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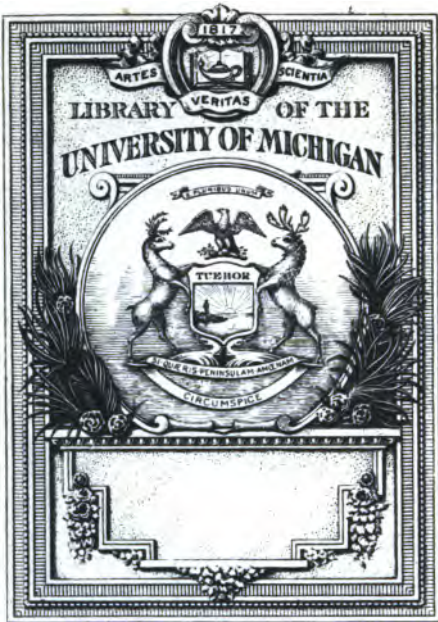
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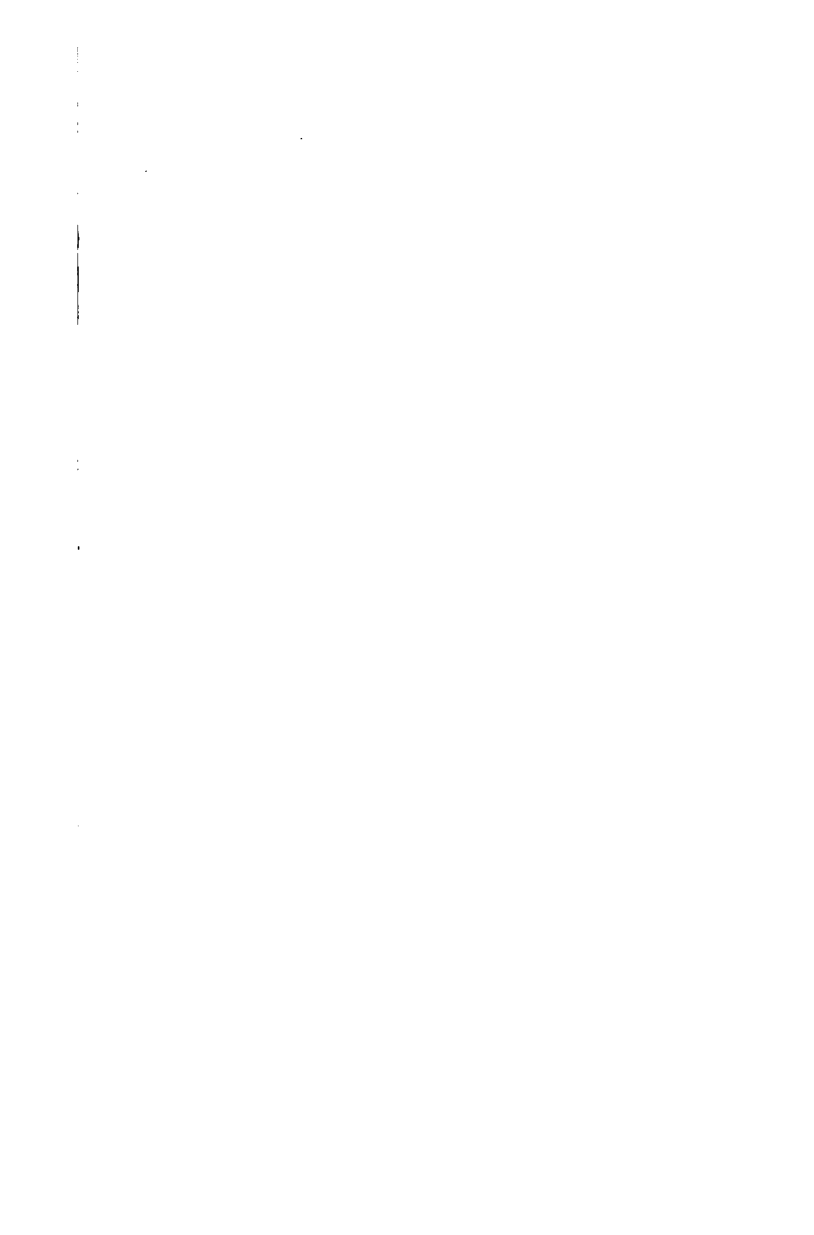
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... of ...  
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... ..  
... ..

Proposition

... ..  
... ..  
... ..  
... ..

$$\frac{ad - bc}{b^2 - c^2}$$

$$\frac{a}{b} - \frac{c}{d}$$

$$\frac{a}{b} - \frac{c}{d}$$

... ..

algebra

$$\frac{a}{b} = \frac{cx}{dx} = \frac{cx}{dx} \text{ with } a, b, c, d$$

Some things to remember  
a = c, b = d, x = x

Compositions

a + a, b + b, c + c, d + d

with + and -

a, b, c, d, x, y, z, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z

algebraic expressions

algebraic equations

algebraic functions

algebraic geometry



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for the  
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UNDER THE SUPERINTENDENCE OF THE SOCIETY FOR THE  
DIFFUSION OF USEFUL KNOWLEDGE.

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TABLES

OF

LOGARITHMS.

Farley, Richard

LONDON:

TAYLOR AND WALTON,

BOOKSELLERS AND PUBLISHERS TO UNIVERSITY COLLEGE.

28 UPPER GOWER STREET.

1839.

LONDON :

PRINTED BY JAMES MOYES, CASTLE STREET,  
LEICESTER SQUARE.

EES

## PREFACE.

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THE present Table of Logarithms has been undertaken in imitation of the Tables of Lalande, so well known both in England and on the Continent. It differs from most modern English works in the use of old numerals, which are formed with heads and tails, as in common handwriting. It is believed that such figures are as legible, for their size, as those in common use among us, and very much less likely to be mistaken for each other: so that the present work may compete in legibility with others which employ a larger type, but in which distinctness of form is sacrificed to uniformity of size. The following comparison of the numerals employed in this work with others, such as are commonly used, will, we think, speak for itself on the points alluded to.

7·11208
7·11371
9·80465
1·00938

7·11208
7·11371
9·80465
1·00938

In the work of Lalande, the common logarithms are accompanied by the characteristic which be-

## PREFACE.

longs to them, on the supposition that the number is a whole number. This, though not very objectionable with reference to the *astronomical* computer (for whom the original work was chiefly intended, and who seldom looks for the logarithm of a number, except when it is a *whole number* of seconds) is an annoyance as well as a risk of error to all others. Thus a person looking for the logarithm of 32·61, will find in Lalande's Table 3·51335, from which he must take away the characteristic 3, and put 1 in its place. The present work gives only the decimal portion of the logarithm (in the usual manner) and the decimal point is inserted (contrary to the usual practice), in order to make the distinction more marked between the column of logarithms and that of numbers.

In the trigonometrical logarithms, the headings are made more distinct, and whereas in Lalande only those logarithms, which have negative characteristics, are increased by 10, in the present work every characteristic is increased by 10 (as in Hutton's Tables). That is, in *all* cases.

Real logarithm = tabular logarithm — 10.

At the end of the tables of Common Logarithms, a small table of the Logarithms of Numbers near to Unity is added, correct to seven decimals. This will enable the general table to give results correct to five places, in questions of interest, statistics, &c., up to ten per cent, and a hundred years.

## PREFACE.

At the end of the Trigonometrical Tables will be found : 1. A Table of the Logarithms of Sines for every second of the first 9 minutes, and also for every tenth of a minute in the first degree. 2. A Table of Constants, mostly taken from that at the end of Mr. Babbage's well-known tables. 3. A small Table of the Logarithms of 1. 2. 3 . . . .  $x$ , for facilitating complicated questions of permutations.

The press was superintended by Mr. Richard Farley, of the Nautical Almanac Office. The proofs were first set up from the work of Lalande (the additions of course excepted). The title of this work is, "Tables de Logarithmes pour les Nombres et pour les Sinus, avec les Explications, &c. &c. Par Jérôme de la Lande. Edition Stéréotype, gravée, fondue, et imprimée par Firmin Didot. A Paris, chez Firmin Didot, Frères, Imprimeurs de L'Institut, et Libraires, &c., Rue Jacob, No. 24, 1805 (tirage de 1831)." Duodecimo.

The proof-sheets were then read with Vega's edition of Vlacq, the title\* of which is, "Thesaurus Logarithmorum Completus, ex Arithmeticâ Logarithmicâ, et ex Trigonometriâ Artificiali Adriani Vlacci collectus, plurimis erroribus purgatus, in novum ordinem redactus, et primâ post centesimam logarithmorum chiliade, partibus quibusdam proportionalibus differentiarum, logarithmis sinuum,

\* The work has also a German title.

## PREFACE.

cosinum, tangentium et cotangentium pro primis ac postremis duobus quadrantis gradibus ad singula minuta secunda, formulis nonnullis trigonometricis, Wolframii denique tabulâ logarithmorum naturalium locupletatus a Georgio Vega, supremo vigilarum præfecto et Professore Matheseos in Caes. Reg. Artis Pyrotechnicæ Cohorte, et Societatis Regiæ Scientiarum Goettingensis sodali correspond. Lipsiæ, in Libraria Weidmannia 1794." Folio.

The differences were then retaken, after which the work was stereotyped. Proofs from the stereotype plates were then read with the work of Lalande, after which the impression was worked off. Every care has thus been taken to insure accuracy. Should any error, however, occur, information of it will be thankfully received by the publishers, and the erratum, with its correction, shall be duly advertised on the cover of the next Number of the *Library of Useful Knowledge*.

The method of using logarithms is now found in so many elementary works, that it has been thought needless to increase the expense of these tables by supplying a treatise on the subject. (See the sixth number of the *Arithmetic and Algebra* in the "Library of Useful Knowledge," being the second of the *Examples of the Processes of Arithmetic and Algebra*.)

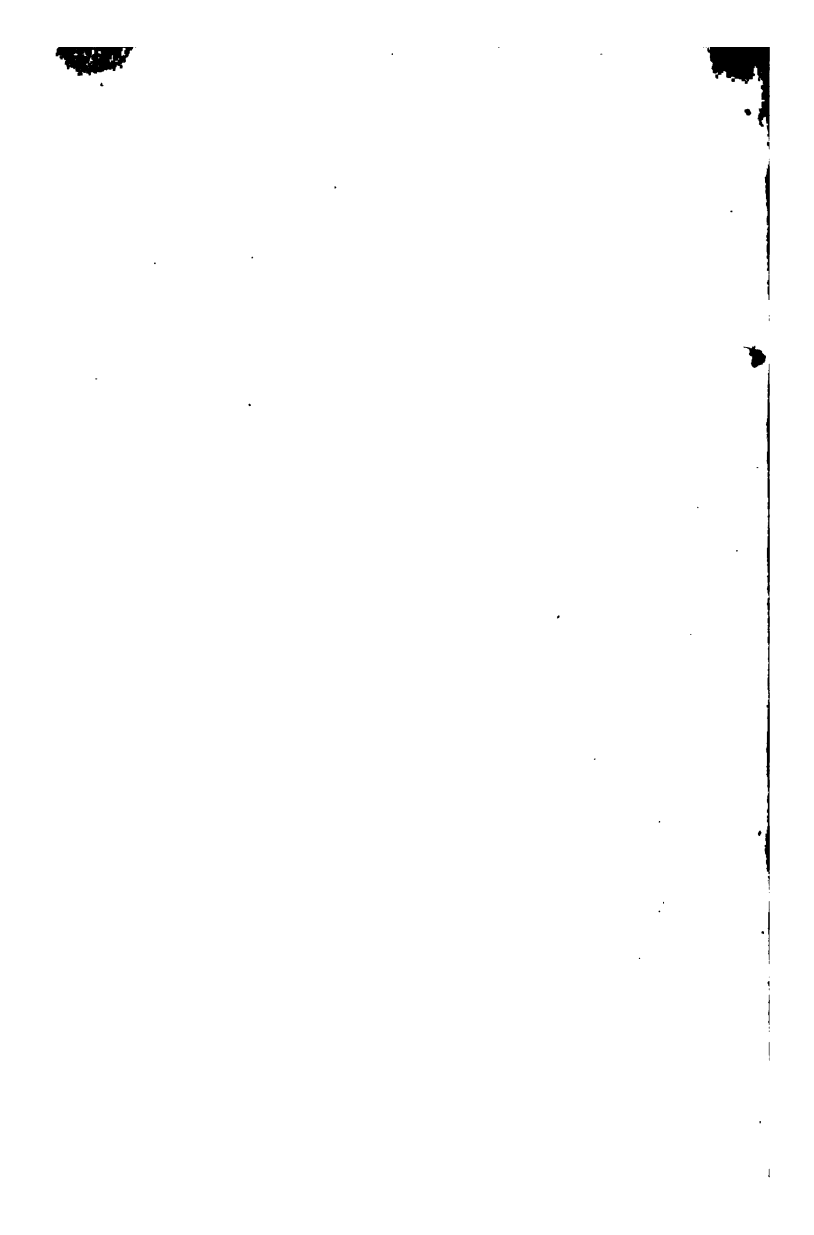
**LOGARITHMS**

**OF**

**NUMBERS,**

**FROM**

**1 TO 10000.**





0° 0' 0"		0° 0' 30"		60" = 0° 1' 0"	
Num.	Log.	Num.	Log.	Num.	Log.
0	-∞	30	.47712	60	.77815
1	.00000	31	.49136	61	.78533
2	.30103	32	.50515	62	.79239
3	.47712	33	.51851	63	.79934
4	.60206	34	.53148	64	.80618
5	.69897	35	.54407	65	.81291
6	.77815	36	.55630	66	.81954
7	.84510	37	.56820	67	.82607
8	.90309	38	.57978	68	.83251
9	.95424	39	.59106	69	.83885
10	.00000	40	.60206	70	.84510
11	.04139	41	.61278	71	.85126
12	.07918	42	.62325	72	.85733
13	.11394	43	.63347	73	.86332
14	.14613	44	.64345	74	.86923
15	.17609	45	.65321	75	.87506
16	.20412	46	.66276	76	.88081
17	.23045	47	.67210	77	.88649
18	.25527	48	.68124	78	.89209
19	.27875	49	.69020	79	.89763
20	.30103	50	.69897	80	.90309
21	.32222	51	.70757	81	.90849
22	.34242	52	.71600	82	.91381
23	.36173	53	.72428	83	.91908
24	.38021	54	.73239	84	.92428
25	.39794	55	.74036	85	.92942
26	.41497	56	.74819	86	.93450
27	.43136	57	.75587	87	.93952
28	.44716	58	.76343	88	.94448
29	.46240	59	.77085	89	.94939
30	.47712	60	.77815	90	.95424

B

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90" = 0° 1' 30"		120" = 0° 2' 0"		150" = 0° 2' 30"	
Num.	Log.	Num.	Log.	Num.	Log.
90	·95424	120	·07918	150	·17609
91	·95904	121	·08279	151	·17898
92	·96379	122	·08636	152	·18184
93	·96848	123	·08991	153	·18469
94	·97313	124	·09342	154	·18752
95	·97772	125	·09691	155	·19033
96	·98227	126	·10037	156	·19312
97	·98677	127	·10380	157	·19590
98	·99123	128	·10721	158	·19866
99	·99564	129	·11059	159	·20140
100	·00000	130	·11394	160	·20412
101	·00432	131	·11727	161	·20683
102	·00860	132	·12057	162	·20952
103	·01284	133	·12385	163	·21219
104	·01703	134	·12710	164	·21484
105	·02119	135	·13033	165	·21748
106	·02531	136	·13354	166	·22011
107	·02938	137	·13672	167	·22272
108	·03342	138	·13988	168	·22531
109	·03743	139	·14301	169	·22789
110	·04139	140	·14613	170	·23045
111	·04532	141	·14922	171	·23300
112	·04922	142	·15229	172	·23553
113	·05308	143	·15534	173	·23805
114	·05690	144	·15836	174	·24055
115	·06070	145	·16137	175	·24304
116	·06446	146	·16435	176	·24551
117	·06819	147	·16732	177	·24797
118	·07188	148	·17026	178	·25042
119	·07555	149	·17319	179	·25285
120	·07918	150	·17609	180	·25527

180" = 0° 3' 0"		210" = 0° 3' 30"		240" = 0° 4' 0"	
Num.	Log.	Num.	Log.	Num.	Log.
180	*25527	210	*32222	240	*38021
181	*25768	211	*32428	241	*38202
182	*26007	212	*32634	242	*38382
183	*26245	213	*32838	243	*38561
184	*26482	214	*33041	244	*38739
185	*26717	215	*33244	245	*38917
186	*26951	216	*33445	246	*39094
187	*27184	217	*33646	247	*39270
188	*27416	218	*33846	248	*39445
189	*27646	219	*34044	249	*39620
190	*27875	220	*34242	250	*39794
191	*28103	221	*34439	251	*39967
192	*28330	222	*34635	252	*40140
193	*28556	223	*34830	253	*40312
194	*28780	224	*35025	254	*40483
195	*29003	225	*35218	255	*40654
196	*29226	226	*35411	256	*40824
197	*29447	227	*35603	257	*40993
198	*29667	228	*35793	258	*41162
199	*29885	229	*35984	259	*41330
200	*30103	230	*36173	260	*41497
201	*30320	231	*36361	261	*41664
202	*30535	232	*36549	262	*41830
203	*30750	233	*36736	263	*41996
204	*30963	234	*36922	264	*42160
205	*31175	235	*37107	265	*42325
206	*31387	236	*37291	266	*42488
207	*31597	237	*37475	267	*42651
208	*31806	238	*37658	268	*42813
209	*32015	239	*37840	269	*42975
210	*32222	240	*38021	270	*43136

270" = 0° 4' 30"		300" = 0° 5' 0"		330" = 0° 5' 30"	
Num.	Log.	Num.	Log.	Num.	Log.
270	*43136	300	*47712	330	*51851
271	*43297	301	*47857	331	*51983
272	*43457	302	*48001	332	*52114
273	*43616	303	*48144	333	*52244
274	*43775	304	*48287	334	*52375
275	*43933	305	*48430	335	*52504
276	*44091	306	*48572	336	*52634
277	*44248	307	*48714	337	*52763
278	*44404	308	*48855	338	*52892
279	*44560	309	*48996	339	*53020
280	*44716	310	*49136	340	*53148
281	*44871	311	*49276	341	*53275
282	*45025	312	*49415	342	*53403
283	*45179	313	*49554	343	*53529
284	*45332	314	*49693	344	*53656
285	*45484	315	*49831	345	*53782
286	*45637	316	*49969	346	*53908
287	*45788	317	*50106	347	*54033
288	*45939	318	*50243	348	*54158
289	*46090	319	*50379	349	*54283
290	*46240	320	*50515	350	*54407
291	*46389	321	*50651	351	*54531
292	*46538	322	*50786	352	*54654
293	*46687	323	*50920	353	*54777
294	*46835	324	*51055	354	*54900
295	*46982	325	*51188	355	*55023
296	*47129	326	*51322	356	*55145
297	*47276	327	*51455	357	*55267
298	*47422	328	*51587	358	*55388
299	*47567	329	*51720	359	*55509
300	*47712	330	*51851	360	*55630

360" = 0° 6' 0"		390" = 0° 6' 30"		420" = 0° 7' 0"	
Num.	Log.	Num.	Log.	Num.	Log.
360	.55630	390	.59106	420	.62325
361	.55751	391	.59218	421	.62428
362	.55871	392	.59329	422	.62531
363	.55991	393	.59439	423	.62634
364	.56110	394	.59550	424	.62737
365	.56229	395	.59660	425	.62839
366	.56348	396	.59770	426	.62941
367	.56467	397	.59879	427	.63043
368	.56585	398	.59988	428	.63144
369	.56703	399	.60097	429	.63246
370	.56820	400	.60206	430	.63347
371	.56937	401	.60314	431	.63448
372	.57054	402	.60423	432	.63548
373	.57171	403	.60531	433	.63649
374	.57287	404	.60638	434	.63749
375	.57403	405	.60746	435	.63849
376	.57519	406	.60853	436	.63949
377	.57634	407	.60959	437	.64048
378	.57749	408	.61066	438	.64147
379	.57864	409	.61172	439	.64246
380	.57978	410	.61278	440	.64345
381	.58092	411	.61384	441	.64444
382	.58206	412	.61490	442	.64542
383	.58320	413	.61595	443	.64640
384	.58433	414	.61700	444	.64738
385	.58546	415	.61805	445	.64836
386	.58659	416	.61909	446	.64933
387	.58771	417	.62014	447	.65031
388	.58883	418	.62118	448	.65128
389	.58995	419	.62221	449	.65225
390	.59106	420	.62325	450	.65321

450" = 0° 7' 30"		480" = 0° 8' 0"		510" = 0° 8' 30"	
Num.	Log.	Num.	Log.	Num.	Log.
450	.65321	480	.68124	510	.70757
451	.65418	481	.68215	511	.70842
452	.65514	482	.68305	512	.70927
453	.65610	483	.68395	513	.71012
454	.65706	484	.68485	514	.71096
455	.65801	485	.68574	515	.71181
456	.65896	486	.68664	516	.71265
457	.65992	487	.68753	517	.71349
458	.66087	488	.68842	518	.71433
459	.66181	489	.68931	519	.71517
460	.66276	490	.69020	520	.71600
461	.66370	491	.69108	521	.71684
462	.66464	492	.69197	522	.71767
463	.66558	493	.69285	523	.71850
464	.66652	494	.69373	524	.71933
465	.66745	495	.69461	525	.72016
466	.66839	496	.69548	526	.72099
467	.66932	497	.69636	527	.72181
468	.67025	498	.69723	528	.72263
469	.67117	499	.69810	529	.72346
470	.67210	500	.69897	530	.72428
471	.67302	501	.69984	531	.72509
472	.67394	502	.70070	532	.72591
473	.67486	503	.70157	533	.72673
474	.67578	504	.70243	534	.72754
475	.67669	505	.70329	535	.72835
476	.67761	506	.70415	536	.72916
477	.67852	507	.70501	537	.72997
478	.67943	508	.70586	538	.73078
479	.68034	509	.70672	539	.73159
480	.68124	510	.70757	540	.73239

540" = 0° 9' 0"		570" = 0° 9' 30"		600" = 0° 10' 0"	
Num.	Log.	Num.	Log.	Num.	Log.
540	.73239	570	.75587	600	.77815
541	.73320	571	.75664	601	.77887
542	.73400	572	.75740	602	.77960
543	.73480	573	.75815	603	.78032
544	.73560	574	.75891	604	.78104
545	.73640	575	.75967	605	.78176
546	.73719	576	.76042	606	.78247
547	.73799	577	.76118	607	.78319
548	.73878	578	.76193	608	.78390
549	.73957	579	.76268	609	.78462
550	.74036	580	.76343	610	.78533
551	.74115	581	.76418	611	.78604
552	.74194	582	.76492	612	.78675
553	.74273	583	.76567	613	.78746
554	.74351	584	.76641	614	.78817
555	.74429	585	.76716	615	.78888
556	.74507	586	.76790	616	.78958
557	.74586	587	.76864	617	.79029
558	.74663	588	.76938	618	.79099
559	.74741	589	.77012	619	.79169
560	.74819	590	.77085	620	.79239
561	.74896	591	.77159	621	.79309
562	.74974	592	.77232	622	.79379
563	.75051	593	.77305	623	.79449
564	.75128	594	.77379	624	.79518
565	.75205	595	.77452	625	.79588
566	.75282	596	.77525	626	.79657
567	.75358	597	.77597	627	.79727
568	.75435	598	.77670	628	.79796
569	.75511	599	.77743	629	.79865
570	.75587	600	.77815	630	.79934

630" = 0° 10' 30"		660" = 0° 11' 0"		690" = 0° 11' 30"	
Num.	Log.	Num.	Log.	Num.	Log.
630	.79934	660	.81954	690	.83885
631	.80003	661	.82020	691	.83948
632	.80072	662	.82086	692	.84011
633	.80140	663	.82151	693	.84073
634	.80209	664	.82217	694	.84136
635	.80277	665	.82282	695	.84198
636	.80346	666	.82347	696	.84261
637	.80414	667	.82413	697	.84323
638	.80482	668	.82478	698	.84386
639	.80550	669	.82543	699	.84448
640	.80618	670	.82607	700	.84510
641	.80686	671	.82672	701	.84572
642	.80754	672	.82737	702	.84634
643	.80821	673	.82802	703	.84696
644	.80889	674	.82866	704	.84757
645	.80956	675	.82930	705	.84819
646	.81023	676	.82995	706	.84880
647	.81090	677	.83059	707	.84942
648	.81158	678	.83123	708	.85003
649	.81224	679	.83187	709	.85065
650	.81291	680	.83251	710	.85126
651	.81358	681	.83315	711	.85187
652	.81425	682	.83378	712	.85248
653	.81491	683	.83442	713	.85309
654	.81558	684	.83506	714	.85370
655	.81624	685	.83569	715	.85431
656	.81690	686	.83632	716	.85491
657	.81757	687	.83696	717	.85552
658	.81823	688	.83759	718	.85612
659	.81889	689	.83822	719	.85673
660	.81954	690	.83885	720	.85733



720" = 0° 12' 0"		750" = 0° 12' 30"		780" = 0° 13' 0"	
Num.	Log.	Num.	Log.	Num.	Log.
720	·85733	750	·87506	780	·89209
721	·85794	751	·87564	781	·89265
722	·85854	752	·87622	782	·89321
723	·85914	753	·87679	783	·89376
724	·85974	754	·87737	784	·89432
725	·86034	755	·87795	785	·89487
726	·86094	756	·87852	786	·89542
727	·86153	757	·87910	787	·89597
728	·86213	758	·87967	788	·89653
729	·86273	759	·88024	789	·89708
730	·86332	760	·88081	790	·89763
731	·86392	761	·88138	791	·89818
732	·86451	762	·88195	792	·89873
733	·86510	763	·88252	793	·89927
734	·86570	764	·88309	794	·89982
735	·86629	765	·88366	795	·90037
736	·86688	766	·88423	796	·90091
737	·86747	767	·88480	797	·90146
738	·86806	768	·88536	798	·90200
739	·86864	769	·88593	799	·90255
740	·86923	770	·88649	800	·90309
741	·86982	771	·88705	801	·90363
742	·87040	772	·88762	802	·90417
743	·87099	773	·88818	803	·90472
744	·87157	774	·88874	804	·90526
745	·87216	775	·88930	805	·90580
746	·87274	776	·88986	806	·90634
747	·87332	777	·89042	807	·90687
748	·87390	778	·89098	808	·90741
749	·87448	779	·89154	809	·90795
750	·87506	780	·89209	810	·90849

