426 | .00574 | 79 | 23,705 | 2,530 | .89326 | .10674 |
| 27 | 82,362 | 488 | .99408 | .00592 | 80 | 21,175 | 2,462 | .88373 | .11627 |
| 28 | 81,874 | 500 | .99389 | .00611 | 81 | 18,713 | 2,355 | .87416 | .12584 |
| 29 | 81,374 | 513 | .99369 | .00631 | 82 | 16,358 | 2,225 | .86397 | .13603 |
| 30 | 80,861 | 526 | .99348 | .00652 | 83 | 14,143 | 2,075 | .85320 | .14680 |
| 31 | 80,335 | 540 | .99330 | .00670 | 84 | 12,058 | 1,908 | .84176 | .15824 |
| 32 | 79,795 | 553 | .99307 | .00693 | 85 | 10,150 | 1,729 | .82964 | .17036 |
| 33 | 79,242 | 564 | .99286 | .00714 | 86 | 8,421 | 1,541 | .81701 | .18299 |
| 34 | 78,678 | 576 | .99268 | .00732 | 87 | 6,880 | 1,350 | .80379 | .19621 |
| 35 | 78,102 | 586 | .99250 | .00750 | 88 | 5,530 | 1,163 | .78968 | .21032 |
| 36 | 77,516 | 593 | .99236 | .00764 | 89 | 4,367 | 981 | .77537 | .22463 |
| 37 | 76,923 | 599 | .99220 | .00780 | 90 | 3,386 | 812 | .76019 | .23981 |
| 38 | 76,324 | 602 | .99211 | .00789 | 91 | 2,574 | 658 | .74437 | .25563 |
| 39 | 75,722 | 604 | .99202 | .00798 | 92 | 1,916 | 521 | .72806 | .27194 |
| 40 | 75,118 | 605 | .99195 | .00805 | 93 | 1,395 | 402 | .71184 | .28816 |
| 41 | 74,513 | 606 | .99188 | .00812 | 94 | 993 | 304 | .69386 | .30614 |
| 42 | 73,907 | 608 | .99177 | .00823 | 95 | 689 | 225 | .67344 | .32656 |
| 43 | 73,299 | 612 | .99165 | .00835 | 96 | 464 | 162 | .65086 | .34914 |
| 44 | 72,687 | 617 | .99149 | .00856 | 97 | 302 | 112 | .62913 | .37087 |
| 45 | 72,070 | 624 | .99136 | .00864 | 98 | 190 | 75 | .60527 | .39473 |
| 46 | 71,446 | 634 | .99113 | .00887 | 99 | 115 | 49 | .57391 | .42009 |
| 47 | 70,812 | 648 | .99083 | .00917 | 100 | 66 | 30 | .54546 | .44554 |
| 48 | 70,164 | 667 | .99051 | .00949 | 101 | 36 | 18 | .50000 | .50000 |
| 49 | 69,497 | 691 | .99006 | .00994 | 102 | 18 | 11 | .38889 | .61111 |
| 50 | 68,806 | 721 | .98951 | .01049 | 103 | 7 | 7 | .... | 1.00000 |
| 51 | 68,085 | 753 | .98894 | .01106 | | | | | |
| 52 | 67,332 | 789 | .98828 | .01172 | | | | | |

280 BELGIAN POPULATION MORTALITY TABLE.

MORTALITY TABLE.
(1880-1900)—MALES.

| Age. | Number Living. | Number Dying. | Probability of Living. | Probability of Dying. | Age | Number Living. | Number Dying. | Probability of Living. | Probability of Dying. |
|------|----------------|---------------|------------------------|-----------------------|-----|----------------|---------------|------------------------|-----------------------|
| 0 | 100,000 | 17,383 | .82617 | .17383 | 51 | 53,977 | 966 | .98284 | .01716 |
| 1 | 82,617 | 3,609 | .95632 | .04368 | 52 | 53,051 | 968 | .98175 | .01825 |
| 2 | 79,008 | 1,584 | .97995 | .02005 | 53 | 52,083 | 1,012 | .98057 | .01943 |
| 3 | 77,424 | 974 | .98742 | .01258 | 54 | 51,071 | 1,058 | .97928 | .02072 |
| 4 | 76,450 | 695 | .99091 | .00909 | 55 | 50,013 | 1,107 | .97787 | .02213 |
| 5 | 75,755 | 511 | .99325 | .00675 | 56 | 48,906 | 1,158 | .97632 | .02368 |
| 6 | 75,244 | 367 | .99512 | .00488 | 57 | 47,748 | 1,210 | .97466 | .02534 |
| 7 | 74,877 | 300 | .99599 | .00402 | 58 | 46,538 | 1,266 | .97280 | .02720 |
| 8 | 74,577 | 236 | .99684 | .00316 | 59 | 45,272 | 1,321 | .97082 | .02918 |
| 9 | 74,341 | 207 | .99722 | .00278 | 60 | 43,951 | 1,377 | .96867 | .03133 |
| 10 | 74,134 | 189 | .99745 | .00255 | 61 | 42,574 | 1,436 | .96627 | .03373 |
| 11 | 73,945 | 166 | .99776 | .00224 | 62 | 41,138 | 1,493 | .96371 | .03629 |
| 12 | 73,779 | 167 | .99774 | .00226 | 63 | 39,645 | 1,550 | .96090 | .03910 |
| 13 | 73,612 | 171 | .99768 | .00232 | 64 | 38,095 | 1,606 | .95784 | .04216 |
| 14 | 73,441 | 183 | .99751 | .00249 | 65 | 36,489 | 1,660 | .95451 | .04549 |
| 15 | 73,258 | 215 | .99707 | .00293 | 66 | 34,829 | 1,710 | .95090 | .04910 |
| 16 | 73,043 | 246 | .99663 | .00337 | 67 | 33,119 | 1,757 | .94695 | .05305 |
| 17 | 72,797 | 290 | .99602 | .00398 | 68 | 31,362 | 1,797 | .94270 | .05730 |
| 18 | 72,507 | 335 | .99538 | .00462 | 69 | 29,565 | 1,832 | .93803 | .06197 |
| 19 | 72,172 | 401 | .99444 | .00556 | 70 | 27,733 | 1,858 | .93300 | .06700 |
| 20 | 71,771 | 431 | .99399 | .00601 | 71 | 25,875 | 1,876 | .92750 | .07250 |
| 21 | 71,340 | 434 | .99392 | .00608 | 72 | 23,999 | 1,883 | .92154 | .07846 |
| 22 | 70,906 | 436 | .99385 | .00615 | 73 | 22,116 | 1,877 | .91513 | .08487 |
| 23 | 70,470 | 440 | .99376 | .00624 | 74 | 20,239 | 1,860 | .90810 | .09190 |
| 24 | 70,030 | 444 | .99366 | .00634 | 75 | 18,379 | 1,828 | .90054 | .09946 |
| 25 | 69,586 | 448 | .99356 | .00644 | 76 | 16,551 | 1,782 | .89233 | .10767 |
| 26 | 69,138 | 453 | .99345 | .00655 | 77 | 14,769 | 1,721 | .88347 | .11653 |
| 27 | 68,685 | 458 | .99333 | .00667 | 78 | 13,048 | 1,646 | .87385 | .12615 |
| 28 | 68,227 | 465 | .99318 | .00682 | 79 | 11,402 | 1,556 | .86353 | .13647 |
| 29 | 67,762 | 471 | .99305 | .00695 | 80 | 9,846 | 1,453 | .85243 | .14752 |
| 30 | 67,291 | 479 | .99288 | .00712 | 81 | 8,393 | 1,340 | .84034 | .15966 |
| 31 | 66,812 | 486 | .99273 | .00727 | 82 | 7,053 | 1,217 | .82745 | .17255 |
| 32 | 66,326 | 496 | .99252 | .00748 | 83 | 5,830 | 1,088 | .81357 | .18643 |
| 33 | 65,830 | 506 | .99231 | .00769 | 84 | 4,748 | 956 | .79865 | .20135 |
| 34 | 65,324 | 517 | .99209 | .00791 | 85 | 3,792 | 814 | .78270 | .21730 |
| 35 | 64,807 | 528 | .99185 | .00815 | 86 | 2,968 | 666 | .76550 | .23450 |
| 36 | 64,279 | 542 | .99157 | .00843 | 87 | 2,272 | 574 | .74736 | .25264 |
| 37 | 63,737 | 556 | .99128 | .00872 | 88 | 1,698 | 462 | .72792 | .27208 |
| 38 | 63,181 | 571 | .99096 | .00904 | 89 | 1,236 | 361 | .70793 | .29207 |
| 39 | 62,610 | 588 | .99061 | .00939 | 90 | 875 | 275 | .68571 | .31249 |
| 40 | 62,022 | 606 | .99023 | .00977 | 91 | 600 | 203 | .66167 | .33333 |
| 41 | 61,416 | 626 | .98981 | .01019 | 92 | 397 | 143 | .63980 | .36000 |
| 42 | 60,790 | 647 | .98936 | .01064 | 93 | 254 | 99 | .61024 | .38976 |
| 43 | 60,143 | 670 | .98886 | .01114 | 94 | 155 | 64 | .58710 | .41290 |
| 44 | 59,473 | 695 | .98831 | .01169 | 95 | 91 | 40 | .56044 | .43956 |
| 45 | 58,778 | 721 | .98773 | .01227 | 96 | 51 | 24 | .52941 | .47059 |
| 46 | 58,057 | 751 | .98706 | .01294 | 97 | 27 | 14 | .48148 | .51852 |
| 47 | 57,306 | 781 | .98637 | .01363 | 98 | 13 | 7 | .46154 | .53846 |
| 48 | 56,525 | 813 | .98562 | .01438 | 99 | 6 | 3 | .5 | .5 |
| 49 | 55,712 | 849 | .98476 | .01524 | 100 | 3 | 2 | .33333 | .66667 |
| 50 | 54,863 | 886 | .98385 | .01615 | 101 | 1 | 1 | ..... | ..... |

BELGIAN POPULATION MORTALITY TABLES. 281

MORTALITY TABLES.

(1880-1900)—FEMALES.

| Age. | Number Living. | Number Dying. | Probability of Living. | Probability of Dying. | Age | Number Living. | Number Dying. | Probability of Living. | Probability of Dying. |
|------|----------------|---------------|------------------------|-----------------------|-----|----------------|---------------|------------------------|-----------------------|
| 0 | 100,000 | 14,607 | .85393 | .14607 | 52 | 57,164 | 780 | .98636 | .01364 |
| 1 | 85,393 | 3,516 | .95883 | .04117 | 53 | 56,384 | 815 | .98555 | .01445 |
| 2 | 81,877 | 1,544 | .98114 | .01886 | 54 | 55,569 | 853 | .98465 | .01535 |
| 3 | 80,333 | 979 | .98781 | .01219 | 55 | 54,716 | 804 | .98366 | .01634 |
| 4 | 79,354 | 724 | .99088 | .00912 | 56 | 53,822 | 939 | .98255 | .01745 |
| 5 | 78,630 | 539 | .99315 | .00685 | 57 | 52,883 | 986 | .98136 | .01864 |
| 6 | 78,091 | 388 | .99503 | .00497 | 58 | 51,897 | 1,037 | .98002 | .01998 |
| 7 | 77,703 | 303 | .99610 | .00390 | 59 | 50,860 | 1,091 | .97855 | .02145 |
| 8 | 77,400 | 259 | .99665 | .00335 | 60 | 49,769 | 1,148 | .97693 | .02307 |
| 9 | 77,141 | 231 | .99701 | .00299 | 61 | 48,621 | 1,210 | .97511 | .02489 |
| 10 | 76,910 | 208 | .99730 | .00270 | 62 | 47,411 | 1,273 | .97315 | .02685 |
| 11 | 76,702 | 189 | .99754 | .00246 | 63 | 46,138 | 1,340 | .97096 | .02904 |
| 12 | 76,513 | 196 | .99744 | .00256 | 64 | 44,798 | 1,409 | .96855 | .03145 |
| 13 | 76,317 | 216 | .99717 | .00283 | 65 | 43,389 | 1,480 | .96589 | .03411 |
| 14 | 76,101 | 232 | .99695 | .00305 | 66 | 41,909 | 1,552 | .96297 | .03703 |
| 15 | 75,869 | 278 | .99634 | .00366 | 67 | 40,357 | 1,625 | .95973 | .04027 |
| 16 | 75,591 | 317 | .99581 | .00419 | 68 | 38,732 | 1,697 | .95619 | .04381 |
| 17 | 75,274 | 330 | .99562 | .00438 | 69 | 37,035 | 1,768 | .95226 | .04774 |
| 18 | 74,944 | 352 | .99530 | .00470 | 70 | 35,267 | 1,836 | .94794 | .05206 |
| 19 | 74,592 | 391 | .99476 | .00524 | 71 | 33,431 | 1,898 | .94323 | .05677 |
| 20 | 74,201 | 462 | .99377 | .00623 | 72 | 31,533 | 1,956 | .93797 | .06203 |
| 21 | 73,739 | 462 | .99373 | .00627 | 73 | 29,577 | 2,004 | .93224 | .06776 |
| 22 | 73,277 | 462 | .99370 | .00630 | 74 | 27,573 | 2,042 | .92594 | .07406 |
| 23 | 72,815 | 461 | .99367 | .00633 | 75 | 25,531 | 2,067 | .91904 | .08096 |
| 24 | 72,354 | 462 | .99361 | .00639 | 76 | 23,464 | 2,078 | .91144 | .08856 |
| 25 | 71,892 | 463 | .99356 | .00644 | 77 | 21,386 | 2,072 | .90311 | .09689 |
| 26 | 71,429 | 464 | .99350 | .00650 | 78 | 19,314 | 2,046 | .89407 | .10593 |
| 27 | 70,965 | 464 | .99346 | .00654 | 79 | 17,268 | 2,002 | .88406 | .11594 |
| 28 | 70,501 | 467 | .99338 | .00662 | 80 | 15,266 | 1,936 | .87318 | .12682 |
| 29 | 70,034 | 468 | .99332 | .00668 | 81 | 13,330 | 1,849 | .86129 | .13871 |
| 30 | 69,566 | 471 | .99323 | .00677 | 82 | 11,481 | 1,741 | .84836 | .15164 |
| 31 | 69,095 | 474 | .99314 | .00686 | 83 | 9,740 | 1,614 | .83429 | .16571 |
| 32 | 68,621 | 478 | .99303 | .00697 | 84 | 8,126 | 1,471 | .81808 | .18102 |
| 33 | 68,143 | 482 | .99293 | .00707 | 85 | 6,655 | 1,315 | .80240 | .19760 |
| 34 | 67,661 | 486 | .99282 | .00718 | 86 | 5,340 | 1,151 | .78446 | .21554 |
| 35 | 67,175 | 492 | .99268 | .00732 | 87 | 4,189 | 984 | .76510 | .23490 |
| 36 | 66,683 | 499 | .99252 | .00748 | 88 | 3,205 | 820 | .74415 | .25585 |
| 37 | 66,184 | 505 | .99237 | .00763 | 89 | 2,385 | 664 | .72159 | .27841 |
| 38 | 65,679 | 514 | .99217 | .00783 | 90 | 1,721 | 520 | .69785 | .30215 |
| 39 | 65,165 | 522 | .99199 | .00801 | 91 | 1,201 | 394 | .67104 | .32806 |
| 40 | 64,643 | 533 | .99175 | .00825 | 92 | 807 | 286 | .64560 | .35440 |
| 41 | 64,110 | 544 | .99151 | .00849 | 93 | 521 | 200 | .61612 | .38388 |
| 42 | 63,566 | 557 | .99124 | .00876 | 94 | 321 | 133 | .58567 | .41433 |
| 43 | 63,009 | 570 | .99095 | .00905 | 95 | 188 | 84 | .55319 | .44681 |
| 44 | 62,439 | 586 | .99061 | .00939 | 96 | 104 | 50 | .51923 | .48077 |
| 45 | 61,853 | 603 | .99025 | .00975 | 97 | 54 | 28 | .48148 | .51852 |
| 46 | 61,250 | 622 | .98984 | .01016 | 98 | 26 | 14 | .46154 | .53816 |
| 47 | 60,628 | 643 | .98939 | .01061 | 99 | 12 | 7 | .41667 | .58333 |
| 48 | 59,985 | 666 | .98890 | .01110 | 100 | 5 | 4 | .4 | .6 |
| 49 | 59,319 | 690 | .98837 | .01163 | 101 | 2 | 1 | .5 | .5 |
| 50 | 58,629 | 718 | .98775 | .01225 | 102 | 1 | ..... | ..... | ..... |
| 51 | 57,911 | 747 | .98710 | .01290 | | | | | |

BRITISH GOVERNMENT SICKNESS TABLES.

INTRODUCTION.

THESE tables were constructed from the experience of all the friendly societies of Great Britain, 1876-1880, as reported to the Registrar of Friendly Societies. The labor of collecting and analyzing this experience, of graduating the tables and computing the monetary values, was entrusted to the late William Sutton, F. I. A., actuary of the registry. The tables were published by the British government in 1896.

The portion of the experience from which these tables were deduced, embraces over 1,600,000 persons exposed to sickness, with 3,147,044 weeks of sickness, and 23,048 deaths.

This table, with interest at $3\frac{1}{2}$ per cent, has been adopted as the standard of valuation of health policies, covering all diseases and renewable beyond one year at the insured's option, under the laws of New York.

BRITISH GOVERNMENT SICKNESS TABLES, FOUR PER CENT.
 MALES, 1876-1880.
 CORRESPONDING MORTALITY VALUES.

| Age. | D ₁ | N ₁ | Age. | D ₁ | N ₁ |
|------|----------------|----------------|------|----------------|----------------|
| 5 | 82192 | 1613800. | 53 | 7947.1 | 88412. |
| 6 | 77897 | 1535900. | 54 | 7484.1 | 80926. |
| 7 | 74034 | 1461900. | 55 | 7037.0 | 73891. |
| 8 | 70477 | 1391400. | 56 | 6604.7 | 67285. |
| 9 | 67197 | 1324200. | 57 | 6187.4 | 61098. |
| 10 | 64145 | 1260100. | 58 | 5785.4 | 55312. |
| 11 | 61282 | 1198800. | 59 | 5398.5 | 49914. |
| 12 | 58581 | 1140200. | 60 | 5026.6 | 44887. |
| 13 | 56016 | 1084200. | 61 | 4668.9 | 40218. |
| 14 | 53562 | 1030600. | 62 | 4324.3 | 35894. |
| 16 | 51215 | 979400. | 63 | 3992.6 | 31902. |
| 16 | 48953 | 930440. | 64 | 3673.6 | 28228. |
| 17 | 46768 | 883690. | 65 | 3367.9 | 24800. |
| 18 | 44656 | 839020. | 66 | 3076.8 | 21783. |
| 19 | 42625 | 796400. | 67 | 2801.6 | 18982. |
| 20 | 40685 | 755720. | 68 | 2542.3 | 16439. |
| 21 | 38845 | 716870. | 69 | 2297.3 | 14142. |
| 22 | 37107 | 679770. | 70 | 2064.1 | 12078. |
| 23 | 35460 | 644300. | 71 | 1841.2 | 10237. |
| 24 | 33898 | 610350. | 72 | 1627.5 | 8609.1 |
| 26 | 32409 | 577990. | 73 | 1424.0 | 7185.2 |
| 26 | 30984 | 547020. | 74 | 1232.7 | 5952.5 |
| 27 | 29617 | 517390. | 75 | 1056.6 | 4895.9 |
| 28 | 28302 | 489090. | 76 | 897.97 | 3998.0 |
| 29 | 27037 | 462050. | 77 | 758.00 | 3240.0 |
| 30 | 25821 | 436230. | 78 | 636.56 | 2603.4 |
| 31 | 24652 | 411290. | 79 | 532.02 | 2071.4 |
| 32 | 23528 | 388050. | 80 | 441.88 | 1629.5 |
| 33 | 22448 | 365600. | 81 | 363.94 | 1265.6 |
| 34 | 21408 | 344200. | 82 | 296.32 | 969.26 |
| 36 | 20408 | 323790. | 83 | 237.71 | 731.54 |
| 36 | 19446 | 304340. | 84 | 187.56 | 543.98 |
| 37 | 18522 | 285820. | 85 | 145.60 | 398.38 |
| 38 | 17635 | 268180. | 86 | 111.43 | 286.95 |
| 39 | 16786 | 251400. | 87 | 84.196 | 202.75 |
| 40 | 15973 | 235430. | 88 | 62.878 | 139.87 |
| 41 | 15195 | 220230. | 89 | 46.301 | 93.573 |
| 42 | 14450 | 205780. | 90 | 33.430 | 60.144 |
| 43 | 13735 | 192050. | 91 | 23.433 | 36.710 |
| 44 | 13049 | 179000. | 92 | 15.742 | 20.973 |
| 46 | 12390 | 166610. | 93 | 9.6674 | 11.000 |
| 46 | 11755 | 154850. | 94 | 5.8248 | 5.1555 |
| 47 | 11144 | 143710. | 95 | 3.0615 | 2.1140 |
| 48 | 10556 | 133150. | 96 | 1.3981 | .71590 |
| 49 | 9990.6 | 123160. | 97 | .52862 | .18730 |
| 50 | 9447.8 | 113710. | 98 | .15385 | .033400 |
| 51 | 8927.3 | 104790. | 99 | .030449 | .0030496 |
| 52 | 8427.5 | 96358. | 100 | .0030496 | ..... |

BRITISH GOVERNMENT SICKNESS TABLES, FOUR PER CENT.
MALES, 1876-1880.

| Age. | DURATION—ONE YEAR. | | | | | | | | |
|------|--------------------|----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Weeks, 0-4. | Weeks, 4-8. | Weeks, 8-13. | Weeks, 13-17. | Weeks, 17-21. | Weeks, 21-26. | Weeks, 26-30. | Weeks, 30-34. | Weeks, 34-39. |
| 5 | 9.92 | 3.12 | 1.62 | .75 | .55 | .51 | .32 | .27 | .28 |
| 6 | 10.16 | 3.09 | 1.71 | .79 | .58 | .53 | .33 | .29 | .30 |
| 7 | 10.37 | 3.05 | 1.78 | .84 | .61 | .56 | .35 | .30 | .32 |
| 8 | 10.51 | 3.11 | 1.83 | .87 | .64 | .59 | .37 | .31 | .33 |
| 9 | 10.62 | 3.16 | 1.87 | .91 | .67 | .62 | .38 | .32 | .35 |
| 10 | 10.72 | 3.22 | 1.93 | .94 | .69 | .64 | .40 | .33 | .36 |
| 11 | 10.80 | 3.28 | 1.99 | .97 | .71 | .66 | .41 | .35 | .38 |
| 12 | 10.89 | 3.33 | 2.04 | .99 | .73 | .68 | .43 | .36 | .40 |
| 13 | 10.96 | 3.38 | 2.09 | 1.02 | .75 | .70 | .44 | .38 | .41 |
| 14 | 10.97 | 3.43 | 2.15 | 1.06 | .78 | .73 | .46 | .39 | .42 |
| 15 | 11.02 | 3.48 | 2.20 | 1.09 | .80 | .76 | .48 | .40 | .44 |
| 16 | 11.07 | 3.53 | 2.24 | 1.12 | .82 | .78 | .49 | .42 | .45 |
| 17 | 11.15 | 3.58 | 2.27 | 1.14 | .84 | .80 | .50 | .43 | .46 |
| 18 | 11.18 | 3.61 | 2.31 | 1.16 | .87 | .82 | .51 | .44 | .48 |
| 19 | 11.17 | 3.67 | 2.36 | 1.19 | .89 | .84 | .53 | .45 | .49 |
| 20 | 11.16 | 3.71 | 2.40 | 1.22 | .91 | .87 | .55 | .47 | .50 |
| 21 | 11.16 | 3.75 | 2.44 | 1.25 | .94 | .89 | .56 | .48 | .52 |
| 22 | 11.16 | 3.81 | 2.49 | 1.28 | .96 | .91 | .58 | .49 | .53 |
| 23 | 11.16 | 3.85 | 2.53 | 1.31 | .98 | .94 | .59 | .51 | .55 |
| 24 | 11.18 | 3.90 | 2.58 | 1.34 | 1.00 | .96 | .61 | .52 | .57 |
| 25 | 11.21 | 3.96 | 2.63 | 1.37 | 1.03 | .99 | .63 | .53 | .58 |
| 26 | 11.25 | 4.02 | 2.68 | 1.40 | 1.06 | 1.02 | .64 | .55 | .60 |
| 27 | 11.28 | 4.08 | 2.73 | 1.43 | 1.08 | 1.04 | .66 | .57 | .62 |
| 28 | 11.33 | 4.14 | 2.79 | 1.46 | 1.11 | 1.07 | .68 | .59 | .64 |
| 29 | 11.37 | 4.21 | 2.85 | 1.49 | 1.13 | 1.09 | .70 | .61 | .66 |
| 30 | 11.43 | 4.27 | 2.90 | 1.53 | 1.16 | 1.12 | .72 | .62 | .68 |
| 31 | 11.48 | 4.34 | 2.96 | 1.56 | 1.19 | 1.15 | .74 | .64 | .70 |
| 32 | 11.53 | 4.41 | 3.01 | 1.60 | 1.21 | 1.18 | .76 | .66 | .72 |
| 33 | 11.56 | 4.47 | 3.08 | 1.64 | 1.25 | 1.21 | .78 | .68 | .74 |
| 34 | 11.59 | 4.53 | 3.13 | 1.68 | 1.28 | 1.25 | .81 | .70 | .77 |
| 35 | 11.62 | 4.60 | 3.20 | 1.72 | 1.31 | 1.28 | .83 | .72 | .80 |
| 36 | 11.66 | 4.67 | 3.26 | 1.75 | 1.35 | 1.31 | .86 | .74 | .82 |
| 37 | 11.70 | 4.74 | 3.32 | 1.79 | 1.38 | 1.35 | .88 | .77 | .84 |
| 38 | 11.73 | 4.80 | 3.39 | 1.83 | 1.41 | 1.38 | .90 | .79 | .87 |
| 39 | 11.76 | 4.87 | 3.45 | 1.87 | 1.44 | 1.42 | .93 | .81 | .89 |
| 40 | 11.78 | 4.93 | 3.51 | 1.91 | 1.47 | 1.46 | .95 | .84 | .93 |
| 41 | 11.80 | 4.99 | 3.58 | 1.96 | 1.51 | 1.50 | .98 | .86 | .95 |
| 42 | 11.81 | 5.05 | 3.64 | 2.00 | 1.55 | 1.53 | 1.01 | .89 | .98 |
| 43 | 11.81 | 5.11 | 3.70 | 2.04 | 1.59 | 1.58 | 1.04 | .92 | 1.01 |
| 44 | 11.80 | 5.16 | 3.76 | 2.08 | 1.62 | 1.62 | 1.07 | .95 | 1.05 |
| 45 | 11.78 | 5.22 | 3.83 | 2.12 | 1.66 | 1.66 | 1.10 | .97 | 1.08 |
| 46 | 11.76 | 5.27 | 3.89 | 2.17 | 1.70 | 1.70 | 1.13 | 1.00 | 1.12 |
| 47 | 11.71 | 5.32 | 3.96 | 2.21 | 1.74 | 1.75 | 1.16 | 1.03 | 1.15 |
| 48 | 11.67 | 5.36 | 4.02 | 2.26 | 1.78 | 1.79 | 1.19 | 1.06 | 1.19 |
| 49 | 11.61 | 5.42 | 4.07 | 2.31 | 1.82 | 1.83 | 1.22 | 1.09 | 1.22 |
| 50 | 11.53 | 5.45 | 4.14 | 2.34 | 1.86 | 1.88 | 1.26 | 1.13 | 1.26 |
| 51 | 11.43 | 5.49 | 4.21 | 2.39 | 1.90 | 1.93 | 1.30 | 1.16 | 1.30 |
| 52 | 11.35 | 5.52 | 4.26 | 2.44 | 1.95 | 1.98 | 1.33 | 1.19 | 1.34 |

BRITISH GOVERNMENT SICKNESS TABLES, FOUR PER CENT.
MALES, 1876-1880.

| Age. | DURATION—ONE YEAR. | | | | DURATION—TWO YEARS. | | | Three Years and Upwards. | All Durations. |
|------|--------------------|---------------|---------------|--------|---------------------|---------------|--------|--------------------------|----------------|
| | Weeks, 39-43. | Weeks, 43-47. | Weeks, 47-52. | Total. | First 6 Mos. | Second 6 Mos. | Total. | | |
| 5 | .20 | .17 | .20 | 17.91 | .92 | .64 | 1.56 | 4.54 | 24.01 |
| 6 | .21 | .18 | .21 | 18.38 | .97 | .67 | 1.64 | 4.79 | 24.81 |
| 7 | .22 | .19 | .22 | 18.81 | 1.02 | .70 | 1.72 | 5.05 | 25.58 |
| 8 | .23 | .20 | .23 | 19.22 | 1.07 | .74 | 1.81 | 5.30 | 26.33 |
| 9 | .24 | .21 | .25 | 19.60 | 1.12 | .78 | 1.90 | 5.56 | 27.06 |
| 10 | .25 | .22 | .26 | 19.96 | 1.18 | .82 | 2.00 | 5.82 | 27.78 |
| 11 | .26 | .23 | .27 | 20.31 | 1.24 | .85 | 2.09 | 6.09 | 28.49 |
| 12 | .27 | .24 | .28 | 20.64 | 1.29 | .89 | 2.18 | 6.38 | 29.20 |
| 13 | .28 | .25 | .29 | 20.95 | 1.34 | .93 | 2.27 | 6.67 | 29.89 |
| 14 | .30 | .26 | .31 | 21.26 | 1.38 | .98 | 2.36 | 6.98 | 30.60 |
| 16 | .30 | .28 | .31 | 21.56 | 1.43 | 1.01 | 2.44 | 7.29 | 31.29 |
| 16 | .31 | .28 | .33 | 21.84 | 1.47 | 1.05 | 2.52 | 7.63 | 31.99 |
| 17 | .32 | .28 | .33 | 22.10 | 1.52 | 1.09 | 2.61 | 7.97 | 32.68 |
| 18 | .33 | .29 | .34 | 22.34 | 1.57 | 1.13 | 2.70 | 8.33 | 33.37 |
| 19 | .34 | .30 | .35 | 22.58 | 1.62 | 1.16 | 2.78 | 8.72 | 34.08 |
| 20 | .35 | .31 | .37 | 22.82 | 1.67 | 1.20 | 2.87 | 9.11 | 34.80 |
| 21 | .36 | .32 | .38 | 23.05 | 1.72 | 1.25 | 2.97 | 9.52 | 35.54 |
| 22 | .37 | .33 | .39 | 23.30 | 1.78 | 1.29 | 3.07 | 9.93 | 36.30 |
| 23 | .39 | .35 | .40 | 23.56 | 1.83 | 1.33 | 3.16 | 10.37 | 37.09 |
| 24 | .40 | .36 | .42 | 23.84 | 1.89 | 1.38 | 3.27 | 10.80 | 37.91 |
| 25 | .41 | .37 | .43 | 24.14 | 1.95 | 1.43 | 3.38 | 11.26 | 38.78 |
| 26 | .42 | .38 | .44 | 24.46 | 2.02 | 1.47 | 3.49 | 11.74 | 39.69 |
| 27 | .44 | .40 | .46 | 24.79 | 2.09 | 1.52 | 3.61 | 12.25 | 40.65 |
| 28 | .45 | .41 | .47 | 25.14 | 2.16 | 1.58 | 3.74 | 12.77 | 41.65 |
| 29 | .47 | .42 | .49 | 25.49 | 2.24 | 1.63 | 3.87 | 13.32 | 42.68 |
| 30 | .48 | .43 | .51 | 25.85 | 2.32 | 1.69 | 4.01 | 13.88 | 43.74 |
| 31 | .50 | .44 | .52 | 26.22 | 2.40 | 1.75 | 4.15 | 14.46 | 44.83 |
| 32 | .51 | .46 | .54 | 26.59 | 2.48 | 1.81 | 4.29 | 15.07 | 45.95 |
| 33 | .53 | .48 | .56 | 26.98 | 2.57 | 1.87 | 4.44 | 15.70 | 47.12 |
| 34 | .55 | .50 | .58 | 27.37 | 2.65 | 1.94 | 4.59 | 16.35 | 48.31 |
| 35 | .56 | .52 | .60 | 27.76 | 2.74 | 2.00 | 4.74 | 17.04 | 49.54 |
| 36 | .58 | .53 | .62 | 28.15 | 2.84 | 2.07 | 4.91 | 17.75 | 50.81 |
| 37 | .60 | .55 | .64 | 28.56 | 2.94 | 2.14 | 5.08 | 18.48 | 52.12 |
| 38 | .62 | .57 | .67 | 28.96 | 3.04 | 2.21 | 5.25 | 19.25 | 53.46 |
| 39 | .64 | .58 | .70 | 29.36 | 3.14 | 2.29 | 5.43 | 20.05 | 54.84 |
| 40 | .66 | .61 | .72 | 29.77 | 3.26 | 2.37 | 5.63 | 20.87 | 56.27 |
| 41 | .68 | .63 | .74 | 30.18 | 3.37 | 2.46 | 5.83 | 21.73 | 57.74 |
| 42 | .71 | .65 | .77 | 30.59 | 3.49 | 2.55 | 6.04 | 22.63 | 59.26 |
| 43 | .73 | .67 | .79 | 30.99 | 3.62 | 2.64 | 6.26 | 23.57 | 60.82 |
| 44 | .76 | .70 | .82 | 31.39 | 3.74 | 2.74 | 6.48 | 24.56 | 62.43 |
| 45 | .78 | .72 | .85 | 31.77 | 3.87 | 2.84 | 6.71 | 25.60 | 64.08 |
| 46 | .80 | .74 | .88 | 32.16 | 4.01 | 2.94 | 6.95 | 26.67 | 65.78 |
| 47 | .83 | .77 | .91 | 32.54 | 4.14 | 3.05 | 7.19 | 27.80 | 67.53 |
| 48 | .86 | .79 | .94 | 32.91 | 4.29 | 3.15 | 7.44 | 28.98 | 69.33 |
| 49 | .89 | .82 | .97 | 33.27 | 4.44 | 3.26 | 7.70 | 30.22 | 71.19 |
| 50 | .92 | .85 | 1.01 | 33.63 | 4.59 | 3.38 | 7.97 | 31.52 | 73.12 |
| 51 | .95 | .88 | 1.04 | 33.98 | 4.75 | 3.50 | 8.25 | 32.89 | 75.12 |
| 52 | .97 | .91 | 1.08 | 34.32 | 4.91 | 3.63 | 8.54 | 34.35 | 77.21 |

BRITISH GOVERNMENT SICKNESS TABLES.

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NET SINGLE PREMIUMS. FOUR PER CENT.
MALES, 1876-1880.

| Age. | DURATION—ONE YEAR. | | | | DURATION—TWO YEARS. | | | Three Years and Upwards. | All Durations. |
|------|--------------------|---------------|---------------|--------|---------------------|---------------|--------|--------------------------|----------------|
| | Weeks, 39-43. | Weeks, 43-47. | Weeks, 47-52. | Total. | First 6 Mos. | Second 6 Mos. | Total. | | |
| 53 | 1.00 | .93 | 1.11 | 34.64 | 5.08 | 3.76 | 8.84 | 35.90 | 79.38 |
| 54 | 1.03 | .96 | 1.15 | 34.95 | 5.26 | 3.89 | 9.15 | 37.54 | 81.64 |
| 55 | 1.06 | .99 | 1.19 | 35.27 | 5.43 | 4.03 | 9.46 | 39.28 | 84.01 |
| 56 | 1.10 | 1.03 | 1.23 | 35.60 | 5.61 | 4.18 | 9.79 | 41.11 | 86.50 |
| 57 | 1.13 | 1.06 | 1.27 | 35.92 | 5.81 | 4.32 | 10.13 | 43.03 | 89.08 |
| 58 | 1.17 | 1.09 | 1.31 | 36.22 | 6.02 | 4.47 | 10.49 | 45.04 | 91.75 |
| 59 | 1.21 | 1.13 | 1.35 | 36.49 | 6.23 | 4.63 | 10.86 | 47.16 | 94.51 |
| 60 | 1.25 | 1.17 | 1.40 | 36.72 | 6.44 | 4.79 | 11.23 | 49.39 | 97.34 |
| 61 | 1.28 | 1.20 | 1.45 | 36.87 | 6.66 | 4.96 | 11.62 | 51.74 | 100.23 |
| 62 | 1.31 | 1.23 | 1.48 | 36.93 | 6.89 | 5.14 | 12.03 | 54.23 | 103.19 |
| 63 | 1.34 | 1.25 | 1.51 | 36.93 | 7.11 | 5.31 | 12.42 | 56.87 | 106.22 |
| 64 | 1.37 | 1.29 | 1.56 | 36.79 | 7.32 | 5.49 | 12.81 | 59.68 | 109.28 |
| 65 | 1.38 | 1.30 | 1.58 | 36.56 | 7.52 | 5.66 | 13.18 | 62.59 | 112.33 |
| 66 | 1.40 | 1.32 | 1.60 | 36.20 | 7.71 | 5.79 | 13.50 | 65.58 | 115.28 |
| 67 | 1.40 | 1.33 | 1.61 | 35.70 | 7.87 | 5.88 | 13.75 | 68.59 | 118.04 |
| 68 | 1.40 | 1.33 | 1.61 | 35.02 | 7.97 | 5.96 | 13.93 | 71.54 | 120.49 |
| 69 | 1.39 | 1.32 | 1.60 | 34.18 | 8.01 | 6.02 | 14.03 | 74.39 | 122.60 |
| 70 | 1.37 | 1.30 | 1.59 | 33.19 | 8.03 | 6.02 | 14.05 | 77.18 | 124.42 |
| 71 | 1.34 | 1.27 | 1.55 | 32.08 | 7.99 | 6.01 | 14.00 | 79.95 | 126.03 |
| 72 | 1.32 | 1.26 | 1.54 | 30.90 | 7.93 | 5.97 | 13.90 | 82.80 | 127.60 |
| 73 | 1.28 | 1.22 | 1.48 | 29.66 | 7.88 | 5.92 | 13.80 | 85.80 | 129.26 |
| 74 | 1.24 | 1.19 | 1.45 | 28.40 | 7.80 | 5.89 | 13.69 | 89.03 | 131.12 |
| 75 | 1.21 | 1.16 | 1.42 | 27.11 | 7.78 | 5.82 | 13.60 | 92.51 | 133.22 |
| 76 | 1.16 | 1.11 | 1.35 | 25.78 | 7.75 | 5.78 | 13.53 | 96.20 | 135.51 |
| 77 | 1.11 | 1.07 | 1.31 | 24.31 | 7.68 | 5.76 | 13.44 | 100.02 | 137.77 |
| 78 | 1.06 | 1.02 | 1.25 | 22.62 | 7.61 | 5.63 | 13.24 | 103.78 | 139.64 |
| 79 | .95 | .93 | 1.13 | 20.69 | 7.39 | 5.49 | 12.88 | 107.39 | 140.96 |
| 80 | .87 | .84 | 1.03 | 18.62 | 7.05 | 5.37 | 12.42 | 110.88 | 141.92 |
| 81 | .76 | .73 | .90 | 16.52 | 6.62 | 5.10 | 11.72 | 114.22 | 142.46 |
| 82 | .59 | .58 | .73 | 14.43 | 6.19 | 4.74 | 10.93 | 117.41 | 142.77 |
| 83 | .47 | .46 | .59 | 12.38 | 5.62 | 4.45 | 10.07 | 120.56 | 143.01 |
| 84 | .30 | .29 | .38 | 10.32 | 5.01 | 4.15 | 9.16 | 123.72 | 143.20 |
| 85 | .32 | .32 | .40 | 8.18 | 4.24 | 3.98 | 8.22 | 126.70 | 143.10 |
| 86 | .27 | .26 | .34 | 5.84 | 3.80 | 3.45 | 7.25 | 129.11 | 142.20 |
| 87 | .12 | .11 | .13 | 3.19 | 3.10 | 3.11 | 6.21 | 130.59 | 139.99 |
| 88 | ..... | ..... | ..... | ..... | 2.56 | 2.56 | 5.12 | 130.09 | 135.81 |
| 89 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 129.05 | 129.06 |
| 90 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 119.08 | 119.08 |
| 91 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 106.98 | 106.98 |
| 92 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 94.77 | 94.77 |
| 93 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 82.00 | 82.00 |
| 94 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 71.71 | 71.71 |
| 95 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 61.41 | 61.41 |
| 96 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 52.13 | 52.13 |
| 97 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 43.93 | 43.93 |
| 98 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 36.82 | 36.82 |
| 99 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 30.70 | 30.70 |
| 100 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 25.49 | 25.49 |

BRITISH GOVERNMENT SICKNESS TABLES, THREE AND ONE-HALF PER CENT MALES, 1876-80.
CORRESPONDING MORTALITY VALUES.