990" = 0° 16' 30"		D.	1020" = 0° 17' 0"		D.	1050" = 0° 17' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
990	'99564	43	1020	'00860	43	1050	'02119	41
991	'99607	44	1021	'00903	42	1051	'02160	42
992	'99651	44	1022	'00945	43	1052	'02202	41
993	'99695	44	1023	'00988	42	1053	'02243	41
994	'99739	43	1024	'01030	42	1054	'02284	41
995	'99782	44	1025	'01072	43	1055	'02325	41
996	'99826	44	1026	'01115	42	1056	'02366	41
997	'99870	43	1027	'01157	42	1057	'02407	42
998	'99913	44	1028	'01199	43	1058	'02449	41
999	'99957	43	1029	'01242	42	1059	'02490	41
1000	'00000	43	1030	'01284	42	1060	'02531	41
1001	'00043	44	1031	'01326	42	1061	'02572	40
1002	'00087	43	1032	'01368	42	1062	'02612	41
1003	'00130	43	1033	'01410	42	1063	'02653	41
1004	'00173	44	1034	'01452	42	1064	'02694	41
1005	'00217	43	1035	'01494	42	1065	'02735	41
1006	'00260	43	1036	'01536	42	1066	'02776	40
1007	'00303	43	1037	'01578	42	1067	'02816	41
1008	'00346	43	1038	'01620	42	1068	'02857	41
1009	'00389	43	1039	'01662	41	1069	'02898	40
1010	'00432	43	1040	'01703	42	1070	'02938	41
1011	'00475	43	1041	'01745	42	1071	'02979	40
1012	'00518	43	1042	'01787	41	1072	'03019	41
1013	'00561	43	1043	'01828	42	1073	'03060	40
1014	'00604	43	1044	'01870	42	1074	'03100	41
1015	'00647	42	1045	'01912	41	1075	'03141	40
1016	'00689	43	1046	'01953	42	1076	'03181	41
1017	'00732	43	1047	'01995	41	1077	'03222	40
1018	'00775	42	1048	'02036	42	1078	'03262	40
1019	'00817	43	1049	'02078	41	1079	'03302	40
1020	'00860	43	1050	'02119	41	1080	'03342	40

1080	·03342
1170	·06819

1080" = 0° 18' 0"		D.	1110" = 0° 18' 30"		D.	1140" = 0° 19' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
1080	·03342	41	1110	·04532	39	1140	·05690	39
1081	·03383	40	1111	·04571	39	1141	·05729	38
1082	·03423	40	1112	·04610	40	1142	·05767	38
1083	·03463	40	1113	·04650	39	1143	·05805	38
1084	·03503	40	1114	·04689	38	1144	·05843	38
1085	·03543	40	1115	·04727	39	1145	·05881	37
1086	·03583	40	1116	·04766	39	1146	·05918	38
1087	·03623	40	1117	·04805	39	1147	·05956	38
1088	·03663	40	1118	·04844	39	1148	·05994	38
1089	·03703	40	1119	·04883	39	1149	·06032	38
1090	·03743	39	1120	·04922	39	1150	·06070	38
1091	·03782	40	1121	·04961	38	1151	·06108	37
1092	·03822	40	1122	·04999	39	1152	·06145	38
1093	·03862	40	1123	·05038	39	1153	·06183	38
1094	·03902	39	1124	·05077	38	1154	·06221	37
1095	·03941	40	1125	·05115	39	1155	·06258	38
1096	·03981	40	1126	·05154	38	1156	·06296	37
1097	·04021	39	1127	·05192	39	1157	·06333	38
1098	·04060	40	1128	·05231	38	1158	·06371	37
1099	·04100	39	1129	·05269	39	1159	·06408	38
1100	·04139	40	1130	·05308	38	1160	·06446	37
1101	·04179	39	1131	·05346	39	1161	·06483	38
1102	·04218	40	1132	·05385	38	1162	·06521	37
1103	·04258	39	1133	·05423	38	1163	·06558	37
1104	·04297	39	1134	·05461	39	1164	·06595	38
1105	·04336	40	1135	·05500	38	1165	·06633	37
1106	·04376	39	1136	·05538	38	1166	·06670	37
1107	·04415	39	1137	·05576	38	1167	·06707	37
1108	·04454	39	1138	·05614	38	1168	·06744	37
1109	·04493	39	1139	·05652	38	1169	·06781	37
1110	·04532	39	1140	·05690	38	1170	·06819	38

1170	·06819
1260	·10037

1170' = 0° 19' 30"			1200' = 0° 20' 0"			1230' = 0° 20' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
1170	·06819	37	1200	·07918	36	1230	·08991	35
1171	·06856	37	1201	·07954	36	1231	·09026	35
1172	·06893	37	1202	·07990	37	1232	·09061	35
1173	·06930	37	1203	·08027	36	1233	·09096	36
1174	·06967	37	1204	·08063	36	1234	·09132	35
1175	·07004	37	1205	·08099	36	1235	·09167	35
1176	·07041	37	1206	·08135	36	1236	·09202	35
1177	·07078	37	1207	·08171	36	1237	·09237	35
1178	·07115	36	1208	·08207	36	1238	·09272	35
1179	·07151	37	1209	·08243	36	1239	·09307	35
1180	·07188	37	1210	·08279	36	1240	·09342	35
1181	·07225	37	1211	·08314	35	1241	·09377	35
1182	·07262	36	1212	·08350	36	1242	·09412	35
1183	·07298	36	1213	·08386	36	1243	·09447	35
1184	·07335	37	1214	·08422	36	1244	·09482	35
1185	·07372	36	1215	·08458	35	1245	·09517	35
1186	·07408	37	1216	·08493	36	1246	·09552	35
1187	·07445	36	1217	·08529	36	1247	·09587	35
1188	·07482	37	1218	·08565	35	1248	·09621	34
1189	·07518	37	1219	·08600	36	1249	·09656	35
1190	·07555	36	1220	·08636	36	1250	·09691	35
1191	·07591	37	1221	·08672	35	1251	·09726	35
1192	·07628	36	1222	·08707	36	1252	·09760	34
1193	·07664	36	1223	·08743	35	1253	·09795	35
1194	·07700	37	1224	·08778	36	1254	·09830	35
1195	·07737	36	1225	·08814	35	1255	·09864	34
1196	·07773	36	1226	·08849	35	1256	·09899	35
1197	·07809	36	1227	·08884	35	1257	·09934	35
1198	·07846	37	1228	·08920	36	1258	·09968	34
1199	·07882	36	1229	·08955	35	1259	·10003	35
1200	·07918	36	1230	·08991	36	1260	·10037	34

1260	•10037
1350	•13033

1260" = 0° 21' 0"			1290" = 0° 21' 30"			1320" = 0° 22' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
1260	•10037	35	1290	•11059	34	1320	•12057	33
1261	•10072	34	1291	•11093	33	1321	•12090	33
1262	•10106	34	1292	•11126	34	1322	•12123	33
1263	•10140	35	1293	•11160	33	1323	•12156	33
1264	•10175	34	1294	•11193	34	1324	•12189	33
1265	•10209	34	1295	•11227	34	1325	•12222	32
1266	•10243	35	1296	•11261	33	1326	•12254	33
1267	•10278	34	1297	•11294	33	1327	•12287	33
1268	•10312	34	1298	•11327	34	1328	•12320	32
1269	•10346	34	1299	•11361	33	1329	•12352	33
1270	•10380	35	1300	•11394	34	1330	•12385	33
1271	•10415	34	1301	•11428	33	1331	•12418	32
1272	•10449	34	1302	•11461	33	1332	•12450	33
1273	•10483	34	1303	•11494	34	1333	•12483	33
1274	•10517	34	1304	•11528	33	1334	•12516	32
1275	•10551	34	1305	•11561	33	1335	•12548	33
1276	•10585	34	1306	•11594	34	1336	•12581	32
1277	•10619	34	1307	•11628	33	1337	•12613	33
1278	•10653	34	1308	•11661	33	1338	•12646	32
1279	•10687	34	1309	•11694	33	1339	•12678	32
1280	•10721	34	1310	•11727	33	1340	•12710	33
1281	•10755	34	1311	•11760	33	1341	•12743	32
1282	•10789	34	1312	•11793	33	1342	•12775	33
1283	•10823	34	1313	•11826	34	1343	•12808	32
1284	•10857	33	1314	•11860	33	1344	•12840	32
1285	•10890	34	1315	•11893	33	1345	•12872	33
1286	•10924	34	1316	•11926	33	1346	•12905	32
1287	•10958	34	1317	•11959	33	1347	•12937	32
1288	•10992	33	1318	•11992	32	1348	•12969	32
1289	•11025	34	1319	•12024	33	1349	•13001	32
1290	•11059	34	1320	•12057	33	1350	•13033	32

1350	13033
1440	15836

1350" = 0° 22' 30"			1380" = 0° 23' 0"			1410" = 0° 23' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
1350	13033		1380	13988		1410	14922	
1351	13066	33	1381	14019	31	1411	14953	31
1352	13098	32	1382	14051	32	1412	14983	30
		32			31			31
1353	13130	32	1383	14082	32	1413	15014	31
1354	13162	32	1384	14114	31	1414	15045	31
1355	13194	32	1385	14145	31	1415	15076	30
		32			32			31
1356	13226	32	1386	14176	31	1416	15106	31
1357	13258	32	1387	14208	31	1417	15137	31
1358	13290	32	1388	14239	31	1418	15168	30
		32			31			31
1359	13322	32	1389	14270	31	1419	15198	31
1360	13354	32	1390	14301	32	1420	15229	30
1361	13386	32	1391	14333	31	1421	15259	31
		32			31			30
1362	13418	32	1392	14364	31	1422	15290	30
1363	13450	31	1393	14395	31	1423	15320	31
1364	13481	32	1394	14426	31	1424	15351	30
		32			32			31
1365	13513	32	1395	14457	31	1425	15381	31
1366	13545	32	1396	14489	31	1426	15412	30
1367	13577	32	1397	14520	31	1427	15442	31
		32			31			30
1368	13609	31	1398	14551	31	1428	15473	30
1369	13640	32	1399	14582	31	1429	15503	31
1370	13672	32	1400	14613	31	1430	15534	30
		32			31			30
1371	13704	31	1401	14644	31	1431	15564	30
1372	13735	32	1402	14675	31	1432	15594	31
1373	13767	32	1403	14706	31	1433	15625	30
		32			31			30
1374	13799	31	1404	14737	31	1434	15655	30
1375	13830	32	1405	14768	31	1435	15685	30
1376	13862	31	1406	14799	30	1436	15715	31
		32			31			30
1377	13893	32	1407	14829	31	1437	15746	30
1378	13925	31	1408	14860	31	1438	15776	30
1379	13956	32	1409	14891	31	1439	15806	30
1380	13988	32	1410	14922	31	1440	15836	30

1440	·15836
1530	·18469

1440" = 0° 24' 0"			1470" = 0° 24' 30"			1500" = 0° 25' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
1440	·15836	30	1470	·16732	29	1500	·17609	29
1441	·15866	31	1471	·16761	30	1501	·17638	29
1442	·15897	30	1472	·16791	29	1502	·17667	29
1443	·15927	30	1473	·16820	30	1503	·17696	29
1444	·15957	30	1474	·16850	29	1504	·17725	29
1445	·15987	30	1475	·16879	30	1505	·17754	28
1446	·16017	30	1476	·16909	29	1506	·17782	29
1447	·16047	30	1477	·16938	29	1507	·17811	29
1448	·16077	30	1478	·16967	30	1508	·17840	29
1449	·16107	30	1479	·16997	29	1509	·17869	29
1450	·16137	30	1480	·17026	30	1510	·17898	28
1451	·16167	30	1481	·17056	29	1511	·17926	29
1452	·16197	30	1482	·17085	29	1512	·17955	29
1453	·16227	29	1483	·17114	29	1513	·17984	29
1454	·16256	30	1484	·17143	30	1514	·18013	28
1455	·16286	30	1485	·17173	29	1515	·18041	29
1456	·16316	30	1486	·17202	29	1516	·18070	29
1457	·16346	30	1487	·17231	29	1517	·18099	28
1458	·16376	30	1488	·17260	29	1518	·18127	29
1459	·16406	29	1489	·17289	30	1519	·18156	28
1460	·16435	30	1490	·17319	29	1520	·18184	29
1461	·16465	30	1491	·17348	29	1521	·18213	28
1462	·16495	29	1492	·17377	29	1522	·18241	29
1463	·16524	30	1493	·17406	29	1523	·18270	28
1464	·16554	30	1494	·17435	29	1524	·18298	29
1465	·16584	29	1495	·17464	29	1525	·18327	28
1466	·16613	30	1496	·17493	29	1526	·18355	29
1467	·16643	30	1497	·17522	29	1527	·18384	28
1468	·16673	29	1498	·17551	29	1528	·18412	29
1469	·16702	30	1499	·17580	29	1529	·18441	28
1470	·16732	30	1500	·17609	29	1530	·18469	28

1530	·18469
1620	·20952

1530" = 0° 25' 30"		D.	1560" = 0° 26' 0"		D.	1590" = 0° 26' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
1530	·18469		1560	·19312		1590	·20140	
1531	·18498	29	1561	·19340	28	1591	·20167	27
1532	·18526	28	1562	·19368	28	1592	·20194	27
		28			28			28
1533	·18554	29	1563	·19396	28	1593	·20222	27
1534	·18583	28	1564	·19424	27	1594	·20249	27
1535	·18611	28	1565	·19451	28	1595	·20276	27
		28			28			27
1536	·18639	28	1566	·19479	28	1596	·20303	27
1537	·18667	29	1567	·19507	28	1597	·20330	28
1538	·18696	28	1568	·19535	27	1598	·20358	27
		28			28			27
1539	·18724	28	1569	·19562	28	1599	·20385	27
1540	·18752	28	1570	·19590	28	1600	·20412	27
1541	·18780	28	1571	·19618	27	1601	·20439	27
		28			27			27
1542	·18808	29	1572	·19645	28	1602	·20466	27
1543	·18837	28	1573	·19673	27	1603	·20493	27
1544	·18865	28	1574	·19700	28	1604	·20520	28
		28			28			28
1545	·18893	28	1575	·19728	28	1605	·20548	27
1546	·18921	28	1576	·19756	27	1606	·20575	27
1547	·18949	28	1577	·19783	28	1607	·20602	27
		28			28			27
1548	·18977	28	1578	·19811	27	1608	·20629	27
1549	·19005	28	1579	·19838	28	1609	·20656	27
1550	·19033	28	1580	·19866	27	1610	·20683	27
		28			27			27
1551	·19061	28	1581	·19893	28	1611	·20710	27
1552	·19089	28	1582	·19921	27	1612	·20737	27
1553	·19117	28	1583	·19948	28	1613	·20763	26
		28			28			27
1554	·19145	28	1584	·19976	27	1614	·20790	27
1555	·19173	28	1585	·20003	27	1615	·20817	27
1556	·19201	28	1586	·20030	27	1616	·20844	27
		28			28			27
1557	·19229	28	1587	·20058	27	1617	·20871	27
1558	·19257	28	1588	·20085	27	1618	·20898	27
1559	·19285	28	1589	·20112	27	1619	·20925	27
1560	·19312	27	1590	·20140	28	1620	·20952	27



1620	'20952
1710	'23300

1620" = 0° 27' 0"			1650" = 0° 27' 30"			1680" = 0° 28' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
1620	'20952	26	1650	'21748	27	1680	'22531	26
1621	'20978	27	1651	'21775	26	1681	'22557	26
1622	'21005	27	1652	'21801	26	1682	'22583	25
1623	'21032	27	1653	'21827	27	1683	'22608	26
1624	'21059	26	1654	'21854	26	1684	'22634	26
1625	'21085	27	1655	'21880	26	1685	'22660	26
1626	'21112	27	1656	'21906	26	1686	'22686	26
1627	'21139	26	1657	'21932	26	1687	'22712	25
1628	'21165	27	1658	'21958	27	1688	'22737	26
1629	'21192	27	1659	'21985	26	1689	'22763	26
1630	'21219	26	1660	'22011	26	1690	'22789	25
1631	'21245	27	1661	'22037	26	1691	'22814	26
1632	'21272	27	1662	'22063	26	1692	'22840	26
1633	'21299	26	1663	'22089	26	1693	'22866	25
1634	'21325	27	1664	'22115	26	1694	'22891	26
1635	'21352	26	1665	'22141	26	1695	'22917	26
1636	'21378	27	1666	'22167	27	1696	'22943	25
1637	'21405	26	1667	'22194	26	1697	'22968	26
1638	'21431	27	1668	'22220	26	1698	'22994	25
1639	'21458	26	1669	'22246	26	1699	'23019	26
1640	'21484	27	1670	'22272	26	1700	'23045	25
1641	'21511	26	1671	'22298	26	1701	'23070	26
1642	'21537	27	1672	'22324	26	1702	'23096	25
1643	'21564	26	1673	'22350	26	1703	'23121	26
1644	'21590	27	1674	'22376	25	1704	'23147	25
1645	'21617	26	1675	'22401	26	1705	'23172	26
1646	'21643	26	1676	'22427	26	1706	'23198	25
1647	'21669	27	1677	'22453	26	1707	'23223	26
1648	'21696	26	1678	'22479	26	1708	'23249	25
1649	'21722	26	1679	'22505	26	1709	'23274	26
1650	'21748	26	1680	'22531	26	1710	'23300	26

1710	'23300
1800	'25527

1710" = 0° 28' 30"		D.	1740" = 0° 29' 0"		D.	1770" = 0° 29' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
1710	'23300	25	1740	'24055	25	1770	'24797	25
1711	'23325	25	1741	'24080	25	1771	'24822	24
1712	'23350	26	1742	'24105	25	1772	'24846	25
1713	'23376	25	1743	'24130	25	1773	'24871	24
1714	'23401	25	1744	'24155	25	1774	'24895	25
1715	'23426	26	1745	'24180	24	1775	'24920	24
1716	'23452	25	1746	'24204	25	1776	'24944	25
1717	'23477	25	1747	'24229	25	1777	'24969	24
1718	'23502	26	1748	'24254	25	1778	'24993	25
1719	'23528	25	1749	'24279	25	1779	'25018	24
1720	'23553	25	1750	'24304	25	1780	'25042	24
1721	'23578	25	1751	'24329	24	1781	'25066	25
1722	'23603	26	1752	'24353	25	1782	'25091	24
1723	'23629	25	1753	'24378	25	1783	'25115	24
1724	'23654	25	1754	'24403	25	1784	'25139	25
1725	'23679	25	1755	'24428	24	1785	'25164	24
1726	'23704	25	1756	'24452	25	1786	'25188	24
1727	'23729	25	1757	'24477	25	1787	'25212	25
1728	'23754	25	1758	'24502	25	1788	'25237	24
1729	'23779	26	1759	'24527	24	1789	'25261	24
1730	'23805	25	1760	'24551	25	1790	'25285	25
1731	'23830	25	1761	'24576	25	1791	'25310	24
1732	'23855	25	1762	'24601	24	1792	'25334	24
1733	'23880	25	1763	'24625	25	1793	'25358	24
1734	'23905	25	1764	'24650	24	1794	'25382	24
1735	'23930	25	1765	'24674	25	1795	'25406	25
1736	'23955	25	1766	'24699	25	1796	'25431	24
1737	'23980	25	1767	'24724	24	1797	'25455	24
1738	'24005	25	1768	'24748	25	1798	'25479	24
1739	'24030	25	1769	'24773	24	1799	'25503	24
1740	'24055	25	1770	'24797	24	1800	'25527	24

1800	·25527
1890	·27646

1800" = 0° 30' 0"		D.	1830" = 0° 30' 30"		D.	1860" = 0° 31' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
1800	·25527	24	1830	·26245	24	1860	·26951	24
1801	·25551	24	1831	·26269	24	1861	·26975	23
1802	·25575	25	1832	·26293	23	1862	·26998	23
1803	·25600	24	1833	·26316	24	1863	·27021	24
1804	·25624	24	1834	·26340	24	1864	·27045	23
1805	·25648	24	1835	·26364	23	1865	·27068	23
1806	·25672	24	1836	·26387	24	1866	·27091	23
1807	·25696	24	1837	·26411	24	1867	·27114	24
1808	·25720	24	1838	·26435	23	1868	·27138	23
1809	·25744	24	1839	·26458	24	1869	·27161	23
1810	·25768	24	1840	·26482	23	1870	·27184	23
1811	·25792	24	1841	·26505	24	1871	·27207	24
1812	·25816	24	1842	·26529	24	1872	·27231	23
1813	·25840	24	1843	·26553	23	1873	·27254	23
1814	·25864	24	1844	·26576	24	1874	·27277	23
1815	·25888	24	1845	·26600	23	1875	·27300	23
1816	·25912	23	1846	·26623	24	1876	·27323	23
1817	·25935	24	1847	·26647	23	1877	·27346	24
1818	·25959	24	1848	·26670	24	1878	·27370	23
1819	·25983	24	1849	·26694	23	1879	·27393	23
1820	·26007	24	1850	·26717	24	1880	·27416	23
1821	·26031	24	1851	·26741	23	1881	·27439	23
1822	·26055	24	1852	·26764	24	1882	·27462	23
1823	·26079	23	1853	·26788	23	1883	·27485	23
1824	·26102	24	1854	·26811	23	1884	·27508	23
1825	·26126	24	1855	·26834	24	1885	·27531	23
1826	·26150	24	1856	·26858	23	1886	·27554	23
1827	·26174	24	1857	·26881	24	1887	·27577	23
1828	·26198	23	1858	·26905	23	1888	·27600	23
1829	·26221	24	1859	·26928	23	1889	·27623	23
1830	·26245		1860	·26951	23	1890	·27646	

1890	'27646
1980	'29667

1890" = 0° 31' 30"			1920" = 0° 32' 0"			1950" = 0° 32' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
1890	'27646		1920	'28330		1950	'29003	
1891	'27669	23	1921	'28353	23	1951	'29026	23
1892	'27692	23	1922	'28375	22	1952	'29048	22
		23			23			22
1893	'27715	23	1923	'28398	23	1953	'29070	22
1894	'27738	23	1924	'28421	22	1954	'29092	23
1895	'27761	23	1925	'28443	23	1955	'29115	22
		23			22			22
1896	'27784	23	1926	'28466	22	1956	'29137	22
1897	'27807	23	1927	'28488	23	1957	'29159	22
1898	'27830	22	1928	'28511	22	1958	'29181	22
		23			23			23
1899	'27852	23	1929	'28533	23	1959	'29203	23
1900	'27875	23	1930	'28556	22	1960	'29226	22
1901	'27898	23	1931	'28578	23	1961	'29248	22
		23			22			22
1902	'27921	23	1932	'28601	22	1962	'29270	22
1903	'27944	23	1933	'28623	23	1963	'29292	22
1904	'27967	22	1934	'28646	22	1964	'29314	22
		23			23			22
1905	'27989	23	1935	'28668	23	1965	'29336	22
1906	'28012	23	1936	'28691	22	1966	'29358	22
1907	'28035	23	1937	'28713	22	1967	'29380	23
		23			23			22
1908	'28058	23	1938	'28735	23	1968	'29403	22
1909	'28081	22	1939	'28758	22	1969	'29425	22
1910	'28103	23	1940	'28780	23	1970	'29447	22
		23			22			22
1911	'28126	23	1941	'28803	22	1971	'29469	22
1912	'28149	22	1942	'28825	22	1972	'29491	22
1913	'28171	23	1943	'28847	23	1973	'29513	22
		23			22			22
1914	'28194	23	1944	'28870	22	1974	'29535	22
1915	'28217	23	1945	'28892	22	1975	'29557	22
1916	'28240	22	1946	'28914	23	1976	'29579	22
		23			22			22
1917	'28262	23	1947	'28937	22	1977	'29601	22
1918	'28285	22	1948	'28959	22	1978	'29623	22
1919	'28307	23	1949	'28981	22	1979	'29645	22
1920	'28330	23	1950	'29003	22	1980	'29667	22

1980" = 0° 33' 0"			2010" = 0° 33' 30"			2040" = 0° 34' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
1980	'29667	21	2010	'30320	21	2040	'30963	21
1981	'29688	22	2011	'30341	22	2041	'30984	22
1982	'29710	22	2012	'30363	21	2042	'31006	21
1983	'29732	22	2013	'30384	22	2043	'31027	21
1984	'29754	22	2014	'30406	22	2044	'31048	21
1985	'29776	22	2015	'30428	21	2045	'31069	22
1986	'29798	22	2016	'30449	22	2046	'31091	21
1987	'29820	22	2017	'30471	21	2047	'31112	21
1988	'29842	21	2018	'30492	22	2048	'31133	21
1989	'29863	22	2019	'30514	21	2049	'31154	21
1990	'29885	22	2020	'30535	22	2050	'31175	22
1991	'29907	22	2021	'30557	21	2051	'31197	21
1992	'29929	22	2022	'30578	22	2052	'31218	21
1993	'29951	22	2023	'30600	21	2053	'31239	21
1994	'29973	21	2024	'30621	22	2054	'31260	21
1995	'29994	22	2025	'30643	21	2055	'31281	21
1996	'30016	22	2026	'30664	21	2056	'31302	21
1997	'30038	22	2027	'30685	22	2057	'31323	22
1998	'30060	21	2028	'30707	21	2058	'31345	21
1999	'30081	22	2029	'30728	22	2059	'31366	21
2000	'30103	22	2030	'30750	21	2060	'31387	21
2001	'30125	21	2031	'30771	21	2061	'31408	21
2002	'30146	22	2032	'30792	22	2062	'31429	21
2003	'30168	22	2033	'30814	21	2063	'31450	21
2004	'30190	21	2034	'30835	21	2064	'31471	21
2005	'30211	22	2035	'30856	22	2065	'31492	21
2006	'30233	22	2036	'30878	21	2066	'31513	21
2007	'30255	21	2037	'30899	21	2067	'31534	21
2008	'30276	22	2038	'30920	22	2068	'31555	21
2009	'30298	22	2039	'30942	21	2069	'31576	21
2010	'30320	22	2040	'30963	21	2070	'31597	21

2070	'31597
2160	'33445

2070" = 0° 34' 30"		D.	2100" = 0° 35' 0"		D.	2130" = 0° 35' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
2070	'31597	21	2100	'32222	21	2130	'32838	20
2071	'31618	21	2101	'32243	20	2131	'32858	21
2072	'31639	21	2102	'32263	21	2132	'32879	20
2073	'31660	21	2103	'32284	21	2133	'32899	20
2074	'31681	21	2104	'32305	20	2134	'32919	21
2075	'31702	21	2105	'32325	21	2135	'32940	20
2076	'31723	21	2106	'32346	20	2136	'32960	20
2077	'31744	21	2107	'32366	21	2137	'32980	21
2078	'31765	20	2108	'32387	21	2138	'33001	20
2079	'31785	21	2109	'32408	20	2139	'33021	20
2080	'31806	21	2110	'32428	21	2140	'33041	21
2081	'31827	21	2111	'32449	20	2141	'33062	20
2082	'31848	21	2112	'32469	21	2142	'33082	20
2083	'31869	21	2113	'32490	20	2143	'33102	20
2084	'31890	21	2114	'32510	21	2144	'33122	21
2085	'31911	20	2115	'32531	21	2145	'33143	20
2086	'31931	21	2116	'32552	20	2146	'33163	20
2087	'31952	21	2117	'32572	21	2147	'33183	20
2088	'31973	21	2118	'32593	20	2148	'33203	21
2089	'31994	21	2119	'32613	21	2149	'33224	20
2090	'32015	20	2120	'32634	20	2150	'33244	20
2091	'32035	21	2121	'32654	21	2151	'33264	20
2092	'32056	21	2122	'32675	20	2152	'33284	20
2093	'32077	21	2123	'32695	20	2153	'33304	21
2094	'32098	20	2124	'32715	21	2154	'33325	20
2095	'32118	21	2125	'32736	20	2155	'33345	20
2096	'32139	21	2126	'32756	21	2156	'33365	20
2097	'32160	21	2127	'32777	20	2157	'33385	20
2098	'32181	20	2128	'32797	21	2158	'33405	20
2099	'32201	21	2129	'32818	20	2159	'33425	20
2100	'32222	21	2130	'32838	20	2160	'33445	20