| Age. | D ₁ | N ₁ | Age. | D ₂ | N ₂ |
|------|----------------|----------------|------|----------------|----------------|
| 5 | 84198 | 1811700. | 53 | 10260 | 119440. |
| 6 | 80183 | 1731500. | 54 | 9708.7 | 109730. |
| 7 | 76574 | 1655000. | 55 | 9172.8 | 100550. |
| 8 | 73249 | 1581700. | 56 | 8650.9 | 91903. |
| 9 | 70176 | 1511500. | 57 | 8143.5 | 83759. |
| 10 | 67312 | 1444200. | 58 | 7651.0 | 76108. |
| 11 | 64619 | 1379600. | 59 | 7174.0 | 68933. |
| 12 | 62070 | 1317500. | 60 | 6712.0 | 62221. |
| 13 | 59638 | 1257900. | 61 | 6264.4 | 55958. |
| 14 | 57305 | 1200600. | 62 | 5830.3 | 50127. |
| 15 | 55054 | 1145500. | 63 | 5409.0 | 44718. |
| 16 | 52876 | 1092700. | 64 | 5000.8 | 39718. |
| 17 | 50761 | 1041900. | 65 | 4607.2 | 35111. |
| 18 | 48702 | 993180. | 66 | 4229.0 | 30882. |
| 19 | 46711 | 946480. | 67 | 3869.4 | 27012. |
| 20 | 44801 | 901670. | 68 | 3528.3 | 23484. |
| 21 | 42982 | 858700. | 69 | 3203.5 | 20281. |
| 22 | 41256 | 817450. | 70 | 2892.3 | 17388. |
| 23 | 39817 | 777820. | 71 | 2592.4 | 14796. |
| 24 | 38055 | 739780. | 72 | 2302.6 | 12493. |
| 25 | 36559 | 703220. | 73 | 2024.4 | 10469. |
| 26 | 35120 | 668100. | 74 | 1761.0 | 8707.8 |
| 27 | 33733 | 634350. | 75 | 1516.7 | 7191.2 |
| 28 | 32391 | 601960. | 76 | 1295.2 | 5895.9 |
| 29 | 31093 | 570870. | 77 | 1098.6 | 4797.3 |
| 30 | 29838 | 541030. | 78 | 927.02 | 3870.3 |
| 31 | 28625 | 512410. | 79 | 778.52 | 3091.8 |
| 32 | 27452 | 484960. | 80 | 649.74 | 2442.0 |
| 33 | 26317 | 458640. | 81 | 537.72 | 1904.3 |
| 34 | 25220 | 433420. | 82 | 439.93 | 1454.4 |
| 35 | 24157 | 409260. | 83 | 354.62 | 1109.8 |
| 36 | 23130 | 386130. | 84 | 281.15 | 828.63 |
| 37 | 22137 | 364000. | 85 | 219.31 | 609.31 |
| 38 | 21180 | 342820. | 86 | 168.68 | 440.65 |
| 39 | 20257 | 322560. | 87 | 128.05 | 312.60 |
| 40 | 19369 | 303190. | 88 | 96.090 | 216.51 |
| 41 | 18515 | 284670. | 89 | 71.100 | 145.41 |
| 42 | 17692 | 266980. | 90 | 51.583 | 93.827 |
| 43 | 16898 | 250080. | 91 | 36.331 | 57.498 |
| 44 | 16131 | 233950. | 92 | 24.526 | 32.971 |
| 45 | 15390 | 218560. | 93 | 15.249 | 17.367 |
| 46 | 14672 | 203890. | 94 | 9.1026 | 8.2043 |
| 47 | 13977 | 189470. | 95 | 4.8393 | 3.3649 |
| 48 | 13303 | 176610. | 96 | 2.2205 | 1.1444 |
| 49 | 12651 | 163960. | 97 | .84365 | .30070 |
| 50 | 12022 | 151940. | 98 | .24673 | .054000 |
| 51 | 11415 | 140520. | 99 | .049066 | .0049379 |
| 52 | 10828 | 129700. | 100 | .0049379 | ..... |

BRITISH GOVERNMENT SICKNESS TABLES, THREE AND ONE-HALF PER CENT. MALES, 1876-1880.

| Age. | DURATIONS—ONE YEAR. | | | | | | | | |
|------|---------------------|----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Weeks, 0-4. | Weeks, 4-8. | Weeks, 8-13. | Weeks, 13-17. | Weeks, 17-21. | Weeks, 21-26. | Weeks, 26-30. | Weeks, 30-34. | Weeks, 34-39. |
| 5 | 11.09 | 3.54 | 1.90 | .90 | .65 | .62 | .39 | .32 | .35 |
| 6 | 11.33 | 3.51 | 2.00 | .94 | .68 | .65 | .41 | .31 | .37 |
| 7 | 11.55 | 3.48 | 2.07 | .99 | .72 | .68 | .43 | .36 | .38 |
| 8 | 11.68 | 3.54 | 2.12 | 1.03 | .75 | .71 | .45 | .38 | .40 |
| 9 | 11.79 | 3.60 | 2.17 | 1.07 | .79 | .74 | .46 | .39 | .42 |
| 10 | 11.89 | 3.66 | 2.23 | 1.10 | .81 | .76 | .48 | .41 | .43 |
| 11 | 11.98 | 3.72 | 2.29 | 1.13 | .83 | .78 | .49 | .43 | .45 |
| 12 | 12.05 | 3.77 | 2.35 | 1.16 | .85 | .81 | .51 | .44 | .47 |
| 13 | 12.11 | 3.82 | 2.40 | 1.19 | .88 | .83 | .53 | .45 | .49 |
| 14 | 12.11 | 3.88 | 2.47 | 1.23 | .90 | .86 | .55 | .47 | .51 |
| 15 | 12.17 | 3.93 | 2.51 | 1.26 | .93 | .89 | .56 | .48 | .52 |
| 16 | 12.21 | 3.98 | 2.55 | 1.29 | .95 | .91 | .58 | .49 | .54 |
| 17 | 12.28 | 4.02 | 2.59 | 1.31 | .98 | .93 | .59 | .50 | .54 |
| 18 | 12.31 | 4.07 | 2.63 | 1.34 | 1.00 | .95 | .60 | .51 | .56 |
| 19 | 12.29 | 4.12 | 2.68 | 1.37 | 1.02 | .98 | .62 | .53 | .57 |
| 20 | 12.27 | 4.16 | 2.72 | 1.40 | 1.05 | 1.01 | .64 | .55 | .59 |
| 21 | 12.27 | 4.21 | 2.77 | 1.43 | 1.07 | 1.03 | .65 | .56 | .61 |
| 22 | 12.26 | 4.26 | 2.82 | 1.46 | 1.10 | 1.05 | .67 | .57 | .62 |
| 23 | 12.25 | 4.31 | 2.86 | 1.49 | 1.12 | 1.08 | .69 | .59 | .64 |
| 24 | 12.26 | 4.36 | 2.91 | 1.52 | 1.14 | 1.11 | .70 | .60 | .66 |
| 25 | 12.29 | 4.41 | 2.96 | 1.55 | 1.17 | 1.13 | .72 | .62 | .68 |
| 26 | 12.28 | 4.47 | 3.01 | 1.58 | 1.20 | 1.16 | .74 | .64 | .70 |
| 27 | 12.32 | 4.53 | 3.06 | 1.61 | 1.22 | 1.19 | .76 | .65 | .72 |
| 28 | 12.35 | 4.59 | 3.12 | 1.65 | 1.25 | 1.22 | .78 | .67 | .74 |
| 29 | 12.39 | 4.65 | 3.18 | 1.68 | 1.28 | 1.24 | .80 | .69 | .76 |
| 30 | 12.43 | 4.71 | 3.23 | 1.71 | 1.30 | 1.27 | .82 | .71 | .78 |
| 31 | 12.47 | 4.78 | 3.28 | 1.75 | 1.33 | 1.30 | .84 | .73 | .80 |
| 32 | 12.50 | 4.84 | 3.34 | 1.75 | 1.36 | 1.33 | .86 | .75 | .82 |
| 33 | 12.52 | 4.90 | 3.40 | 1.83 | 1.39 | 1.36 | .88 | .77 | .85 |
| 34 | 12.54 | 4.97 | 3.46 | 1.86 | 1.43 | 1.39 | .91 | .79 | .87 |
| 35 | 12.55 | 5.03 | 3.53 | 1.90 | 1.46 | 1.43 | .93 | .82 | .89 |
| 36 | 12.57 | 5.10 | 3.59 | 1.94 | 1.49 | 1.46 | .95 | .84 | .91 |
| 37 | 12.59 | 5.16 | 3.65 | 1.98 | 1.52 | 1.49 | .98 | .86 | .94 |
| 38 | 12.61 | 5.22 | 3.71 | 2.02 | 1.56 | 1.53 | 1.00 | .88 | .97 |
| 39 | 12.62 | 5.28 | 3.77 | 2.06 | 1.59 | 1.57 | 1.03 | .90 | 1.00 |
| 40 | 12.62 | 5.33 | 3.83 | 2.10 | 1.62 | 1.61 | 1.05 | .93 | 1.03 |
| 41 | 12.62 | 5.39 | 3.89 | 2.14 | 1.66 | 1.65 | 1.08 | .95 | 1.06 |
| 42 | 12.61 | 5.44 | 3.95 | 2.18 | 1.70 | 1.68 | 1.11 | .98 | 1.09 |
| 43 | 12.59 | 5.50 | 4.01 | 2.22 | 1.73 | 1.72 | 1.14 | 1.00 | 1.12 |
| 44 | 12.56 | 5.55 | 4.07 | 2.26 | 1.77 | 1.77 | 1.17 | 1.03 | 1.15 |
| 45 | 12.53 | 5.59 | 4.13 | 2.30 | 1.80 | 1.81 | 1.20 | 1.06 | 1.18 |
| 46 | 12.48 | 5.63 | 4.19 | 2.34 | 1.84 | 1.85 | 1.23 | 1.09 | 1.22 |
| 47 | 12.40 | 5.68 | 4.24 | 2.38 | 1.88 | 1.89 | 1.26 | 1.12 | 1.25 |
| 48 | 12.34 | 5.72 | 4.30 | 2.43 | 1.92 | 1.93 | 1.29 | 1.15 | 1.29 |
| 49 | 12.26 | 5.76 | 4.36 | 2.47 | 1.96 | 1.97 | 1.32 | 1.18 | 1.32 |
| 50 | 12.15 | 5.79 | 4.42 | 2.51 | 1.99 | 2.02 | 1.36 | 1.21 | 1.36 |
| 51 | 12.03 | 5.81 | 4.47 | 2.55 | 2.04 | 2.07 | 1.39 | 1.24 | 1.40 |
| 52 | 11.93 | 5.84 | 4.53 | 2.59 | 2.07 | 2.11 | 1.42 | 1.28 | 1.44 |

BRITISH GOVERNMENT SICKNESS TABLES, THREE AND ONE-HALF PER CENT MALES, 1876-1880.

| Age. | DURATIONS—ONE YEAR. | | | | DURATIONS—TWO YEARS. | | | Three Years and Upwards. | All Durations. |
|------|---------------------|---------------|---------------|--------|----------------------|---------------|--------|--------------------------|----------------|
| | Weeks, 39-43. | Weeks, 43-47. | Weeks, 47-52. | Total. | First 6 Mos. | Second 6 Mos. | Total. | | |
| 5 | .24 | .22 | .25 | 20.47 | 1.16 | .81 | 1.97 | 6.05 | 28.49 |
| 6 | .25 | .23 | .27 | 20.98 | 1.22 | .85 | 2.07 | 6.35 | 29.40 |
| 7 | .27 | .24 | .28 | 21.45 | 1.27 | .89 | 2.16 | 6.65 | 30.26 |
| 8 | .28 | .25 | .29 | 21.88 | 1.33 | .93 | 2.26 | 6.95 | 31.09 |
| 9 | .29 | .26 | .30 | 22.98 | 1.39 | .97 | 2.36 | 7.26 | 31.90 |
| 10 | .30 | .27 | .32 | 22.66 | 1.45 | 1.01 | 2.46 | 7.57 | 32.69 |
| 11 | .32 | .28 | .33 | 23.03 | 1.51 | 1.05 | 2.56 | 7.88 | 33.47 |
| 12 | .33 | .29 | .34 | 23.37 | 1.57 | 1.10 | 2.67 | 8.20 | 34.24 |
| 13 | .34 | .30 | .35 | 23.69 | 1.62 | 1.14 | 2.76 | 8.54 | 34.99 |
| 14 | .35 | .31 | .37 | 24.01 | 1.67 | 1.18 | 2.85 | 8.89 | 35.75 |
| 15 | .36 | .32 | .38 | 24.31 | 1.72 | 1.23 | 2.95 | 9.25 | 36.51 |
| 16 | .37 | .33 | .39 | 24.59 | 1.77 | 1.27 | 3.04 | 9.63 | 37.26 |
| 17 | .38 | .34 | .40 | 24.86 | 1.82 | 1.31 | 3.13 | 10.02 | 38.01 |
| 18 | .39 | .35 | .41 | 25.12 | 1.87 | 1.35 | 3.22 | 10.43 | 38.77 |
| 19 | .40 | .36 | .42 | 25.36 | 1.93 | 1.39 | 3.32 | 10.86 | 39.54 |
| 20 | .41 | .37 | .43 | 25.60 | 1.99 | 1.44 | 3.43 | 11.30 | 40.33 |
| 21 | .43 | .38 | .45 | 25.86 | 2.04 | 1.48 | 3.52 | 11.75 | 41.13 |
| 22 | .44 | .39 | .46 | 26.10 | 2.10 | 1.53 | 3.63 | 12.21 | 41.94 |
| 23 | .45 | .40 | .48 | 26.36 | 2.16 | 1.57 | 3.73 | 12.68 | 42.77 |
| 24 | .47 | .42 | .49 | 26.64 | 2.22 | 1.62 | 3.84 | 13.18 | 43.60 |
| 25 | .48 | .43 | .50 | 26.94 | 2.29 | 1.68 | 3.97 | 13.67 | 44.58 |
| 26 | .49 | .45 | .52 | 27.24 | 2.36 | 1.73 | 4.09 | 14.20 | 45.53 |
| 27 | .51 | .46 | .54 | 27.57 | 2.44 | 1.78 | 4.22 | 14.74 | 46.53 |
| 28 | .52 | .47 | .55 | 27.91 | 2.52 | 1.84 | 4.36 | 15.30 | 47.57 |
| 29 | .53 | .48 | .57 | 28.25 | 2.60 | 1.90 | 4.50 | 15.90 | 48.65 |
| 30 | .55 | .50 | .59 | 28.60 | 2.68 | 1.96 | 4.64 | 16.50 | 49.74 |
| 31 | .57 | .51 | .61 | 28.97 | 2.76 | 2.02 | 4.78 | 17.12 | 50.87 |
| 32 | .58 | .53 | .62 | 29.32 | 2.85 | 2.08 | 4.93 | 17.77 | 52.02 |
| 33 | .60 | .55 | .64 | 29.69 | 2.94 | 2.15 | 5.09 | 18.44 | 53.22 |
| 34 | .62 | .56 | .66 | 30.06 | 3.03 | 2.21 | 5.24 | 19.14 | 54.44 |
| 35 | .64 | .58 | .68 | 30.44 | 3.12 | 2.28 | 5.40 | 19.86 | 55.70 |
| 36 | .66 | .60 | .71 | 30.82 | 3.22 | 2.35 | 5.57 | 20.61 | 57.00 |
| 37 | .68 | .62 | .73 | 31.20 | 3.32 | 2.42 | 5.74 | 21.39 | 58.33 |
| 38 | .69 | .64 | .75 | 31.58 | 3.43 | 2.50 | 5.93 | 22.19 | 59.70 |
| 39 | .71 | .66 | .77 | 31.96 | 3.53 | 2.58 | 6.11 | 23.03 | 61.10 |
| 40 | .74 | .68 | .80 | 32.34 | 3.65 | 2.66 | 6.31 | 23.88 | 62.53 |
| 41 | .76 | .70 | .82 | 32.72 | 3.76 | 2.75 | 6.51 | 24.78 | 64.01 |
| 42 | .78 | .72 | .85 | 33.09 | 3.89 | 2.84 | 6.73 | 25.71 | 65.53 |
| 43 | .81 | .74 | .88 | 33.46 | 4.01 | 2.93 | 6.94 | 26.69 | 67.09 |
| 44 | .83 | .76 | .90 | 33.82 | 4.14 | 3.03 | 7.17 | 27.71 | 68.70 |
| 45 | .85 | .79 | .93 | 34.17 | 4.27 | 3.13 | 7.40 | 28.77 | 70.34 |
| 46 | .88 | .81 | .96 | 34.52 | 4.40 | 3.23 | 7.63 | 29.87 | 72.02 |
| 47 | .91 | .84 | 1.00 | 34.85 | 4.54 | 3.34 | 7.88 | 31.02 | 73.75 |
| 48 | .93 | .86 | 1.02 | 35.18 | 4.68 | 3.45 | 8.13 | 32.22 | 75.53 |
| 49 | .96 | .89 | 1.05 | 35.50 | 4.83 | 3.56 | 8.39 | 33.48 | 77.37 |
| 50 | .99 | .92 | 1.09 | 35.81 | 4.98 | 3.68 | 8.66 | 34.80 | 79.27 |
| 51 | 1.02 | .95 | 1.13 | 36.10 | 5.14 | 3.80 | 8.94 | 36.19 | 81.23 |
| 52 | 1.04 | .97 | 1.16 | 36.38 | 5.30 | 3.92 | 9.22 | 37.67 | 83.27 |

NET SINGLE PREMIUMS.

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BRITISH GOVERNMENT SICKNESS TABLES, THREE AND ONE-HALF PER CENT. MALES, 1876-1880.

| Age. | DURATION—ONE YEAR. | | | | DURATION—TWO YEARS. | | | Three Years and Upwards. | All Durations. |
|------|--------------------|---------------|---------------|--------|---------------------|---------------|--------|--------------------------|----------------|
| | Weeks, 89-48. | Weeks, 48-47. | Weeks, 47-52. | Total. | First 6 Mos. | Second 6 Mos. | Total. | | |
| 53 | 1.07 | 1.00 | 1.19 | 36.65 | 5.47 | 4.04 | 9.51 | 39.22 | 85.38 |
| 54 | 1.10 | 1.03 | 1.23 | 36.91 | 5.64 | 4.17 | 9.81 | 40.87 | 87.59 |
| 55 | 1.13 | 1.06 | 1.26 | 37.17 | 5.80 | 4.32 | 10.12 | 42.61 | 89.90 |
| 56 | 1.17 | 1.09 | 1.30 | 37.43 | 5.98 | 4.46 | 10.44 | 44.44 | 92.31 |
| 57 | 1.20 | 1.12 | 1.34 | 37.69 | 6.17 | 4.60 | 10.77 | 46.36 | 94.82 |
| 58 | 1.24 | 1.16 | 1.38 | 37.92 | 6.38 | 4.75 | 11.13 | 48.37 | 97.42 |
| 59 | 1.27 | 1.19 | 1.43 | 38.13 | 6.58 | 4.89 | 11.47 | 50.48 | 100.08 |
| 60 | 1.31 | 1.23 | 1.47 | 38.29 | 6.79 | 5.05 | 11.84 | 52.69 | 102.82 |
| 61 | 1.34 | 1.26 | 1.51 | 38.37 | 7.00 | 5.22 | 12.22 | 55.02 | 105.61 |
| 62 | 1.37 | 1.29 | 1.55 | 38.37 | 7.22 | 5.39 | 12.61 | 57.49 | 108.47 |
| 63 | 1.39 | 1.31 | 1.58 | 38.27 | 7.43 | 5.55 | 12.98 | 60.12 | 111.37 |
| 64 | 1.42 | 1.34 | 1.62 | 38.07 | 7.63 | 5.72 | 13.35 | 62.89 | 114.31 |
| 65 | 1.43 | 1.36 | 1.63 | 37.76 | 7.82 | 5.88 | 13.70 | 65.78 | 117.24 |
| 66 | 1.45 | 1.37 | 1.66 | 37.32 | 7.99 | 6.01 | 14.00 | 68.74 | 120.06 |
| 67 | 1.44 | 1.37 | 1.66 | 36.73 | 8.15 | 6.09 | 14.24 | 71.70 | 122.67 |
| 68 | 1.44 | 1.36 | 1.66 | 35.98 | 8.24 | 6.16 | 14.40 | 74.59 | 124.97 |
| 69 | 1.42 | 1.35 | 1.65 | 35.07 | 8.26 | 6.20 | 14.46 | 77.39 | 125.92 |
| 70 | 1.40 | 1.34 | 1.63 | 34.01 | 8.26 | 6.20 | 14.46 | 80.11 | 128.58 |
| 71 | 1.37 | 1.31 | 1.59 | 32.82 | 8.21 | 6.18 | 14.39 | 82.82 | 130.03 |
| 72 | 1.35 | 1.29 | 1.57 | 31.57 | 8.14 | 6.14 | 14.28 | 85.61 | 131.46 |
| 73 | 1.31 | 1.25 | 1.51 | 30.27 | 8.07 | 6.07 | 14.14 | 88.57 | 132.98 |
| 74 | 1.27 | 1.21 | 1.48 | 28.95 | 7.98 | 6.03 | 14.01 | 91.70 | 134.72 |
| 75 | 1.23 | 1.17 | 1.44 | 27.60 | 7.95 | 5.95 | 13.90 | 95.21 | 136.71 |
| 76 | 1.18 | 1.13 | 1.38 | 26.22 | 7.91 | 5.90 | 13.81 | 98.87 | 138.90 |
| 77 | 1.13 | 1.09 | 1.33 | 24.69 | 7.83 | 5.87 | 13.70 | 102.65 | 141.04 |
| 78 | 1.07 | 1.03 | 1.26 | 22.95 | 7.74 | 5.74 | 13.48 | 106.36 | 142.79 |
| 79 | .97 | .94 | 1.15 | 20.99 | 7.51 | 5.58 | 13.09 | 109.90 | 143.98 |
| 80 | .88 | .85 | 1.04 | 18.86 | 7.16 | 5.46 | 12.62 | 113.31 | 144.79 |
| 81 | .77 | .74 | .91 | 16.71 | 6.72 | 5.18 | 11.90 | 116.56 | 145.17 |
| 82 | .60 | .59 | .72 | 14.58 | 6.28 | 4.80 | 11.08 | 119.66 | 145.32 |
| 83 | .47 | .47 | .59 | 12.49 | 5.69 | 4.50 | 10.19 | 122.72 | 145.40 |
| 84 | .30 | .30 | .39 | 10.41 | 5.06 | 4.19 | 9.25 | 125.77 | 145.43 |
| 85 | .32 | .32 | .41 | 8.23 | 4.28 | 4.02 | 8.30 | 128.64 | 145.17 |
| 86 | .27 | .26 | .34 | 5.87 | 3.83 | 3.47 | 7.30 | 130.93 | 144.10 |
| 87 | .12 | .10 | .14 | 3.18 | 3.13 | 3.13 | 6.26 | 132.26 | 141.70 |
| 88 | .... | .... | .... | .... | 2.58 | 2.58 | 5.16 | 132.17 | 137.33 |
| 89 | .... | .... | .... | .... | .... | .... | .... | 130.35 | 130.35 |
| 90 | .... | .... | .... | .... | .... | .... | .... | 120.15 | 120.15 |
| 91 | .... | .... | .... | .... | .... | .... | .... | 107.87 | 107.87 |
| 92 | .... | .... | .... | .... | .... | .... | .... | 95.49 | 95.49 |
| 93 | .... | .... | .... | .... | .... | .... | .... | 83.44 | 83.44 |
| 94 | .... | .... | .... | .... | .... | .... | .... | 72.12 | 72.12 |
| 95 | .... | .... | .... | .... | .... | .... | .... | 61.72 | 61.72 |
| 96 | .... | .... | .... | .... | .... | .... | .... | 52.36 | 52.36 |
| 97 | .... | .... | .... | .... | .... | .... | .... | 44.10 | 44.10 |
| 98 | .... | .... | .... | .... | .... | .... | .... | 36.94 | 36.94 |
| 99 | .... | .... | .... | .... | .... | .... | .... | 30.79 | 30.79 |
| 100 | .... | .... | .... | .... | .... | .... | .... | 25.50 | 25.50 |