2160" = 0° 36' 0"		D.	2190" = 0° 36' 30"		D.	2220" = 0° 37' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
2160	33445	20	2190	34044	20	2220	34635	20
2161	33465	21	2191	34064	20	2221	34655	19
2162	33486	20	2192	34084	20	2222	34674	20
2163	33506	20	2193	34104	20	2223	34694	19
2164	33526	20	2194	34124	19	2224	34713	20
2165	33546	20	2195	34143	20	2225	34733	20
2166	33566	20	2196	34163	20	2226	34753	19
2167	33586	20	2197	34183	20	2227	34772	20
2168	33606	20	2198	34203	20	2228	34792	19
2169	33626	20	2199	34223	19	2229	34811	19
2170	33646	20	2200	34242	20	2230	34830	20
2171	33666	20	2201	34262	20	2231	34850	19
2172	33686	20	2202	34282	19	2232	34869	20
2173	33706	20	2203	34301	20	2233	34889	19
2174	33726	20	2204	34321	20	2234	34908	20
2175	33746	20	2205	34341	20	2235	34928	19
2176	33766	20	2206	34361	19	2236	34947	20
2177	33786	20	2207	34380	20	2237	34967	19
2178	33806	20	2208	34400	20	2238	34986	19
2179	33826	20	2209	34420	19	2239	35005	20
2180	33846	20	2210	34439	20	2240	35025	19
2181	33866	19	2211	34459	20	2241	35044	20
2182	33885	20	2212	34479	19	2242	35064	19
2183	33905	20	2213	34498	20	2243	35083	19
2184	33925	20	2214	34518	19	2244	35102	20
2185	33945	20	2215	34537	20	2245	35122	19
2186	33965	20	2216	34557	20	2246	35141	19
2187	33985	20	2217	34577	19	2247	35160	20
2188	34005	19	2218	34596	20	2248	35180	19
2189	34025	20	2219	34616	19	2249	35199	19
2190	34044	19	2220	34635	19	2250	35218	19

2250	'35218
2340	'36922

2250" = 0° 37' 30"		D.	2280" = 0° 38' 0"		D.	2310" = 0° 38' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
2250	'35218	20	2280	'35793	20	2310	'36361	19
2251	'35238	19	2281	'35813	19	2311	'36380	19
2252	'35257	19	2282	'35832	19	2312	'36399	19
2253	'35276	19	2283	'35851	19	2313	'36418	18
2254	'35295	20	2284	'35870	19	2314	'36436	19
2255	'35315	19	2285	'35889	19	2315	'36455	19
2256	'35334	19	2286	'35908	19	2316	'36474	19
2257	'35353	19	2287	'35927	19	2317	'36493	18
2258	'35372	20	2288	'35946	19	2318	'36511	19
2259	'35392	19	2289	'35965	19	2319	'36530	19
2260	'35411	19	2290	'35984	19	2320	'36549	19
2261	'35430	19	2291	'36003	18	2321	'36568	18
2262	'35449	19	2292	'36021	19	2322	'36586	19
2263	'35468	20	2293	'36040	19	2323	'36605	19
2264	'35488	19	2294	'36059	19	2324	'36624	18
2265	'35507	19	2295	'36078	19	2325	'36642	19
2266	'35526	19	2296	'36097	19	2326	'36661	19
2267	'35545	19	2297	'36116	19	2327	'36680	18
2268	'35564	19	2298	'36135	19	2328	'36698	19
2269	'35583	20	2299	'36154	19	2329	'36717	19
2270	'35603	19	2300	'36173	19	2330	'36736	18
2271	'35622	19	2301	'36192	19	2331	'36754	19
2272	'35641	19	2302	'36211	18	2332	'36773	18
2273	'35660	19	2303	'36229	19	2333	'36791	19
2274	'35679	19	2304	'36248	19	2334	'36810	19
2275	'35698	19	2305	'36267	19	2335	'36829	18
2276	'35717	19	2306	'36286	19	2336	'36847	19
2277	'35736	19	2307	'36305	19	2337	'36866	18
2278	'35755	19	2308	'36324	18	2338	'36884	19
2279	'35774	19	2309	'36342	19	2339	'36903	19
2280	'35793	19	2310	'36361	19	2340	'36922	19



2340	·38522
2430	·38561

2340" = 0° 39' 0"			2370" = 0° 39' 30"			2400" = 0° 40' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
2340	·36922	18	2370	·37475	18	2400	·38021	18
2341	·36940	19	2371	·37493	18	2401	·38039	18
2342	·36959	18	2372	·37511	19	2402	·38057	18
2343	·36977	19	2373	·37530	18	2403	·38075	18
2344	·36996	18	2374	·37548	18	2404	·38093	19
2345	·37014	19	2375	·37566	19	2405	·38112	18
2346	·37033	18	2376	·37585	18	2406	·38130	18
2347	·37051	19	2377	·37603	18	2407	·38148	18
2348	·37070	18	2378	·37621	18	2408	·38166	18
2349	·37088	19	2379	·37639	19	2409	·38184	18
2350	·37107	18	2380	·37658	18	2410	·38202	18
2351	·37125	19	2381	·37676	18	2411	·38220	18
2352	·37144	18	2382	·37694	18	2412	·38238	18
2353	·37162	19	2383	·37712	19	2413	·38256	18
2354	·37181	18	2384	·37731	18	2414	·38274	18
2355	·37199	19	2385	·37749	18	2415	·38292	18
2356	·37218	18	2386	·37767	18	2416	·38310	18
2357	·37236	18	2387	·37785	18	2417	·38328	18
2358	·37254	19	2388	·37803	19	2418	·38346	18
2359	·37273	18	2389	·37822	18	2419	·38364	18
2360	·37291	19	2390	·37840	18	2420	·38382	17
2361	·37310	18	2391	·37858	18	2421	·38399	18
2362	·37328	18	2392	·37876	18	2422	·38417	18
2363	·37346	19	2393	·37894	18	2423	·38435	18
2364	·37365	18	2394	·37912	19	2424	·38453	18
2365	·37383	18	2395	·37931	18	2425	·38471	18
2366	·37401	19	2396	·37949	18	2426	·38489	18
2367	·37420	18	2397	·37967	18	2427	·38507	18
2368	·37438	19	2398	·37985	18	2428	·38525	18
2369	·37457	18	2399	·38003	18	2429	·38543	18
2370	·37475	18	2400	·38021	18	2430	·38561	18

2430	'38561
2520	'40140

2430" = 0° 40' 30"			2460" = 0° 41' 0"			2490" = 0° 41' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
2430	'38561	17	2460	'39094	17	2490	'39620	17
2431	'38578	18	2461	'39111	18	2491	'39637	18
2432	'38596	18	2462	'39129	17	2492	'39655	17
2433	'38614	18	2463	'39146	18	2493	'39672	18
2434	'38632	18	2464	'39164	18	2494	'39690	17
2435	'38650	18	2465	'39182	17	2495	'39707	17
2436	'38668	18	2466	'39199	18	2496	'39724	18
2437	'38686	17	2467	'39217	18	2497	'39742	17
2438	'38703	18	2468	'39235	17	2498	'39759	18
2439	'38721	18	2469	'39252	18	2499	'39777	17
2440	'38739	18	2470	'39270	17	2500	'39794	17
2441	'38757	18	2471	'39287	18	2501	'39811	18
2442	'38775	17	2472	'39305	17	2502	'39829	17
2443	'38792	18	2473	'39322	18	2503	'39846	17
2444	'38810	18	2474	'39340	18	2504	'39863	18
2445	'38828	18	2475	'39358	17	2505	'39881	17
2446	'38846	17	2476	'39375	18	2506	'39898	17
2447	'38863	18	2477	'39393	17	2507	'39915	18
2448	'38881	18	2478	'39410	18	2508	'39933	17
2449	'38899	18	2479	'39428	17	2509	'39950	17
2450	'38917	17	2480	'39445	18	2510	'39967	18
2451	'38934	18	2481	'39463	17	2511	'39985	17
2452	'38952	18	2482	'39480	18	2512	'40002	17
2453	'38970	17	2483	'39498	17	2513	'40019	18
2454	'38987	18	2484	'39515	18	2514	'40037	17
2455	'39005	18	2485	'39533	17	2515	'40054	17
2456	'39023	18	2486	'39550	18	2516	'40071	17
2457	'39041	17	2487	'39568	17	2517	'40088	18
2458	'39058	18	2488	'39585	17	2518	'40106	17
2459	'39076	18	2489	'39602	17	2519	'40123	17
2460	'39094	18	2490	'39620	18	2520	'40140	17

2520	'40140
2610	'41664

2520" = 0° 42' 0"			2550" = 0° 42' 30"			2580" = 0° 43' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
2520	'40140		2550	'40654		2580	'41162	
2521	'40157	17	2551	'40671	17	2581	'41179	17
2522	'40175	18	2552	'40688	17	2582	'41196	17
		17			17			16
2523	'40192	17	2553	'40705	17	2583	'41212	17
2524	'40209	17	2554	'40722	17	2584	'41229	17
2525	'40226	17	2555	'40739	17	2585	'41246	17
		17			17			17
2526	'40243	18	2556	'40756	17	2586	'41263	17
2527	'40261	17	2557	'40773	17	2587	'41280	17
2528	'40278	17	2558	'40790	17	2588	'41296	16
		17			17			17
2529	'40295	17	2559	'40807	17	2589	'41313	17
2530	'40312	17	2560	'40824	17	2590	'41330	17
2531	'40329	17	2561	'40841	17	2591	'41347	17
		17			17			16
2532	'40346	18	2562	'40858	17	2592	'41363	17
2533	'40364	17	2563	'40875	17	2593	'41380	17
2534	'40381	17	2564	'40892	17	2594	'41397	17
		17			17			17
2535	'40398	17	2565	'40909	17	2595	'41414	16
2536	'40415	17	2566	'40926	17	2596	'41430	17
2537	'40432	17	2567	'40943	17	2597	'41447	17
		17			17			17
2538	'40449	17	2568	'40960	16	2598	'41464	17
2539	'40466	17	2569	'40976	17	2599	'41481	16
2540	'40483	17	2570	'40993	17	2600	'41497	17
		17			17			17
2541	'40500	18	2571	'41010	17	2601	'41514	17
2542	'40518	17	2572	'41027	17	2602	'41531	16
2543	'40535	17	2573	'41044	17	2603	'41547	17
		17			17			17
2544	'40552	17	2574	'41061	17	2604	'41564	17
2545	'40569	17	2575	'41078	17	2605	'41581	16
2546	'40586	17	2576	'41095	16	2606	'41597	17
		17			16			17
2547	'40603	17	2577	'41111	17	2607	'41614	17
2548	'40620	17	2578	'41128	17	2608	'41631	16
2549	'40637	17	2579	'41145	17	2609	'41647	17
2550	'40654	17	2580	'41162	17	2610	'41664	17

2610	'41664
2700	'43136

2610" - 0° 43' 30"		D.	2640" - 0° 44' 0"		D.	2670" - 0° 44' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
2610	'41664	17	2640	'42160	17	2670	'42651	16
2611	'41681	16	2641	'42177	16	2671	'42667	17
2612	'41697	17	2642	'42193	17	2672	'42684	16
2613	'41714	17	2643	'42210	16	2673	'42700	16
2614	'41731	16	2644	'42226	17	2674	'42716	16
2615	'41747	17	2645	'42243	16	2675	'42732	17
2616	'41764	16	2646	'42259	16	2676	'42749	16
2617	'41780	17	2647	'42275	17	2677	'42765	16
2618	'41797	17	2648	'42292	16	2678	'42781	16
2619	'41814	16	2649	'42308	17	2679	'42797	17
2620	'41830	17	2650	'42325	16	2680	'42813	17
2621	'41847	16	2651	'42341	16	2681	'42830	16
2622	'41863	17	2652	'42357	17	2682	'42846	16
2623	'41880	16	2653	'42374	16	2683	'42862	16
2624	'41896	17	2654	'42390	16	2684	'42878	16
2625	'41913	16	2655	'42406	17	2685	'42894	17
2626	'41929	17	2656	'42423	16	2686	'42911	16
2627	'41946	17	2657	'42439	16	2687	'42927	16
2628	'41963	16	2658	'42455	17	2688	'42943	16
2629	'41979	17	2659	'42472	16	2689	'42959	16
2630	'41996	16	2660	'42488	16	2690	'42975	16
2631	'42012	17	2661	'42504	17	2691	'42991	17
2632	'42029	16	2662	'42521	16	2692	'43008	16
2633	'42045	17	2663	'42537	16	2693	'43024	16
2634	'42062	16	2664	'42553	17	2694	'43040	16
2635	'42078	17	2665	'42570	16	2695	'43056	16
2636	'42095	16	2666	'42586	16	2696	'43072	16
2637	'42111	16	2667	'42602	17	2697	'43088	16
2638	'42127	17	2668	'42619	16	2698	'43104	16
2639	'42144	16	2669	'42635	16	2699	'43120	16
2640	'42160	16	2670	'42651	16	2700	'43136	16

2700	43136
2790	44560

2700'' = 0° 45' 0''			2730'' = 0° 45' 30''			2760'' = 0° 46' 0''		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
2700	43136	16	2730	43616	16	2760	44091	16
2701	43152	17	2731	43632	16	2761	44107	15
2702	43169	16	2732	43648	16	2762	44122	16
2703	43185	16	2733	43664	16	2763	44138	16
2704	43201	16	2734	43680	16	2764	44154	16
2705	43217	16	2735	43696	16	2765	44170	15
2706	43233	16	2736	43712	15	2766	44185	16
2707	43249	16	2737	43727	16	2767	44201	16
2708	43265	16	2738	43743	16	2768	44217	15
2709	43281	16	2739	43759	16	2769	44232	16
2710	43297	16	2740	43775	16	2770	44248	16
2711	43313	16	2741	43791	16	2771	44264	15
2712	43329	16	2742	43807	16	2772	44279	16
2713	43345	16	2743	43823	15	2773	44295	16
2714	43361	16	2744	43838	16	2774	44311	15
2715	43377	16	2745	43854	16	2775	44326	16
2716	43393	16	2746	43870	16	2776	44342	16
2717	43409	16	2747	43886	16	2777	44358	15
2718	43425	16	2748	43902	15	2778	44373	16
2719	43441	16	2749	43917	16	2779	44389	15
2720	43457	16	2750	43933	16	2780	44404	16
2721	43473	16	2751	43949	16	2781	44420	16
2722	43489	16	2752	43965	16	2782	44436	15
2723	43505	16	2753	43981	15	2783	44451	16
2724	43521	16	2754	43996	16	2784	44467	16
2725	43537	16	2755	44012	16	2785	44483	15
2726	43553	16	2756	44028	16	2786	44498	16
2727	43569	15	2757	44044	15	2787	44514	15
2728	43584	16	2758	44059	16	2788	44529	16
2729	43600	16	2759	44075	16	2789	44545	15
2730	43616		2760	44091		2790	44560	

2790	·44560
2880	·45939

2790" = 0° 46' 30"			2820" = 0° 47' 0"			2850" = 0° 47' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
2790	·44560	16	2820	·45025	15	2850	·45484	16
2791	·44576	16	2821	·45040	15	2851	·45500	15
2792	·44592	15	2822	·45056	15	2852	·45515	15
2793	·44607	16	2823	·45071	15	2853	·45530	15
2794	·44623	15	2824	·45086	16	2854	·45545	16
2795	·44638	16	2825	·45102	15	2855	·45561	15
2796	·44654	15	2826	·45117	16	2856	·45576	15
2797	·44669	16	2827	·45133	15	2857	·45591	15
2798	·44685	15	2828	·45148	15	2858	·45606	15
2799	·44700	16	2829	·45163	16	2859	·45621	16
2800	·44716	15	2830	·45179	15	2860	·45637	15
2801	·44731	16	2831	·45194	15	2861	·45652	15
2802	·44747	15	2832	·45209	16	2862	·45667	15
2803	·44762	16	2833	·45225	15	2863	·45682	15
2804	·44778	15	2834	·45240	15	2864	·45697	15
2805	·44793	16	2835	·45255	16	2865	·45712	16
2806	·44809	15	2836	·45271	15	2866	·45728	15
2807	·44824	16	2837	·45286	15	2867	·45743	15
2808	·44840	15	2838	·45301	16	2868	·45758	15
2809	·44855	16	2839	·45317	15	2869	·45773	15
2810	·44871	15	2840	·45332	15	2870	·45788	15
2811	·44886	16	2841	·45347	15	2871	·45803	15
2812	·44902	15	2842	·45362	16	2872	·45818	16
2813	·44917	15	2843	·45378	15	2873	·45834	15
2814	·44932	16	2844	·45393	15	2874	·45849	15
2815	·44948	15	2845	·45408	15	2875	·45864	15
2816	·44963	16	2846	·45423	16	2876	·45879	15
2817	·44979	15	2847	·45439	15	2877	·45894	15
2818	·44994	16	2848	·45454	15	2878	·45909	15
2819	·45010	15	2849	·45469	15	2879	·45924	15
2820	·45025	15	2850	·45484	15	2880	·45939	15

2880	45939
2970	47276

2880" = 0° 48' 0"			2910" = 0° 48' 30"			2940" = 0° 49' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
2880	45939	15	2910	46389	15	2940	46835	15
2881	45954	15	2911	46404	15	2941	46850	14
2882	45969	15	2912	46419	15	2942	46864	15
2883	45984	16	2913	46434	15	2943	46879	15
2884	46000	15	2914	46449	15	2944	46894	15
2885	46015	15	2915	46464	15	2945	46909	14
2886	46030	15	2916	46479	15	2946	46923	15
2887	46045	15	2917	46494	15	2947	46938	15
2888	46060	15	2918	46509	14	2948	46953	14
2889	46075	15	2919	46523	15	2949	46967	15
2890	46090	15	2920	46538	15	2950	46982	15
2891	46105	15	2921	46553	15	2951	46997	15
2892	46120	15	2922	46568	15	2952	47012	14
2893	46135	15	2923	46583	15	2953	47026	15
2894	46150	15	2924	46598	15	2954	47041	15
2895	46165	15	2925	46613	14	2955	47056	14
2896	46180	15	2926	46627	15	2956	47070	15
2897	46195	15	2927	46642	15	2957	47085	15
2898	46210	15	2928	46657	15	2958	47100	14
2899	46225	15	2929	46672	15	2959	47114	15
2900	46240	15	2930	46687	15	2960	47129	15
2901	46255	15	2931	46702	14	2961	47144	15
2902	46270	15	2932	46716	15	2962	47159	14
2903	46285	15	2933	46731	15	2963	47173	15
2904	46300	15	2934	46746	15	2964	47188	14
2905	46315	15	2935	46761	15	2965	47202	15
2906	46330	15	2936	46776	15	2966	47217	15
2907	46345	14	2937	46790	14	2967	47232	14
2908	46359	15	2938	46805	15	2968	47246	15
2909	46374	15	2939	46820	15	2969	47261	15
2910	46389	15	2940	46835	15	2970	47276	15

2970	·47276
3060	·48572

2970" = 0° 49' 30"			3000" = 0° 50' 0"			3030" = 0° 50' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
2970	·47276	14	3000	·47712	15	3030	·48144	15
2971	·47290	15	3001	·47727	14	3031	·48159	14
2972	·47305	14	3002	·47741	15	3032	·48173	14
2973	·47319	15	3003	·47756	14	3033	·48187	15
2974	·47334	15	3004	·47770	14	3034	·48202	14
2975	·47349	14	3005	·47784	15	3035	·48216	14
2976	·47363	15	3006	·47799	14	3036	·48230	14
2977	·47378	14	3007	·47813	15	3037	·48244	15
2978	·47392	15	3008	·47828	14	3038	·48259	14
2979	·47407	15	3009	·47842	15	3039	·48273	14
2980	·47422	14	3010	·47857	14	3040	·48287	15
2981	·47436	15	3011	·47871	14	3041	·48302	14
2982	·47451	14	3012	·47885	15	3042	·48316	14
2983	·47465	15	3013	·47900	14	3043	·48330	14
2984	·47480	14	3014	·47914	15	3044	·48344	15
2985	·47494	15	3015	·47929	14	3045	·48359	14
2986	·47509	15	3016	·47943	15	3046	·48373	14
2987	·47524	14	3017	·47958	14	3047	·48387	14
2988	·47538	15	3018	·47972	14	3048	·48401	15
2989	·47553	14	3019	·47986	15	3049	·48416	14
2990	·47567	15	3020	·48001	14	3050	·48430	14
2991	·47582	14	3021	·48015	14	3051	·48444	14
2992	·47596	15	3022	·48029	15	3052	·48458	15
2993	·47611	14	3023	·48044	14	3053	·48473	14
2994	·47625	15	3024	·48058	15	3054	·48487	14
2995	·47640	14	3025	·48073	14	3055	·48501	14
2996	·47654	15	3026	·48087	14	3056	·48515	15
2997	·47669	14	3027	·48101	15	3057	·48530	14
2998	·47683	15	3028	·48116	14	3058	·48544	14
2999	·47698	14	3029	·48130	14	3059	·48558	14
3000	·47712	14	3030	·48144	14	3060	·48572	14



3060" = 0° 51' 0"		D.	3090" = 0° 51' 30"		D.	3120" = 0° 52' 0"	
Num.	Log.		Num.	Log.		Num.	Log.
3060	.48572	14	3090	.48996	14	3120	.49415
3061	.48586	15	3091	.49010	14	3121	.49429
3062	.48601	14	3092	.49024	14	3122	.49443
		14			14		
3063	.48615	14	3093	.49038	14	3123	.49457
3064	.48629	14	3094	.49052	14	3124	.49471
3065	.48643	14	3095	.49066	14	3125	.49485
		14			14		
3066	.48657	14	3096	.49080	14	3126	.49499
3067	.48671	15	3097	.49094	14	3127	.49513
3068	.48686	14	3098	.49108	14	3128	.49527
		14			14		
3069	.48700	14	3099	.49122	14	3129	.49541
3070	.48714	14	3100	.49136	14	3130	.49554
3071	.48728	14	3101	.49150	14	3131	.49568
		14			14		
3072	.48742	14	3102	.49164	14	3132	.49582
3073	.48756	14	3103	.49178	14	3133	.49596
3074	.48770	14	3104	.49192	14	3134	.49610
		15			14		
3075	.48785	14	3105	.49206	14	3135	.49624
3076	.48799	14	3106	.49220	14	3136	.49638
3077	.48813	14	3107	.49234	14	3137	.49651
		14			14		
3078	.48827	14	3108	.49248	14	3138	.49665
3079	.48841	14	3109	.49262	14	3139	.49679
3080	.48855	14	3110	.49276	14	3140	.49693
		14			14		
3081	.48869	14	3111	.49290	14	3141	.49707
3082	.48883	14	3112	.49304	14	3142	.49721
3083	.48897	14	3113	.49318	14	3143	.49734
		14			14		
3084	.48911	15	3114	.49332	14	3144	.49748
3085	.48926	14	3115	.49346	14	3145	.49762
3086	.48940	14	3116	.49360	14	3146	.49776
		14			14		
3087	.48954	14	3117	.49374	14	3147	.49790
3088	.48968	14	3118	.49388	14	3148	.49803
3089	.48982	14	3119	.49402	14	3149	.49817
3090	.48996	14	3120	.49415	13	3150	.49831

2970	.47276
3060	.48572

2970" = 0° 49' 30"			3000" = 0° 50' 0"			3030" = 0° 50' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
2970	.47276	14	3000	.47712	15	3030	.48144	15
2971	.47290	15	3001	.47727	14	3031	.48159	14
2972	.47305	14	3002	.47741	15	3032	.48173	14
2973	.47319	15	3003	.47756	14	3033	.48187	15
2974	.47334	15	3004	.47770	14	3034	.48202	14
2975	.47349	14	3005	.47784	15	3035	.48216	14
2976	.47363	15	3006	.47799	14	3036	.48230	14
2977	.47378	14	3007	.47813	15	3037	.48244	15
2978	.47392	15	3008	.47828	14	3038	.48259	14
2979	.47407	15	3009	.47842	15	3039	.48273	14
2980	.47422	14	3010	.47857	14	3040	.48287	15
2981	.47436	15	3011	.47871	14	3041	.48302	14
2982	.47451	14	3012	.47885	15	3042	.48316	14
2983	.47465	15	3013	.47900	14	3043	.48330	14
2984	.47480	14	3014	.47914	15	3044	.48344	15
2985	.47494	15	3015	.47929	14	3045	.48359	14
2986	.47509	15	3016	.47943	15	3046	.48373	14
2987	.47524	14	3017	.47958	14	3047	.48387	14
2988	.47538	15	3018	.47972	14	3048	.48401	15
2989	.47553	14	3019	.47986	15	3049	.48416	14
2990	.47567	15	3020	.48001	14	3050	.48430	14
2991	.47582	14	3021	.48015	14	3051	.48444	14
2992	.47596	15	3022	.48029	15	3052	.48458	15
2993	.47611	14	3023	.48044	14	3053	.48473	14
2994	.47625	15	3024	.48058	15	3054	.48487	14
2995	.47640	14	3025	.48073	14	3055	.48501	14
2996	.47654	15	3026	.48087	14	3056	.48515	15
2997	.47669	14	3027	.48101	15	3057	.48530	14
2998	.47683	15	3028	.48116	14	3058	.48544	14
2999	.47698	14	3029	.48130	14	3059	.48558	14
3000	.47712	14	3030	.48144	14	3060	.48572	14