BRITISH GOVERNMENT SICKNESS TABLES, THREE PER CENT.
 MALES, 1876-1880.
 CORRESPONDING MORTALITY VALUES.

| Age. | D _z | N _z | Age. | D _z | N _z |
|------|----------------|----------------|------|----------------|----------------|
| 5 | 86260 | 2047000. | 53 | 13261 | 161770. |
| 6 | 82547 | 1964400. | 54 | 12610 | 149160. |
| 7 | 79214 | 1885200. | 55 | 11972 | 137190. |
| 8 | 76141 | 1809100. | 56 | 11346 | 125840. |
| 9 | 73303 | 1735800. | 57 | 10732 | 115110. |
| 10 | 70651 | 1665100. | 58 | 10132 | 104980. |
| 11 | 68154 | 1597000. | 59 | 9546.4 | 95431. |
| 12 | 65782 | 1531200. | 60 | 8975.1 | 86457. |
| 13 | 63513 | 1467700. | 61 | 8417.2 | 78039. |
| 14 | 61324 | 1406400. | 62 | 7871.9 | 70168. |
| 15 | 59202 | 1347200. | 63 | 7338.5 | 62829. |
| 16 | 57136 | 1290000. | 64 | 6817.7 | 56011. |
| 17 | 55118 | 1234900. | 65 | 6311.2 | 49700. |
| 18 | 53139 | 1181800. | 66 | 5821.6 | 43879. |
| 19 | 51213 | 1130500. | 67 | 5352.4 | 38526. |
| 20 | 49358 | 1081200. | 68 | 4904.2 | 33622. |
| 21 | 47584 | 1033600. | 69 | 4474.5 | 29147. |
| 22 | 45894 | 987710. | 70 | 4059.4 | 25088. |
| 23 | 44284 | 943430. | 71 | 3656.1 | 21432. |
| 24 | 42745 | 900680. | 72 | 3263.2 | 18169. |
| 25 | 41264 | 859430. | 73 | 2882.8 | 15286. |
| 26 | 39833 | 819600. | 74 | 2519.9 | 12766. |
| 27 | 38445 | 781140. | 75 | 2180.9 | 10585. |
| 28 | 37095 | 744030. | 76 | 1871.4 | 8713.6 |
| 29 | 35781 | 708260. | 77 | 1595.0 | 7118.7 |
| 30 | 34503 | 673770. | 78 | 1352.5 | 5766.2 |
| 31 | 33261 | 640500. | 79 | 1141.4 | 4624.8 |
| 32 | 32053 | 608440. | 80 | 957.17 | 3667.7 |
| 33 | 30877 | 577560. | 81 | 795.99 | 2871.7 |
| 34 | 29733 | 547840. | 82 | 654.40 | 2217.3 |
| 35 | 28619 | 519220. | 83 | 530.05 | 1687.2 |
| 36 | 27535 | 491680. | 84 | 422.28 | 1264.9 |
| 37 | 26481 | 465200. | 85 | 330.99 | 933.94 |
| 38 | 25459 | 439740. | 86 | 255.78 | 678.16 |
| 39 | 24469 | 415280. | 87 | 195.14 | 483.03 |
| 40 | 23509 | 391770. | 88 | 147.15 | 335.87 |
| 41 | 22581 | 369190. | 89 | 109.41 | 226.46 |
| 42 | 21682 | 347500. | 90 | 79.761 | 146.70 |
| 43 | 20810 | 326690. | 91 | 56.449 | 90.251 |
| 44 | 19962 | 306730. | 92 | 38.292 | 51.959 |
| 45 | 19137 | 287590. | 93 | 24.480 | 27.479 |
| 46 | 18333 | 269260. | 94 | 14.445 | 13.034 |
| 47 | 17549 | 251710. | 95 | 7.6660 | 5.3681 |
| 48 | 16784 | 234930. | 96 | 3.5348 | 1.8333 |
| 49 | 16040 | 218890. | 97 | 1.3495 | .48380 |
| 50 | 15316 | 203570. | 98 | .39658 | .087201 |
| 51 | 14612 | 188960. | 99 | .070246 | .0080140 |
| 52 | 13928 | 175030. | 100 | .0080140 | ..... |

NET SINGLE PREMIUMS.

BRITISH GOVERNMENT SICKNESS TABLES, THREE PER CENT.
MALES, 1876-1880.

| Age. | DURATIONS—ONE YEAR. | | | | | | | | |
|------|---------------------|----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Weeks, 0-4. | Weeks, 4-8. | Weeks, 8-13. | Weeks, 13-17. | Weeks, 17-21. | Weeks, 21-26. | Weeks, 26-30. | Weeks, 30-34. | Weeks, 34-39. |
| 5 | 12.49 | 4.05 | 2.25 | 1.08 | .80 | .75 | .48 | .41 | .44 |
| 6 | 12.74 | 4.03 | 2.36 | 1.13 | .84 | .79 | .50 | .42 | .46 |
| 7 | 12.97 | 4.01 | 2.44 | 1.18 | .87 | .82 | .54 | .44 | .48 |
| 8 | 13.10 | 4.07 | 2.49 | 1.22 | .91 | .86 | .54 | .46 | .49 |
| 9 | 13.21 | 4.13 | 2.55 | 1.26 | .94 | .89 | .56 | .48 | .51 |
| 10 | 13.30 | 4.20 | 2.60 | 1.30 | .97 | .91 | .58 | .49 | .53 |
| 11 | 13.37 | 4.26 | 2.67 | 1.33 | .99 | .94 | .59 | .51 | .55 |
| 12 | 13.44 | 4.31 | 2.72 | 1.36 | 1.01 | .98 | .61 | .53 | .57 |
| 13 | 13.50 | 4.36 | 2.78 | 1.39 | 1.04 | .99 | .63 | .54 | .59 |
| 14 | 13.48 | 4.42 | 2.85 | 1.43 | 1.07 | 1.02 | .65 | .56 | .61 |
| 15 | 13.53 | 4.47 | 2.90 | 1.47 | 1.09 | 1.04 | .66 | .57 | .62 |
| 16 | 13.59 | 4.51 | 2.94 | 1.49 | 1.12 | 1.07 | .67 | .58 | .64 |
| 17 | 13.61 | 4.56 | 2.98 | 1.52 | 1.14 | 1.09 | .69 | .60 | .65 |
| 18 | 13.63 | 4.60 | 3.02 | 1.55 | 1.16 | 1.12 | .71 | .61 | .66 |
| 19 | 13.61 | 4.65 | 3.06 | 1.58 | 1.19 | 1.15 | .73 | .63 | .68 |
| 20 | 13.57 | 4.70 | 3.11 | 1.61 | 1.22 | 1.17 | .75 | .65 | .70 |
| 21 | 13.56 | 4.75 | 3.17 | 1.64 | 1.24 | 1.20 | .76 | .66 | .71 |
| 22 | 13.54 | 4.80 | 3.21 | 1.67 | 1.27 | 1.22 | .78 | .67 | .73 |
| 23 | 13.51 | 4.84 | 3.25 | 1.70 | 1.30 | 1.25 | .80 | .69 | .75 |
| 24 | 13.51 | 4.89 | 3.30 | 1.74 | 1.32 | 1.28 | .82 | .70 | .77 |
| 25 | 13.51 | 4.94 | 3.35 | 1.77 | 1.34 | 1.30 | .84 | .72 | .79 |
| 26 | 13.51 | 4.99 | 3.40 | 1.80 | 1.37 | 1.33 | .86 | .74 | .81 |
| 27 | 13.52 | 5.05 | 3.45 | 1.83 | 1.40 | 1.36 | .88 | .76 | .83 |
| 28 | 13.54 | 5.11 | 3.51 | 1.86 | 1.42 | 1.39 | .89 | .78 | .85 |
| 29 | 13.55 | 5.17 | 3.56 | 1.90 | 1.45 | 1.41 | .91 | .80 | .87 |
| 30 | 13.58 | 5.23 | 3.62 | 1.93 | 1.48 | 1.44 | .93 | .81 | .89 |
| 31 | 13.60 | 5.29 | 3.67 | 1.96 | 1.50 | 1.47 | .96 | .83 | .91 |
| 32 | 13.61 | 5.35 | 3.73 | 2.00 | 1.53 | 1.50 | .98 | .85 | .93 |
| 33 | 13.61 | 5.40 | 3.78 | 2.04 | 1.56 | 1.53 | 1.00 | .88 | .96 |
| 34 | 13.61 | 5.46 | 3.84 | 2.08 | 1.60 | 1.57 | 1.02 | .90 | .99 |
| 35 | 13.60 | 5.52 | 3.90 | 2.11 | 1.63 | 1.61 | 1.05 | .92 | 1.01 |
| 36 | 13.61 | 5.58 | 3.96 | 2.15 | 1.66 | 1.64 | 1.07 | .94 | 1.03 |
| 37 | 13.60 | 5.64 | 4.01 | 2.19 | 1.69 | 1.67 | 1.09 | .97 | 1.06 |
| 38 | 13.60 | 5.69 | 4.07 | 2.23 | 1.72 | 1.70 | 1.12 | .99 | 1.09 |
| 39 | 13.59 | 5.75 | 4.13 | 2.27 | 1.75 | 1.74 | 1.14 | 1.01 | 1.11 |
| 40 | 13.56 | 5.79 | 4.19 | 2.30 | 1.79 | 1.78 | 1.17 | 1.04 | 1.14 |
| 41 | 13.54 | 5.84 | 4.24 | 2.34 | 1.83 | 1.81 | 1.20 | 1.06 | 1.17 |
| 42 | 13.51 | 5.89 | 4.39 | 2.38 | 1.86 | 1.85 | 1.23 | 1.08 | 1.20 |
| 43 | 13.46 | 5.93 | 4.35 | 2.42 | 1.89 | 1.90 | 1.26 | 1.11 | 1.23 |
| 44 | 13.41 | 5.97 | 4.41 | 2.46 | 1.93 | 1.93 | 1.28 | 1.14 | 1.26 |
| 45 | 13.34 | 6.01 | 4.46 | 2.49 | 1.97 | 1.97 | 1.31 | 1.16 | 1.30 |
| 46 | 13.27 | 6.04 | 4.51 | 2.53 | 2.00 | 2.01 | 1.34 | 1.19 | 1.33 |
| 47 | 13.17 | 6.07 | 4.57 | 2.57 | 2.03 | 2.05 | 1.37 | 1.22 | 1.37 |
| 48 | 13.08 | 6.10 | 4.62 | 2.61 | 2.07 | 2.09 | 1.40 | 1.25 | 1.40 |
| 49 | 12.97 | 6.13 | 4.67 | 2.65 | 2.10 | 2.13 | 1.43 | 1.28 | 1.43 |
| 50 | 12.84 | 6.15 | 4.72 | 2.68 | 2.14 | 2.17 | 1.46 | 1.31 | 1.47 |
| 51 | 12.69 | 6.17 | 4.77 | 2.72 | 2.18 | 2.22 | 1.49 | 1.34 | 1.51 |
| 52 | 12.56 | 6.18 | 4.81 | 2.76 | 2.21 | 2.26 | 1.52 | 1.37 | 1.55 |

NET SINGLE PREMIUMS.

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BRITISH GOVERNMENT SICKNESS TABLES, THREE PER CENT.
MALES, 1876-1880.

| Age. | DURATION—ONE YEAR. | | | | DURATION—TWO YEARS. | | | Three Years and Upwards. | All Durations. |
|------|--------------------|---------------|---------------|--------|---------------------|---------------|--------|--------------------------|----------------|
| | Weeks, 39-43. | Weeks, 43-47. | Weeks, 47-52. | Total. | First 6 Mos. | Second 6 Mos. | Total. | | |
| 6 | .31 | .27 | .33 | 23.66 | 1.47 | 1.04 | 2.51 | 8.11 | 34.28 |
| 7 | .32 | .28 | .34 | 24.21 | 1.54 | 1.08 | 2.62 | 8.48 | 35.31 |
| 8 | .33 | .30 | .35 | 24.71 | 1.60 | 1.13 | 2.73 | 8.83 | 36.27 |
| 9 | .35 | .31 | .37 | 25.17 | 1.66 | 1.17 | 2.83 | 9.19 | 37.19 |
| 10 | .36 | .32 | .38 | 25.59 | 1.73 | 1.22 | 2.95 | 9.54 | 38.08 |
| 11 | .37 | .33 | .40 | 25.98 | 1.79 | 1.26 | 3.05 | 9.90 | 38.93 |
| 12 | .39 | .34 | .41 | 26.35 | 1.86 | 1.31 | 3.17 | 10.26 | 39.78 |
| 13 | .40 | .35 | .42 | 26.70 | 1.93 | 1.36 | 3.29 | 10.63 | 40.62 |
| 14 | .41 | .36 | .43 | 27.02 | 1.98 | 1.41 | 3.39 | 11.01 | 41.42 |
| 15 | .43 | .38 | .44 | 27.34 | 2.04 | 1.45 | 3.49 | 11.41 | 42.24 |
| 16 | .44 | .39 | .46 | 27.64 | 2.09 | 1.50 | 3.59 | 11.82 | 43.05 |
| 17 | .45 | .40 | .47 | 27.93 | 2.15 | 1.55 | 3.70 | 12.23 | 43.86 |
| 18 | .46 | .41 | .48 | 28.19 | 2.21 | 1.59 | 3.80 | 12.68 | 44.67 |
| 19 | .47 | .42 | .50 | 28.45 | 2.27 | 1.63 | 3.90 | 13.13 | 45.48 |
| 20 | .48 | .43 | .51 | 28.70 | 2.32 | 1.68 | 4.00 | 13.61 | 46.31 |
| 21 | .49 | .45 | .52 | 28.94 | 2.38 | 1.73 | 4.11 | 14.11 | 47.16 |
| 22 | .50 | .46 | .53 | 29.18 | 2.45 | 1.78 | 4.23 | 14.60 | 48.01 |
| 23 | .52 | .47 | .55 | 29.43 | 2.51 | 1.82 | 4.33 | 15.11 | 48.87 |
| 24 | .54 | .48 | .57 | 29.68 | 2.57 | 1.88 | 4.45 | 15.63 | 49.76 |
| 25 | .55 | .49 | .58 | 29.95 | 2.64 | 1.93 | 4.57 | 16.15 | 50.67 |
| 26 | .56 | .51 | .60 | 30.23 | 2.71 | 1.98 | 4.69 | 16.70 | 51.62 |
| 27 | .57 | .52 | .62 | 30.52 | 2.79 | 2.04 | 4.83 | 17.26 | 52.61 |
| 28 | .59 | .54 | .63 | 30.84 | 2.86 | 2.09 | 4.95 | 17.85 | 53.64 |
| 29 | .60 | .55 | .65 | 31.15 | 2.94 | 2.15 | 5.09 | 18.40 | 54.70 |
| 30 | .62 | .57 | .67 | 31.48 | 3.03 | 2.22 | 5.25 | 19.07 | 55.80 |
| 31 | .63 | .58 | .69 | 31.81 | 3.11 | 2.28 | 5.39 | 19.72 | 56.92 |
| 32 | .65 | .60 | .70 | 32.14 | 3.20 | 2.34 | 5.54 | 20.38 | 58.06 |
| 33 | .67 | .61 | .72 | 32.48 | 3.29 | 2.40 | 5.69 | 21.07 | 59.24 |
| 34 | .69 | .63 | .74 | 32.82 | 3.38 | 2.47 | 5.85 | 21.78 | 60.45 |
| 35 | .70 | .64 | .76 | 33.17 | 3.47 | 2.54 | 6.01 | 22.51 | 61.69 |
| 36 | .72 | .66 | .78 | 33.51 | 3.57 | 2.61 | 6.18 | 23.26 | 62.95 |
| 37 | .74 | .68 | .80 | 33.86 | 3.67 | 2.69 | 6.36 | 24.05 | 64.27 |
| 38 | .76 | .70 | .83 | 34.21 | 3.77 | 2.76 | 6.53 | 24.86 | 65.60 |
| 39 | .78 | .72 | .85 | 34.56 | 3.87 | 2.84 | 6.71 | 25.69 | 66.96 |
| 40 | .80 | .74 | .87 | 34.90 | 3.99 | 2.92 | 6.91 | 26.55 | 68.36 |
| 41 | .83 | .76 | .90 | 35.25 | 4.10 | 3.00 | 7.10 | 27.44 | 69.79 |
| 42 | .85 | .78 | .92 | 35.58 | 4.22 | 3.09 | 7.31 | 28.36 | 71.25 |
| 43 | .87 | .80 | .94 | 35.91 | 4.34 | 3.18 | 7.52 | 29.32 | 72.75 |
| 44 | .89 | .82 | .97 | 36.23 | 4.47 | 3.27 | 7.74 | 30.32 | 74.29 |
| 45 | .91 | .85 | 1.00 | 36.55 | 4.59 | 3.37 | 7.96 | 31.36 | 75.87 |
| 46 | .94 | .87 | 1.03 | 36.85 | 4.72 | 3.47 | 8.19 | 32.43 | 77.47 |
| 47 | .97 | .89 | 1.06 | 37.14 | 4.85 | 3.57 | 8.42 | 33.55 | 79.11 |
| 48 | .99 | .92 | 1.09 | 37.42 | 4.99 | 3.67 | 8.66 | 34.71 | 80.79 |
| 49 | 1.01 | .94 | 1.12 | 37.69 | 5.13 | 3.78 | 8.91 | 35.93 | 82.53 |
| 50 | 1.04 | .97 | 1.15 | 37.95 | 5.27 | 3.89 | 9.16 | 37.20 | 84.31 |
| 51 | 1.07 | .99 | 1.19 | 38.19 | 5.42 | 4.00 | 9.42 | 38.53 | 86.14 |
| 52 | 1.10 | 1.02 | 1.22 | 38.43 | 5.57 | 4.12 | 9.69 | 39.92 | 88.04 |
| 53 | 1.12 | 1.05 | 1.25 | 38.64 | 5.73 | 4.24 | 9.97 | 41.40 | 90.01 |

NET SINGLE PREMIUMS.