3060	48572
3150	49831

3060" = 0° 51' 0"			3090" = 0° 51' 30"			3120" = 0° 52' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
3060	48572	14	3090	48996	14	3120	49415	14
3061	48586	15	3091	49010	14	3121	49429	14
3062	48601	14	3092	49024	14	3122	49443	14
3063	48615	14	3093	49038	14	3123	49457	14
3064	48629	14	3094	49052	14	3124	49471	14
3065	48643	14	3095	49066	14	3125	49485	14
3066	48657	14	3096	49080	14	3126	49499	14
3067	48671	15	3097	49094	14	3127	49513	14
3068	48686	14	3098	49108	14	3128	49527	14
3069	48700	14	3099	49122	14	3129	49541	13
3070	48714	14	3100	49136	14	3130	49554	14
3071	48728	14	3101	49150	14	3131	49568	14
3072	48742	14	3102	49164	14	3132	49582	14
3073	48756	14	3103	49178	14	3133	49596	14
3074	48770	15	3104	49192	14	3134	49610	14
3075	48785	14	3105	49206	14	3135	49624	14
3076	48799	14	3106	49220	14	3136	49638	13
3077	48813	14	3107	49234	14	3137	49651	14
3078	48827	14	3108	49248	14	3138	49665	14
3079	48841	14	3109	49262	14	3139	49679	14
3080	48855	14	3110	49276	14	3140	49693	14
3081	48869	14	3111	49290	14	3141	49707	14
3082	48883	14	3112	49304	14	3142	49721	13
3083	48897	14	3113	49318	14	3143	49734	14
3084	48911	15	3114	49332	14	3144	49748	14
3085	48926	14	3115	49346	14	3145	49762	14
3086	48940	14	3116	49360	14	3146	49776	14
3087	48954	14	3117	49374	14	3147	49790	13
3088	48968	14	3118	49388	14	3148	49803	14
3089	48982	14	3119	49402	14	3149	49817	14
3090	48996	14	3120	49415	13	3150	49831	14

3150	49831
3240	51055

3150" = 0° 52' 30"		D.	3180" = 0° 53' 0"		D.	3210" = 0° 53' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
3150	49831	14	3180	50243	13	3210	50651	13
3151	49845		3181	50256		3211	50664	
3152	49859		3182	50270		3212	50678	
		13			14			13
3153	49872	14	3183	50284	13	3213	50691	14
3154	49886		3184	50297		3214	50705	
3155	49900		3185	50311		3215	50718	
		14			14			13
3156	49914	13	3186	50325	14	3216	50732	13
3157	49927		3187	50338		3217	50745	
3158	49941		3188	50352		3218	50759	
		14			13			14
3159	49955	14	3189	50365	14	3219	50772	14
3160	49969		3190	50379		3220	50786	
3161	49982		3191	50393		3221	50799	
		13			13			13
3162	49996	14	3192	50406	14	3222	50813	13
3163	50010		3193	50420		3223	50826	
3164	50024		3194	50433		3224	50840	
		13			14			14
3165	50037	14	3195	50447	14	3225	50853	13
3166	50051		3196	50461		3226	50866	
3167	50065		3197	50474		3227	50880	
		14			13			14
3168	50079	13	3198	50488	13	3228	50893	14
3169	50092		3199	50501		3229	50907	
3170	50106		3200	50515		3230	50920	
		14			14			13
3171	50120	13	3201	50529	13	3231	50934	13
3172	50133		3202	50542		3232	50947	
3173	50147		3203	50556		3233	50961	
		14			14			14
3174	50161	13	3204	50569	14	3234	50974	13
3175	50174		3205	50583		3235	50987	
3176	50188		3206	50596		3236	51001	
		14			13			14
3177	50202	13	3207	50610	14	3237	51014	13
3178	50215		3208	50623		3238	51028	
3179	50229		3209	50637		3239	51041	
3180	50243	14	3210	50651	14	3240	51055	14

3240" = 0° 54' 0"		D.	3270" = 0° 54' 30"		D.	3300" = 0° 55' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
3240	51055	13	3270	51455	13	3300	51851	14
3241	51068	13	3271	51468	13	3301	51865	13
3242	51081	14	3272	51481	14	3302	51878	13
3243	51095	13	3273	51495	13	3303	51891	13
3244	51108	13	3274	51508	13	3304	51904	13
3245	51121	14	3275	51521	13	3305	51917	13
3246	51135	13	3276	51534	14	3306	51930	13
3247	51148	13	3277	51548	13	3307	51943	14
3248	51162	13	3278	51561	13	3308	51957	13
3249	51175	13	3279	51574	13	3309	51970	13
3250	51188	14	3280	51587	14	3310	51983	13
3251	51202	13	3281	51601	13	3311	51996	13
3252	51215	13	3282	51614	13	3312	52009	13
3253	51228	14	3283	51627	13	3313	52022	13
3254	51242	13	3284	51640	14	3314	52035	13
3255	51255	13	3285	51654	13	3315	52048	13
3256	51268	14	3286	51667	13	3316	52061	14
3257	51282	13	3287	51680	13	3317	52075	13
3258	51295	13	3288	51693	13	3318	52088	13
3259	51308	14	3289	51706	14	3319	52101	13
3260	51322	13	3290	51720	13	3320	52114	13
3261	51335	13	3291	51733	13	3321	52127	13
3262	51348	14	3292	51746	13	3322	52140	13
3263	51362	13	3293	51759	13	3323	52153	13
3264	51375	13	3294	51772	14	3324	52166	13
3265	51388	14	3295	51786	13	3325	52179	13
3266	51402	13	3296	51799	13	3326	52192	13
3267	51415	13	3297	51812	13	3327	52205	13
3268	51428	13	3298	51825	13	3328	52218	13
3269	51441	14	3299	51838	13	3329	52231	13
3270	51455		3300	51851	13	3330	52244	13

3330	'52244
3420	'53403

3330" = 0° 55' 30"			3360" = 0° 56' 0"			3390" = 0° 56' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
3330	'52244	13	3360	'52634	13	3390	'53020	13
3331	'52257	13	3361	'52647	13	3391	'53033	13
3332	'52270	14	3362	'52660	13	3392	'53046	12
3333	'52284	13	3363	'52673	13	3393	'53058	13
3334	'52297	13	3364	'52686	13	3394	'53071	13
3335	'52310	13	3365	'52699	12	3395	'53084	13
3336	'52323	13	3366	'52711	13	3396	'53097	13
3337	'52336	13	3367	'52724	13	3397	'53110	12
3338	'52349	13	3368	'52737	13	3398	'53122	13
3339	'52362	13	3369	'52750	13	3399	'53135	13
3340	'52375	13	3370	'52763	13	3400	'53148	13
3341	'52388	13	3371	'52776	13	3401	'53161	12
3342	'52401	13	3372	'52789	13	3402	'53173	13
3343	'52414	13	3373	'52802	13	3403	'53186	13
3344	'52427	13	3374	'52815	12	3404	'53199	13
3345	'52440	13	3375	'52827	13	3405	'53212	12
3346	'52453	13	3376	'52840	13	3406	'53224	13
3347	'52466	13	3377	'52853	13	3407	'53237	13
3348	'52479	13	3378	'52866	13	3408	'53250	13
3349	'52492	12	3379	'52879	13	3409	'53263	12
3350	'52504	13	3380	'52892	13	3410	'53275	13
3351	'52517	13	3381	'52905	12	3411	'53288	13
3352	'52530	13	3382	'52917	13	3412	'53301	13
3353	'52543	13	3383	'52930	13	3413	'53314	12
3354	'52556	13	3384	'52943	13	3414	'53326	13
3355	'52569	13	3385	'52956	13	3415	'53339	13
3356	'52582	13	3386	'52969	13	3416	'53352	12
3357	'52595	13	3387	'52982	12	3417	'53364	13
3358	'52608	13	3388	'52994	13	3418	'53377	13
3359	'52621	13	3389	'53007	13	3419	'53390	13
3360	'52634	13	3390	'53020	13	3420	'53403	13

3420	53403
3510	54531

3420'' = 0° 57' 0''		D.	3450'' = 0° 57' 30''		D.	3480'' = 0° 58' 0''		D.
Num.	Log.		Num.	Log.		Num.	Log.	
3420	*53403	12	3450	*53782	12	3480	*54158	12
3421	*53415	13	3451	*53794	13	3481	*54170	13
3422	*53428	13	3452	*53807	13	3482	*54183	12
3423	*53441	12	3453	*53820	12	3483	*54195	13
3424	*53453	13	3454	*53832	13	3484	*54208	12
3425	*53466	13	3455	*53845	12	3485	*54220	13
3426	*53479	12	3456	*53857	13	3486	*54233	12
3427	*53491	13	3457	*53870	12	3487	*54245	13
3428	*53504	13	3458	*53882	13	3488	*54258	12
3429	*53517	12	3459	*53895	13	3489	*54270	13
3430	*53529	13	3460	*53908	12	3490	*54283	12
3431	*53542	13	3461	*53920	13	3491	*54295	12
3432	*53555	12	3462	*53933	12	3492	*54307	13
3433	*53567	13	3463	*53945	13	3493	*54320	12
3434	*53580	13	3464	*53958	12	3494	*54332	13
3435	*53593	12	3465	*53970	13	3495	*54345	12
3436	*53605	13	3466	*53983	12	3496	*54357	13
3437	*53618	13	3467	*53995	13	3497	*54370	12
3438	*53631	12	3468	*54008	12	3498	*54382	12
3439	*53643	13	3469	*54020	13	3499	*54394	13
3440	*53656	12	3470	*54033	12	3500	*54407	12
3441	*53668	13	3471	*54045	13	3501	*54419	13
3442	*53681	13	3472	*54058	12	3502	*54432	12
3443	*53694	12	3473	*54070	13	3503	*54444	12
3444	*53706	13	3474	*54083	12	3504	*54456	13
3445	*53719	13	3475	*54095	13	3505	*54469	12
3446	*53732	12	3476	*54108	12	3506	*54481	13
3447	*53744	13	3477	*54120	13	3507	*54494	12
3448	*53757	12	3478	*54133	12	3508	*54506	12
3449	*53769	13	3479	*54145	13	3509	*54518	13
3450	*53782	13	3480	*54158	13	3510	*54531	13

3690	·56703
3780	·57749

3690" = 1° 1' 30"		D.	3720" = 1° 2' 0"		D.	3750" = 1° 2' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
3690	·56703	11	3720	·57054	12	3750	·57403	12
3691	·56714	12	3721	·57066	12	3751	·57415	11
3692	·56726	12	3722	·57078	11	3752	·57426	12
3693	·56738	12	3723	·57089	12	3753	·57438	11
3694	·56750	11	3724	·57101	12	3754	·57449	12
3695	·56761	12	3725	·57113	11	3755	·57461	12
3696	·56773	12	3726	·57124	12	3756	·57473	11
3697	·56785	12	3727	·57136	12	3757	·57484	12
3698	·56797	11	3728	·57148	11	3758	·57496	11
3699	·56808	12	3729	·57159	12	3759	·57507	12
3700	·56820	12	3730	·57171	12	3760	·57519	11
3701	·56832	12	3731	·57183	11	3761	·57530	12
3702	·56844	11	3732	·57194	12	3762	·57542	11
3703	·56855	12	3733	·57206	11	3763	·57553	12
3704	·56867	12	3734	·57217	12	3764	·57565	11
3705	·56879	12	3735	·57229	12	3765	·57576	12
3706	·56891	11	3736	·57241	11	3766	·57588	12
3707	·56902	12	3737	·57252	12	3767	·57600	11
3708	·56914	12	3738	·57264	12	3768	·57611	12
3709	·56926	11	3739	·57276	11	3769	·57623	11
3710	·56937	12	3740	·57287	12	3770	·57634	12
3711	·56949	12	3741	·57299	11	3771	·57646	11
3712	·56961	11	3742	·57310	12	3772	·57657	12
3713	·56972	12	3743	·57322	12	3773	·57669	11
3714	·56984	12	3744	·57334	11	3774	·57680	12
3715	·56996	12	3745	·57345	12	3775	·57692	11
3716	·57008	11	3746	·57357	11	3776	·57703	12
3717	·57019	12	3747	·57368	12	3777	·57715	11
3718	·57031	12	3748	·57380	12	3778	·57726	12
3719	·57043	11	3749	·57392	11	3779	·57738	11
3720	·57054		3750	·57403		3780	·57749	



3780	·57749
3870	·58771

3780" = 1° 3' 0"		D.	3810" = 1° 3' 30"		D.	3840" = 1° 4' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
3780	·57749	12	3810	·58092	12	3840	·58433	11
3781	·57761	11	3811	·58104	11	3841	·58444	12
3782	·57772	12	3812	·58115	12	3842	·58456	11
3783	·57784	11	3813	·58127	11	3843	·58467	11
3784	·57795	12	3814	·58138	11	3844	·58478	12
3785	·57807	11	3815	·58149	12	3845	·58490	11
3786	·57818	12	3816	·58161	11	3846	·58501	11
3787	·57830	11	3817	·58172	12	3847	·58512	12
3788	·57841	11	3818	·58184	11	3848	·58524	11
3789	·57852	12	3819	·58195	11	3849	·58535	11
3790	·57864	11	3820	·58206	12	3850	·58546	11
3791	·57875	12	3821	·58218	11	3851	·58557	12
3792	·57887	11	3822	·58229	11	3852	·58569	11
3793	·57898	12	3823	·58240	12	3853	·58580	11
3794	·57910	11	3824	·58252	11	3854	·58591	11
3795	·57921	12	3825	·58263	11	3855	·58602	12
3796	·57933	11	3826	·58274	12	3856	·58614	11
3797	·57944	11	3827	·58286	11	3857	·58625	11
3798	·57955	12	3828	·58297	12	3858	·58636	11
3799	·57967	11	3829	·58309	11	3859	·58647	12
3800	·57978	12	3830	·58320	11	3860	·58659	11
3801	·57990	11	3831	·58331	12	3861	·58670	11
3802	·58001	12	3832	·58343	11	3862	·58681	11
3803	·58013	11	3833	·58354	11	3863	·58692	12
3804	·58024	11	3834	·58365	12	3864	·58704	11
3805	·58035	12	3835	·58377	11	3865	·58715	11
3806	·58047	11	3836	·58388	11	3866	·58726	11
3807	·58058	12	3837	·58399	11	3867	·58737	12
3808	·58070	11	3838	·58410	12	3868	·58749	11
3809	·58081	11	3839	·58422	11	3869	·58760	11
3810	·58092	11	3840	·58433	11	3870	·58771	11

3870" = 1° 4' 30"		D.	3900" = 1° 5' 0"		D.	3930" = 1° 5' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
3870	·58771	11	3900	·59106	12	3930	·59439	11
3871	·58782	12	3901	·59118	11	3931	·59450	11
3872	·58794	11	3902	·59129	11	3932	·59461	11
3873	·58805	11	3903	·59140	11	3933	·59472	11
3874	·58816	11	3904	·59151	11	3934	·59483	11
3875	·58827	11	3905	·59162	11	3935	·59494	12
3876	·58838	12	3906	·59173	11	3936	·59506	11
3877	·58850	11	3907	·59184	11	3937	·59517	11
3878	·58861	11	3908	·59195	12	3938	·59528	11
3879	·58872	11	3909	·59207	11	3939	·59539	11
3880	·58883	11	3910	·59218	11	3940	·59550	11
3881	·58894	12	3911	·59229	11	3941	·59561	11
3882	·58906	11	3912	·59240	11	3942	·59572	11
3883	·58917	11	3913	·59251	11	3943	·59583	11
3884	·58928	11	3914	·59262	11	3944	·59594	11
3885	·58939	11	3915	·59273	11	3945	·59605	11
3886	·58950	11	3916	·59284	11	3946	·59616	11
3887	·58961	12	3917	·59295	11	3947	·59627	11
3888	·58973	11	3918	·59306	12	3948	·59638	11
3889	·58984	11	3919	·59318	11	3949	·59649	11
3890	·58995	11	3920	·59329	11	3950	·59660	11
3891	·59006	11	3921	·59340	11	3951	·59671	11
3892	·59017	11	3922	·59351	11	3952	·59682	11
3893	·59028	12	3923	·59362	11	3953	·59693	11
3894	·59040	11	3924	·59373	11	3954	·59704	11
3895	·59051	11	3925	·59384	11	3955	·59715	11
3896	·59062	11	3926	·59395	11	3956	·59726	11
3897	·59073	11	3927	·59406	11	3957	·59737	11
3898	·59084	11	3928	·59417	11	3958	·59748	11
3899	·59095	11	3929	·59428	11	3959	·59759	11
3900	·59106		3930	·59439		3960	·59770	

3960	•59770
4050	•60746

3960" = 1° 6' 0"		D.	3990" = 1° 6' 30"		D.	4020" = 1° 7' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
3960	•59770	10	3990	•60097	11	4020	•60423	10
3961	•59780	11	3991	•60108	11	4021	•60433	11
3962	•59791	11	3992	•60119	11	4022	•60444	11
3963	•59802	11	3993	•60130	11	4023	•60455	11
3964	•59813	11	3994	•60141	11	4024	•60466	11
3965	•59824	11	3995	•60152	11	4025	•60477	10
3966	•59835	11	3996	•60163	10	4026	•60487	11
3967	•59846	11	3997	•60173	11	4027	•60498	11
3968	•59857	11	3998	•60184	11	4028	•60509	11
3969	•59868	11	3999	•60195	11	4029	•60520	11
3970	•59879	11	4000	•60206	11	4030	•60531	10
3971	•59890	11	4001	•60217	11	4031	•60541	11
3972	•59901	11	4002	•60228	11	4032	•60552	11
3973	•59912	11	4003	•60239	10	4033	•60563	11
3974	•59923	11	4004	•60249	11	4034	•60574	10
3975	•59934	11	4005	•60260	11	4035	•60584	11
3976	•59945	11	4006	•60271	11	4036	•60595	11
3977	•59956	10	4007	•60282	11	4037	•60606	11
3978	•59966	11	4008	•60293	11	4038	•60617	10
3979	•59977	11	4009	•60304	10	4039	•60627	11
3980	•59988	11	4010	•60314	11	4040	•60638	11
3981	•59999	11	4011	•60325	11	4041	•60649	11
3982	•60010	11	4012	•60336	11	4042	•60660	10
3983	•60021	11	4013	•60347	11	4043	•60670	11
3984	•60032	11	4014	•60358	11	4044	•60681	11
3985	•60043	11	4015	•60369	10	4045	•60692	11
3986	•60054	11	4016	•60379	11	4046	•60703	10
3987	•60065	11	4017	•60390	11	4047	•60713	11
3988	•60076	10	4018	•60401	11	4048	•60724	11
3989	•60086	11	4019	•60412	11	4049	•60735	11
3990	•60097	11	4020	•60423	11	4050	•60746	11

4050	·60746
4140	·61700

4050" = 1° 7' 30"		D.	4080" = 1° 8' 0"		D.	4110" = 1° 8' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4050	·60746	IO	4080	·61066	II	4110	·61384	II
4051	·60756	II	4081	·61077	IO	4111	·61395	IO
4052	·60767	II	4082	·61087	II	4112	·61405	II
4053	·60778	IO	4083	·61098	II	4113	·61416	IO
4054	·60788	II	4084	·61109	IO	4114	·61426	II
4055	·60799	II	4085	·61119	II	4115	·61437	II
4056	·60810	II	4086	·61130	IO	4116	·61448	IO
4057	·60821	IO	4087	·61140	II	4117	·61458	II
4058	·60831	II	4088	·61151	II	4118	·61469	IO
4059	·60842	II	4089	·61162	IO	4119	·61479	II
4060	·60853	IO	4090	·61172	II	4120	·61490	IO
4061	·60863	II	4091	·61183	II	4121	·61500	II
4062	·60874	II	4092	·61194	IO	4122	·61511	IO
4063	·60885	IO	4093	·61204	II	4123	·61521	II
4064	·60895	II	4094	·61215	IO	4124	·61532	IO
4065	·60906	II	4095	·61225	II	4125	·61542	II
4066	·60917	IO	4096	·61236	II	4126	·61553	IO
4067	·60927	II	4097	·61247	IO	4127	·61563	II
4068	·60938	II	4098	·61257	II	4128	·61574	IO
4069	·60949	IO	4099	·61268	IO	4129	·61584	II
4070	·60959	II	4100	·61278	II	4130	·61595	II
4071	·60970	II	4101	·61289	II	4131	·61606	IO
4072	·60981	IO	4102	·61300	IO	4132	·61616	II
4073	·60991	II	4103	·61310	II	4133	·61627	IO
4074	·61002	II	4104	·61321	IO	4134	·61637	II
4075	·61013	IO	4105	·61331	II	4135	·61648	IO
4076	·61023	II	4106	·61342	IO	4136	·61658	II
4077	·61034	II	4107	·61352	II	4137	·61669	IO
4078	·61045	IO	4108	·61363	II	4138	·61679	II
4079	·61055	IO	4109	·61374	II	4139	·61690	IO
4080	·61066	II	4110	·61384	IO	4140	·61700	IO

4140	·61700
4230	·62634

4140" = 1° 9' 0"		D.	4170" = 1° 9' 30"		D.	4200" = 1° 10' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4140	·61700	II	4170	·62014	IO	4200	·62325	IO
4141	·61711	IO	4171	·62024	IO	4201	·62335	II
4142	·61721	IO	4172	·62034	II	4202	·62346	IO
4143	·61731	II	4173	·62045	IO	4203	·62356	IO
4144	·61742	IO	4174	·62055	II	4204	·62366	II
4145	·61752	II	4175	·62066	IO	4205	·62377	IO
4146	·61763	IO	4176	·62076	IO	4206	·62387	IO
4147	·61773	II	4177	·62086	II	4207	·62397	II
4148	·61784	IO	4178	·62097	IO	4208	·62408	IO
4149	·61794	II	4179	·62107	II	4209	·62418	IO
4150	·61805	IO	4180	·62118	IO	4210	·62428	II
4151	·61815	II	4181	·62128	IO	4211	·62439	IO
4152	·61826	IO	4182	·62138	II	4212	·62449	IO
4153	·61836	II	4183	·62149	IO	4213	·62459	IO
4154	·61847	IO	4184	·62159	II	4214	·62469	II
4155	·61857	II	4185	·62170	IO	4215	·62480	IO
4156	·61868	IO	4186	·62180	IO	4216	·62490	IO
4157	·61878	IO	4187	·62190	II	4217	·62500	II
4158	·61888	II	4188	·62201	IO	4218	·62511	IO
4159	·61899	IO	4189	·62211	IO	4219	·62521	IO
4160	·61909	II	4190	·62221	II	4220	·62531	II
4161	·61920	IO	4191	·62232	IO	4221	·62542	IO
4162	·61930	II	4192	·62242	IO	4222	·62552	IO
4163	·61941	IO	4193	·62252	II	4223	·62562	IO
4164	·61951	II	4194	·62263	IO	4224	·62572	II
4165	·61962	IO	4195	·62273	II	4225	·62583	IO
4166	·61972	IO	4196	·62284	IO	4226	·62593	IO
4167	·61982	II	4197	·62294	IO	4227	·62603	IO
4168	·61993	IO	4198	·62304	II	4228	·62613	II
4169	·62003	II	4199	·62315	IO	4229	·62624	IO
4170	·62014	II	4200	·62325		4230	·62634	

4230	·62634
4320	·63548

4230" = 1° 10' 30"		D.	4260" = 1° 11' 0"		D.	4290" = 1° 11' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4230	·62634	10	4260	·62941	10	4290	·63246	10
4231	·62644	11	4261	·62951	10	4291	·63256	10
4232	·62655	10	4262	·62961	11	4292	·63266	10
4233	·62665	10	4263	·62972	10	4293	·63276	10
4234	·62675	10	4264	·62982	10	4294	·63286	10
4235	·62685	11	4265	·62992	10	4295	·63296	10
4236	·62696	10	4266	·63002	10	4296	·63306	11
4237	·62706	10	4267	·63012	10	4297	·63317	10
4238	·62716	10	4268	·63022	11	4298	·63327	10
4239	·62726	11	4269	·63033	10	4299	·63337	10
4240	·62737	10	4270	·63043	10	4300	·63347	10
4241	·62747	10	4271	·63053	10	4301	·63357	10
4242	·62757	10	4272	·63063	10	4302	·63367	10
4243	·62767	11	4273	·63073	10	4303	·63377	10
4244	·62778	10	4274	·63083	11	4304	·63387	10
4245	·62788	10	4275	·63094	10	4305	·63397	10
4246	·62798	10	4276	·63104	10	4306	·63407	10
4247	·62808	10	4277	·63114	10	4307	·63417	11
4248	·62818	11	4278	·63124	10	4308	·63428	10
4249	·62829	10	4279	·63134	10	4309	·63438	10
4250	·62839	10	4280	·63144	11	4310	·63448	10
4251	·62849	10	4281	·63155	10	4311	·63458	10
4252	·62859	11	4282	·63165	10	4312	·63468	10
4253	·62870	10	4283	·63175	10	4313	·63478	10
4254	·62880	10	4284	·63185	10	4314	·63488	10
4255	·62890	10	4285	·63195	10	4315	·63498	10
4256	·62900	10	4286	·63205	10	4316	·63508	10
4257	·62910	11	4287	·63215	10	4317	·63518	10
4258	·62921	10	4288	·63225	11	4318	·63528	10
4259	·62931	10	4289	·63236	10	4319	·63538	10
4260	·62941	10	4290	·63246	10	4320	·63548	10

4320	·63548
4410	·64444

4320" = 1° 12' 0"		D.	4350" = 1° 12' 30"		D.	4380" = 1° 13' 0"		D.	
Num.	Log.		Num.	Log.		Num.	Log.		
4320	·63548	10	4350	·63849	10	4380	·64147	10	
4321	·63558		4351	·63859		4381	·64157		10
4322	·63568		4352	·63869		4382	·64167		10
		11			10			10	
4323	·63579	10	4353	·63879	10	4383	·64177	10	
4324	·63589		4354	·63889		4384	·64187		10
4325	·63599		4355	·63899		4385	·64197		10
		10			10			10	
4326	·63609	10	4356	·63909	10	4386	·64207	10	
4327	·63619		4357	·63919		4387	·64217		10
4328	·63629		4358	·63929		4388	·64227		10
		10			10			10	
4329	·63639	10	4359	·63939	10	4389	·64237	9	
4330	·63649		4360	·63949		4390	·64246		10
4331	·63659		4361	·63959		4391	·64256		10
		10			10			10	
4332	·63669	10	4362	·63969	10	4392	·64266	10	
4333	·63679		4363	·63979		4393	·64276		10
4334	·63689		4364	·63988		4394	·64286		10
		10			10			10	
4335	·63699	10	4365	·63998	10	4395	·64296	10	
4336	·63709		4366	·64008		4396	·64306		10
4337	·63719		4367	·64018		4397	·64316		10
		10			10			10	
4338	·63729	10	4368	·64028	10	4398	·64326	9	
4339	·63739		4369	·64038		4399	·64335		10
4340	·63749		4370	·64048		4400	·64345		10
		10			10			10	
4341	·63759	10	4371	·64058	10	4401	·64355	10	
4342	·63769		4372	·64068		4402	·64365		10
4343	·63779		4373	·64078		4403	·64375		10
		10			10			10	
4344	·63789	10	4374	·64088	10	4404	·64385	10	
4345	·63799		4375	·64098		4405	·64395		9
4346	·63809		4376	·64108		4406	·64404		10
		10			10			10	
4347	·63819	10	4377	·64118	10	4407	·64414	10	
4348	·63829		4378	·64128		4408	·64424		10
4349	·63839		4379	·64137		4409	·64434		10
4350	·63849	10	4380	·64147	4410	·64444	10		

4410	·64444
4500	·65321

4410'' = 1° 13' 30''		D.	4440'' = 1° 14' 0''		D.	4470'' = 1° 14' 30''		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4410	·64444	10	4440	·64738	10	4470	·65031	9
4411	·64454	10	4441	·64748	10	4471	·65040	10
4412	·64464	9	4442	·64758	10	4472	·65050	10
4413	·64473	10	4443	·64768	9	4473	·65060	10
4414	·64483	10	4444	·64777	10	4474	·65070	9
4415	·64493	10	4445	·64787	10	4475	·65079	10
4416	·64503	10	4446	·64797	10	4476	·65089	10
4417	·64513	10	4447	·64807	9	4477	·65099	9
4418	·64523	9	4448	·64816	10	4478	·65108	10
4419	·64532	10	4449	·64826	10	4479	·65118	10
4420	·64542	10	4450	·64836	10	4480	·65128	9
4421	·64552	10	4451	·64846	10	4481	·65137	10
4422	·64562	10	4452	·64856	9	4482	·65147	10
4423	·64572	10	4453	·64865	10	4483	·65157	10
4424	·64582	9	4454	·64875	10	4484	·65167	9
4425	·64591	10	4455	·64885	10	4485	·65176	10
4426	·64601	10	4456	·64895	9	4486	·65186	10
4427	·64611	10	4457	·64904	10	4487	·65196	9
4428	·64621	10	4458	·64914	10	4488	·65205	10
4429	·64631	9	4459	·64924	9	4489	·65215	10
4430	·64640	10	4460	·64933	10	4490	·65225	9
4431	·64650	10	4461	·64943	10	4491	·65234	10
4432	·64660	10	4462	·64953	10	4492	·65244	10
4433	·64670	10	4463	·64963	9	4493	·65254	9
4434	·64680	9	4464	·64972	10	4494	·65263	10
4435	·64689	10	4465	·64982	10	4495	·65273	10
4436	·64699	10	4466	·64992	10	4496	·65283	9
4437	·64709	10	4467	·65002	9	4497	·65292	10
4438	·64719	10	4468	·65011	10	4498	·65302	10
4439	·64729	9	4469	·65021	10	4499	·65312	9
4440	·64738		4470	·65031		4500	·65321	



4500	·65321
4590	·66181

4500" = 1° 15' 0"		D.	4530" = 1° 15' 30"		D.	4560" = 1° 16' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4500	·65321	10	4530	·65610	9	4560	·65896	10
4501	·65331	10	4531	·65619	10	4561	·65906	10
4502	·65341	9	4532	·65629	10	4562	·65916	9
4503	·65350	10	4533	·65639	9	4563	·65925	10
4504	·65360	9	4534	·65648	10	4564	·65935	9
4505	·65369	10	4535	·65658	9	4565	·65944	10
4506	·65379	10	4536	·65667	10	4566	·65954	9
4507	·65389	9	4537	·65677	9	4567	·65963	10
4508	·65398	10	4538	·65686	10	4568	·65973	9
4509	·65408	10	4539	·65696	10	4569	·65982	10
4510	·65418	9	4540	·65706	9	4570	·65992	9
4511	·65427	10	4541	·65715	10	4571	·66001	10
4512	·65437	10	4542	·65725	9	4572	·66011	9
4513	·65447	9	4543	·65734	10	4573	·66020	10
4514	·65456	10	4544	·65744	9	4574	·66030	9
4515	·65466	9	4545	·65753	10	4575	·66039	10
4516	·65475	10	4546	·65763	9	4576	·66049	9
4517	·65485	10	4547	·65772	10	4577	·66058	10
4518	·65495	9	4548	·65782	10	4578	·66068	9
4519	·65504	10	4549	·65792	9	4579	·66077	10
4520	·65514	9	4550	·65801	10	4580	·66087	9
4521	·65523	10	4551	·65811	9	4581	·66096	10
4522	·65533	10	4552	·65820	10	4582	·66106	9
4523	·65543	9	4553	·65830	9	4583	·66115	9
4524	·65552	10	4554	·65839	10	4584	·66124	10
4525	·65562	9	4555	·65849	9	4585	·66134	9
4526	·65571	10	4556	·65858	10	4586	·66143	10
4527	·65581	10	4557	·65868	9	4587	·66153	9
4528	·65591	9	4558	·65877	10	4588	·66162	10
4529	·65600	10	4559	·65887	9	4589	·66172	9
4530	·65610	10	4560	·65896	9	4590	·66181	9

4590	·66181
4680	·67c25

4590" = 1° 16' 30"		D.	4620" = 1° 17' 0"		D.	4650" = 1° 17' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4590	·66181	10	4620	·66464	10	4650	·66745	10
4591	·66191	9	4621	·66474	9	4651	·66755	9
4592	·66200	10	4622	·66483	9	4652	·66764	9
4593	·66210	9	4623	·66492	10	4653	·66773	10
4594	·66219	10	4624	·66502	9	4654	·66783	9
4595	·66229	9	4625	·66511	10	4655	·66792	9
4596	·66238	9	4626	·66521	9	4656	·66801	10
4597	·66247	10	4627	·66530	9	4657	·66811	9
4598	·66257	9	4628	·66539	10	4658	·66820	9
4599	·66266	10	4629	·66549	9	4659	·66829	9
4600	·66276	9	4630	·66558	9	4660	·66839	10
4601	·66285	10	4631	·66567	9	4661	·66848	9
4602	·66295	9	4632	·66577	10	4662	·66857	9
4603	·66304	10	4633	·66586	9	4663	·66867	10
4604	·66314	9	4634	·66596	10	4664	·66876	9
4605	·66323	9	4635	·66605	9	4665	·66885	9
4606	·66332	10	4636	·66614	9	4666	·66894	10
4607	·66342	9	4637	·66624	10	4667	·66904	9
4608	·66351	10	4638	·66633	9	4668	·66913	9
4609	·66361	9	4639	·66642	10	4669	·66922	10
4610	·66370	10	4640	·66652	9	4670	·66932	9
4611	·66380	9	4641	·66661	10	4671	·66941	9
4612	·66389	9	4642	·66671	9	4672	·66950	10
4613	·66398	10	4643	·66680	9	4673	·66960	9
4614	·66408	9	4644	·66689	10	4674	·66969	9
4615	·66417	10	4645	·66699	9	4675	·66978	9
4616	·66427	9	4646	·66708	9	4676	·66987	10
4617	·66436	9	4647	·66717	10	4677	·66997	9
4618	·66445	10	4648	·66727	9	4678	·67006	9
4619	·66455	9	4649	·66736	9	4679	·67015	9
4620	·66464	9	4650	·66745	9	4680	·67025	10

4680	·67025
4770	·67852

4680" = 1° 18' 0"		D.	4710" = 1° 18' 30"		D.	4740" = 1° 19' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4680	·67025	9	4710	·67302	9	4740	·67578	9
4681	·67034		4711	·67311		4741	·67587	
4682	·67043		4712	·67321		4742	·67596	
4683	·67052	10	4713	·67330	9	4743	·67605	9
4684	·67062		4714	·67339		4744	·67614	
4685	·67071		4715	·67348		4745	·67624	
4686	·67080	9	4716	·67357	10	4746	·67633	9
4687	·67089		4717	·67367		4747	·67642	
4688	·67099		4718	·67376		4748	·67651	
4689	·67108	9	4719	·67385	9	4749	·67660	9
4690	·67117		4720	·67394		4750	·67669	
4691	·67127		4721	·67403		4751	·67679	
4692	·67136	9	4722	·67413	10	4752	·67688	9
4693	·67145		4723	·67422		4753	·67697	
4694	·67154		4724	·67431		4754	·67706	
4695	·67164	10	4725	·67440	9	4755	·67715	9
4696	·67173		4726	·67449		4756	·67724	
4697	·67182		4727	·67459		4757	·67733	
4698	·67191	9	4728	·67468	10	4758	·67742	9
4699	·67201		4729	·67477		4759	·67752	
4700	·67210		4730	·67486		4760	·67761	
4701	·67219	9	4731	·67495	9	4761	·67770	9
4702	·67228		4732	·67504		4762	·67779	
4703	·67237		4733	·67514		4763	·67788	
4704	·67247	10	4734	·67523	9	4764	·67797	9
4705	·67256		4735	·67532		4765	·67806	
4706	·67265		4736	·67541		4766	·67815	
4707	·67274	9	4737	·67550	10	4767	·67825	9
4708	·67284		4738	·67560		4768	·67834	
4709	·67293		4739	·67569		4769	·67843	
4710	·67302	9	4740	·67578	9	4770	·67852	9

4770	·67852
4860	·68664

4770" = 1°19'30"		D.	4800" = 1°20'0"		D.	4830" = 1°20'30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4770	·67852		4800	·68124		4830	·68395	
4771	·67861	9	4801	·68133	9	4831	·68404	9
4772	·67870	9	4802	·68142	9	4832	·68413	9
		9			9			9
4773	·67879	9	4803	·68151	9	4833	·68422	9
4774	·67888	9	4804	·68160	9	4834	·68431	9
4775	·67897	9	4805	·68169	9	4835	·68440	9
		9			9			9
4776	·67906	10	4806	·68178	9	4836	·68449	9
4777	·67916	9	4807	·68187	9	4837	·68458	9
4778	·67925	9	4808	·68196	9	4838	·68467	9
		9			9			9
4779	·67934	9	4809	·68205	10	4839	·68476	9
4780	·67943	9	4810	·68215	9	4840	·68485	9
4781	·67952	9	4811	·68224	9	4841	·68494	9
		9			9			8
4782	·67961	9	4812	·68233	9	4842	·68502	9
4783	·67970	9	4813	·68242	9	4843	·68511	9
4784	·67979	9	4814	·68251	9	4844	·68520	9
		9			9			9
4785	·67988	9	4815	·68260	9	4845	·68529	9
4786	·67997	9	4816	·68269	9	4846	·68538	9
4787	·68006	9	4817	·68278	9	4847	·68547	9
		9			9			9
4788	·68015	9	4818	·68287	9	4848	·68556	9
4789	·68024	9	4819	·68296	9	4849	·68565	9
4790	·68034	10	4820	·68305	9	4850	·68574	9
		9			9			9
4791	·68043	9	4821	·68314	9	4851	·68583	9
4792	·68052	9	4822	·68323	9	4852	·68592	9
4793	·68061	9	4823	·68332	9	4853	·68601	9
		9			9			9
4794	·68070	9	4824	·68341	9	4854	·68610	9
4795	·68079	9	4825	·68350	9	4855	·68619	9
4796	·68088	9	4826	·68359	9	4856	·68628	9
		9			9			9
4797	·68097	9	4827	·68368	9	4857	·68637	9
4798	·68106	9	4828	·68377	9	4858	·68646	9
4799	·68115	9	4829	·68386	9	4859	·68655	9
4800	·68124	9	4830	·68395	9	4860	·68664	9

4860	·68664
4950	·69461

4860" = 1° 21' 0"		D.	4890" = 1° 21' 30"		D.	4920" = 1° 22' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4860	·68664	9	4890	·68931	9	4920	·69197	8
4861	·68673	8	4891	·68940	9	4921	·69205	9
4862	·68681	9	4892	·68949	9	4922	·69214	9
4863	·68690	9	4893	·68958	8	4923	·69223	9
4864	·68699	9	4894	·68966	9	4924	·69232	9
4865	·68708	9	4895	·68975	9	4925	·69241	8
4866	·68717	9	4896	·68984	9	4926	·69249	9
4867	·68726	9	4897	·68993	9	4927	·69258	9
4868	·68735	9	4898	·69002	9	4928	·69267	9
4869	·68744	9	4899	·69011	9	4929	·69276	9
4870	·68753	9	4900	·69020	8	4930	·69285	9
4871	·68762	9	4901	·69028	9	4931	·69294	8
4872	·68771	9	4902	·69037	9	4932	·69302	9
4873	·68780	9	4903	·69046	9	4933	·69311	9
4874	·68789	8	4904	·69055	9	4934	·69320	9
4875	·68797	9	4905	·69064	9	4935	·69329	9
4876	·68806	9	4906	·69073	9	4936	·69338	8
4877	·68815	9	4907	·69082	8	4937	·69346	9
4878	·68824	9	4908	·69090	9	4938	·69355	9
4879	·68833	9	4909	·69099	9	4939	·69364	9
4880	·68842	9	4910	·69108	9	4940	·69373	8
4881	·68851	9	4911	·69117	9	4941	·69381	9
4882	·68860	9	4912	·69126	9	4942	·69390	9
4883	·68869	9	4913	·69135	9	4943	·69399	9
4884	·68878	8	4914	·69144	8	4944	·69408	9
4885	·68886	9	4915	·69152	9	4945	·69417	8
4886	·68895	9	4916	·69161	9	4946	·69425	9
4887	·68904	9	4917	·69170	9	4947	·69434	9
4888	·68913	9	4918	·69179	9	4948	·69443	9
4889	·68922	9	4919	·69188	9	4949	·69452	9
4890	·68931	9	4920	·69197	9	4950	·69461	9

4950	·69461
5040	·70243

4950" = 1° 22' 30"		D.	4980" = 1° 23' 0"		D.	5010" = 1° 23' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
4950	·69461	8	4980	·69723	9	5010	·69984	8
4951	·69469	9	4981	·69732	8	5011	·69992	9
4952	·69478	9	4982	·69740	9	5012	·70001	9
4953	·69487	9	4983	·69749	9	5013	·70010	8
4954	·69496	9	4984	·69758	9	5014	·70018	9
4955	·69504	8	4985	·69767	9	5015	·70027	9
4956	·69513	9	4986	·69775	8	5016	·70036	9
4957	·69522	9	4987	·69784	9	5017	·70044	8
4958	·69531	9	4988	·69793	9	5018	·70053	9
4959	·69539	8	4989	·69801	8	5019	·70062	9
4960	·69548	9	4990	·69810	9	5020	·70070	8
4961	·69557	9	4991	·69819	9	5021	·70079	9
4962	·69566	9	4992	·69827	8	5022	·70088	9
4963	·69574	8	4993	·69836	9	5023	·70096	8
4964	·69583	9	4994	·69845	9	5024	·70105	9
4965	·69592	9	4995	·69854	9	5025	·70114	9
4966	·69601	8	4996	·69862	8	5026	·70122	8
4967	·69609	9	4997	·69871	9	5027	·70131	9
4968	·69618	9	4998	·69880	9	5028	·70140	9
4969	·69627	9	4999	·69888	8	5029	·70148	8
4970	·69636	9	5000	·69897	9	5030	·70157	9
4971	·69644	8	5001	·69906	9	5031	·70165	8
4972	·69653	9	5002	·69914	8	5032	·70174	9
4973	·69662	9	5003	·69923	9	5033	·70183	9
4974	·69671	9	5004	·69932	9	5034	·70191	8
4975	·69679	8	5005	·69940	8	5035	·70200	9
4976	·69688	9	5006	·69949	9	5036	·70209	9
4977	·69697	9	5007	·69958	9	5037	·70217	8
4978	·69705	8	5008	·69966	8	5038	·70226	9
4979	·69714	9	5009	·69975	9	5039	·70234	8
4980	·69723	9	5010	·69984	9	5040	·70243	9

5040" = 1° 24' 0"		D.	5070" = 1° 24' 30"		D.	5100" = 1° 25' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
5040	.70243	9	5070	.70501	8	5100	.70757	9
5041	.70252	8	5071	.70509	9	5101	.70766	8
5042	.70260	9	5072	.70518	8	5102	.70774	9
5043	.70269	9	5073	.70526	9	5103	.70783	8
5044	.70278	8	5074	.70535	9	5104	.70791	9
5045	.70286	9	5075	.70544	8	5105	.70800	8
5046	.70295	8	5076	.70552	9	5106	.70808	9
5047	.70303	9	5077	.70561	8	5107	.70817	8
5048	.70312	9	5078	.70569	9	5108	.70825	9
5049	.70321	8	5079	.70578	8	5109	.70834	8
5050	.70329	9	5080	.70586	9	5110	.70842	9
5051	.70338	8	5081	.70595	8	5111	.70851	8
5052	.70346	9	5082	.70603	9	5112	.70859	9
5053	.70355	9	5083	.70612	9	5113	.70868	8
5054	.70364	8	5084	.70621	8	5114	.70876	9
5055	.70372	9	5085	.70629	9	5115	.70885	8
5056	.70381	8	5086	.70638	8	5116	.70893	9
5057	.70389	9	5087	.70646	8	5117	.70902	8
5058	.70398	8	5088	.70655	8	5118	.70910	9
5059	.70406	9	5089	.70663	9	5119	.70919	8
5060	.70415	9	5090	.70672	8	5120	.70927	8
5061	.70424	8	5091	.70680	9	5121	.70935	9
5062	.70432	9	5092	.70689	8	5122	.70944	8
5063	.70441	8	5093	.70697	9	5123	.70952	9
5064	.70449	9	5094	.70706	8	5124	.70961	8
5065	.70458	9	5095	.70714	9	5125	.70969	9
5066	.70467	8	5096	.70723	8	5126	.70978	8
5067	.70475	9	5097	.70731	9	5127	.70986	9
5068	.70484	8	5098	.70740	9	5128	.70995	8
5069	.70492	9	5099	.70749	8	5129	.71003	9
5070	.70501	9	5100	.70757	9	5130	.71012	9

'71012  
'71767

130" = 1°25'30"		D.	5160" = 1°26'0"		D.	5190" = 1°26'30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
5130	'71012	8	5160	'71265	8	5190	'71517	8
5131	'71020	9	5161	'71273	9	5191	'71525	8
5132	'71029	8	5162	'71282	8	5192	'71533	9
5133	'71037	9	5163	'71290	9	5193	'71542	8
5134	'71046	8	5164	'71299	8	5194	'71550	9
5135	'71054	8	5165	'71307	8	5195	'71559	8
5136	'71063	9	5166	'71315	9	5196	'71567	8
5137	'71071	8	5167	'71324	8	5197	'71575	9
5138	'71079	8	5168	'71332	8	5198	'71584	9
5139	'71088	9	5169	'71341	9	5199	'71592	8
5140	'71096	8	5170	'71349	8	5200	'71600	8
5141	'71105	9	5171	'71357	8	5201	'71609	9
5142	'71113	8	5172	'71366	9	5202	'71617	8
5143	'71122	9	5173	'71374	8	5203	'71625	8
5144	'71130	8	5174	'71383	9	5204	'71634	9
5145	'71139	9	5175	'71391	8	5205	'71642	8
5146	'71147	8	5176	'71399	8	5206	'71650	9
5147	'71155	8	5177	'71408	9	5207	'71659	8
5148	'71164	9	5178	'71416	8	5208	'71667	8
5149	'71172	8	5179	'71425	9	5209	'71675	9
5150	'71181	8	5180	'71433	8	5210	'71684	8
5151	'71189	9	5181	'71441	9	5211	'71692	8
5152	'71198	8	5182	'71450	8	5212	'71700	9
5153	'71206	8	5183	'71458	8	5213	'71709	8
5154	'71214	9	5184	'71466	9	5214	'71717	8
5155	'71223	8	5185	'71475	8	5215	'71725	9
5156	'71231	8	5186	'71483	8	5216	'71734	8
5157	'71240	9	5187	'71492	9	5217	'71742	8
5158	'71248	8	5188	'71500	8	5218	'71750	8
5159	'71257	9	5189	'71508	8	5219	'71759	9
5160	'71265	8	5190	'71517	9	5220	'71767	8



5220	71700
5310	72509

5220" = 2° 27' 0"		D.	5250" = 2° 27' 30"		D.	5280" = 2° 28' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
5220	71767	8	5250	72016	8	5280	72263	9
5221	71775	9	5251	72024	8	5281	72272	8
5222	71784	8	5252	72032	9	5282	72280	8
5223	71792	8	5253	72041	8	5283	72288	8
5224	71800	9	5254	72049	8	5284	72296	8
5225	71809	8	5255	72057	9	5285	72304	9
5226	71817	8	5256	72066	8	5286	72313	8
5227	71825	9	5257	72074	8	5287	72321	8
5228	71834	8	5258	72082	8	5288	72329	8
5229	71842	8	5259	72090	9	5289	72337	9
5230	71850	8	5260	72099	8	5290	72346	8
5231	71858	8	5261	72107	8	5291	72354	8
5232	71867	9	5262	72115	8	5292	72362	8
5233	71875	8	5263	72123	8	5293	72370	8
5234	71883	8	5264	72132	9	5294	72378	8
5235	71892	9	5265	72140	8	5295	72387	9
5236	71900	8	5266	72148	8	5296	72395	8
5237	71908	8	5267	72156	8	5297	72403	8
5238	71917	9	5268	72165	9	5298	72411	8
5239	71925	8	5269	72173	8	5299	72419	9
5240	71933	8	5270	72181	8	5300	72428	8
5241	71941	9	5271	72189	9	5301	72436	8
5242	71950	8	5272	72198	8	5302	72444	8
5243	71958	8	5273	72206	8	5303	72452	8
5244	71966	9	5274	72214	8	5304	72460	9
5245	71975	8	5275	72222	8	5305	72469	8
5246	71983	8	5276	72230	8	5306	72477	8
5247	71991	9	5277	72239	9	5307	72485	8
5248	71999	8	5278	72247	8	5308	72493	8
5249	72008	9	5279	72255	8	5309	72501	8
5250	72016	8	5280	72263	8	5310	72509	8

72509  
73239

10" = 1° 28' 30"		5340" = 1° 29' 0"		5370" = 1° 29' 30"		D.
im.	Log.	Num.	Log.	Num.	Log.	
10	*72509	5340	*72754	5370	*72997	9
11	*72518	5341	*72762	5371	*73006	8
12	*72526	5342	*72770	5372	*73014	8
13	*72534	5343	*72779	5373	*73022	8
14	*72542	5344	*72787	5374	*73030	8
15	*72550	5345	*72795	5375	*73038	8
16	*72558	5346	*72803	5376	*73046	8
17	*72567	5347	*72811	5377	*73054	8
18	*72575	5348	*72819	5378	*73062	8
19	*72583	5349	*72827	5379	*73070	8
20	*72591	5350	*72835	5380	*73078	8
21	*72599	5351	*72843	5381	*73086	8
22	*72607	5352	*72852	5382	*73094	8
23	*72616	5353	*72860	5383	*73102	9
24	*72624	5354	*72868	5384	*73111	8
25	*72632	5355	*72876	5385	*73119	8
26	*72640	5356	*72884	5386	*73127	8
27	*72648	5357	*72892	5387	*73135	8
28	*72656	5358	*72900	5388	*73143	8
29	*72665	5359	*72908	5389	*73151	8
30	*72673	5360	*72916	5390	*73159	8
31	*72681	5361	*72925	5391	*73167	8
32	*72689	5362	*72933	5392	*73175	8
33	*72697	5363	*72941	5393	*73183	8
34	*72705	5364	*72949	5394	*73191	8
35	*72713	5365	*72957	5395	*73199	8
36	*72722	5366	*72965	5396	*73207	8
37	*72730	5367	*72973	5397	*73215	8
38	*72738	5368	*72981	5398	*73223	8
39	*72746	5369	*72989	5399	*73231	8
40	*72754	5370	*72997	5400	*73239	8

5400	'73239
5490	'73957

5400" = 1° 30' 0"		D.	5430" = 1° 30' 30"		D.	5460" = 1° 31' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
5400	'73239	8	5430	'73480	8	5460	'73719	8
5401	'73247	8	5431	'73488	8	5461	'73727	8
5402	'73255	8	5432	'73496	8	5462	'73735	8
5403	'73263	9	5433	'73504	8	5463	'73743	8
5404	'73272	8	5434	'73512	8	5464	'73751	8
5405	'73280	8	5435	'73520	8	5465	'73759	8
5406	'73288	8	5436	'73528	8	5466	'73767	8
5407	'73296	8	5437	'73536	8	5467	'73775	8
5408	'73304	8	5438	'73544	8	5468	'73783	8
5409	'73312	8	5439	'73552	8	5469	'73791	8
5410	'73320	8	5440	'73560	8	5470	'73799	8
5411	'73328	8	5441	'73568	8	5471	'73807	8
5412	'73336	8	5442	'73576	8	5472	'73815	8
5413	'73344	8	5443	'73584	8	5473	'73823	8
5414	'73352	8	5444	'73592	8	5474	'73830	7
5415	'73360	8	5445	'73600	8	5475	'73838	8
5416	'73368	8	5446	'73608	8	5476	'73846	8
5417	'73376	8	5447	'73616	8	5477	'73854	8
5418	'73384	8	5448	'73624	8	5478	'73862	8
5419	'73392	8	5449	'73632	8	5479	'73870	8
5420	'73400	8	5450	'73640	8	5480	'73878	8
5421	'73408	8	5451	'73648	8	5481	'73886	8
5422	'73416	8	5452	'73656	8	5482	'73894	8
5423	'73424	8	5453	'73664	8	5483	'73902	8
5424	'73432	8	5454	'73672	7	5484	'73910	8
5425	'73440	8	5455	'73679	8	5485	'73918	8
5426	'73448	8	5456	'73687	8	5486	'73926	7
5427	'73456	8	5457	'73695	8	5487	'73933	8
5428	'73464	8	5458	'73703	8	5488	'73941	8
5429	'73472	8	5459	'73711	8	5489	'73949	8
5430	'73480	8	5460	'73719	8	5490	'73957	8

5490	'73957
5580	'74663

5490" = 1° 31' 30"			5520" = 1° 32' 0"			5550" = 1° 32' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
5490	'73957	8	5520	'74194	8	5550	'74429	8
5491	'73965	8	5521	'74202	8	5551	'74437	8
5492	'73973	8	5522	'74210	8	5552	'74445	8
5493	'73981	8	5523	'74218	7	5553	'74453	8
5494	'73989	8	5524	'74225	8	5554	'74461	7
5495	'73997	8	5525	'74233	8	5555	'74468	8
5496	'74005	8	5526	'74241	8	5556	'74476	8
5497	'74013	7	5527	'74249	8	5557	'74484	8
5498	'74020	8	5528	'74257	8	5558	'74492	8
5499	'74028	8	5529	'74265	8	5559	'74500	7
5500	'74036	8	5530	'74273	7	5560	'74507	8
5501	'74044	8	5531	'74280	8	5561	'74515	8
5502	'74052	8	5532	'74288	8	5562	'74523	8
5503	'74060	8	5533	'74296	8	5563	'74531	8
5504	'74068	8	5534	'74304	8	5564	'74539	8
5505	'74076	8	5535	'74312	8	5565	'74547	7
5506	'74084	8	5536	'74320	8	5566	'74554	8
5507	'74092	8	5537	'74327	7	5567	'74562	8
5508	'74099	7	5538	'74335	8	5568	'74570	8
5509	'74107	8	5539	'74343	8	5569	'74578	8
5510	'74115	8	5540	'74351	8	5570	'74586	7
5511	'74123	8	5541	'74359	8	5571	'74593	8
5512	'74131	8	5542	'74367	7	5572	'74601	8
5513	'74139	8	5543	'74374	8	5573	'74609	8
5514	'74147	8	5544	'74382	8	5574	'74617	7
5515	'74155	8	5545	'74390	8	5575	'74624	8
5516	'74162	7	5546	'74398	8	5576	'74632	8
5517	'74170	8	5547	'74406	8	5577	'74640	8
5518	'74178	8	5548	'74414	7	5578	'74648	8
5519	'74186	8	5549	'74421	8	5579	'74656	7
5520	'74194	8	5550	'74429	8	5580	'74663	7