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BRITISH GOVERNMENT SICKNESS TABLES, THREE PER CENT.
MALES, 1876-1880.

| AGE. | DURATIONS—ONE YEAR. | | | | DURATIONS—TWO YEARS. | | | Three Years and Upwards. | All Durations. |
|------|---------------------|---------------|---------------|--------|----------------------|---------------|--------|--------------------------|----------------|
| | Weeks, 39-43. | Weeks, 43-47. | Weeks, 47-52. | Total. | First 6 Mos. | Second 6 Mos. | Total. | | |
| 53 | 1.15 | 1.07 | 1.23 | 38.84 | 5.89 | 4.36 | 10.25 | 42.95 | 92.04 |
| 54 | 1.18 | 1.10 | 1.32 | 39.04 | 6.05 | 4.49 | 10.54 | 44.59 | 94.17 |
| 55 | 1.21 | 1.13 | 1.35 | 39.23 | 6.21 | 4.62 | 10.83 | 46.32 | 96.38 |
| 56 | 1.24 | 1.16 | 1.38 | 39.41 | 6.39 | 4.76 | 11.15 | 48.14 | 98.70 |
| 57 | 1.27 | 1.19 | 1.42 | 39.59 | 6.57 | 4.90 | 11.47 | 50.05 | 101.11 |
| 58 | 1.31 | 1.22 | 1.46 | 39.76 | 6.77 | 5.03 | 11.80 | 52.04 | 103.60 |
| 59 | 1.34 | 1.25 | 1.50 | 39.88 | 6.96 | 5.18 | 12.14 | 54.13 | 106.15 |
| 60 | 1.37 | 1.29 | 1.55 | 39.96 | 7.16 | 5.33 | 12.49 | 56.31 | 108.76 |
| 61 | 1.40 | 1.31 | 1.59 | 39.96 | 7.37 | 5.49 | 12.86 | 58.61 | 111.43 |
| 62 | 1.43 | 1.34 | 1.61 | 39.88 | 7.57 | 5.65 | 13.22 | 61.05 | 114.15 |
| 63 | 1.44 | 1.36 | 1.65 | 39.70 | 7.78 | 5.81 | 13.59 | 63.64 | 116.93 |
| 64 | 1.46 | 1.39 | 1.68 | 39.42 | 7.97 | 5.97 | 13.94 | 66.36 | 119.72 |
| 65 | 1.48 | 1.40 | 1.70 | 39.02 | 8.14 | 6.12 | 14.26 | 69.22 | 122.50 |
| 66 | 1.50 | 1.41 | 1.71 | 38.49 | 8.30 | 6.23 | 14.53 | 72.12 | 125.14 |
| 67 | 1.49 | 1.41 | 1.71 | 37.83 | 8.44 | 6.31 | 14.75 | 75.03 | 127.61 |
| 68 | 1.48 | 1.40 | 1.71 | 37.00 | 8.51 | 6.37 | 14.88 | 77.85 | 129.73 |
| 69 | 1.46 | 1.39 | 1.69 | 36.00 | 8.52 | 6.41 | 14.93 | 80.57 | 131.50 |
| 70 | 1.44 | 1.37 | 1.67 | 34.85 | 8.50 | 6.39 | 14.89 | 83.24 | 132.98 |
| 71 | 1.41 | 1.34 | 1.63 | 33.60 | 8.44 | 6.35 | 14.79 | 85.87 | 134.26 |
| 72 | 1.38 | 1.32 | 1.61 | 32.27 | 8.35 | 6.30 | 14.65 | 88.59 | 135.51 |
| 73 | 1.34 | 1.27 | 1.55 | 30.91 | 8.27 | 6.22 | 14.49 | 91.49 | 136.89 |
| 74 | 1.30 | 1.24 | 1.51 | 29.52 | 8.17 | 6.17 | 14.34 | 94.64 | 138.50 |
| 75 | 1.25 | 1.20 | 1.47 | 28.11 | 8.14 | 6.08 | 14.22 | 98.05 | 140.38 |
| 76 | 1.20 | 1.16 | 1.40 | 26.67 | 8.08 | 6.03 | 14.11 | 101.66 | 142.44 |
| 77 | 1.15 | 1.11 | 1.36 | 25.09 | 7.98 | 5.98 | 13.96 | 105.41 | 144.46 |
| 78 | 1.09 | 1.05 | 1.28 | 23.29 | 7.88 | 5.84 | 13.72 | 109.07 | 146.08 |
| 79 | .98 | .95 | 1.16 | 21.27 | 7.64 | 5.68 | 13.32 | 112.53 | 147.12 |
| 80 | .89 | .86 | 1.06 | 19.10 | 7.26 | 5.54 | 12.80 | 115.85 | 147.75 |
| 81 | .78 | .75 | .92 | 16.90 | 6.81 | 5.25 | 12.06 | 119.02 | 147.98 |
| 82 | .61 | .59 | .73 | 14.73 | 6.34 | 4.86 | 11.20 | 122.02 | 147.95 |
| 83 | .48 | .47 | .60 | 12.61 | 5.74 | 4.55 | 10.29 | 124.96 | 147.86 |
| 84 | .30 | .30 | .41 | 10.48 | 5.11 | 4.24 | 9.35 | 127.90 | 147.73 |
| 85 | .33 | .32 | .42 | 8.28 | 4.32 | 4.06 | 8.38 | 130.65 | 147.31 |
| 86 | .27 | .26 | .34 | 5.90 | 3.86 | 3.50 | 7.36 | 132.80 | 146.06 |
| 87 | .11 | .10 | .14 | 3.19 | 3.14 | 3.15 | 6.29 | 134.00 | 143.48 |
| 88 | ..... | ..... | ..... | ..... | 2.58 | 2.58 | 5.16 | 133.73 | 138.89 |
| 89 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 131.69 | 131.69 |
| 90 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 121.26 | 121.26 |
| 91 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 108.75 | 108.75 |
| 92 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 96.18 | 96.18 |
| 93 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 83.98 | 83.98 |
| 94 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 72.55 | 72.55 |
| 95 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 62.04 | 62.04 |
| 96 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 52.59 | 52.59 |
| 97 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 44.26 | 44.26 |
| 98 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 37.06 | 37.06 |
| 99 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 30.88 | 30.88 |
| 100 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 25.62 | 25.62 |

CONVERSION TABLES.
INTRODUCTION.

THESE tables will enable the actuary to pass from annuities to single or annual premiums or vice versa. The method of using the same is fully described in the text of this book.

These tables were originally published in the Institute of Actuaries' Text-Book, Part II., and are reproduced here by special permission of the Institute.

For greater convenience and facility in finding such values, the actuary is referred to Orchard's Conversion Tables.

CONVERSION TABLE.

TABLE I.
SINGLE PREMIUM CONVERSION TABLE.
For finding by inspection the Value of A from that of a .

| Value of a | VALUE OF A AT VARIOUS RATES OF INTEREST. | | | | | |
|--------------------|------------------------------------------|------------|-----------|------------|-----------|-----------|
| | $i = .03$ | $i = .035$ | $i = .04$ | $i = .045$ | $i = .05$ | $i = .06$ |
| 0 | .97087 | .96618 | .96154 | .95694 | .95238 | .94340 |
| 1 | .94175 | .93237 | .92308 | .91388 | .90476 | .88679 |
| 2 | .91262 | .89855 | .88462 | .87081 | .85714 | .83019 |
| 3 | .88350 | .86473 | .84615 | .82775 | .80952 | .77358 |
| 4 | .85437 | .83092 | .80769 | .78469 | .76190 | .71638 |
| 5 | .82524 | .79710 | .76923 | .74163 | .71429 | .66038 |
| 6 | .79612 | .76329 | .73077 | .69856 | .66667 | .60377 |
| 7 | .76699 | .72947 | .69231 | .65550 | .61905 | .54717 |
| 8 | .73786 | .69565 | .65385 | .61244 | .57143 | .49056 |
| 9 | .70874 | .66184 | .61538 | .56938 | .52381 | .43396 |
| 10 | .67961 | .62802 | .57692 | .52632 | .47619 | .37736 |
| 11 | .65049 | .59420 | .53846 | .48325 | .42857 | .32075 |
| 12 | .62136 | .56039 | .50000 | .44019 | .38095 | .26415 |
| 13 | .59223 | .52657 | .46154 | .39713 | .33333 | .20755 |
| 14 | .56311 | .49275 | .42308 | .35407 | .28571 | .15094 |
| 15 | .53398 | .45894 | .38462 | .31100 | .23810 | .09434 |
| 16 | .50485 | .42512 | .34615 | .26794 | .19048 | .03774 |
| 17 | .47573 | .39130 | .30769 | .22488 | .14286 | .00000 |
| 18 | .44660 | .35749 | .26923 | .18182 | .09524 | ..... |
| 19 | .41748 | .32367 | .23077 | .13876 | .04762 | ..... |
| 20 | .38835 | .28986 | .19231 | .09569 | .00000 | ..... |
| 21 | .35922 | .25604 | .15385 | .05263 | ..... | ..... |
| 22 | .33010 | .22222 | .11538 | .00957 | ..... | ..... |
| 23 | .30097 | .18841 | .07602 | .00000 | ..... | ..... |
| 24 | .27184 | .15459 | .03846 | ..... | ..... | ..... |
| 25 | .24272 | .12077 | .00000 | ..... | ..... | ..... |
| 26 | .21359 | .08696 | ..... | ..... | ..... | ..... |
| 27 | .18447 | .05314 | ..... | ..... | ..... | ..... |
| 28 | .15534 | .01932 | ..... | ..... | ..... | ..... |
| 29 | .12621 | .00000 | ..... | ..... | ..... | ..... |
| 30 | .09709 | ..... | ..... | ..... | ..... | ..... |

TABLE II.
SINGLE PREMIUM CONVERSION TABLE.
Table of Differences.

| Difference of <i>s</i> | DIFFERENCE OF A (SUBTRACTIVE). | | | | | |
|------------------------------|--------------------------------|-----------------|----------------|-----------------|----------------|----------------|
| | <i>i</i> = .03 | <i>i</i> = .035 | <i>i</i> = .04 | <i>i</i> = .045 | <i>i</i> = .05 | <i>i</i> = .06 |
| .1 | .00291 | .00338 | .00385 | .00431 | .00476 | .00566 |
| .2 | .00583 | .00676 | .00769 | .00861 | .00952 | .01132 |
| .3 | .00874 | .01015 | .01154 | .01292 | .01429 | .01698 |
| .4 | .01165 | .01353 | .01538 | .01722 | .01905 | .02264 |
| .5 | .01456 | .01691 | .01923 | .02153 | .02381 | .02830 |
| .6 | .01748 | .02029 | .02308 | .02584 | .02857 | .03396 |
| .7 | .02039 | .02367 | .02692 | .03014 | .03333 | .03962 |
| .8 | .02330 | .02705 | .03077 | .03445 | .03810 | .04528 |
| .9 | .02621 | .03044 | .03462 | .03876 | .04286 | .05094 |
| .01 | .00029 | .00034 | .00038 | .00043 | .00048 | .00057 |
| .02 | .00058 | .00068 | .00077 | .00086 | .00095 | .00113 |
| .03 | .00087 | .00101 | .00115 | .00129 | .00143 | .00170 |
| .04 | .00117 | .00135 | .00154 | .00172 | .00190 | .00226 |
| .05 | .00146 | .00169 | .00192 | .00215 | .00238 | .00283 |
| .06 | .00175 | .00203 | .00231 | .00258 | .00286 | .00340 |
| .07 | .00204 | .00237 | .00269 | .00301 | .00333 | .00396 |
| .08 | .00233 | .00271 | .00308 | .00344 | .00381 | .00453 |
| .09 | .00262 | .00304 | .00346 | .00388 | .00429 | .00509 |
| .001 | .00003 | .00003 | .00004 | .00004 | .00005 | .00006 |
| .002 | .00006 | .00007 | .00008 | .00009 | .00010 | .00011 |
| .003 | .00009 | .00010 | .00012 | .00013 | .00014 | .00017 |
| .004 | .00012 | .00014 | .00015 | .00017 | .00019 | .00023 |
| .005 | .00015 | .00017 | .00019 | .00022 | .00024 | .00028 |
| .006 | .00017 | .00020 | .00023 | .00026 | .00029 | .00034 |
| .007 | .00020 | .00024 | .00027 | .00030 | .00033 | .00040 |
| .008 | .00023 | .00027 | .00031 | .00034 | .00038 | .00045 |
| .009 | .00026 | .00030 | .00035 | .00039 | .00043 | .00051 |

CONVERSION TABLE.

TABLE III.
ANNUAL PREMIUM CONVERSION TABLE.
For finding by inspection the Value of P from that of a .

| Value of a | VALUE OF P AT VARIOUS RATES OF INTEREST. | | | | | |
|--------------|------------------------------------------|------------|-----------|------------|-----------|-----------|
| | $i = .03$ | $i = .035$ | $i = .04$ | $i = .045$ | $i = .05$ | $i = .06$ |
| 0 | .97087 | .96618 | .96154 | .95694 | .95238 | .94340 |
| 1 | .47087 | .46618 | .46154 | .45694 | .45238 | .44340 |
| 2 | .30421 | .29952 | .29487 | .29027 | .28571 | .27673 |
| 3 | .22087 | .21618 | .21154 | .20694 | .20238 | .19340 |
| 4 | .17087 | .16618 | .16154 | .15694 | .15238 | .14340 |
| 5 | .13754 | .13285 | .12821 | .12361 | .11905 | .11006 |
| 6 | .11373 | .10904 | .10440 | .09980 | .09524 | .08625 |
| 7 | .09587 | .09118 | .08654 | .08194 | .07738 | .06840 |
| 8 | .08199 | .07730 | .07265 | .06805 | .06349 | .05451 |
| 9 | .07087 | .06618 | .06154 | .05694 | .05238 | .04340 |
| 10 | .06178 | .05709 | .05245 | .04785 | .04329 | .03431 |
| 11 | .05421 | .04952 | .04487 | .04027 | .03571 | .02673 |
| 12 | .04780 | .04311 | .03846 | .03386 | .02930 | .02032 |
| 13 | .04230 | .03761 | .03297 | .02837 | .02381 | .01483 |
| 14 | .03754 | .03285 | .02821 | .02361 | .01905 | .01006 |
| 15 | .03337 | .02868 | .02404 | .01944 | .01488 | .00590 |
| 16 | .02970 | .02501 | .02036 | .01576 | .01121 | .00222 |
| 17 | .02643 | .02174 | .01709 | .01249 | .00794 | .00000 |
| 18 | .02351 | .01882 | .01417 | .00957 | .00501 | ..... |
| 19 | .02087 | .01618 | .01154 | .00694 | .00238 | ..... |
| 20 | .01849 | .01380 | .00916 | .00456 | .00000 | ..... |
| 21 | .01633 | .01164 | .00699 | .00239 | ..... | ..... |
| 22 | .01435 | .00966 | .00502 | .00042 | ..... | ..... |
| 23 | .01254 | .00785 | .00321 | .00000 | ..... | ..... |
| 24 | .01087 | .00618 | .00154 | ..... | ..... | ..... |
| 25 | .00934 | .00465 | .00000 | ..... | ..... | ..... |
| 26 | .00791 | .00322 | ..... | ..... | ..... | ..... |
| 27 | .00659 | .00190 | ..... | ..... | ..... | ..... |
| 28 | .00536 | .00067 | ..... | ..... | ..... | ..... |
| 29 | .00421 | .00000 | ..... | ..... | ..... | ..... |
| 30 | .00313 | ..... | ..... | ..... | ..... | ..... |

TABLE IV.
ANNUAL PREMIUM CONVERSION TABLE.
Table of Differences.

| Value of a | DIFFERENCE OF P (SUBTRACTIVE). | | | | | | | | |
|--------------|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | $\Delta a = .1$ | $\Delta a = .2$ | $\Delta a = .3$ | $\Delta a = .4$ | $\Delta a = .5$ | $\Delta a = .6$ | $\Delta a = .7$ | $\Delta a = .8$ | $\Delta a = .9$ |
| 0 | .09091 | .16667 | .22077 | .28571 | .33333 | .37500 | .41176 | .44444 | .47368 |
| 1 | .02381 | .04545 | .06522 | .08333 | .10000 | .11538 | .12963 | .14286 | .15517 |
| 2 | .01075 | .02083 | .03030 | .03921 | .04762 | .05555 | .06306 | .07017 | .07692 |
| 3 | .00610 | .01190 | .01744 | .02273 | .02778 | .03261 | .03723 | .04167 | .04592 |
| 4 | .00392 | .00769 | .01132 | .01481 | .01818 | .02143 | .02456 | .02759 | .03051 |
| 5 | .00274 | .00538 | .00794 | .01042 | .01282 | .01515 | .01742 | .01961 | .02174 |
| 6 | .00201 | .00397 | .00587 | .00772 | .00953 | .01128 | .01299 | .01465 | .01628 |
| 7 | .00154 | .00305 | .00452 | .00595 | .00735 | .00872 | .01006 | .01136 | .01264 |
| 8 | .00122 | .00241 | .00358 | .00473 | .00585 | .00694 | .00802 | .00907 | .01010 |
| 9 | .00099 | .00196 | .00291 | .00385 | .00476 | .00566 | .00654 | .00741 | .00826 |
| 10 | .00082 | .00162 | .00241 | .00319 | .00395 | .00470 | .00544 | .00616 | .00688 |
| 11 | .00068 | .00136 | .00203 | .00268 | .00333 | .00396 | .00459 | .00520 | .00581 |
| 12 | .00058 | .00116 | .00173 | .00229 | .00285 | .00339 | .00393 | .00446 | .00498 |
| 13 | .00051 | .00101 | .00150 | .00199 | .00246 | .00294 | .00340 | .00386 | .00432 |
| 14 | .00044 | .00088 | .00131 | .00173 | .00215 | .00257 | .00298 | .00338 | .00378 |
| 15 | .00039 | .00077 | .00115 | .00152 | .00189 | .00226 | .00262 | .00298 | .00333 |
| 16 | .00034 | .00068 | .00102 | .00135 | .00168 | .00200 | .00232 | .00264 | .00295 |
| 17 | .00031 | .00061 | .00091 | .00121 | .00151 | .00180 | .00208 | .00237 | .00265 |
| 18 | .00027 | .00055 | .00082 | .00108 | .00135 | .00161 | .00187 | .00212 | .00236 |
| 19 | .00025 | .00049 | .00074 | .00098 | .00122 | .00146 | .00169 | .00192 | .00215 |
| 20 | .00023 | .00045 | .00067 | .00089 | .00111 | .00132 | .00154 | .00175 | .00196 |
| 21 | .00021 | .00041 | .00062 | .00082 | .00102 | .00121 | .00141 | .00160 | .00179 |
| 22 | .00019 | .00038 | .00056 | .00074 | .00093 | .00111 | .00129 | .00146 | .00164 |
| 23 | .00018 | .00035 | .00052 | .00069 | .00085 | .00102 | .00118 | .00135 | .00151 |
| 24 | .00016 | .00032 | .00047 | .00063 | .00078 | .00094 | .00109 | .00124 | .00139 |
| 25 | .00015 | .00029 | .00044 | .00058 | .00072 | .00087 | .00101 | .00115 | .00128 |
| 26 | .00014 | .00027 | .00041 | .00054 | .00068 | .00081 | .00094 | .00107 | .00120 |
| 27 | .00012 | .00025 | .00037 | .00050 | .00062 | .00074 | .00087 | .00099 | .00111 |
| 28 | .00012 | .00023 | .00035 | .00047 | .00058 | .00070 | .00081 | .00092 | .00103 |
| 29 | .00011 | .00022 | .00033 | .00043 | .00054 | .00065 | .00076 | .00086 | .00097 |
| 30 | .00010 | .00021 | .00031 | .00041 | .00051 | .00061 | .00071 | .00081 | .00091 |

FARR'S HEALTHY MALE LIFE TABLE.

INTRODUCTION.

The Healthy Male Life Table, which bears the name of Dr. William Farr, the late Registrar-General of Great Britain, also the author of Census Tables, known as Farr's No. 1, Farr's No. 2 and Farr's No. 3, represents the mortality in the 63 districts of England in which the mortality rate did not exceed 17 per 1000 in the census returns. It was first published in the *Journal of the Institute of Actuaries*, Vol. IX., in 1860.

The commutation tables at 4 per cent. interest were computed by Mr. D. J. McG. McKenzie, of the Government Life Insurance Department of New Zealand, and published in *Transactions of the Actuarial Society of America*, Vol. III.

The modified values of q_x by this table were prepared by the Committee on Specialized Mortality Investigation of the Actuarial Society of America as a standard by which to measure the variation in the ultimate mortality, i. e., after the fifth year of insurance.

FARR'S HEALTHY MALES MORTALITY TABLE. 311

MORTALITY TABLE.

| Age | Living l _x | Dying d _x | PROBABILITY OF | | Age | Living l _x | Dying d _x | PROBABILITY OF | |
|-----|--------------------------|-------------------------|--------------------------|-------------------------|-----|--------------------------|-------------------------|--------------------------|-------------------------|
| | | | Living p _x | Dying q _x | | | | Living p _x | Dying q _x |
| 0 | 51125 | 5767 | .88720 | .11280 | 53 | 28095 | 420 | .98505 | .01495 |
| 1 | 45358 | 1591 | .96492 | .03508 | 54 | 27675 | 435 | .98428 | .01572 |
| 2 | 43767 | 953 | .97823 | .02177 | 55 | 27240 | 451 | .98344 | .01656 |
| 3 | 42814 | 661 | .98456 | .01544 | 56 | 26789 | 467 | .98257 | .01743 |
| 4 | 42153 | 532 | .98738 | .01262 | 57 | 26322 | 483 | .98165 | .01835 |
| 5 | 41621 | 427 | .98974 | .01026 | 58 | 25839 | 501 | .98061 | .01939 |
| 6 | 41194 | 341 | .99172 | .00828 | 59 | 25338 | 522 | .97861 | .02139 |
| 7 | 40853 | 275 | .99327 | .00673 | 60 | 24796 | 587 | .97633 | .02367 |
| 8 | 40578 | 223 | .99450 | .00550 | 61 | 24209 | 631 | .97394 | .02606 |
| 9 | 40355 | 186 | .99539 | .00461 | 62 | 23578 | 672 | .97150 | .02850 |
| 10 | 40169 | 161 | .99599 | .00401 | 63 | 22906 | 712 | .96892 | .03108 |
| 11 | 40008 | 146 | .99635 | .00365 | 64 | 22194 | 752 | .96612 | .03388 |
| 12 | 39862 | 142 | .99644 | .00356 | 65 | 21442 | 789 | .96320 | .03680 |
| 13 | 39720 | 144 | .99638 | .00362 | 66 | 20653 | 826 | .96001 | .03999 |
| 14 | 39576 | 154 | .99611 | .00389 | 67 | 19827 | 861 | .95657 | .04343 |
| 15 | 39422 | 168 | .99574 | .00426 | 68 | 18966 | 895 | .95281 | .04719 |
| 16 | 39254 | 186 | .99526 | .00474 | 69 | 18071 | 926 | .94876 | .05124 |
| 17 | 39068 | 205 | .99475 | .00525 | 70 | 17145 | 954 | .94436 | .05564 |
| 18 | 38863 | 227 | .99416 | .00584 | 71 | 16191 | 978 | .93960 | .06040 |
| 19 | 38636 | 248 | .99358 | .00642 | 72 | 15213 | 999 | .93433 | .06557 |
| 20 | 38388 | 267 | .99305 | .00695 | 73 | 14214 | 1013 | .92873 | .07127 |
| 21 | 38121 | 272 | .99286 | .00714 | 74 | 13201 | 1022 | .92285 | .07742 |
| 22 | 37849 | 277 | .99268 | .00732 | 75 | 12179 | 1023 | .91600 | .08400 |
| 23 | 37572 | 281 | .99252 | .00748 | 76 | 11156 | 1016 | .90893 | .09107 |
| 24 | 37291 | 284 | .99238 | .00762 | 77 | 10140 | 1000 | .90138 | .09862 |
| 25 | 37007 | 287 | .99225 | .00775 | 78 | 9140 | 977 | .89311 | .10689 |
| 26 | 36720 | 288 | .99216 | .00784 | 79 | 8163 | 943 | .88448 | .11552 |
| 27 | 36432 | 289 | .99207 | .00793 | 80 | 7220 | 902 | .87557 | .12493 |
| 28 | 36143 | 290 | .99198 | .00802 | 81 | 6318 | 851 | .86630 | .13470 |
| 29 | 35853 | 291 | .99188 | .00812 | 82 | 5467 | 794 | .85477 | .14523 |
| 30 | 35562 | 292 | .99179 | .00821 | 83 | 4673 | 731 | .84357 | .15643 |
| 31 | 35270 | 292 | .99172 | .00828 | 84 | 3942 | 662 | .83206 | .16794 |
| 32 | 34978 | 292 | .99165 | .00835 | 85 | 3280 | 591 | .81982 | .18018 |
| 33 | 34686 | 293 | .99155 | .00845 | 86 | 2689 | 520 | .80662 | .19338 |
| 34 | 34393 | 293 | .99148 | .00852 | 87 | 2169 | 448 | .79345 | .20655 |
| 35 | 34100 | 295 | .99135 | .00865 | 88 | 1721 | 380 | .77920 | .22080 |
| 36 | 33805 | 296 | .99124 | .00876 | 89 | 1341 | 316 | .76435 | .23565 |
| 37 | 33509 | 298 | .99111 | .00889 | 90 | 1025 | 257 | .74927 | .25073 |
| 38 | 33211 | 300 | .99097 | .00903 | 91 | 768 | 204 | .73438 | .26562 |
| 39 | 32911 | 302 | .99082 | .00918 | 92 | 564 | 159 | .71809 | .28191 |
| 40 | 32609 | 306 | .99062 | .00938 | 93 | 405 | 122 | .69876 | .30124 |
| 41 | 32303 | 310 | .99040 | .00960 | 94 | 283 | 89 | .68551 | .31449 |
| 42 | 31993 | 315 | .99015 | .00985 | 95 | 194 | 65 | .66495 | .33505 |
| 43 | 31678 | 320 | .98990 | .01010 | 96 | 129 | 45 | .65116 | .34884 |
| 44 | 31358 | 326 | .98961 | .01039 | 97 | 84 | 31 | .63095 | .36905 |
| 45 | 31032 | 334 | .98924 | .01076 | 98 | 53 | 21 | .60377 | .39623 |
| 46 | 30698 | 341 | .98889 | .01111 | 99 | 32 | 13 | .59375 | .40625 |
| 47 | 30357 | 350 | .98847 | .01153 | 100 | 19 | 8 | .57895 | .42105 |
| 48 | 30007 | 360 | .98800 | .01200 | 101 | 11 | 5 | .55455 | .45455 |
| 49 | 29647 | 370 | .98752 | .01248 | 102 | 6 | 3 | .50000 | .50000 |
| 50 | 29277 | 381 | .98699 | .01301 | 103 | 3 | 1 | .66667 | .33333 |
| 51 | 28896 | 394 | .98636 | .01364 | 104 | 2 | 1 | .50000 | .50000 |
| 52 | 28502 | 407 | .98572 | .01428 | 105 | 1 | 1 | .00000 | 1.00000 |

312 FARR'S HEALTHY MALES MORTALITY TABLE.

COMMUTATION COLUMNS.
FOUR PER CENT.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 51125.0 | 936731. | 18044931. | 5545.19 | 15096.9 | 242695. |
| 1 | 43613.4 | 885606. | 17108200. | 1470.97 | 9551.69 | 227598. |
| 2 | 40465.0 | 841992. | 16222594. | 847.21 | 8080.72 | 218046. |
| 3 | 38061.5 | 801527. | 15380602. | 565.02 | 7233.51 | 209966. |
| 4 | 36032.5 | 763466. | 14579075. | 437.27 | 6668.48 | 202732. |
| 5 | 34209.5 | 727433. | 13815609. | 337.46 | 6231.22 | 196064. |
| 6 | 32556.2 | 693224. | 13088176. | 259.13 | 5893.75 | 189832. |
| 7 | 31044.9 | 660668. | 12394952. | 200.94 | 5634.62 | 183939. |
| 8 | 29649.9 | 629623. | 11734285. | 156.68 | 5433.68 | 178304. |
| 9 | 28352.9 | 599973. | 11104662. | 125.66 | 5277.01 | 172870. |
| 10 | 27136.7 | 571620. | 10504690. | 104.58 | 5151.35 | 167593. |
| 11 | 25988.4 | 544483. | 9933070. | 91.191 | 5046.77 | 162442. |
| 12 | 24897.7 | 518495. | 9388587. | 85.281 | 4955.58 | 157395. |
| 13 | 23854.8 | 493597. | 8870092. | 83.156 | 4870.30 | 152440. |
| 14 | 22854.2 | 469742. | 8370495. | 85.511 | 4787.14 | 147569. |
| 15 | 21889.6 | 446888. | 7906753. | 89.696 | 4701.63 | 142782. |
| 16 | 20958.0 | 424998. | 7459865. | 95.487 | 4611.93 | 138081. |
| 17 | 20056.5 | 404040. | 7034866. | 101.19 | 4516.45 | 133469. |
| 18 | 19183.9 | 383984. | 6630826. | 107.74 | 4415.25 | 128952. |
| 19 | 18338.2 | 364800. | 6246842. | 113.18 | 4307.51 | 124537. |
| 20 | 17519.8 | 346462. | 5882042. | 117.17 | 4194.32 | 120229. |
| 21 | 16728.8 | 328942. | 5535580. | 114.77 | 4077.16 | 116035. |
| 22 | 15970.6 | 312213. | 5206638. | 112.39 | 3962.38 | 111958. |
| 23 | 15243.9 | 296243. | 4894425. | 109.62 | 3850.00 | 107966. |
| 24 | 14548.0 | 280999. | 4598183. | 106.53 | 3740.37 | 104146. |
| 25 | 13882.0 | 266451. | 4317184. | 103.52 | 3633.84 | 100405. |
| 26 | 13244.5 | 252569. | 4050733. | 99.883 | 3530.32 | 96771.3 |
| 27 | 12635.2 | 239324. | 3798164. | 96.375 | 3430.44 | 93241.0 |
| 28 | 12052.9 | 226689. | 3558840. | 92.989 | 3334.06 | 89810.6 |
| 29 | 11496.3 | 214636. | 3332151. | 89.721 | 3241.07 | 86476.5 |
| 30 | 10964.4 | 203140. | 3117515. | 86.566 | 3151.35 | 83235.4 |
| 31 | 10456.1 | 192175. | 2914375. | 83.237 | 3064.79 | 80084.1 |
| 32 | 9970.75 | 181719. | 2722200. | 80.035 | 2981.55 | 77019.3 |
| 33 | 9507.23 | 171749. | 2540481. | 77.221 | 2901.52 | 74037.8 |
| 34 | 9064.34 | 162241. | 2368732. | 74.251 | 2824.29 | 71136.2 |
| 35 | 8641.46 | 153177. | 2206491. | 71.882 | 2750.04 | 68311.9 |
| 36 | 8237.22 | 144536. | 2053314. | 69.352 | 2678.16 | 65561.9 |
| 37 | 7851.94 | 136298. | 1908778. | 67.135 | 2608.81 | 62883.7 |
| 38 | 7481.95 | 128447. | 1772480. | 64.986 | 2541.67 | 60274.9 |
| 39 | 7129.20 | 120965. | 1644033. | 62.903 | 2476.69 | 57733.3 |
| 40 | 6792.09 | 113836. | 1523067. | 61.285 | 2413.79 | 55256.6 |
| 41 | 6469.59 | 107044. | 1409231. | 59.698 | 2352.50 | 52842.8 |
| 42 | 6161.06 | 100574. | 1302167. | 58.328 | 2292.80 | 50490.3 |
| 43 | 5865.76 | 94413.4 | 1201613. | 56.975 | 2234.47 | 48197.5 |
| 44 | 5583.18 | 88547.6 | 1107199. | 55.811 | 2177.50 | 45963.0 |
| 45 | 5312.64 | 82964.5 | 1018652. | 54.981 | 2121.69 | 43785.5 |
| 46 | 5053.31 | 77651.8 | 935687.1 | 53.974 | 2066.71 | 41663.8 |
| 47 | 4804.99 | 72598.5 | 858035.3 | 53.268 | 2012.73 | 39597.1 |
| 48 | 4566.91 | 67793.5 | 785436.8 | 52.683 | 1959.47 | 37584.4 |
| 49 | 4338.57 | 63226.6 | 717043.3 | 52.064 | 1906.78 | 35624.9 |
| 50 | 4119.65 | 58888.0 | 654416.7 | 51.550 | 1854.72 | 33718.1 |
| 51 | 3909.66 | 54768.4 | 595528.6 | 51.258 | 1803.17 | 31863.4 |
| 52 | 3708.01 | 50858.7 | 540760.3 | 50.913 | 1751.91 | 30060.2 |

FARR'S HEALTHY MALES MORTALITY TABLE. 313

COMMUTATION COLUMNS.
FOUR PER CENT.—Continued.

| Age. | D _x | N _x | S _x | C _x | M _x | R _x |
|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 53 | 3514.49 | 47150.7 | 489901.5 | 50.518 | 1701.00 | 28308.3 |
| 54 | 3328.80 | 43636.2 | 442750.8 | 50.310 | 1650.48 | 26607.3 |
| 55 | 3150.45 | 40307.4 | 399114.6 | 50.155 | 1600.17 | 24956.9 |
| 56 | 2979.13 | 37157.0 | 358807.2 | 49.936 | 1550.02 | 23356.7 |
| 57 | 2814.61 | 34177.8 | 321650.2 | 49.661 | 1500.08 | 21806.7 |
| 58 | 2656.70 | 31363.2 | 287472.4 | 49.530 | 1450.42 | 20306.6 |
| 59 | 2504.98 | 28706.5 | 256109.2 | 51.523 | 1400.89 | 18856.2 |
| 60 | 2357.12 | 26201.6 | 227402.6 | 53.654 | 1349.37 | 17455.3 |
| 61 | 2212.81 | 23844.4 | 201201.1 | 55.458 | 1295.71 | 16105.9 |
| 62 | 2072.24 | 21631.6 | 177356.6 | 56.790 | 1240.25 | 14810.2 |
| 63 | 1935.75 | 19559.4 | 155725.0 | 57.856 | 1183.46 | 13570.0 |
| 64 | 1803.44 | 17623.5 | 136165.6 | 58.756 | 1125.61 | 12386.5 |
| 65 | 1675.32 | 15820.2 | 118542.0 | 59.276 | 1066.85 | 11260.9 |
| 66 | 1551.01 | 14144.9 | 102721.8 | 59.669 | 1007.58 | 10191.0 |
| 67 | 1432.26 | 12593.3 | 88576.95 | 59.805 | 947.908 | 9186.45 |
| 68 | 1317.37 | 11161.0 | 75983.69 | 59.775 | 888.103 | 8238.54 |
| 69 | 1206.93 | 9843.63 | 64822.69 | 59.467 | 828.328 | 7350.44 |
| 70 | 1101.04 | 8636.70 | 54979.06 | 58.909 | 768.861 | 6522.11 |
| 71 | 999.786 | 7535.66 | 46342.36 | 58.068 | 709.952 | 5753.25 |
| 72 | 903.264 | 6535.87 | 38806.70 | 57.034 | 651.884 | 5043.30 |
| 73 | 811.488 | 5632.61 | 32270.83 | 55.609 | 594.850 | 4391.41 |
| 74 | 724.670 | 4821.12 | 26638.23 | 53.945 | 539.242 | 3796.56 |
| 75 | 642.853 | 4096.45 | 21817.11 | 51.921 | 485.297 | 3257.32 |
| 76 | 566.206 | 3453.59 | 17720.76 | 49.582 | 433.376 | 2772.03 |
| 77 | 494.847 | 2887.39 | 14267.17 | 46.924 | 383.794 | 2338.65 |
| 78 | 428.890 | 2392.54 | 11379.78 | 44.082 | 336.860 | 1954.86 |
| 79 | 368.312 | 1963.65 | 8987.239 | 40.912 | 292.787 | 1617.99 |
| 80 | 313.235 | 1595.34 | 7023.588 | 37.628 | 251.876 | 1325.20 |
| 81 | 263.560 | 1282.10 | 5428.249 | 34.135 | 214.248 | 1073.32 |
| 82 | 219.288 | 1018.54 | 4146.145 | 30.623 | 180.113 | 859.076 |
| 83 | 180.231 | 799.256 | 3127.601 | 27.109 | 149.490 | 678.963 |
| 84 | 146.189 | 619.025 | 2328.345 | 23.606 | 122.381 | 529.473 |
| 85 | 116.961 | 472.836 | 1709.320 | 20.264 | 98.7747 | 407.092 |
| 86 | 92.1984 | 355.875 | 1236.484 | 17.144 | 78.5109 | 308.317 |
| 87 | 71.5088 | 263.676 | 880.6088 | 14.202 | 61.3673 | 229.806 |
| 88 | 54.5566 | 192.168 | 616.9324 | 11.583 | 47.1655 | 168.439 |
| 89 | 40.8754 | 137.611 | 424.7648 | 9.2616 | 35.5826 | 121.274 |
| 90 | 30.0417 | 96.7356 | 287.1538 | 7.2427 | 26.3210 | 85.6911 |
| 91 | 21.6435 | 66.6939 | 190.4182 | 5.5270 | 19.0783 | 59.3701 |
| 92 | 15.2831 | 45.0504 | 123.7243 | 4.1428 | 13.5504 | 40.2917 |
| 93 | 10.5525 | 29.7673 | 78.67386 | 3.0565 | 9.4076 | 26.7413 |
| 94 | 7.0901 | 19.2148 | 48.90656 | 2.1440 | 6.3511 | 17.3338 |
| 95 | 4.6734 | 12.1247 | 29.69172 | 1.5056 | 4.2071 | 10.9827 |
| 96 | 2.9881 | 7.4513 | 17.56698 | 1.0023 | 2.7015 | 6.7756 |
| 97 | 1.8709 | 4.4633 | 10.11566 | .6639 | 1.6992 | 4.0742 |
| 98 | 1.1350 | 2.5924 | 5.65240 | .4324 | 1.0353 | 2.3750 |
| 99 | .6589 | 1.4573 | 3.06002 | .2574 | .6029 | 1.3396 |
| 100 | .3762 | .79839 | 1.60268 | .1523 | .3455 | .7367 |
| 101 | .2094 | .42219 | .80429 | .0915 | .1932 | .3913 |
| 102 | .1098 | .21277 | .38210 | .0528 | .1017 | .1981 |
| 103 | .0528 | .10293 | .16933 | .0169 | .0488 | .0964 |
| 104 | .0339 | .05012 | .06640 | .0163 | .0319 | .0476 |
| 105 | .0163 | .01627 | .01627 | .0156 | .0156 | .0156 |

314 FARR'S HEALTHY MALES MORTALITY TABLE.

MORTALITY TABLE.

| AGE. | FARR'S TABLE. | MODIFIED TABLE. | AGE. | FARR'S TABLE. | MODIFIED TABLE. |
|------|--------------------------------|--------------------------------|------|--------------------------------|--------------------------------|
| | Probability of Dying. q_x | Probability of Dying. q_x | | Probability of Dying. q_x | Probability of Dying. q_x |
| 15 | .00426 | .00692 | 60 | .02367 | .02434 |
| 16 | .00474 | .00696 | 61 | .02606 | .02615 |
| 17 | .00525 | .00702 | 62 | .02850 | .02850 |
| 18 | .00584 | .00706 | 63 | .03108 | .03108 |
| 19 | .00642 | .00711 | 64 | .03388 | .03388 |
| 20 | .00695 | .00717 | 65 | .03680 | .03680 |
| 21 | .00714 | .00725 | 66 | .03999 | .03999 |
| 22 | .00732 | .00732 | 67 | .04343 | .04343 |
| 23 | .00748 | .00748 | 68 | .04719 | .04719 |
| 24 | .00762 | .00762 | 69 | .05124 | .05124 |
| 25 | .00775 | .00775 | 70 | .05564 | .05564 |
| 26 | .00784 | .00784 | 71 | .06040 | .06040 |
| 27 | .00793 | .00793 | 72 | .06567 | .06567 |
| 28 | .00802 | .00802 | 73 | .07127 | .07127 |
| 29 | .00812 | .00812 | 74 | .07742 | .07742 |
| 30 | .00821 | .00821 | 75 | .08400 | .08400 |
| 31 | .00828 | .00828 | 76 | .09107 | .09107 |
| 32 | .00835 | .00835 | 77 | .09862 | .09862 |
| 33 | .00845 | .00845 | 78 | .10689 | .10689 |
| 34 | .00852 | .00852 | 79 | .11552 | .11552 |
| 35 | .00865 | .00865 | 80 | .12493 | .12493 |
| 36 | .00876 | .00876 | 81 | .13470 | .13470 |
| 37 | .00889 | .00889 | 82 | .14523 | .14523 |
| 38 | .00903 | .00903 | 83 | .15643 | .15643 |
| 39 | .00918 | .00918 | 84 | .16794 | .16794 |
| 40 | .00938 | .00938 | 85 | .18018 | .18018 |
| 41 | .00960 | .00960 | 86 | .19338 | .19338 |
| 42 | .00985 | .00985 | 87 | .20655 | .20655 |
| 43 | .01010 | .01010 | 88 | .22080 | .22080 |
| 44 | .01039 | .01039 | 89 | .23565 | .23565 |
| 45 | .01076 | .01076 | 90 | .25073 | .25073 |
| 46 | .01111 | .01111 | 91 | .26562 | .26562 |
| 47 | .01153 | .01153 | 92 | .28191 | .28191 |
| 48 | .01200 | .01200 | 93 | .30124 | .30124 |
| 49 | .01248 | .01248 | 94 | .31449 | .31449 |
| 50 | .01301 | .01301 | 95 | .33505 | .33505 |
| 51 | .01364 | .01364 | 96 | .34884 | .34884 |
| 52 | .01428 | .01443 | 97 | .36905 | .36905 |
| 53 | .01495 | .01533 | 98 | .39623 | .39623 |
| 54 | .01572 | .01630 | 99 | .40625 | .40625 |
| 55 | .01656 | .01736 | 100 | .42105 | .42105 |
| 56 | .01743 | .01852 | 101 | .45455 | .45455 |
| 57 | .01835 | .01979 | 102 | .50000 | .50000 |
| 58 | .01939 | .02118 | 103 | .33333 | .33333 |
| 59 | .02139 | .02268 | 104 | .50000 | .50000 |
| | | | 105 | 1.00000 | 1.00000 |

McCLINTOCK'S ANNUITANTS' MORTALITY TABLES.