5580	74663
5670	75358

5580" = 1° 33' 0"		D.	5610" = 1° 33' 30"		D.	5640" = 1° 34' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
5580	.74663	8	5610	.74896	8	5640	.75128	8
5581	.74671	8	5611	.74904	8	5641	.75136	7
5582	.74679	8	5612	.74912	8	5642	.75143	8
5583	.74687	8	5613	.74920	7	5643	.75151	8
5584	.74695	7	5614	.74927	8	5644	.75159	7
5585	.74702	8	5615	.74935	8	5645	.75166	8
5586	.74710	8	5616	.74943	7	5646	.75174	8
5587	.74718	8	5617	.74950	8	5647	.75182	7
5588	.74726	7	5618	.74958	8	5648	.75189	8
5589	.74733	8	5619	.74966	8	5649	.75197	8
5590	.74741	8	5620	.74974	7	5650	.75205	8
5591	.74749	8	5621	.74981	8	5651	.75213	7
5592	.74757	7	5622	.74989	8	5652	.75220	8
5593	.74764	8	5623	.74997	8	5653	.75228	8
5594	.74772	8	5624	.75005	7	5654	.75236	7
5595	.74780	8	5625	.75012	8	5655	.75243	8
5596	.74788	8	5626	.75020	8	5656	.75251	8
5597	.74796	7	5627	.75028	7	5657	.75259	7
5598	.74803	8	5628	.75035	8	5658	.75266	8
5599	.74811	8	5629	.75043	8	5659	.75274	8
5600	.74819	8	5630	.75051	8	5660	.75282	7
5601	.74827	7	5631	.75059	7	5661	.75289	8
5602	.74834	8	5632	.75066	8	5662	.75297	8
5603	.74842	8	5633	.75074	8	5663	.75305	7
5604	.74850	8	5634	.75082	7	5664	.75312	8
5605	.74858	7	5635	.75089	8	5665	.75320	8
5606	.74865	8	5636	.75097	8	5666	.75328	7
5607	.74873	8	5637	.75105	8	5667	.75335	8
5608	.74881	8	5638	.75113	7	5668	.75343	8
5609	.74889	8	5639	.75120	8	5669	.75351	7
5610	.74896	7	5640	.75128	8	5670	.75358	7

5670	*75358
5760	*76042

5670" = 1° 34' 30"		D.	5700" = 1° 35' 0"		D.	5730" = 1° 35' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
5670	*75358	8	5700	*75587	8	5730	*75815	8
5671	*75366	8	5701	*75595	8	5731	*75823	8
5672	*75374	7	5702	*75603	7	5732	*75831	7
5673	*75381	8	5703	*75610	8	5733	*75838	8
5674	*75389	8	5704	*75618	8	5734	*75846	7
5675	*75397	7	5705	*75626	7	5735	*75853	8
5676	*75404	8	5706	*75633	8	5736	*75861	7
5677	*75412	8	5707	*75641	7	5737	*75868	8
5678	*75420	8	5708	*75648	8	5738	*75876	8
5679	*75427	8	5709	*75656	8	5739	*75884	7
5680	*75435	7	5710	*75664	7	5740	*75891	8
5681	*75442	8	5711	*75671	8	5741	*75899	7
5682	*75450	8	5712	*75679	7	5742	*75906	8
5683	*75458	7	5713	*75686	8	5743	*75914	7
5684	*75465	8	5714	*75694	8	5744	*75921	8
5685	*75473	8	5715	*75702	7	5745	*75929	8
5686	*75481	7	5716	*75709	8	5746	*75937	7
5687	*75488	8	5717	*75717	7	5747	*75944	8
5688	*75496	8	5718	*75724	8	5748	*75952	7
5689	*75504	7	5719	*75732	8	5749	*75959	8
5690	*75511	8	5720	*75740	7	5750	*75967	7
5691	*75519	7	5721	*75747	8	5751	*75974	8
5692	*75526	8	5722	*75755	7	5752	*75982	7
5693	*75534	8	5723	*75762	8	5753	*75989	8
5694	*75542	7	5724	*75770	8	5754	*75997	8
5695	*75549	8	5725	*75778	7	5755	*76005	7
5696	*75557	8	5726	*75785	8	5756	*76012	8
5697	*75565	7	5727	*75793	7	5757	*76020	7
5698	*75572	8	5728	*75800	8	5758	*76027	8
5699	*75580	7	5729	*75808	8	5759	*76035	7
5700	*75587	7	5730	*75815	7	5760	*76042	7

5760	·76042
5850	·76716

5760" = 1° 36' 0"		D.	5790" = 1° 36' 30"		D.	5820" = 1° 37' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
5760	·76042	8	5790	·76268	7	5820	·76492	8
5761	·76050	7	5791	·76275	8	5821	·76500	7
5762	·76057	8	5792	·76283	7	5822	·76507	8
5763	·76065	7	5793	·76290	8	5823	·76515	7
5764	·76072	8	5794	·76298	7	5824	·76522	8
5765	·76080	7	5795	·76305	8	5825	·76530	7
5766	·76087	8	5796	·76313	7	5826	·76537	8
5767	·76095	8	5797	·76320	8	5827	·76545	7
5768	·76103	7	5798	·76328	7	5828	·76552	7
5769	·76110	8	5799	·76335	8	5829	·76559	8
5770	·76118	7	5800	·76343	7	5830	·76567	7
5771	·76125	8	5801	·76350	8	5831	·76574	8
5772	·76133	7	5802	·76358	7	5832	·76582	7
5773	·76140	8	5803	·76365	8	5833	·76589	8
5774	·76148	7	5804	·76373	7	5834	·76597	7
5775	·76155	8	5805	·76380	8	5835	·76604	8
5776	·76163	7	5806	·76388	7	5836	·76612	7
5777	·76170	8	5807	·76395	8	5837	·76619	7
5778	·76178	7	5808	·76403	7	5838	·76626	8
5779	·76185	8	5809	·76410	8	5839	·76634	7
5780	·76193	7	5810	·76418	7	5840	·76641	8
5781	·76200	8	5811	·76425	8	5841	·76649	7
5782	·76208	7	5812	·76433	7	5842	·76656	8
5783	·76215	8	5813	·76440	8	5843	·76664	7
5784	·76223	7	5814	·76448	7	5844	·76671	7
5785	·76230	8	5815	·76455	7	5845	·76678	8
5786	·76238	7	5816	·76462	8	5846	·76686	7
5787	·76245	8	5817	·76470	7	5847	·76693	8
5788	·76253	7	5818	·76477	8	5848	·76701	7
5789	·76260	8	5819	·76485	7	5849	·76708	8
5790	·76268	7	5820	·76492	7	5850	·76716	8

5850	.76716
5940	.77379

5850" = 1° 37' 30"		D.	5880" = 1° 38' 0"		D.	5910" = 1° 38' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
5850	.76716	7	5880	.76938	7	5910	.77159	7
5851	.76723	7	5881	.76945	8	5911	.77166	7
5852	.76730	8	5882	.76953	7	5912	.77173	8
5853	.76738	7	5883	.76960	7	5913	.77181	7
5854	.76745	8	5884	.76967	8	5914	.77188	7
5855	.76753	7	5885	.76975	7	5915	.77195	8
5856	.76760	8	5886	.76982	7	5916	.77203	7
5857	.76768	7	5887	.76989	8	5917	.77210	7
5858	.76775	7	5888	.76997	7	5918	.77217	8
5859	.76782	8	5889	.77004	8	5919	.77225	7
5860	.76790	7	5890	.77012	7	5920	.77232	8
5861	.76797	8	5891	.77019	7	5921	.77240	7
5862	.76805	7	5892	.77026	8	5922	.77247	7
5863	.76812	7	5893	.77034	7	5923	.77254	8
5864	.76819	8	5894	.77041	7	5924	.77262	7
5865	.76827	7	5895	.77048	8	5925	.77269	7
5866	.76834	8	5896	.77056	7	5926	.77276	7
5867	.76842	7	5897	.77063	7	5927	.77283	8
5868	.76849	7	5898	.77070	8	5928	.77291	7
5869	.76856	8	5899	.77078	7	5929	.77298	7
5870	.76864	7	5900	.77085	8	5930	.77305	8
5871	.76871	8	5901	.77093	7	5931	.77313	7
5872	.76879	7	5902	.77100	7	5932	.77320	7
5873	.76886	7	5903	.77107	8	5933	.77327	8
5874	.76893	8	5904	.77115	7	5934	.77335	7
5875	.76901	7	5905	.77122	7	5935	.77342	7
5876	.76908	8	5906	.77129	8	5936	.77349	8
5877	.76916	7	5907	.77137	7	5937	.77357	7
5878	.76923	7	5908	.77144	7	5938	.77364	7
5879	.76930	8	5909	.77151	8	5939	.77371	8
5880	.76938	8	5910	.77159	8	5940	.77379	8



5940	77379
6030	78034

5940" = 1° 39' 0"		D.	5970" = 1° 39' 30"		D.	6000" = 1° 40' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
5940	77379	7	5970	77597	8	6000	77815	7
5941	77386	7	5971	77605	7	6001	77822	8
5942	77393	8	5972	77612	7	6002	77830	7
5943	77401	7	5973	77619	8	6003	77837	7
5944	77408	7	5974	77627	7	6004	77844	7
5945	77415	7	5975	77634	7	6005	77851	8
5946	77422	8	5976	77641	7	6006	77859	7
5947	77430	7	5977	77648	8	6007	77866	7
5948	77437	7	5978	77656	7	6008	77873	7
5949	77444	8	5979	77663	7	6009	77880	7
5950	77452	7	5980	77670	7	6010	77887	8
5951	77459	7	5981	77677	8	6011	77895	7
5952	77466	8	5982	77685	7	6012	77902	7
5953	77474	7	5983	77692	7	6013	77909	7
5954	77481	7	5984	77699	7	6014	77916	8
5955	77488	7	5985	77706	8	6015	77924	7
5956	77495	8	5986	77714	7	6016	77931	7
5957	77503	7	5987	77721	7	6017	77938	7
5958	77510	7	5988	77728	7	6018	77945	7
5959	77517	8	5989	77735	8	6019	77952	8
5960	77525	7	5990	77743	7	6020	77960	7
5961	77532	7	5991	77750	7	6021	77967	7
5962	77539	7	5992	77757	7	6022	77974	7
5963	77546	8	5993	77764	8	6023	77981	7
5964	77554	7	5994	77772	7	6024	77988	8
5965	77561	7	5995	77779	7	6025	77996	7
5966	77568	8	5996	77786	7	6026	78003	7
5967	77576	7	5997	77793	8	6027	78010	7
5968	77583	7	5998	77801	7	6028	78017	8
5969	77590	7	5999	77808	7	6029	78025	7
5970	77597		6000	77815		6030	78032	

6030	·78032
6120	·78675

6030" = 1°40'30"		D.	6060" = 1°41'0"		D.	6090" = 1°41'30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
6030	·78032	7	6060	·78247	7	6090	·78462	7
6031	·78039	7	6061	·78254	8	6091	·78469	7
6032	·78046	7	6062	·78262	7	6092	·78476	7
6033	·78053	8	6063	·78269	7	6093	·78483	7
6034	·78061	7	6064	·78276	7	6094	·78490	7
6035	·78068	7	6065	·78283	7	6095	·78497	7
6036	·78075	7	6066	·78290	7	6096	·78504	8
6037	·78082	7	6067	·78297	8	6097	·78512	7
6038	·78089	8	6068	·78305	7	6098	·78519	7
6039	·78097	7	6069	·78312	7	6099	·78526	7
6040	·78104	7	6070	·78319	7	6100	·78533	7
6041	·78111	7	6071	·78326	7	6101	·78540	7
6042	·78118	7	6072	·78333	7	6102	·78547	7
6043	·78125	7	6073	·78340	7	6103	·78554	7
6044	·78132	8	6074	·78347	8	6104	·78561	8
6045	·78140	7	6075	·78355	7	6105	·78569	7
6046	·78147	7	6076	·78362	7	6106	·78576	7
6047	·78154	7	6077	·78369	7	6107	·78583	7
6048	·78161	7	6078	·78376	7	6108	·78590	7
6049	·78168	8	6079	·78383	7	6109	·78597	7
6050	·78176	7	6080	·78390	8	6110	·78604	7
6051	·78183	7	6081	·78398	7	6111	·78611	7
6052	·78190	7	6082	·78405	7	6112	·78618	7
6053	·78197	7	6083	·78412	7	6113	·78625	8
6054	·78204	7	6084	·78419	7	6114	·78633	7
6055	·78211	8	6085	·78426	7	6115	·78640	7
6056	·78219	7	6086	·78433	7	6116	·78647	7
6057	·78226	7	6087	·78440	7	6117	·78654	7
6058	·78233	7	6088	·78447	8	6118	·78661	7
6059	·78240	7	6089	·78455	7	6119	·78668	7
6060	·78247	7	6090	·78462	7	6120	·78675	7

6120" = 1° 42' 0"		D.	6150" = 1° 42' 30"		D.	6180" = 1° 43' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
6120	·78675		6150	·78888		6180	·79099	
6121	·78682	7	6151	·78895	7	6181	·79106	7
6122	·78689	7	6152	·78902	7	6182	·79113	7
		7			7			7
6123	·78696	8	6153	·78909	7	6183	·79120	7
6124	·78704	7	6154	·78916	7	6184	·79127	7
6125	·78711	7	6155	·78923	7	6185	·79134	7
		7			7			7
6126	·78718	7	6156	·78930	7	6186	·79141	7
6127	·78725	7	6157	·78937	7	6187	·79148	7
6128	·78732	7	6158	·78944	7	6188	·79155	7
		7			7			7
6129	·78739	7	6159	·78951	7	6189	·79162	7
6130	·78746	7	6160	·78958	7	6190	·79169	7
6131	·78753	7	6161	·78965	7	6191	·79176	7
		7			7			7
6132	·78760	7	6162	·78972	7	6192	·79183	7
6133	·78767	7	6163	·78979	7	6193	·79190	7
6134	·78774	7	6164	·78986	7	6194	·79197	7
		7			7			7
6135	·78781	8	6165	·78993	7	6195	·79204	7
6136	·78789	7	6166	·79000	7	6196	·79211	7
6137	·78796	7	6167	·79007	7	6197	·79218	7
		7			7			7
6138	·78803	7	6168	·79014	7	6198	·79225	7
6139	·78810	7	6169	·79021	7	6199	·79232	7
6140	·78817	7	6170	·79029	8	6200	·79239	7
		7			7			7
6141	·78824	7	6171	·79036	7	6201	·79246	7
6142	·78831	7	6172	·79043	7	6202	·79253	7
6143	·78838	7	6173	·79050	7	6203	·79260	7
		7			7			7
6144	·78845	7	6174	·79057	7	6204	·79267	7
6145	·78852	7	6175	·79064	7	6205	·79274	7
6146	·78859	7	6176	·79071	7	6206	·79281	7
		7			7			7
6147	·78866	7	6177	·79078	7	6207	·79288	7
6148	·78873	7	6178	·79085	7	6208	·79295	7
6149	·78880	7	6179	·79092	7	6209	·79302	7
6150	·78888	8	6180	·79099	7	6210	·79309	7

6210	.79309
6300	.79934

6210" = 1° 43' 30"			6240" = 1° 44' 0"			6270" = 1° 44' 30"		
Num.	Log.		Num.	Log.		Num.	Log.	
6210	.79309	D	6240	.79518	D	6270	.79727	D
6211	.79316	7	6241	.79525	7	6271	.79734	7
6212	.79323	7	6242	.79532	7	6272	.79741	7
		7			7			7
6213	.79330	7	6243	.79539	7	6273	.79748	6
6214	.79337	7	6244	.79546	7	6274	.79754	7
6215	.79344	7	6245	.79553	7	6275	.79761	7
		7			7			7
6216	.79351	7	6246	.79560	7	6276	.79768	7
6217	.79358	7	6247	.79567	7	6277	.79775	7
6218	.79365	7	6248	.79574	7	6278	.79782	7
		7			7			7
6219	.79372	7	6249	.79581	7	6279	.79789	7
6220	.79379	7	6250	.79588	7	6280	.79796	7
6221	.79386	7	6251	.79595	7	6281	.79803	7
		7			7			7
6222	.79393	7	6252	.79602	7	6282	.79810	7
6223	.79400	7	6253	.79609	7	6283	.79817	7
6224	.79407	7	6254	.79616	7	6284	.79824	7
		7			7			7
6225	.79414	7	6255	.79623	7	6285	.79831	6
6226	.79421	7	6256	.79630	7	6286	.79837	7
6227	.79428	7	6257	.79637	7	6287	.79844	7
		7			7			7
6228	.79435	7	6258	.79644	6	6288	.79851	7
6229	.79442	7	6259	.79650	7	6289	.79858	7
6230	.79449	7	6260	.79657	7	6290	.79865	7
		7			7			7
6231	.79456	7	6261	.79664	7	6291	.79872	7
6232	.79463	7	6262	.79671	7	6292	.79879	7
6233	.79470	7	6263	.79678	7	6293	.79886	7
		7			7			7
6234	.79477	7	6264	.79685	7	6294	.79893	7
6235	.79484	7	6265	.79692	7	6295	.79900	6
6236	.79491	7	6266	.79699	7	6296	.79906	6
		7			7			7
6237	.79498	7	6267	.79706	7	6297	.79913	7
6238	.79505	6	6268	.79713	7	6298	.79920	7
6239	.79511	6	6269	.79720	7	6299	.79927	7
6240	.79518	7	6270	.79727	7	6300	.79934	7

6300	·79934
6390	·80550

6300" = 1° 45' 0"		D.	6330" = 1° 45' 30"		D.	6360" = 1° 46' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
6300	·79934	7	6330	·80140	7	6360	·80346	7
6301	·79941	7	6331	·80147	7	6361	·80353	7
6302	·79948	7	6332	·80154	7	6362	·80359	7
6303	·79955	7	6333	·80161	7	6363	·80366	7
6304	·79962	7	6334	·80168	7	6364	·80373	7
6305	·79969	7	6335	·80175	7	6365	·80380	7
6306	·79975	6	6336	·80182	7	6366	·80387	7
6307	·79982	7	6337	·80188	6	6367	·80393	6
6308	·79989	7	6338	·80195	7	6368	·80400	7
6309	·79996	7	6339	·80202	7	6369	·80407	7
6310	·80003	7	6340	·80209	7	6370	·80414	7
6311	·80010	7	6341	·80216	7	6371	·80421	7
6312	·80017	7	6342	·80223	7	6372	·80428	7
6313	·80024	7	6343	·80229	6	6373	·80434	6
6314	·80030	6	6344	·80236	7	6374	·80441	7
6315	·80037	7	6345	·80243	7	6375	·80448	7
6316	·80044	7	6346	·80250	7	6376	·80455	7
6317	·80051	7	6347	·80257	7	6377	·80462	7
6318	·80058	7	6348	·80264	7	6378	·80468	6
6319	·80065	7	6349	·80271	7	6379	·80475	7
6320	·80072	7	6350	·80277	6	6380	·80482	7
6321	·80079	7	6351	·80284	7	6381	·80489	7
6322	·80085	6	6352	·80291	7	6382	·80496	7
6323	·80092	7	6353	·80298	7	6383	·80502	6
6324	·80099	7	6354	·80305	7	6384	·80509	7
6325	·80106	7	6355	·80312	7	6385	·80516	7
6326	·80113	7	6356	·80318	6	6386	·80523	7
6327	·80120	7	6357	·80325	7	6387	·80530	7
6328	·80127	7	6358	·80332	7	6388	·80536	6
6329	·80134	7	6359	·80339	7	6389	·80543	7
6330	·80140	6	6360	·80346	7	6390	·80550	7

6390	·80550
6480	·81158

6390" = 1° 46' 30"		D.	6420" = 1° 47' 0"		D.	6450" = 1° 47' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
6390	·80550	7	6420	·80754	6	6450	·80956	7
6391	·80557	7	6421	·80760	7	6451	·80963	6
6392	·80564	6	6422	·80767	7	6452	·80969	7
6393	·80570	7	6423	·80774	7	6453	·80976	7
6394	·80577	7	6424	·80781	6	6454	·80983	7
6395	·80584	7	6425	·80787	7	6455	·80990	6
6396	·80591	7	6426	·80794	7	6456	·80996	7
6397	·80598	6	6427	·80801	7	6457	·81003	7
6398	·80604	7	6428	·80808	6	6458	·81010	7
6399	·80611	7	6429	·80814	7	6459	·81017	6
6400	·80618	7	6430	·80821	7	6460	·81023	7
6401	·80625	7	6431	·80828	7	6461	·81030	7
6402	·80632	6	6432	·80835	6	6462	·81037	6
6403	·80638	7	6433	·80841	7	6463	·81043	7
6404	·80645	7	6434	·80848	7	6464	·81050	7
6405	·80652	7	6435	·80855	7	6465	·81057	7
6406	·80659	6	6436	·80862	6	6466	·81064	6
6407	·80665	7	6437	·80868	7	6467	·81070	7
6408	·80672	7	6438	·80875	7	6468	·81077	7
6409	·80679	7	6439	·80882	7	6469	·81084	6
6410	·80686	7	6440	·80889	6	6470	·81090	7
6411	·80693	6	6441	·80895	7	6471	·81097	7
6412	·80699	7	6442	·80902	7	6472	·81104	7
6413	·80706	7	6443	·80909	7	6473	·81111	6
6414	·80713	7	6444	·80916	6	6474	·81117	7
6415	·80720	6	6445	·80922	7	6475	·81124	7
6416	·80726	7	6446	·80929	7	6476	·81131	6
6417	·80733	7	6447	·80936	7	6477	·81137	7
6418	·80740	7	6448	·80943	6	6478	·81144	7
6419	·80747	7	6449	·80949	7	6479	·81151	7
6420	·80754	7	6450	·80956	7	6480	·81158	7

6480" = 1° 48' 0"		D.	6510" = 1° 48' 30"		D.	6540" = 1° 49' 0"		I.
Num.	Log.		Num.	Log.		Num.	Log.	
6480	·81158	6	6510	·81358	7	6540	·81558	6
6481	·81164	7	6511	·81365	6	6541	·81564	7
6482	·81171	7	6512	·81371	7	6542	·81571	7
6483	·81178	6	6513	·81378	7	6543	·81578	6
6484	·81184	7	6514	·81385	6	6544	·81584	7
6485	·81191	7	6515	·81391	7	6545	·81591	7
6486	·81198	6	6516	·81398	7	6546	·81598	6
6487	·81204	7	6517	·81405	6	6547	·81604	7
6488	·81211	7	6518	·81411	7	6548	·81611	6
6489	·81218	6	6519	·81418	7	6549	·81617	7
6490	·81224	7	6520	·81425	6	6550	·81624	7
6491	·81231	7	6521	·81431	7	6551	·81631	6
6492	·81238	6	6522	·81438	7	6552	·81637	7
6493	·81245	7	6523	·81445	6	6553	·81644	7
6494	·81251	7	6524	·81451	7	6554	·81651	6
6495	·81258	7	6525	·81458	7	6555	·81657	7
6496	·81265	6	6526	·81465	6	6556	·81664	7
6497	·81271	7	6527	·81471	7	6557	·81671	6
6498	·81278	7	6528	·81478	7	6558	·81677	7
6499	·81285	6	6529	·81485	6	6559	·81684	6
6500	·81291	7	6530	·81491	7	6560	·81690	7
6501	·81298	7	6531	·81498	7	6561	·81697	7
6502	·81305	6	6532	·81505	6	6562	·81704	6
6503	·81311	7	6533	·81511	7	6563	·81710	7
6504	·81318	7	6534	·81518	7	6564	·81717	6
6505	·81325	6	6535	·81525	6	6565	·81723	7
6506	·81331	7	6536	·81531	7	6566	·81730	6
6507	·81338	7	6537	·81538	6	6567	·81737	7
6508	·81345	6	6538	·81544	7	6568	·81743	6
6509	·81351	7	6539	·81551	7	6569	·81750	7
6510	·81358	7	6540	·81558	7	6570	·81757	7

6570	·81757
6660	·82347

6570" = 1° 49' 30"		D.	6600" = 1° 50' 0"		D.	6630" = 1° 50' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
6570	·81757	6	6600	·81954	7	6630	·82151	7
6571	·81763	7	6601	·81961	7	6631	·82158	7
6572	·81770	6	6602	·81968	6	6632	·82164	6
6573	·81776	7	6603	·81974	7	6633	·82171	7
6574	·81783	7	6604	·81981	6	6634	·82178	6
6575	·81790	6	6605	·81987	7	6635	·82184	7
6576	·81796	7	6606	·81994	6	6636	·82191	6
6577	·81803	6	6607	·82000	7	6637	·82197	7
6578	·81809	7	6608	·82007	6	6638	·82204	6
6579	·81816	7	6609	·82014	6	6639	·82210	7
6580	·81823	6	6610	·82020	7	6640	·82217	6
6581	·81829	7	6611	·82027	6	6641	·82223	7
6582	·81836	6	6612	·82033	7	6642	·82230	6
6583	·81842	7	6613	·82040	6	6643	·82236	7
6584	·81849	7	6614	·82046	6	6644	·82243	6
6585	·81856	6	6615	·82053	7	6645	·82249	7
6586	·81862	7	6616	·82060	6	6646	·82256	7
6587	·81869	6	6617	·82066	7	6647	·82263	6
6588	·81875	7	6618	·82073	6	6648	·82269	7
6589	·81882	7	6619	·82079	7	6649	·82276	6
6590	·81889	6	6620	·82086	6	6650	·82282	7
6591	·81895	7	6621	·82092	7	6651	·82289	6
6592	·81902	6	6622	·82099	6	6652	·82295	7
6593	·81908	7	6623	·82105	7	6653	·82302	6
6594	·81915	6	6624	·82112	7	6654	·82308	7
6595	·81921	7	6625	·82119	6	6655	·82315	6
6596	·81928	7	6626	·82125	7	6656	·82321	7
6597	·81935	6	6627	·82132	6	6657	·82328	6
6598	·81941	7	6628	·82138	7	6658	·82334	7
6599	·81948	6	6629	·82145	6	6659	·82341	6
6600	·81954	7	6630	·82151	6	6660	·82347	6



6660	·82347
6750	·82930

6660" = 1° 51' 0"		D.	6690" = 1° 51' 30"		D.	6720" = 1° 52' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
6660	·82347	7	6690	·82543	6	6720	·82737	6
6661	·82354	6	6691	·82549	7	6721	·82743	7
6662	·82360	7	6692	·82556	6	6722	·82750	6
		6			7			7
6663	·82367	6	6693	·82562	7	6723	·82756	7
6664	·82373	7	6694	·82569	6	6724	·82763	6
6665	·82380	7	6695	·82575	7	6725	·82769	7
		6			6			6
6666	·82387	6	6696	·82582	6	6726	·82776	6
6667	·82393	7	6697	·82588	7	6727	·82782	7
6668	·82400	6	6698	·82595	6	6728	·82789	6
		7			7			7
6669	·82406	7	6699	·82601	6	6729	·82795	7
6670	·82413	6	6700	·82607	7	6730	·82802	6
6671	·82419	7	6701	·82614	6	6731	·82808	6
		6			7			7
6672	·82426	6	6702	·82620	7	6732	·82814	7
6673	·82432	7	6703	·82627	6	6733	·82821	6
6674	·82439	6	6704	·82633	7	6734	·82827	7
		7			6			6
6675	·82445	7	6705	·82640	6	6735	·82834	6
6676	·82452	6	6706	·82646	7	6736	·82840	7
6677	·82458	7	6707	·82653	6	6737	·82847	6
		6			7			7
6678	·82465	6	6708	·82659	7	6738	·82853	7
6679	·82471	7	6709	·82666	6	6739	·82860	6
6680	·82478	6	6710	·82672	7	6740	·82866	6
		7			6			7
6681	·82484	7	6711	·82679	6	6741	·82872	7
6682	·82491	6	6712	·82685	7	6742	·82879	6
6683	·82497	7	6713	·82692	6	6743	·82885	7
		6			7			6
6684	·82504	6	6714	·82698	7	6744	·82892	6
6685	·82510	7	6715	·82705	6	6745	·82898	7
6686	·82517	6	6716	·82711	7	6746	·82905	6
		7			6			7
6687	·82523	7	6717	·82718	6	6747	·82911	7
6688	·82530	6	6718	·82724	7	6748	·82918	6
6689	·82536	7	6719	·82730	6	6749	·82924	7
6690	·82543	7	6720	·82737	7	6750	·82930	6

6750	·82930
6840	·83506

6750" = 1° 52' 30"		D.	6780" = 1° 53' 0"		D.	6810" = 1° 53' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
6750	·82930	7	6780	·83123	6	6810	·83315	6
6751	·82937	6	6781	·83129	7	6811	·83321	6
6752	·82943	7	6782	·83136	6	6812	·83327	7
6753	·82950	6	6783	·83142	7	6813	·83334	6
6754	·82956	7	6784	·83149	6	6814	·83340	7
6755	·82963	6	6785	·83155	6	6815	·83347	6
6756	·82969	6	6786	·83161	7	6816	·83353	6
6757	·82975	7	6787	·83168	6	6817	·83359	7
6758	·82982	6	6788	·83174	7	6818	·83366	6
6759	·82988	7	6789	·83181	6	6819	·83372	6
6760	·82995	6	6790	·83187	6	6820	·83378	7
6761	·83001	7	6791	·83193	6	6821	·83385	6
6762	·83008	6	6792	·83200	7	6822	·83391	7
6763	·83014	6	6793	·83206	6	6823	·83398	6
6764	·83020	7	6794	·83213	6	6824	·83404	6
6765	·83027	6	6795	·83219	6	6825	·83410	7
6766	·83033	7	6796	·83225	7	6826	·83417	6
6767	·83040	6	6797	·83232	6	6827	·83423	6
6768	·83046	6	6798	·83238	7	6828	·83429	7
6769	·83052	7	6799	·83245	6	6829	·83436	6
6770	·83059	6	6800	·83251	6	6830	·83442	6
6771	·83065	7	6801	·83257	7	6831	·83448	7
6772	·83072	6	6802	·83264	6	6832	·83455	6
6773	·83078	7	6803	·83270	6	6833	·83461	6
6774	·83085	6	6804	·83276	7	6834	·83467	7
6775	·83091	6	6805	·83283	6	6835	·83474	6
6776	·83097	7	6806	·83289	7	6836	·83480	7
6777	·83104	6	6807	·83296	6	6837	·83487	6
6778	·83110	7	6808	·83302	6	6838	·83493	6
6779	·83117	6	6809	·83308	7	6839	·83499	7
6780	·83123	6	6810	·83315	7	6840	·83506	7

6840	·83506
6930	·84073

6840" = 1° 54' 0"		D.	6870" = 1° 54' 30"		D.	6900" = 1° 55' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
6840	·83506	6	6870	·83696	6	6900	·83885	6
6841	·83512	6	6871	·83702	6	6901	·83891	6
6842	·83518	7	6872	·83708	7	6902	·83897	7
6843	·83525	6	6873	·83715	6	6903	·83904	6
6844	·83531	6	6874	·83721	6	6904	·83910	6
6845	·83537	7	6875	·83727	7	6905	·83916	7
6846	·83544	6	6876	·83734	6	6906	·83923	6
6847	·83550	6	6877	·83740	6	6907	·83929	6
6848	·83556	7	6878	·83746	7	6908	·83935	7
6849	·83563	6	6879	·83753	6	6909	·83942	6
6850	·83569	6	6880	·83759	6	6910	·83948	6
6851	·83575	7	6881	·83765	6	6911	·83954	6
6852	·83582	6	6882	·83771	7	6912	·83960	7
6853	·83588	6	6883	·83778	6	6913	·83967	6
6854	·83594	7	6884	·83784	6	6914	·83973	6
6855	·83601	6	6885	·83790	7	6915	·83979	6
6856	·83607	6	6886	·83797	6	6916	·83985	6
6857	·83613	7	6887	·83803	6	6917	·83992	7
6858	·83620	6	6888	·83809	6	6918	·83998	6
6859	·83626	6	6889	·83816	7	6919	·84004	6
6860	·83632	7	6890	·83822	6	6920	·84011	7
6861	·83639	6	6891	·83828	6	6921	·84017	6
6862	·83645	6	6892	·83835	7	6922	·84023	6
6863	·83651	7	6893	·83841	6	6923	·84029	6
6864	·83658	6	6894	·83847	6	6924	·84036	7
6865	·83664	6	6895	·83853	7	6925	·84042	6
6866	·83670	7	6896	·83860	6	6926	·84048	6
6867	·83677	6	6897	·83866	6	6927	·84055	7
6868	·83683	6	6898	·83872	7	6928	·84061	6
6869	·83689	7	6899	·83879	6	6929	·84067	6
6870	·83696	7	6900	·83885	6	6930	·84073	6

6930	·84073
7020	·84634

6930" = 1° 55' 30"		D.	6960" = 1° 56' 0"		D.	6990" = 1° 56' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
6930	·84073	7	6960	·84261	6	6990	·84448	6
6931	·84080	6	6961	·84267	6	6991	·84454	6
6932	·84086	6	6962	·84273	6	6992	·84460	6
6933	·84092	6	6963	·84280	7	6993	·84466	6
6934	·84098	6	6964	·84286	6	6994	·84473	7
6935	·84105	7	6965	·84292	6	6995	·84479	6
6936	·84111	6	6966	·84298	6	6996	·84485	6
6937	·84117	6	6967	·84305	7	6997	·84491	6
6938	·84123	6	6968	·84311	6	6998	·84497	6
6939	·84130	7	6969	·84317	6	6999	·84504	7
6940	·84136	6	6970	·84323	6	7000	·84510	6
6941	·84142	6	6971	·84330	7	7001	·84516	6
6942	·84148	6	6972	·84336	6	7002	·84522	6
6943	·84155	7	6973	·84342	6	7003	·84528	7
6944	·84161	6	6974	·84348	6	7004	·84535	6
6945	·84167	6	6975	·84354	7	7005	·84541	6
6946	·84173	7	6976	·84361	6	7006	·84547	6
6947	·84180	6	6977	·84367	6	7007	·84553	6
6948	·84186	6	6978	·84373	6	7008	·84559	7
6949	·84192	6	6979	·84379	7	7009	·84566	6
6950	·84198	7	6980	·84386	6	7010	·84572	6
6951	·84205	6	6981	·84392	6	7011	·84578	6
6952	·84211	6	6982	·84398	6	7012	·84584	6
6953	·84217	6	6983	·84404	6	7013	·84590	7
6954	·84223	6	6984	·84410	7	7014	·84597	6
6955	·84230	7	6985	·84417	6	7015	·84603	6
6956	·84236	6	6986	·84423	6	7016	·84609	6
6957	·84242	6	6987	·84429	6	7017	·84615	6
6958	·84248	6	6988	·84435	7	7018	·84621	7
6959	·84255	7	6989	·84442	6	7019	·84628	6
6960	·84261	6	6990	·84448	7	7020	·84634	6

7020	·84634
7110	·85187

7020" = 1° 57' 0"			7050" = 1° 57' 30"			7080" = 1° 58' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
7020	·84634	6	7050	·84819	6	7080	·85003	6
7021	·84640	6	7051	·84825	6	7081	·85009	6
7022	·84646	6	7052	·84831	6	7082	·85016	7
7023	·84652	6	7053	·84837	7	7083	·85022	6
7024	·84658	7	7054	·84844	6	7084	·85028	6
7025	·84665	6	7055	·84850	6	7085	·85034	6
7026	·84671	6	7056	·84856	6	7086	·85040	6
7027	·84677	6	7057	·84862	6	7087	·85046	6
7028	·84683	6	7058	·84868	6	7088	·85052	6
7029	·84689	7	7059	·84874	6	7089	·85058	7
7030	·84696	6	7060	·84880	7	7090	·85065	6
7031	·84702	6	7061	·84887	6	7091	·85071	6
7032	·84708	6	7062	·84893	6	7092	·85077	6
7033	·84714	6	7063	·84899	6	7093	·85083	6
7034	·84720	6	7064	·84905	6	7094	·85089	6
7035	·84726	7	7065	·84911	6	7095	·85095	6
7036	·84733	6	7066	·84917	7	7096	·85101	6
7037	·84739	6	7067	·84924	6	7097	·85107	7
7038	·84745	6	7068	·84930	6	7098	·85114	6
7039	·84751	6	7069	·84936	6	7099	·85120	6
7040	·84757	6	7070	·84942	6	7100	·85126	6
7041	·84763	7	7071	·84948	6	7101	·85132	6
7042	·84770	6	7072	·84954	6	7102	·85138	6
7043	·84776	6	7073	·84960	7	7103	·85144	6
7044	·84782	6	7074	·84967	6	7104	·85150	6
7045	·84788	6	7075	·84973	6	7105	·85156	7
7046	·84794	6	7076	·84979	6	7106	·85163	6
7047	·84800	7	7077	·84985	6	7107	·85169	6
7048	·84807	6	7078	·84991	6	7108	·85175	6
7049	·84813	6	7079	·84997	6	7109	·85181	6
7050	·84819	6	7080	·85003	6	7110	·85187	6

7110	·85187
7200	·85733

7110" - 1° 58' 30"		D.	7140" - 1° 59' 0"		D.	7170" - 1° 59' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7110	·85187	6	7140	·85370	6	7170	·85552	6
7111	·85193	6	7141	·85376	6	7171	·85558	6
7112	·85199	6	7142	·85382	6	7172	·85564	6
7113	·85205	6	7143	·85388	6	7173	·85570	6
7114	·85211	6	7144	·85394	6	7174	·85576	6
7115	·85217	7	7145	·85400	6	7175	·85582	6
7116	·85224	6	7146	·85406	6	7176	·85588	6
7117	·85230	6	7147	·85412	6	7177	·85594	6
7118	·85236	6	7148	·85418	7	7178	·85600	6
7119	·85242	6	7149	·85425	6	7179	·85606	6
7120	·85248	6	7150	·85431	6	7180	·85612	6
7121	·85254	6	7151	·85437	6	7181	·85618	6
7122	·85260	6	7152	·85443	6	7182	·85625	7
7123	·85266	6	7153	·85449	6	7183	·85631	6
7124	·85272	6	7154	·85455	6	7184	·85637	6
7125	·85278	7	7155	·85461	6	7185	·85643	6
7126	·85285	6	7156	·85467	6	7186	·85649	6
7127	·85291	6	7157	·85473	6	7187	·85655	6
7128	·85297	6	7158	·85479	6	7188	·85661	6
7129	·85303	6	7159	·85485	6	7189	·85667	6
7130	·85309	6	7160	·85491	6	7190	·85673	6
7131	·85315	6	7161	·85497	6	7191	·85679	6
7132	·85321	6	7162	·85503	6	7192	·85685	6
7133	·85327	6	7163	·85509	7	7193	·85691	6
7134	·85333	6	7164	·85516	6	7194	·85697	6
7135	·85339	6	7165	·85522	6	7195	·85703	6
7136	·85345	7	7166	·85528	6	7196	·85709	6
7137	·85352	6	7167	·85534	6	7197	·85715	6
7138	·85358	6	7168	·85540	6	7198	·85721	6
7139	·85364	6	7169	·85546	6	7199	·85727	6
7140	·85370		7170	·85552		7200	·85733	

7200	·85733
7290	·86273

7200'' = 2° 0' 0''		D.	7230'' = 2° 0' 30''		D.	7260'' = 2° 1' 0''		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7200	·85733	6	7230	·85914	6	7260	·86094	6
7201	·85739	6	7231	·85920	6	7261	·86100	6
7202	·85745	6	7232	·85926	6	7262	·86106	6
7203	·85751	6	7233	·85932	6	7263	·86112	6
7204	·85757	6	7234	·85938	6	7264	·86118	6
7205	·85763	6	7235	·85944	6	7265	·86124	6
7206	·85769	6	7236	·85950	6	7266	·86130	6
7207	·85775	6	7237	·85956	6	7267	·86136	5
7208	·85781	7	7238	·85962	6	7268	·86141	6
7209	·85788	6	7239	·85968	6	7269	·86147	6
7210	·85794	6	7240	·85974	6	7270	·86153	6
7211	·85800	6	7241	·85980	6	7271	·86159	6
7212	·85806	6	7242	·85986	6	7272	·86165	6
7213	·85812	6	7243	·85992	6	7273	·86171	6
7214	·85818	6	7244	·85998	6	7274	·86177	6
7215	·85824	6	7245	·86004	6	7275	·86183	6
7216	·85830	6	7246	·86010	6	7276	·86189	6
7217	·85836	6	7247	·86016	6	7277	·86195	6
7218	·85842	6	7248	·86022	6	7278	·86201	6
7219	·85848	6	7249	·86028	6	7279	·86207	6
7220	·85854	6	7250	·86034	6	7280	·86213	6
7221	·85860	6	7251	·86040	6	7281	·86219	6
7222	·85866	6	7252	·86046	6	7282	·86225	6
7223	·85872	6	7253	·86052	6	7283	·86231	6
7224	·85878	6	7254	·86058	6	7284	·86237	6
7225	·85884	6	7255	·86064	6	7285	·86243	6
7226	·85890	6	7256	·86070	6	7286	·86249	6
7227	·85896	6	7257	·86076	6	7287	·86255	6
7228	·85902	6	7258	·86082	6	7288	·86261	6
7229	·85908	6	7259	·86088	6	7289	·86267	6
7230	·85914	6	7260	·86094	6	7290	·86273	6

7290	.86273
7380	.86806

7290'' = 2° 1' 30''		D.	7320'' = 2° 2' 0''		D.	7350'' = 2° 2' 30''		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7290	.86273	6	7320	.86451	6	7350	.86629	6
7291	.86279		7321	.86457		7351	.86635	
7292	.86285		7322	.86463		7352	.86641	
7293	.86291	6	7323	.86469	6	7353	.86646	5
7294	.86297		7324	.86475		7354	.86652	
7295	.86303		7325	.86481		7355	.86658	
7296	.86308	5	7326	.86487	6	7356	.86664	6
7297	.86314		7327	.86493		7357	.86670	
7298	.86320		7328	.86499		7358	.86676	
7299	.86326	6	7329	.86504	6	7359	.86682	6
7300	.86332		7330	.86510		7360	.86688	
7301	.86338		7331	.86516		7361	.86694	
7302	.86344	6	7332	.86522	6	7362	.86700	5
7303	.86350		7333	.86528		7363	.86705	
7304	.86356		7334	.86534		7364	.86711	
7305	.86362	6	7335	.86540	6	7365	.86717	6
7306	.86368		7336	.86546		7366	.86723	
7307	.86374		7337	.86552		7367	.86729	
7308	.86380	6	7338	.86558	6	7368	.86735	6
7309	.86386		7339	.86564		7369	.86741	
7310	.86392		7340	.86570		7370	.86747	
7311	.86398	6	7341	.86576	6	7371	.86753	6
7312	.86404		7342	.86581		7372	.86759	
7313	.86410		7343	.86587		7373	.86764	
7314	.86415	5	7344	.86593	6	7374	.86770	6
7315	.86421		7345	.86599		7375	.86776	
7316	.86427		7346	.86605		7376	.86782	
7317	.86433	6	7347	.86611	6	7377	.86788	6
7318	.86439		7348	.86617		7378	.86794	
7319	.86445		7349	.86623		7379	.86800	
7320	.86451	6	7350	.86629	6	7380	.86806	6



7380	·86808
7470	·87332

7380" = 2° 3' 0"		D.	7410" = 2° 3' 30"		D.	7440" = 2° 4' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7380	·86806	6	7410	·86982	6	7440	·87157	6
7381	·86812	5	7411	·86988	6	7441	·87163	6
7382	·86817	6	7412	·86994	6	7442	·87169	6
7383	·86823	6	7413	·86999	5	7443	·87175	6
7384	·86829	6	7414	·87005	6	7444	·87181	6
7385	·86835	6	7415	·87011	6	7445	·87186	5
7386	·86841	6	7416	·87017	6	7446	·87192	6
7387	·86847	6	7417	·87023	6	7447	·87198	6
7388	·86853	6	7418	·87029	6	7448	·87204	6
7389	·86859	6	7419	·87035	6	7449	·87210	6
7390	·86864	5	7420	·87040	5	7450	·87216	6
7391	·86870	6	7421	·87046	6	7451	·87221	5
7392	·86876	6	7422	·87052	6	7452	·87227	6
7393	·86882	6	7423	·87058	6	7453	·87233	6
7394	·86888	6	7424	·87064	6	7454	·87239	6
7395	·86894	6	7425	·87070	5	7455	·87245	6
7396	·86900	6	7426	·87075	6	7456	·87251	5
7397	·86906	5	7427	·87081	6	7457	·87256	6
7398	·86911	6	7428	·87087	6	7458	·87262	6
7399	·86917	6	7429	·87093	6	7459	·87268	6
7400	·86923	6	7430	·87099	6	7460	·87274	6
7401	·86929	6	7431	·87105	6	7461	·87280	6
7402	·86935	6	7432	·87111	5	7462	·87286	6
7403	·86941	6	7433	·87116	6	7463	·87291	5
7404	·86947	6	7434	·87122	6	7464	·87297	6
7405	·86953	6	7435	·87128	6	7465	·87303	6
7406	·86958	5	7436	·87134	6	7466	·87309	6
7407	·86964	6	7437	·87140	6	7467	·87315	6
7408	·86970	6	7438	·87146	6	7468	·87320	5
7409	·86976	6	7439	·87151	6	7469	·87326	6
7410	·86982	6	7440	·87157	6	7470	·87332	6

7470	·87332
7560	·87852

7470" = 2° 4' 30"		D.	7500" = 2° 5' 0"		D.	7530" = 2° 5' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7470	·87332	6	7500	·87506	6	7530	·87679	6
7471	·87338	6	7501	·87512	6	7531	·87685	6
7472	·87344	5	7502	·87518	5	7532	·87691	6
7473	·87349	6	7503	·87523	6	7533	·87697	6
7474	·87355	6	7504	·87529	6	7534	·87703	5
7475	·87361	6	7505	·87535	6	7535	·87708	6
7476	·87367	6	7506	·87541	6	7536	·87714	6
7477	·87373	6	7507	·87547	5	7537	·87720	6
7478	·87379	5	7508	·87552	6	7538	·87726	5
7479	·87384	6	7509	·87558	6	7539	·87731	6
7480	·87390	6	7510	·87564	6	7540	·87737	6
7481	·87396	6	7511	·87570	6	7541	·87743	6
7482	·87402	6	7512	·87576	5	7542	·87749	5
7483	·87408	5	7513	·87581	6	7543	·87754	6
7484	·87413	6	7514	·87587	6	7544	·87760	6
7485	·87419	6	7515	·87593	6	7545	·87766	6
7486	·87425	6	7516	·87599	5	7546	·87772	5
7487	·87431	6	7517	·87604	6	7547	·87777	6
7488	·87437	5	7518	·87610	6	7548	·87783	6
7489	·87442	6	7519	·87616	6	7549	·87789	6
7490	·87448	6	7520	·87622	6	7550	·87795	5
7491	·87454	6	7521	·87628	5	7551	·87800	6
7492	·87460	6	7522	·87633	6	7552	·87806	6
7493	·87466	6	7523	·87639	6	7553	·87812	6
7494	·87471	5	7524	·87645	6	7554	·87818	5
7495	·87477	6	7525	·87651	5	7555	·87823	6
7496	·87483	6	7526	·87656	6	7556	·87829	6
7497	·87489	6	7527	·87662	6	7557	·87835	6
7498	·87495	6	7528	·87668	6	7558	·87841	5
7499	·87500	5	7529	·87674	5	7559	·87846	6
7500	·87506	6	7530	·87679	6	7560	·87852	6

7560" = 2° 6' 0"		D.	7590" = 2° 6' 30"		D.	7620" = 2° 7' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7560	.87852	6	7590	.88024	6	7620	.88195	6
7561	.87858	6	7591	.88030	6	7621	.88201	6
7562	.87864	5	7592	.88036	5	7622	.88207	6
7563	.87869	6	7593	.88041	6	7623	.88213	5
7564	.87875	6	7594	.88047	6	7624	.88218	6
7565	.87881	6	7595	.88053	5	7625	.88224	6
7566	.87887	5	7596	.88058	6	7626	.88230	5
7567	.87892	6	7597	.88064	6	7627	.88235	6
7568	.87898	6	7598	.88070	6	7628	.88241	6
7569	.87904	6	7599	.88076	5	7629	.88247	5
7570	.87910	5	7600	.88081	6	7630	.88252	6
7571	.87915	6	7601	.88087	6	7631	.88258	6
7572	.87921	6	7602	.88093	5	7632	.88264	6
7573	.87927	6	7603	.88098	6	7633	.88270	5
7574	.87933	5	7604	.88104	6	7634	.88275	6
7575	.87938	6	7605	.88110	6	7635	.88281	6
7576	.87944	6	7606	.88116	5	7636	.88287	5
7577	.87950	5	7607	.88121	6	7637	.88292	6
7578	.87955	6	7608	.88127	6	7638	.88298	6
7579	.87961	6	7609	.88133	5	7639	.88304	5
7580	.87967	6	7610	.88138	6	7640	.88309	6
7581	.87973	5	7611	.88144	6	7641	.88315	6
7582	.87978	6	7612	.88150	6	7642	.88321	5
7583	.87984	6	7613	.88156	5	7643	.88326	6
7584	.87990	6	7614	.88161	6	7644	.88332	6
7585	.87996	5	7615	.88167	6	7645	.88338	5
7586	.88001	6	7616	.88173	6	7646	.88343	6
7587	.88007	6	7617	.88178	5	7647	.88349	6
7588	.88013	6	7618	.88184	6	7648	.88355	5
7589	.88018	5	7619	.88190	6	7649	.88360	6
7590	.88024	6	7620	.88195	5	7650	.88366	6

7650	·88366
7740	·88874

7650" = 2° 7' 30"		D.	7680" = 2° 8' 0"		D.	7710" = 2° 8' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7650	·88366	6	7680	·88536	6	7710	·88705	6
7651	·88372	5	7681	·88542	5	7711	·88711	6
7652	·88377	6	7682	·88547	6	7712	·88717	5
7653	·88383	6	7683	·88553	6	7713	·88722	6
7654	·88389	6	7684	·88559	5	7714	·88728	6
7655	·88395	5	7685	·88564	6	7715	·88734	5
7656	·88400	6	7686	·88570	6	7716	·88739	6
7657	·88406	6	7687	·88576	5	7717	·88745	5
7658	·88412	5	7688	·88581	6	7718	·88750	6
7659	·88417	6	7689	·88587	6	7719	·88756	6
7660	·88423	6	7690	·88593	5	7720	·88762	5
7661	·88429	5	7691	·88598	6	7721	·88767	6
7662	·88434	6	7692	·88604	6	7722	·88773	5
7663	·88440	6	7693	·88610	5	7723	·88779	6
7664	·88446	5	7694	·88615	6	7724	·88784	5
7665	·88451	6	7695	·88621	6	7725	·88790	6
7666	·88457	6	7696	·88627	5	7726	·88795	6
7667	·88463	5	7697	·88632	6	7727	·88801	5
7668	·88468	6	7698	·88638	6	7728	·88807	6
7669	·88474	6	7699	·88643	5	7729	·88812	6
7670	·88480	5	7700	·88649	6	7730	·88818	5
7671	·88485	6	7701	·88655	6	7731	·88824	6
7672	·88491	6	7702	·88660	5	7732	·88829	5
7673	·88497	5	7703	·88666	6	7733	·88835	6
7674	·88502	6	7704	·88672	6	7734	·88840	5
7675	·88508	5	7705	·88677	5	7735	·88846	6
7676	·88513	6	7706	·88683	6	7736	·88852	5
7677	·88519	5	7707	·88689	6	7737	·88857	6
7678	·88525	6	7708	·88694	5	7738	·88863	5
7679	·88530	5	7709	·88700	6	7739	·88868	6
7680	·88536	6	7710	·88705	5	7740	·88874	5

7740" = 2° 9' 0"		D.	7770" = 2° 9' 30"		D.	7800" = 2° 10' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7740	·88874	6	7770	·89042	6	7800	·89209	6
7741	·88880	5	7771	·89048	5	7801	·89215	6
7742	·88885	6	7772	·89053	6	7802	·89221	5
7743	·88891	6	7773	·89059	5	7803	·89226	6
7744	·88897	5	7774	·89064	6	7804	·89232	5
7745	·88902	6	7775	·89070	6	7805	·89237	6
7746	·88908	5	7776	·89076	5	7806	·89243	5
7747	·88913	6	7777	·89081	6	7807	·89248	6
7748	·88919	6	7778	·89087	5	7808	·89254	6
7749	·88925	5	7779	·89092	6	7809	·89260	5
7750	·88930	6	7780	·89098	6	7810	·89265	6
7751	·88936	5	7781	·89104	5	7811	·89271	5
7752	·88941	6	7782	·89109	6	7812	·89276	6
7753	·88947	5	7783	·89115	5	7813	·89282	5
7754	·88953	6	7784	·89120	6	7814	·89287	6
7755	·88958	5	7785	·89126	5	7815	·89293	5
7756	·88964	6	7786	·89131	6	7816	·89298	6
7757	·88969	5	7787	·89137	5	7817	·89304	6
7758	·88975	6	7788	·89143	6	7818	·89310	5
7759	·88981	5	7789	·89148	5	7819	·89315	6
7760	·88986	6	7790	·89154	6	7820	·89321	5
7761	·88992	5	7791	·89159	5	7821	·89326	6
7762	·88997	6	7792	·89165	6	7822	·89332	5
7763	·89003	6	7793	·89170	6	7823	·89337	6
7764	·89009	5	7794	·89176	6	7824	·89343	5
7765	·89014	6	7795	·89182	5	7825	·89348	6
7766	·89020	5	7796	·89187	6	7826	·89354	6
7767	·89025	6	7797	·89193	5	7827	·89360	5
7768	·89031	6	7798	·89198	6	7828	·89365	6
7769	·89037	5	7799	·89204	5	7829	·89371	5
7770	·89042	5	7800	·89209	5	7830	·89376	5