INTRODUCTION.

This mortality table was prepared by Emory McClintock, Actuary of the Mutual Life Insurance Company of New York, and published in the Transactions of the Actuarial Society, Vol. V.

Both tables are graduated by Makeham's first law and with the common value, $\log. c = .04$. In consequence, equal age formulæ may be applied for all combinations.

The commutation columns were computed by Wendell M. Strong, of the actuarial force of the Mutual Life Insurance Company, and were published in the Transactions of the Actuarial Society of America, Vol. VII.

These tables have been adopted by the Insurance Department of New York as its standard, and the Department has published a very complete set of one life, joint life and survivorship annuity values at $3\frac{1}{2}$ per cent. interest.

MALE MORTALITY TABLE.

| Age. | Living l_x | Dying d_x | PROBABILITIES OF | | Force of Mortality μ_x |
|------|-----------------|----------------|------------------|----------------|----------------------------------|
| | | | Living p_x | Dying q_x | |
| 10 | 1000000 | 7542 | .99245 | .00755 | .00757 |
| 11 | 992458 | 7510 | .99243 | .00757 | .00758 |
| 12 | 984948 | 7472 | .99241 | .00759 | .00761 |
| 13 | 977476 | 7439 | .99239 | .00761 | .00763 |
| 14 | 970037 | 7406 | .99236 | .00764 | .00765 |
| 15 | 962631 | 7378 | .99234 | .00766 | .00768 |
| 16 | 955253 | 7351 | .99230 | .00770 | .00771 |
| 17 | 947902 | 7326 | .99227 | .00773 | .00774 |
| 18 | 940576 | 7306 | .99223 | .00777 | .00778 |
| 19 | 933270 | 7286 | .99219 | .00781 | .00782 |
| 20 | 925984 | 7272 | .99215 | .00785 | .00786 |
| 21 | 918712 | 7260 | .99210 | .00790 | .00791 |
| 22 | 911452 | 7252 | .99204 | .00796 | .00796 |
| 23 | 904200 | 7247 | .99198 | .00802 | .00802 |
| 24 | 896953 | 7248 | .99192 | .00808 | .00808 |
| 25 | 889705 | 7253 | .99185 | .00815 | .00815 |
| 26 | 882452 | 7262 | .99177 | .00823 | .00823 |
| 27 | 875190 | 7278 | .99168 | .00832 | .00831 |
| 28 | 867912 | 7299 | .99159 | .00841 | .00840 |
| 29 | 860613 | 7326 | .99149 | .00851 | .00850 |
| 30 | 853287 | 7360 | .99137 | .00863 | .00861 |
| 31 | 845927 | 7401 | .99125 | .00875 | .00873 |
| 32 | 838526 | 7451 | .99111 | .00889 | .00886 |
| 33 | 831075 | 7508 | .99097 | .00903 | .00900 |
| 34 | 823567 | 7575 | .99080 | .00920 | .00916 |
| 35 | 815992 | 7651 | .99063 | .00937 | .00933 |
| 36 | 808341 | 7738 | .99043 | .00957 | .00952 |
| 37 | 800603 | 7835 | .99022 | .00978 | .00973 |
| 38 | 792768 | 7946 | .98998 | .01002 | .00995 |
| 39 | 784822 | 8069 | .98972 | .01028 | .01020 |
| 40 | 776753 | 8206 | .98944 | .01056 | .01047 |
| 41 | 768547 | 8358 | .98912 | .01088 | .01077 |
| 42 | 760189 | 8526 | .98878 | .01122 | .01110 |
| 43 | 751663 | 8710 | .98842 | .01158 | .01146 |
| 44 | 742953 | 8913 | .98801 | .01199 | .01186 |
| 45 | 734040 | 9135 | .98755 | .01245 | .01229 |
| 46 | 724905 | 9378 | .98706 | .01294 | .01277 |
| 47 | 715527 | 9641 | .98653 | .01347 | .01329 |
| 48 | 705886 | 9927 | .98594 | .01406 | .01386 |
| 49 | 695959 | 10238 | .98529 | .01471 | .01448 |
| 50 | 685721 | 10572 | .98458 | .01542 | .01517 |
| 51 | 675149 | 10934 | .98381 | .01619 | .01592 |
| 52 | 664215 | 11320 | .98296 | .01704 | .01675 |
| 53 | 652895 | 11736 | .98202 | .01798 | .01765 |
| 54 | 641159 | 12179 | .98100 | .01900 | .01864 |
| 55 | 628980 | 12649 | .97989 | .02011 | .01973 |
| 56 | 616331 | 13150 | .97866 | .02134 | .02092 |
| 57 | 603181 | 13677 | .97733 | .02267 | .02223 |
| 58 | 589504 | 14231 | .97586 | .02414 | .02367 |
| 59 | 575273 | 14812 | .97425 | .02575 | .02524 |

MALE MORTALITY TABLE.—Cont.

| Age. | Living l_x | Dying d_x | PROBABILITIES OF | | Force of Mortality μ_x |
|------|-----------------|----------------|------------------|----------------|----------------------------------|
| | | | Living p_x | Dying q_x | |
| 60 | 560461 | 15415 | .97250 | .02750 | .02696 |
| 61 | 545046 | 16040 | .97057 | .02943 | .02885 |
| 62 | 529006 | 16681 | .96847 | .03153 | .03092 |
| 63 | 512325 | 17335 | .96616 | .03384 | .03320 |
| 64 | 494990 | 17995 | .96365 | .03635 | .03569 |
| 65 | 476995 | 18654 | .96089 | .03911 | .03842 |
| 66 | 458341 | 19305 | .95788 | .04212 | .04142 |
| 67 | 439036 | 19936 | .95459 | .04541 | .04470 |
| 68 | 419100 | 20537 | .95100 | .04900 | .04830 |
| 69 | 398563 | 21095 | .94707 | .05293 | .05225 |
| 70 | 377468 | 21597 | .94278 | .05722 | .05658 |
| 71 | 355871 | 22026 | .93811 | .06189 | .06133 |
| 72 | 333845 | 22365 | .93301 | .06699 | .06653 |
| 73 | 311489 | 22600 | .92745 | .07255 | .07224 |
| 74 | 288880 | 22710 | .92138 | .07862 | .07850 |
| 75 | 266170 | 22682 | .91479 | .08521 | .08536 |
| 76 | 243488 | 22498 | .90760 | .09240 | .09289 |
| 77 | 220990 | 22145 | .89979 | .10021 | .10114 |
| 78 | 198845 | 21613 | .89131 | .10869 | .11019 |
| 79 | 177232 | 20898 | .88209 | .11791 | .12011 |
| 80 | 156334 | 19995 | .87210 | .12790 | .13098 |
| 81 | 136339 | 18914 | .86127 | .13873 | .14291 |
| 82 | 117425 | 17666 | .84955 | .15045 | .15598 |
| 83 | 99759 | 16271 | .83689 | .16311 | .17032 |
| 84 | 83488 | 14759 | .82322 | .17678 | .18601 |
| 85 | 68729 | 13162 | .80849 | .19151 | .20328 |
| 86 | 55567 | 11523 | .79264 | .20736 | .22218 |
| 87 | 44044 | 9882 | .77562 | .22438 | .24291 |
| 88 | 34162 | 8289 | .75737 | .24263 | .26593 |
| 89 | 25873 | 6782 | .73786 | .26214 | .29055 |
| 90 | 19091 | 5402 | .71704 | .28296 | .31787 |
| 91 | 13689 | 4177 | .69400 | .30510 | .34783 |
| 92 | 9512 | 3125 | .67139 | .32861 | .38067 |
| 93 | 6387 | 2258 | .64653 | .35347 | .41679 |
| 94 | 4129 | 1568 | .62034 | .37966 | .45618 |
| 95 | 2561 | 1043 | .59283 | .40717 | .49948 |
| 96 | 1518 | 661 | .56407 | .43593 | .54696 |
| 97 | 857 | 400 | .53413 | .46587 | .59901 |
| 98 | 457 | 227 | .50313 | .49687 | .65609 |
| 99 | 230 | 122 | .47120 | .52880 | .71868 |
| 100 | 108 | 60 | .43852 | .56148 | ..... |
| 101 | 48 | 29 | .40528 | .59472 | ..... |
| 102 | 19 | 12 | .37172 | .62828 | ..... |
| 103 | 7 | 5 | .33812 | .66188 | ..... |
| 104 | 2 | 1 | .50000 | .50000 | ..... |
| 105 | 1 | 1 | .00000 | 1.00000 | ..... |
| 106 | 0 | .. | ..... | ..... | ..... |

FEMALE MORTALITY TABLE.

| Age. | Living. l_x | Dying. d_x | PROBABILITIES OF | | Force of Mortality. μ_x |
|------|------------------|-----------------|------------------|-----------------|-----------------------------------|
| | | | Living. p_x | Dying. q_x | |
| 10 | 1000000 | 3603 | .99639 | .00361 | .00360 |
| 11 | 996397 | 3605 | .99638 | .00362 | .00361 |
| 12 | 992792 | 3608 | .99637 | .00363 | .00363 |
| 13 | 989184 | 3613 | .99635 | .00365 | .00365 |
| 14 | 985571 | 3619 | .99632 | .00368 | .00366 |
| 15 | 981952 | 3627 | .99630 | .00370 | .00369 |
| 16 | 978325 | 3637 | .99628 | .00372 | .00371 |
| 17 | 974688 | 3649 | .99625 | .00375 | .00373 |
| 18 | 971039 | 3663 | .99623 | .00377 | .00376 |
| 19 | 967376 | 3680 | .99620 | .00380 | .00379 |
| 20 | 963696 | 3697 | .99616 | .00384 | .00382 |
| 21 | 959999 | 3720 | .99612 | .00388 | .00386 |
| 22 | 956279 | 3744 | .99608 | .00392 | .00390 |
| 23 | 952535 | 3775 | .99604 | .00396 | .00394 |
| 24 | 948760 | 3805 | .99599 | .00401 | .00399 |
| 25 | 944955 | 3842 | .99593 | .00407 | .00404 |
| 26 | 941113 | 3882 | .99588 | .00413 | .00410 |
| 27 | 937231 | 3927 | .99582 | .00418 | .00416 |
| 28 | 933304 | 3978 | .99574 | .00426 | .00423 |
| 29 | 929326 | 4033 | .99566 | .00434 | .00431 |
| 30 | 925293 | 4096 | .99557 | .00443 | .00439 |
| 31 | 921197 | 4164 | .99547 | .00453 | .00448 |
| 32 | 917033 | 4241 | .99538 | .00462 | .00458 |
| 33 | 912792 | 4324 | .99527 | .00473 | .00469 |
| 34 | 908468 | 4417 | .99513 | .00487 | .00481 |
| 35 | 904051 | 4518 | .99499 | .00501 | .00494 |
| 36 | 899533 | 4630 | .99486 | .00514 | .00508 |
| 37 | 894903 | 4754 | .99470 | .00530 | .00524 |
| 38 | 890149 | 4887 | .99451 | .00549 | .00541 |
| 39 | 885262 | 5036 | .99431 | .00569 | .00560 |
| 40 | 880226 | 5196 | .99410 | .00590 | .00581 |
| 41 | 875030 | 5373 | .99386 | .00614 | .00603 |
| 42 | 869657 | 5565 | .99360 | .00640 | .00628 |
| 43 | 864092 | 5776 | .99332 | .00668 | .00655 |
| 44 | 858316 | 6004 | .99300 | .00700 | .00685 |
| 45 | 852312 | 6254 | .99265 | .00734 | .00718 |
| 46 | 846058 | 6524 | .99229 | .00771 | .00754 |
| 47 | 839534 | 6819 | .99188 | .00812 | .00794 |
| 48 | 832715 | 7138 | .99143 | .00857 | .00837 |
| 49 | 825577 | 7483 | .99094 | .00906 | .00885 |
| 50 | 818094 | 7858 | .99040 | .00960 | .00937 |
| 51 | 810236 | 8262 | .98981 | .01019 | .00994 |
| 52 | 801974 | 8697 | .98915 | .01085 | .01056 |
| 53 | 793277 | 9168 | .98844 | .01156 | .01125 |
| 54 | 784109 | 9672 | .98767 | .01233 | .01200 |
| 55 | 774437 | 10214 | .98680 | .01320 | .01283 |
| 56 | 764223 | 10793 | .98587 | .01413 | .01373 |
| 57 | 753430 | 11413 | .98485 | .01515 | .01472 |
| 58 | 742017 | 12071 | .98373 | .01627 | .01581 |
| 59 | 729946 | 12772 | .98250 | .01750 | .01700 |

FEMALE MORTALITY TABLE—Continued.

| Age. | Living. l_x | Dying. d_x | PROBABILITIES OF | | Force of Mortality. μ_x |
|------|------------------|-----------------|------------------|-----------------|-----------------------------------|
| | | | Living. p_x | Dying. q_x | |
| 60 | 717174 | 13512 | .98116 | .01884 | .01831 |
| 61 | 703662 | 14294 | .97969 | .02031 | .01975 |
| 62 | 689368 | 15116 | .97807 | .02193 | .02132 |
| 63 | 674252 | 15973 | .97632 | .02368 | .02304 |
| 64 | 658279 | 16866 | .97438 | .02562 | .02493 |
| 65 | 641413 | 17790 | .97227 | .02773 | .02700 |
| 66 | 623623 | 18737 | .96995 | .03005 | .02928 |
| 67 | 604886 | 19704 | .96743 | .03257 | .03177 |
| 68 | 585182 | 20680 | .96466 | .03534 | .03450 |
| 69 | 564502 | 21655 | .96163 | .03837 | .03750 |
| 70 | 542847 | 22618 | .95834 | .04166 | .04078 |
| 71 | 520229 | 23552 | .95473 | .04527 | .04438 |
| 72 | 496677 | 24444 | .95078 | .04922 | .04833 |
| 73 | 472233 | 25272 | .94648 | .05352 | .05266 |
| 74 | 446961 | 26019 | .94178 | .05822 | .05741 |
| 75 | 420912 | 26660 | .93667 | .06333 | .06261 |
| 76 | 394282 | 27173 | .93109 | .06891 | .06832 |
| 77 | 367109 | 27534 | .92500 | .07500 | .07458 |
| 78 | 339575 | 27719 | .91837 | .08163 | .08144 |
| 79 | 311856 | 27705 | .91116 | .08884 | .08897 |
| 80 | 284151 | 27471 | .90332 | .09668 | .09722 |
| 81 | 256680 | 27003 | .89480 | .10520 | .10627 |
| 82 | 229677 | 26286 | .88554 | .11446 | .11619 |
| 83 | 203391 | 25318 | .87552 | .12418 | .12706 |
| 84 | 178073 | 24102 | .86465 | .13535 | .13899 |
| 85 | 153971 | 22651 | .85288 | .14712 | .15206 |
| 86 | 131320 | 20989 | .84018 | .15982 | .16640 |
| 87 | 110331 | 19148 | .82645 | .17355 | .18212 |
| 88 | 91183 | 17173 | .81166 | .18834 | .19936 |
| 89 | 74010 | 15117 | .79575 | .20425 | .21826 |
| 90 | 58893 | 13035 | .77866 | .22134 | .23899 |
| 91 | 45858 | 10990 | .76034 | .23966 | .26171 |
| 92 | 34868 | 9039 | .74076 | .25924 | .28663 |
| 93 | 25829 | 7236 | .71986 | .28014 | .31395 |
| 94 | 18593 | 5622 | .69762 | .30238 | .34391 |
| 95 | 12971 | 4228 | .67403 | .32597 | .37675 |
| 96 | 8743 | 3068 | .64907 | .35093 | .41277 |
| 97 | 5675 | 2141 | .62277 | .37723 | .45226 |
| 98 | 3534 | 1431 | .59515 | .40485 | .49556 |
| 99 | 2103 | 912 | .56628 | .43372 | .54304 |
| 100 | 1191 | 552 | .53623 | .46377 | ..... |
| 101 | 639 | 316 | .50510 | .49490 | ..... |
| 102 | 323 | 170 | .47305 | .52695 | ..... |
| 103 | 153 | 86 | .44024 | .55976 | ..... |
| 104 | 67 | 40 | .40686 | .59314 | ..... |
| 105 | 27 | 17 | .37318 | .62682 | ..... |
| 106 | 10 | 7 | .33944 | .66056 | ..... |
| 107 | 3 | 2 | .30594 | .69406 | ..... |
| 108 | 1 | 1 | .00000 | 1.00000 | ..... |
| 109 | 0 | .. | ..... | ..... | ..... |

MALES—COMMUTATION COLUMNS—ONE LIFE.
THREE AND ONE-HALF PER CENT.

| Age. | D_x | N_x | Age. | D_x | N_x |
|------|---------|-----------|------|------------|-----------|
| 10 | 708919 | 15697253 | 60 | 71141.8 | 803405.39 |
| 11 | 679778 | 14988334 | 61 | 66845.4 | 732203.59 |
| 12 | 651822 | 14308556 | 62 | 62684.3 | 665418.19 |
| 13 | 625002 | 13656734 | 63 | 58654.8 | 602733.89 |
| 14 | 599272 | 13031732 | 64 | 54753.8 | 544079.09 |
| 15 | 574585 | 12432460 | 65 | 50979.0 | 489325.29 |
| 16 | 550900 | 11857875 | 66 | 47328.8 | 438346.29 |
| 17 | 528175 | 11306975 | 67 | 43802.3 | 391017.49 |
| 18 | 506369 | 10778800 | 68 | 40399.3 | 347215.19 |
| 19 | 485446 | 10272431 | 69 | 37120.4 | 306815.89 |
| 20 | 465368 | 9786981.9 | 70 | 33966.8 | 269695.49 |
| 21 | 446100 | 9321616.9 | 71 | 30940.5 | 235728.69 |
| 22 | 427608 | 8875516.9 | 72 | 28044.0 | 204788.19 |
| 23 | 409861 | 8447908.9 | 73 | 25280.4 | 176744.19 |
| 24 | 392827 | 8038047.9 | 74 | 22653.3 | 151463.79 |
| 25 | 376476 | 7645220.9 | 75 | 20166.6 | 128810.49 |
| 26 | 360780 | 7268744.9 | 76 | 17824.2 | 108643.89 |
| 27 | 345711 | 6907964.9 | 77 | 15630.2 | 90819.687 |
| 28 | 331242 | 6562253.9 | 78 | 13588.4 | 75189.487 |
| 29 | 317349 | 6231011.9 | 79 | 11701.8 | 61601.087 |
| 30 | 304008 | 5913662.9 | 80 | 9973.03 | 49899.287 |
| 31 | 291194 | 5609654.9 | 81 | 8403.35 | 39926.257 |
| 32 | 278885 | 5318460.9 | 82 | 6992.83 | 31522.967 |
| 33 | 267060 | 5039575.9 | 83 | 5739.90 | 24530.077 |
| 34 | 255698 | 4772515.9 | 84 | 4641.23 | 18790.177 |
| 35 | 244779 | 4516817.9 | 85 | 3691.55 | 14148.947 |
| 36 | 234284 | 4272038.9 | 86 | 2883.66 | 10457.397 |
| 37 | 224194 | 4037754.9 | 87 | 2208.41 | 7573.7306 |
| 38 | 214493 | 3813560.9 | 88 | 1654.96 | 5365.3266 |
| 39 | 205162 | 3599067.9 | 89 | 1211.04 | 3710.3666 |
| 40 | 196186 | 3393905.9 | 90 | 863.360 | 2499.3266 |
| 41 | 187549 | 3197719.9 | 91 | 598.133 | 1635.6666 |
| 42 | 179237 | 3010170.9 | 92 | 401.584 | 1037.8336 |
| 43 | 171233 | 2830933.9 | 93 | 260.502 | 636.24957 |
| 44 | 163526 | 2659700.9 | 94 | 162.728 | 375.74757 |
| 45 | 156100 | 2496174.9 | 95 | 97.5322 | 213.01957 |
| 46 | 148945 | 2340074.9 | 96 | 55.8645 | 115.48737 |
| 47 | 142046 | 2191129.9 | 97 | 30.4456 | 59.622870 |
| 48 | 135394 | 2049083.9 | 98 | 15.7120 | 29.177270 |
| 49 | 128975 | 1913689.9 | 99 | 7.63782 | 13.465270 |
| 50 | 122781 | 1784714.9 | 100 | 3.47724 | 5.8274501 |
| 51 | 116800 | 1651933.9 | 101 | 1.47327 | 2.3502101 |
| 52 | 111023 | 1545133.9 | 102 | .576894 | .87694011 |
| 53 | 105440 | 1434110.9 | 103 | .207104 | .30004611 |
| 54 | 100043 | 1328670.9 | 104 | .0576863 | .09285211 |
| 55 | 94823.9 | 1228627.9 | 105 | .0199296 | .02516581 |
| 56 | 89774.7 | 1133804.0 | 106 | .005236214 | .00523621 |
| 57 | 84888.3 | 1044029.3 | | | |
| 58 | 80158.0 | 959140.99 | | | |
| 59 | 75577.6 | 878982.99 | | | |

FEMALES—COMMUTATION COLUMNS—ONE LIFE.
THREE AND ONE-HALF PER CENT.

| Age. | D ₁ | N ₁ | Age. | D ₁ | N ₁ |
|------|----------------|----------------|------|----------------|----------------|
| 10 | 708919 | 17112208 | 60 | 91034.0 | 1157938.6 |
| 11 | 682478 | 16403379 | 61 | 86258.4 | 1066904.6 |
| 12 | 657013 | 15720901 | 62 | 81686.3 | 980006.18 |
| 13 | 632488 | 15063888 | 63 | 77193.5 | 898919.88 |
| 14 | 608868 | 14431400 | 64 | 72816.1 | 821726.38 |
| 15 | 586118 | 13822532 | 65 | 68551.2 | 748910.28 |
| 16 | 564206 | 13236414 | 66 | 64396.1 | 680359.08 |
| 17 | 543100 | 12672208 | 67 | 60349.0 | 615962.98 |
| 18 | 522770 | 12129108 | 68 | 56408.8 | 555613.98 |
| 19 | 503186 | 11606338 | 69 | 52575.3 | 499205.18 |
| 20 | 484321 | 11103152 | 70 | 48848.7 | 446629.88 |
| 21 | 466147 | 10618831 | 71 | 45230.4 | 397781.18 |
| 22 | 448539 | 10152684 | 72 | 41722.4 | 352550.78 |
| 23 | 431770 | 9704044.7 | 73 | 38327.5 | 310828.38 |
| 24 | 415516 | 9272274.7 | 74 | 35049.6 | 272500.88 |
| 25 | 399855 | 8856758.7 | 75 | 31893.1 | 237451.28 |
| 26 | 384762 | 8456603.7 | 76 | 28862.9 | 205558.18 |
| 27 | 370218 | 8072141.7 | 77 | 25965.0 | 176695.28 |
| 28 | 356199 | 7701923.7 | 78 | 23205.3 | 150730.28 |
| 29 | 342687 | 7345724.7 | 79 | 20590.5 | 127524.98 |
| 30 | 329662 | 7003037.7 | 80 | 18126.8 | 106934.48 |
| 31 | 317104 | 6673375.7 | 81 | 15820.6 | 88807.675 |
| 32 | 304996 | 6356271.7 | 82 | 13677.6 | 72987.075 |
| 33 | 293319 | 6051275.7 | 83 | 11702.6 | 59399.475 |
| 34 | 282058 | 5757950.7 | 84 | 9899.39 | 47606.875 |
| 35 | 271194 | 5475898.7 | 85 | 8270.06 | 37707.485 |
| 36 | 260714 | 5204704.7 | 86 | 6814.91 | 29437.425 |
| 37 | 250601 | 4943990.7 | 87 | 5532.08 | 22622.515 |
| 38 | 240841 | 4693386.7 | 88 | 4417.39 | 17090.435 |
| 39 | 231418 | 4452548.7 | 89 | 3464.17 | 12673.045 |
| 40 | 222321 | 4221130.7 | 90 | 2663.40 | 9208.8749 |
| 41 | 213535 | 3998800.7 | 91 | 2003.75 | 6545.4749 |
| 42 | 205047 | 3785274.7 | 92 | 1472.02 | 4541.7249 |
| 43 | 196845 | 3580227.7 | 93 | 1053.53 | 3069.7049 |
| 44 | 188917 | 3383382.7 | 94 | 732.747 | 2016.1749 |
| 45 | 181252 | 3194465.7 | 95 | 493.892 | 1283.4279 |
| 46 | 173838 | 3013213.7 | 96 | 321.638 | 780.53585 |
| 47 | 166664 | 2839375.7 | 97 | 201.706 | 467.89785 |
| 48 | 159720 | 2672711.7 | 98 | 121.368 | 266.19185 |
| 49 | 152996 | 2512991.7 | 99 | 69.7897 | 144.82385 |
| 50 | 146482 | 2359995.7 | 100 | 38.1839 | 75.034145 |
| 51 | 140170 | 2213513.7 | 101 | 19.7827 | 36.850245 |
| 52 | 134049 | 2073343.7 | 102 | 9.65440 | 17.067545 |
| 53 | 128111 | 1939294.7 | 103 | 4.41257 | 7.41314.0 |
| 54 | 122348 | 1811183.7 | 104 | 1.87668 | 3.0005750 |
| 55 | 116753 | 1688835.7 | 105 | .737823 | 1.1236950 |
| 56 | 111317 | 1572082.7 | 106 | .266031 | .38567197 |
| 57 | 106033 | 1460765.7 | 107 | .0872482 | .11984067 |
| 58 | 100896 | 1354732.7 | 108 | .0257902 | .03259277 |
| 59 | 95398.1 | 1253836.7 | 109 | .006802573 | .006802573 |

MALES—JOINT LIFE COMMUTATION COLUMNS—EQUAL AGES.
THREE AND ONE-HALF PER CENT.

| Age. | D _{xx} | N _{xx} | Age. | D _{xx} | N _{xx} |
|------|-----------------|-----------------|------|-----------------|-----------------|
| 10 | 7089200 | 134223400 | 55 | 596420 | 59116.2 |
| 11 | 6746500 | 127134200 | 56 | 553310 | 5315179 |
| 12 | 6420100 | 120387700 | 57 | 512030 | 4761870 |
| 13 | 6109200 | 113067600 | 58 | 472530 | 4249840 |
| 14 | 5813100 | 107858400 | 59 | 434780 | 3777305 |
| 15 | 5531100 | 102045200 | 60 | 398720 | 3342528 |
| 16 | 5262500 | 96514090 | 61 | 364330 | 2943806 |
| 17 | 5006600 | 91251600 | 62 | 331600 | 2579468 |
| 18 | 4762800 | 86245030 | 63 | 300500 | 2247864 |
| 19 | 4530500 | 81482240 | 64 | 271030 | 1947361 |
| 20 | 4309200 | 76951710 | 65 | 243170 | 1676335 |
| 21 | 4098400 | 72642490 | 66 | 216930 | 1433168 |
| 22 | 3897400 | 68544110 | 67 | 192310 | 1216241 |
| 23 | 3706000 | 64646570 | 68 | 169310 | 1023933 |
| 24 | 3523500 | 60940700 | 69 | 147950 | 854619.3 |
| 25 | 3349500 | 57417230 | 70 | 128210 | 706671.0 |
| 26 | 3183700 | 54067700 | 71 | 110110 | 578457.2 |
| 27 | 3025600 | 50884000 | 72 | 93624 | 468348.9 |
| 28 | 2874900 | 47858370 | 73 | 78743 | 374725.3 |
| 29 | 2731200 | 44983480 | 74 | 65441 | 295981.9 |
| 30 | 2594100 | 42252330 | 75 | 53677 | 230540.9 |
| 31 | 2463300 | 39658270 | 76 | 43400 | 176863.6 |
| 32 | 2338500 | 37194990 | 77 | 34541 | 133463.9 |
| 33 | 2219500 | 34856470 | 78 | 27020 | 98922.59 |
| 34 | 2105900 | 32637000 | 79 | 20739 | 71902.80 |
| 35 | 1997400 | 30531160 | 80 | 15591 | 51163.48 |
| 36 | 1893800 | 28533790 | 81 | 11457 | 35572.19 |
| 37 | 1794900 | 26639980 | 82 | 8211.3 | 24115.12 |
| 38 | 1700400 | 24845070 | 83 | 5726.1 | 15903.77 |
| 39 | 1610200 | 23144640 | 84 | 3874.8 | 10177.69 |
| 40 | 1523900 | 21534480 | 85 | 2537.2 | 6302.845 |
| 41 | 1441400 | 20010600 | 86 | 1602.4 | 3765.683 |
| 42 | 1362500 | 18569190 | 87 | 972.68 | 2163.332 |
| 43 | 1287100 | 17206660 | 88 | 565.36 | 1190.652 |
| 44 | 1214900 | 15919560 | 89 | 313.33 | 625.2907 |
| 45 | 1145800 | 14704640 | 90 | 164.82 | 311.9579 |
| 46 | 1079700 | 13558800 | 91 | 81.879 | 147.1357 |
| 47 | 1016400 | 12479100 | 92 | 38.200 | 65.25760 |
| 48 | 955720 | 11462720 | 93 | 16.637 | 27.05753 |
| 49 | 897610 | 10506990 | 94 | 6.7192 | 10.42053 |
| 50 | 841940 | 9609380 | 95 | 2.4982 | 3.701338 |
| 51 | 788570 | 8767447 | 96 | .84829 | 1.203126 |
| 52 | 737430 | 7978876 | 97 | .26077 | .3548349 |
| 53 | 688410 | 7241448 | 98 | .071881 | .09406176 |
| 54 | 641430 | 6553037 | 99 | .017580 | .02218056 |

FEMALES—JOINT LIFE COMMUTATION COLUMNS—EQUAL AGES
THREE AND ONE-HALF PER CENT

| Age. | D ₁₁ | N ₁₁ | Age. | D ₁₁ | N ₁₁ |
|------|-----------------|-----------------|------|-----------------|-----------------|
| 10 | 7089200 | 155005400 | 55 | 904170 | 10393300 |
| 11 | 6800200 | 147916300 | 56 | 850710 | 9489123 |
| 12 | 6522700 | 141116100 | 57 | 798890 | 8638415 |
| 13 | 6256500 | 134593300 | 58 | 748670 | 7839528 |
| 14 | 6000800 | 128336800 | 59 | 700000 | 7090862 |
| 15 | 5755400 | 122336000 | 60 | 652870 | 6390858 |
| 16 | 5519800 | 116580600 | 61 | 607250 | 5737985 |
| 17 | 5293600 | 111060800 | 62 | 563120 | 5130737 |
| 18 | 5076300 | 105767300 | 63 | 520480 | 4567618 |
| 19 | 4867700 | 100691000 | 64 | 479340 | 4047139 |
| 20 | 4667400 | 95823300 | 65 | 439690 | 3567806 |
| 21 | 4475000 | 91155920 | 66 | 401590 | 3128110 |
| 22 | 4290200 | 86680910 | 67 | 365040 | 2726521 |
| 23 | 4112700 | 82390670 | 68 | 330100 | 2361479 |
| 24 | 3942200 | 78277920 | 69 | 296790 | 2031385 |
| 25 | 3778400 | 74335660 | 70 | 265170 | 1734596 |
| 26 | 3621000 | 70557220 | 71 | 235300 | 1469423 |
| 27 | 3469800 | 66936170 | 72 | 207220 | 1234121 |
| 28 | 3324500 | 63466380 | 73 | 181000 | 1026896 |
| 29 | 3184700 | 60141960 | 74 | 156660 | 845900.2 |
| 30 | 3050400 | 56957270 | 75 | 134250 | 689242.1 |
| 31 | 2921100 | 53906940 | 76 | 113800 | 554990.8 |
| 32 | 2796900 | 50935780 | 77 | 95320 | 441189.5 |
| 33 | 2677400 | 48188870 | 78 | 78800 | 345869.8 |
| 34 | 2562400 | 45511480 | 79 | 64213 | 267070.3 |
| 35 | 2451700 | 42949070 | 80 | 51507 | 202857.7 |
| 36 | 2345200 | 40497340 | 81 | 40608 | 151350.1 |
| 37 | 2242600 | 38152130 | 82 | 31414 | 110741.8 |
| 38 | 2143800 | 35909490 | 83 | 23802 | 79327.47 |
| 39 | 2048700 | 33765650 | 84 | 17628 | 55525.39 |
| 40 | 1956900 | 31716990 | 85 | 12734 | 37897.25 |
| 41 | 1868500 | 29760070 | 86 | 8949.3 | 25163.77 |
| 42 | 1783200 | 27891570 | 87 | 6103.7 | 16214.45 |
| 43 | 1700900 | 26108370 | 88 | 4027.9 | 10110.83 |
| 44 | 1621500 | 24407440 | 89 | 2563.8 | 6082.901 |
| 45 | 1544800 | 22785940 | 90 | 1568.6 | 3519.063 |
| 46 | 1470800 | 21241100 | 91 | 918.88 | 1950.497 |
| 47 | 1399200 | 19770340 | 92 | 513.26 | 1031.617 |
| 48 | 1330000 | 18371130 | 93 | 272.11 | 518.3557 |
| 49 | 1263100 | 17041120 | 94 | 136.24 | 246.2431 |
| 50 | 1198400 | 15778020 | 95 | 64.062 | 110.0043 |
| 51 | 1135700 | 14579650 | 96 | 28.120 | 45.94283 |
| 52 | 1075000 | 13443950 | 97 | 11.446 | 17.82330 |
| 53 | 1016300 | 12368910 | 98 | 4.2890 | 6.377385 |
| 54 | 959340 | 11352640 | 99 | 1.4678 | 2.088323 |

MALE AND FEMALE—JOINT LIFE COMMUTATION COLUMNS—
EQUAL AGES.
THREE AND ONE-HALF PER CENT.

| Age | D ₁₁ | N ₁₁ | Age | D ₁₁ | N ₁₁ |
|-----|-----------------|-----------------|-----|-----------------|-----------------|
| 10 | 7089200 | 143859400 | 55 | 734350 | 7809844 |
| 11 | 6773300 | 136770200 | 56 | 680080 | 7075493 |
| 12 | 6471300 | 129996900 | 57 | 639570 | 6389414 |
| 13 | 6182400 | 123525700 | 58 | 594790 | 5749840 |
| 14 | 5906200 | 117343300 | 59 | 551670 | 5155955 |
| 15 | 5642100 | 111437000 | 60 | 510210 | 4603379 |
| 16 | 5389600 | 105794900 | 61 | 470370 | 4093169 |
| 17 | 5148000 | 100405300 | 62 | 432190 | 3622803 |
| 18 | 4917000 | 95257240 | 63 | 395490 | 3190678 |
| 19 | 4696100 | 90340200 | 64 | 360430 | 2795196 |
| 20 | 4484800 | 85644110 | 65 | 326990 | 2434764 |
| 21 | 4282500 | 81159380 | 66 | 295150 | 2107778 |
| 22 | 4089100 | 76876820 | 67 | 264950 | 1812025 |
| 23 | 3904100 | 72787700 | 68 | 236410 | 1547671 |
| 24 | 3727000 | 68883630 | 69 | 209550 | 1311261 |
| 25 | 3557500 | 65156650 | 70 | 184390 | 1101716 |
| 26 | 3395300 | 61599120 | 71 | 160960 | 917328.0 |
| 27 | 3240100 | 58203780 | 72 | 139200 | 756366.3 |
| 28 | 3091500 | 54903670 | 73 | 119380 | 617078.2 |
| 29 | 2949200 | 5182170 | 74 | 101250 | 497695.6 |
| 30 | 2812900 | 48922060 | 75 | 84890 | 396444.1 |
| 31 | 2682400 | 46110000 | 76 | 70277 | 311554.5 |
| 32 | 2557500 | 43427530 | 77 | 57380 | 241276.8 |
| 33 | 2437700 | 40870070 | 78 | 46142 | 183896.8 |
| 34 | 2323000 | 38432370 | 79 | 36493 | 137754.2 |
| 35 | 2212900 | 36109440 | 80 | 28339 | 101261.3 |
| 36 | 2107500 | 33896510 | 81 | 21570 | 72922.65 |
| 37 | 2006300 | 31789050 | 82 | 16061 | 51353.14 |
| 38 | 1909300 | 29782730 | 83 | 11675 | 35292.20 |
| 39 | 1816200 | 27873430 | 84 | 8264.8 | 23617.76 |
| 40 | 1726900 | 26057200 | 85 | 5683.9 | 15352.99 |
| 41 | 1641100 | 24330320 | 86 | 3786.8 | 9769.073 |
| 42 | 1558700 | 22689210 | 87 | 2436.6 | 5882.259 |
| 43 | 1479600 | 21130460 | 88 | 1509.0 | 3445.689 |
| 44 | 1403600 | 19650850 | 89 | 896.29 | 1936.639 |
| 45 | 1330500 | 18247280 | 90 | 508.46 | 1040.350 |
| 46 | 1260200 | 16916820 | 91 | 274.29 | 531.8869 |
| 47 | 1192300 | 15656660 | 92 | 140.02 | 257.5948 |
| 48 | 1127400 | 14464140 | 93 | 67.284 | 117.5711 |
| 49 | 1064800 | 13336700 | 94 | 30.256 | 50.28709 |
| 50 | 1004500 | 12271910 | 95 | 12.651 | 20.03126 |
| 51 | 946360 | 11267440 | 96 | 4.8838 | 7.386604 |
| 52 | 890370 | 10321090 | 97 | 1.7277 | 2.496596 |
| 53 | 836430 | 9430719 | 98 | .55525 | .7689428 |
| 54 | 784450 | 8594290 | 99 | .16064 | .2136925 |

JOINT LIVES—ANNUITIES FOR JOINT LIVES.

Number of years to be added to the younger of Two Joint Lives to obtain the Equivalent Equal Ages.

| Difference of Ages. | ADDITION TO YOUNGER AGE. | | | Difference of Ages. | ADDITION TO YOUNGER AGE. | | |
|---------------------|---------------------------|-----------------|-------------------|---------------------|---------------------------|-----------------|-------------------|
| | Two Males or Two Females. | Male the Older. | Female the Older. | | Two Males or Two Females. | Male the Older. | Female the Older. |
| 1 | .512 | .580 | .443 | 31 | 24.082 | 25.335 | 22.665 |
| 2 | 1.046 | 1.182 | .908 | 32 | 25.030 | 26.295 | 23.597 |
| 3 | 1.603 | 1.806 | 1.397 | 33 | 25.982 | 27.258 | 24.535 |
| 4 | 2.183 | 2.451 | 1.908 | 34 | 26.938 | 28.225 | 25.478 |
| 5 | 2.785 | 3.117 | 2.443 | 35 | 27.898 | 29.194 | 26.426 |
| 6 | 3.409 | 3.804 | 3.000 | 36 | 28.861 | 30.166 | 27.379 |
| 7 | 4.055 | 4.509 | 3.580 | 37 | 29.828 | 31.140 | 28.335 |
| 8 | 4.721 | 5.234 | 4.182 | 38 | 30.797 | 32.117 | 29.295 |
| 9 | 5.407 | 5.976 | 4.806 | 39 | 31.769 | 33.095 | 30.258 |
| 10 | 6.113 | 6.736 | 5.451 | 40 | 32.744 | 34.076 | 31.225 |
| 11 | 6.837 | 7.512 | 6.117 | 41 | 33.720 | 35.058 | 32.194 |
| 12 | 7.580 | 8.304 | 6.804 | 42 | 34.699 | 36.042 | 33.166 |
| 13 | 8.339 | 9.111 | 7.509 | 43 | 35.679 | 37.027 | 34.140 |
| 14 | 9.116 | 9.931 | 8.234 | 44 | 36.661 | 38.013 | 35.117 |
| 15 | 9.907 | 10.765 | 8.976 | 45 | 37.645 | 39.001 | 36.095 |
| 16 | 10.714 | 11.611 | 9.736 | 46 | 38.630 | 39.989 | 37.076 |
| 17 | 11.534 | 12.468 | 10.512 | 47 | 39.616 | 40.979 | 38.058 |
| 18 | 12.368 | 13.337 | 11.304 | 48 | 40.604 | 41.970 | 39.042 |
| 19 | 13.214 | 14.215 | 12.111 | 49 | 41.593 | 42.961 | 40.027 |
| 20 | 14.072 | 15.104 | 12.931 | 50 | 42.582 | 43.953 | 41.013 |
| 21 | 14.940 | 16.001 | 13.765 | 51 | 43.573 | 44.946 | 42.001 |
| 22 | 15.819 | 16.909 | 14.611 | 52 | 44.564 | 45.939 | 42.989 |
| 23 | 16.707 | 17.819 | 15.468 | 53 | 45.556 | 46.933 | 43.979 |
| 24 | 17.604 | 18.738 | 16.337 | 54 | 46.549 | 47.928 | 44.970 |
| 25 | 18.509 | 19.665 | 17.215 | 55 | 47.543 | 48.923 | 45.961 |
| 26 | 19.422 | 20.597 | 18.104 | 56 | 48.537 | 49.918 | 46.953 |
| 27 | 20.342 | 21.535 | 19.001 | 57 | 49.531 | 50.914 | 47.946 |
| 28 | 21.268 | 22.478 | 19.906 | 58 | 50.526 | 51.910 | 48.939 |
| 29 | 22.201 | 23.426 | 20.819 | 59 | 51.522 | 52.907 | 49.933 |
| 30 | 23.139 | 24.379 | 21.738 | 60 | 52.517 | 53.904 | 50.928 |