7830	·89376
7920	·89873

7830" = 2° 10' 30"		D.	7860" = 2° 11' 0"		D.	7890" = 2° 11' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7830	·89376	6	7860	·89542	6	7890	·89708	5
7831	·89382	5	7861	·89548	5	7891	·89713	6
7832	·89387	6	7862	·89553	6	7892	·89719	5
7833	·89393	5	7863	·89559	5	7893	·89724	6
7834	·89398	6	7864	·89564	6	7894	·89730	5
7835	·89404	5	7865	·89570	5	7895	·89735	6
7836	·89409	6	7866	·89575	6	7896	·89741	5
7837	·89415	6	7867	·89581	5	7897	·89746	6
7838	·89421	5	7868	·89586	6	7898	·89752	5
7839	·89426	6	7869	·89592	5	7899	·89757	6
7840	·89432	5	7870	·89597	6	7900	·89763	5
7841	·89437	6	7871	·89603	6	7901	·89768	6
7842	·89443	5	7872	·89609	5	7902	·89774	5
7843	·89448	6	7873	·89614	6	7903	·89779	6
7844	·89454	5	7874	·89620	5	7904	·89785	5
7845	·89459	6	7875	·89625	6	7905	·89790	6
7846	·89465	5	7876	·89631	5	7906	·89796	5
7847	·89470	6	7877	·89636	6	7907	·89801	6
7848	·89476	5	7878	·89642	5	7908	·89807	5
7849	·89481	6	7879	·89647	6	7909	·89812	6
7850	·89487	5	7880	·89653	5	7910	·89818	5
7851	·89492	6	7881	·89658	6	7911	·89823	6
7852	·89498	6	7882	·89664	5	7912	·89829	5
7853	·89504	5	7883	·89669	6	7913	·89834	6
7854	·89509	6	7884	·89675	5	7914	·89840	5
7855	·89515	5	7885	·89680	6	7915	·89845	6
7856	·89520	6	7886	·89686	5	7916	·89851	5
7857	·89526	5	7887	·89691	6	7917	·89856	6
7858	·89531	6	7888	·89697	5	7918	·89862	5
7859	·89537	5	7889	·89702	6	7919	·89867	6
7860	·89542	5	7890	·89708	5	7920	·89873	6

7920	·89873
8010	·90363

7920" = 2° 12' 0"		D.	7950" = 2° 12' 30"		D.	7980" = 2° 13' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
7920	·89873		7950	·90037		7980	·90200	6
7921	·89878	5	7951	·90042	5	7981	·90206	5
7922	·89883	6	7952	·90048	6	7982	·90211	6
7923	·89889	5	7953	·90053	5	7983	·90217	5
7924	·89894	6	7954	·90059	6	7984	·90222	5
7925	·89900	5	7955	·90064	5	7985	·90227	6
7926	·89905	6	7956	·90069	6	7986	·90233	5
7927	·89911	5	7957	·90075	5	7987	·90238	6
7928	·89916	6	7958	·90080	6	7988	·90244	5
7929	·89922	5	7959	·90086	5	7989	·90249	6
7930	·89927	6	7960	·90091	6	7990	·90255	5
7931	·89933	5	7961	·90097	5	7991	·90260	6
7932	·89938	6	7962	·90102	6	7992	·90266	5
7933	·89944	5	7963	·90108	5	7993	·90271	5
7934	·89949	6	7964	·90113	6	7994	·90276	6
7935	·89955	5	7965	·90119	5	7995	·90282	5
7936	·89960	6	7966	·90124	6	7996	·90287	6
7937	·89966	5	7967	·90129	5	7997	·90293	5
7938	·89971	6	7968	·90135	6	7998	·90298	6
7939	·89977	5	7969	·90140	5	7999	·90304	5
7940	·89982	6	7970	·90146	6	8000	·90309	5
7941	·89988	5	7971	·90151	5	8001	·90314	6
7942	·89993	6	7972	·90157	6	8002	·90320	5
7943	·89998	5	7973	·90162	5	8003	·90325	6
7944	·90004	6	7974	·90168	6	8004	·90331	5
7945	·90009	5	7975	·90173	5	8005	·90336	6
7946	·90015	6	7976	·90179	6	8006	·90342	5
7947	·90020	5	7977	·90184	5	8007	·90347	5
7948	·90026	6	7978	·90189	6	8008	·90352	6
7949	·90031	5	7979	·90195	5	8009	·90358	5
7950	·90037	6	7980	·90200	6	8010	·90363	5

8010	'90363
8100	'90849

8010" = 2° 13' 30"		D.	8040" = 2° 14' 0"		D.	8070" = 2° 14' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
8010	'90363	6	8040	'90526	5	8070	'90687	6
8011	'90369	5	8041	'90531	5	8071	'90693	5
8012	'90374	6	8042	'90536	6	8072	'90698	5
8013	'90380	5	8043	'90542	5	8073	'90703	6
8014	'90385	5	8044	'90547	6	8074	'90709	5
8015	'90390	6	8045	'90553	5	8075	'90714	6
8016	'90396	5	8046	'90558	5	8076	'90720	5
8017	'90401	6	8047	'90563	6	8077	'90725	5
8018	'90407	5	8048	'90569	5	8078	'90730	6
8019	'90412	5	8049	'90574	6	8079	'90736	5
8020	'90417	6	8050	'90580	5	8080	'90741	6
8021	'90423	5	8051	'90585	5	8081	'90747	5
8022	'90428	6	8052	'90590	6	8082	'90752	5
8023	'90434	5	8053	'90596	5	8083	'90757	6
8024	'90439	6	8054	'90601	6	8084	'90763	5
8025	'90445	5	8055	'90607	5	8085	'90768	5
8026	'90450	5	8056	'90612	5	8086	'90773	6
8027	'90455	6	8057	'90617	6	8087	'90779	5
8028	'90461	5	8058	'90623	5	8088	'90784	5
8029	'90466	6	8059	'90628	6	8089	'90789	6
8030	'90472	5	8060	'90634	5	8090	'90795	5
8031	'90477	5	8061	'90639	5	8091	'90800	6
8032	'90482	6	8062	'90644	6	8092	'90806	5
8033	'90488	5	8063	'90650	5	8093	'90811	5
8034	'90493	6	8064	'90655	5	8094	'90816	6
8035	'90499	5	8065	'90660	6	8095	'90822	5
8036	'90504	5	8066	'90666	5	8096	'90827	5
8037	'90509	6	8067	'90671	6	8097	'90832	6
8038	'90515	5	8068	'90677	5	8098	'90838	5
8039	'90520	6	8069	'90682	5	8099	'90843	6
8040	'90526	6	8070	'90687	5	8100	'90849	6



8100" = 2° 15' 0"		D.	8130" = 2° 15' 30"		D.	8160" = 2° 16' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
8100	'90849	5	8130	'91009	5	8160	'91169	5
8101	'90854		8131	'91014		8161	'91174	
8102	'90859		8132	'91020		8162	'91180	
8103	'90865	5	8133	'91025	5	8163	'91185	5
8104	'90870		8134	'91030		8164	'91190	
8105	'90875		8135	'91036		8165	'91196	
8106	'90881	5	8136	'91041	5	8166	'91201	5
8107	'90886		8137	'91046		8167	'91206	
8108	'90891		8138	'91052		8168	'91212	
8109	'90897	5	8139	'91057	5	8169	'91217	5
8110	'90902		8140	'91062		8170	'91222	
8111	'90907		8141	'91068		8171	'91228	
8112	'90913	5	8142	'91073	5	8172	'91233	5
8113	'90918		8143	'91078		8173	'91238	
8114	'90924		8144	'91084		8174	'91243	
8115	'90929	5	8145	'91089	5	8175	'91249	5
8116	'90934		8146	'91094		8176	'91254	
8117	'90940		8147	'91100		8177	'91259	
8118	'90945	5	8148	'91105	5	8178	'91265	5
8119	'90950		8149	'91110		8179	'91270	
8120	'90956		8150	'91116		8180	'91275	
8121	'90961	5	8151	'91121	5	8181	'91281	5
8122	'90966		8152	'91126		8182	'91286	
8123	'90972		8153	'91132		8183	'91291	
8124	'90977	5	8154	'91137	5	8184	'91297	5
8125	'90982		8155	'91142		8185	'91302	
8126	'90988		8156	'91148		8186	'91307	
8127	'90993	5	8157	'91153	5	8187	'91312	5
8128	'90998		8158	'91158		8188	'91318	
8129	'91004		8159	'91164		8189	'91323	
8130	'91009	5	8160	'91169	5	8190	'91328	5

8190	'91328
8280	'91803

8190" = 2° 16' 30"		D.	8220" = 2° 17' 0"		D.	8250" = 2° 17' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
8190	'91328	6	8220	'91487	5	8250	'91645	6
8191	'91334	5	8221	'91492	6	8251	'91651	5
8192	'91339	5	8222	'91498	5	8252	'91656	5
8193	'91344	6	8223	'91503	6	8253	'91661	5
8194	'91350	5	8224	'91508	5	8254	'91666	5
8195	'91355	5	8225	'91514	6	8255	'91672	5
8196	'91360	5	8226	'91519	5	8256	'91677	5
8197	'91365	6	8227	'91524	5	8257	'91682	5
8198	'91371	5	8228	'91529	6	8258	'91687	6
8199	'91376	5	8229	'91535	5	8259	'91693	5
8200	'91381	6	8230	'91540	5	8260	'91698	5
8201	'91387	5	8231	'91545	6	8261	'91703	6
8202	'91392	5	8232	'91551	5	8262	'91709	5
8203	'91397	6	8233	'91556	5	8263	'91714	5
8204	'91403	5	8234	'91561	5	8264	'91719	5
8205	'91408	5	8235	'91566	6	8265	'91724	6
8206	'91413	5	8236	'91572	5	8266	'91730	5
8207	'91418	6	8237	'91577	5	8267	'91735	5
8208	'91424	5	8238	'91582	5	8268	'91740	5
8209	'91429	5	8239	'91587	6	8269	'91745	6
8210	'91434	6	8240	'91593	5	8270	'91751	5
8211	'91440	5	8241	'91598	5	8271	'91756	5
8212	'91445	5	8242	'91603	6	8272	'91761	5
8213	'91450	5	8243	'91609	5	8273	'91766	6
8214	'91455	6	8244	'91614	5	8274	'91772	5
8215	'91461	5	8245	'91619	5	8275	'91777	5
8216	'91466	5	8246	'91624	6	8276	'91782	5
8217	'91471	6	8247	'91630	5	8277	'91787	6
8218	'91477	5	8248	'91635	5	8278	'91793	5
8219	'91482	5	8249	'91640	5	8279	'91798	5
8220	'91487	5	8250	'91645	5	8280	'91803	5

8280" = 2°18'0"		D.	8310" = 2°18'30"		D.	8340" = 2°19'0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
8280	'91803	5	8310	'91960	5	8340	'92117	5
8281	'91808		8311	'91965		8341	'92122	
8282	'91814	6	8312	'91971	6	8342	'92127	5
		5			5			5
8283	'91819	5	8313	'91976	5	8343	'92132	5
8284	'91824	5	8314	'91981	5	8344	'92137	5
8285	'91829	5	8315	'91986	5	8345	'92143	6
		5			5			5
8286	'91834	6	8316	'91991	6	8346	'92148	5
8287	'91840	5	8317	'91997	5	8347	'92153	5
8288	'91845	5	8318	'92002	5	8348	'92158	5
		5			5			6
8289	'91850	5	8319	'92007	5	8349	'92163	5
8290	'91855	5	8320	'92012	6	8350	'92169	5
8291	'91861	6	8321	'92018	5	8351	'92174	5
		5			5			5
8292	'91866	5	8322	'92023	5	8352	'92179	5
8293	'91871	5	8323	'92028	5	8353	'92184	5
8294	'91876	5	8324	'92033	5	8354	'92189	6
		6			5			5
8295	'91882	5	8325	'92038	6	8355	'92195	5
8296	'91887	5	8326	'92044	5	8356	'92200	5
8297	'91892	5	8327	'92049	5	8357	'92205	5
		5			5			5
8298	'91897	6	8328	'92054	5	8358	'92210	5
8299	'91903	5	8329	'92059	6	8359	'92215	6
8300	'91908	5	8330	'92065	5	8360	'92221	5
		5			5			5
8301	'91913	5	8331	'92070	5	8361	'92226	5
8302	'91918	6	8332	'92075	5	8362	'92231	5
8303	'91924	5	8333	'92080	5	8363	'92236	5
		5			5			5
8304	'91929	5	8334	'92085	6	8364	'92241	6
8305	'91934	5	8335	'92091	5	8365	'92247	5
8306	'91939	5	8336	'92096	5	8366	'92252	5
		5			5			5
8307	'91944	6	8337	'92101	5	8367	'92257	5
8308	'91950	5	8338	'92106	5	8368	'92262	5
8309	'91955	5	8339	'92111	6	8369	'92267	6
8310	'91960	5	8340	'92117	5	8370	'92273	6

8370	'92273
8460	'92737

8370" = 2° 19' 30"		D.	8400" = 2° 20' 0"		D.	8430" = 2° 20' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
8370	'92273		8400	'92428		8430	'92583	
8371	'92278	5	8401	'92433	5	8431	'92588	5
8372	'92283	5	8402	'92438	5	8432	'92593	5
		5			5			5
8373	'92288	5	8403	'92443	6	8433	'92598	5
8374	'92293	5	8404	'92449	5	8434	'92603	5
8375	'92298	5	8405	'92454	5	8435	'92609	6
		6			5			5
8376	'92304	5	8406	'92459	5	8436	'92614	5
8377	'92309	5	8407	'92464	5	8437	'92619	5
8378	'92314	5	8408	'92469	5	8438	'92624	5
		5			5			5
8379	'92319	5	8409	'92474	6	8439	'92629	5
8380	'92324	6	8410	'92480	5	8440	'92634	5
8381	'92330	5	8411	'92485	5	8441	'92639	6
		5			5			5
8382	'92335	5	8412	'92490	5	8442	'92645	5
8383	'92340	5	8413	'92495	5	8443	'92650	5
8384	'92345	5	8414	'92500	5	8444	'92655	5
		5			5			5
8385	'92350	5	8415	'92505	6	8445	'92660	5
8386	'92355	6	8416	'92511	5	8446	'92665	5
8387	'92361	5	8417	'92516	5	8447	'92670	5
		5			5			5
8388	'92366	5	8418	'92521	5	8448	'92675	6
8389	'92371	5	8419	'92526	5	8449	'92681	5
8390	'92376	5	8420	'92531	5	8450	'92686	5
		5			5			5
8391	'92381	6	8421	'92536	6	8451	'92691	5
8392	'92387	5	8422	'92542	5	8452	'92696	5
8393	'92392	5	8423	'92547	5	8453	'92701	5
		5			5			5
8394	'92397	5	8424	'92552	5	8454	'92706	5
8395	'92402	5	8425	'92557	5	8455	'92711	5
8396	'92407	5	8426	'92562	5	8456	'92716	6
		5			5			5
8397	'92412	6	8427	'92567	5	8457	'92722	5
8398	'92418	5	8428	'92572	6	8458	'92727	5
8399	'92423	5	8429	'92578	5	8459	'92732	5
8400	'92428	5	8430	'92583	5	8460	'92737	5

8460	'92737
8550	'93197

8460" = 2° 21' 0"		D.	8490" = 2° 21' 30"		D.	8520" = 2° 22' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
8460	'92737		8490	'92891		8520	'93044	
8461	'92742	5	8491	'92896	5	8521	'93049	5
8462	'92747	5	8492	'92901	5	8522	'93054	5
		5			5			5
8463	'92752	6	8493	'92906	5	8523	'93059	5
8464	'92758	5	8494	'92911	5	8524	'93064	5
8465	'92763	5	8495	'92916	5	8525	'93069	5
		5			5			6
8466	'92768	5	8496	'92921	6	8526	'93075	5
8467	'92773	5	8497	'92927	5	8527	'93080	5
8468	'92778	5	8498	'92932	5	8528	'93085	5
		5			5			5
8469	'92783	5	8499	'92937	5	8529	'93090	5
8470	'92788	5	8500	'92942	5	8530	'93095	5
8471	'92793	5	8501	'92947	5	8531	'93100	5
		6			5			5
8472	'92799	5	8502	'92952	5	8532	'93105	5
8473	'92804	5	8503	'92957	5	8533	'93110	5
8474	'92809	5	8504	'92962	5	8534	'93115	5
		5			5			5
8475	'92814	5	8505	'92967	6	8535	'93120	5
8476	'92819	5	8506	'92973	5	8536	'93125	5
8477	'92824	5	8507	'92978	5	8537	'93131	6
		5			5			5
8478	'92829	5	8508	'92983	5	8538	'93136	5
8479	'92834	6	8509	'92988	5	8539	'93141	5
8480	'92840	5	8510	'92993	5	8540	'93146	5
		5			5			5
8481	'92845	5	8511	'92998	5	8541	'93151	5
8482	'92850	5	8512	'93003	5	8542	'93156	5
8483	'92855	5	8513	'93008	5	8543	'93161	5
		5			5			5
8484	'92860	5	8514	'93013	5	8544	'93166	5
8485	'92865	5	8515	'93018	6	8545	'93171	5
8486	'92870	5	8516	'93024	5	8546	'93176	5
		5			5			5
8487	'92875	6	8517	'93029	5	8547	'93181	5
8488	'92881	5	8518	'93034	5	8548	'93186	6
8489	'92886	5	8519	'93039	5	8549	'93192	5
8490	'92891	5	8520	'93044	5	8550	'93197	5

8550	'93197
8640	'93651

8550" = 2° 22' 30"		D.	8580" = 2° 23' 0"		D.	8610" = 2° 23' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
8550	'93197		8580	'93349		8610	'93500	
8551	'93202	5	8581	'93354	5	8611	'93505	5
8552	'93207	5	8582	'93359	5	8612	'93510	5
		5			5			5
8553	'93212	5	8583	'93364	5	8613	'93515	5
8554	'93217	5	8584	'93369	5	8614	'93520	5
8555	'93222	5	8585	'93374	5	8615	'93526	6
		5			5			5
8556	'93227	5	8586	'93379	5	8616	'93531	5
8557	'93232	5	8587	'93384	5	8617	'93536	5
8558	'93237	5	8588	'93389	5	8618	'93541	5
		5			5			5
8559	'93242	5	8589	'93394	5	8619	'93546	5
8560	'93247	5	8590	'93399	5	8620	'93551	5
8561	'93252	5	8591	'93404	5	8621	'93556	5
		6			5			5
8562	'93258	5	8592	'93409	5	8622	'93561	5
8563	'93263	5	8593	'93414	5	8623	'93566	5
8564	'93268	5	8594	'93420	6	8624	'93571	5
		5			5			5
8565	'93273	5	8595	'93425	5	8625	'93576	5
8566	'93278	5	8596	'93430	5	8626	'93581	5
8567	'93283	5	8597	'93435	5	8627	'93586	5
		5			5			5
8568	'93288	5	8598	'93440	5	8628	'93591	5
8569	'93293	5	8599	'93445	5	8629	'93596	5
8570	'93298	5	8600	'93450	5	8630	'93601	5
		5			5			5
8571	'93303	5	8601	'93455	5	8631	'93606	5
8572	'93308	5	8602	'93460	5	8632	'93611	5
8573	'93313	5	8603	'93465	5	8633	'93616	5
		5			5			5
8574	'93318	5	8604	'93470	5	8634	'93621	5
8575	'93323	5	8605	'93475	5	8635	'93626	5
8576	'93328	5	8606	'93480	5	8636	'93631	5
		6			5			5
8577	'93334	5	8607	'93485	5	8637	'93636	5
8578	'93339	5	8608	'93490	5	8638	'93641	5
8579	'93344	5	8609	'93495	5	8639	'93646	5
8580	'93349	5	8610	'93500	5	8640	'93651	5

8640	'93651
8730	'94101

8640" = 2° 24' 0"		D.	8670" = 2° 24' 30"		D.	8700" = 2° 25' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
8640	'93651	5	8670	'93802	5	8700	'93952	5
8641	'93656	5	8671	'93807	5	8701	'93957	5
8642	'93661	5	8672	'93812	5	8702	'93962	5
8643	'93666	5	8673	'93817	5	8703	'93967	5
8644	'93671	5	8674	'93822	5	8704	'93972	5
8645	'93676	6	8675	'93827	5	8705	'93977	5
8646	'93682	5	8676	'93832	5	8706	'93982	5
8647	'93687	5	8677	'93837	5	8707	'93987	5
8648	'93692	5	8678	'93842	5	8708	'93992	5
8649	'93697	5	8679	'93847	5	8709	'93997	5
8650	'93702	5	8680	'93852	5	8710	'94002	5
8651	'93707	5	8681	'93857	5	8711	'94007	5
8652	'93712	5	8682	'93862	5	8712	'94012	5
8653	'93717	5	8683	'93867	5	8713	'94017	5
8654	'93722	5	8684	'93872	5	8714	'94022	5
8655	'93727	5	8685	'93877	5	8715	'94027	5
8656	'93732	5	8686	'93882	5	8716	'94032	5
8657	'93737	5	8687	'93887	5	8717	'94037	5
8658	'93742	5	8688	'93892	5	8718	'94042	5
8659	'93747	5	8689	'93897	5	8719	'94047	5
8660	'93752	5	8690	'93902	5	8720	'94052	5
8661	'93757	5	8691	'93907	5	8721	'94057	5
8662	'93762	5	8692	'93912	5	8722	'94062	5
8663	'93767	5	8693	'93917	5	8723	'94067	5
8664	'93772	5	8694	'93922	5	8724	'94072	5
8665	'93777	5	8695	'93927	5	8725	'94077	5
8666	'93782	5	8696	'93932	5	8726	'94082	5
8667	'93787	5	8697	'93937	5	8727	'94086	4
8668	'93792	5	8698	'93942	5	8728	'94091	5
8669	'93797	5	8699	'93947	5	8729	'94096	5
8670	'93802	5	8700	'93952	5	8730	'94101	5

8730	94101
8820	94547

8730° = 2° 25' 30"		D	8760° = 2° 26' 0"		D	8790° = 2° 26' 30"		D
Num.	Log.		Num.	Log.		Num.	Log.	
8730	94101		8760	94250		8790	94399	
8731	94106	5	8761	94255	5	8791	94404	5
8732	94111	5	8762	94260	5	8792	94409	5
		5			5			5
8733	94116	5	8763	94265	5	8793	94414	5
8734	94121	5	8764	94270	5	8794	94419	5
8735	94126	5	8765	94275	5	8795	94424	5
		5			5			5
8736	94131	5	8766	94280	5	8796	94429	4
8737	94136	5	8767	94285	5	8797	94433	5
8738	94141	5	8768	94290	5	8798	94438	5
		5			5			5
8739	94146	5	8769	94295	5	8799	94443	5
8740	94151	5	8770	94300	5	8800	94448	5
8741	94156	5	8771	94305	5	8801	94453	5
		5			5			5
8742	94161	5	8772	94310	5	8802	94458	5
8743	94166	5	8773	94315	5	8803	94463	5
8744	94171	5	8774	94320	5	8804	94468	5
		5			5			5
8745	94176	5	8775	94325	5	8805	94473	5
8746	94181	5	8776	94330	5	8806	94478	5
8747	94186	5	8777	94335	5	8807	94483	5
		5			5			5
8748	94191	5	8778	94340	5	8808	94488	5
8749	94196	5	8779	94345	5	8809	94493	5
8750	94201	5	8780	94349	4	8810	94498	5
		5			5			5
8751	94206	5	8781	94354	5	8811	94503	5
8752	94211	5	8782	94359	5	8812	94507	4
8753	94216	5	8783	94364	5	8813	94512	5
		5			5			5
8754	94221	5	8784	94369	5	8814	94517	5
8755	94226	5	8785	94374	5	8815	94522	5
8756	94231	5	8786	94379	5	8816	94527	5
		5			5			5
8757	94236	4	8787	94384	5	8817	94532	5
8758	94240	5	8788	94389	5	8818	94537	5
8759	94245	5	8789	94394	5	8819	94542	5
8760	94250	5	8790	94399	5	8820	94547	5



8820	'94547
8910	'94988

8820' = 2° 27' 0"			8850' = 2° 27' 30"			8880' = 2° 28' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
8820	'94547		8850	'94694		8880	'94841	
8821	'94552	5	8851	'94699	5	8881	'94846	5
8822	'94557	5	8852	'94704	5	8882	'94851	5
		5			5			5
8823	'94562	5	8853	'94709	5	8883	'94856	5
8824	'94567	5	8854	'94714	5	8884	'94861	5
8825	'94571	4	8855	'94719	5	8885	'94866	5
		5			5			5
8826	'94576	5	8856	'94724	5	8886	'94871	5
8827	'94581	5	8857	'94729	5	8887	'94876	5
8828	'94586	5	8858	'94734	5	8888	'94880	4
		5			4			5
8829	'94591	5	8859	'94738	5	8889	'94885	5
8830	'94596	5	8860	'94743	5	8890	'94890	5
8831	'94601	5	8861	'94748	5	8891	'94895	5
		5			5			5
8832	'94606	5	8862	'94753	5	8892	'94900	5
8833	'94611	5	8863	'94758	5	8893	'94905	5
8834	'94616	5	8864	'94763	5	8894	'94910	5
		5			5			5
8835	'94621	5	8865	'94768	5	8895	'94915	4
8836	'94626	5	8866	'94773	5	8896	'94919	5
8837	'94630	4	8867	'94778	5	8897	'94924	5
		5			5			5
8838	'94635	5	8868	'94783	5	8898	'94929	5
8839	'94640	5	8869	'94787	4	8899	'94934	5
8840	'94645	5	8870	'94792	5	8900	'94939	5
		5			5			5
8841	'94650	5	8871	'94797	5	8901	'94944	5
8842	'94655	5	8872	'94802	5	8902	'94949	5
8843	'94660	5	8873	'94807	5	8903	'94954	5
		5			5			5
8844	'94665	5	8874	'94812	5	8904	'94959	4
8845	'94670	5	8875	'94817	5	8905	'94963	5
8846	'94675	5	8876	'94822	5	8906	'94968	5
		5			5			5
8847	'94680	5	8877	'94827	5	8907	'94973	5
8848	'94685	5	8878	'94832	5	8908	'94978	5
8849	'94689	4	8879	'94836	4	8909	'94983	5
8850	'94694	5	8880	'94841	5	8910	'94988	5

8910	'94988
9000	'95424

8910" = 2° 28' 30"			8940" = 2° 29' 0"			8970" = 2° 29' 30"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
8910	'94988	5	8940	'95134	5	8970	'95279	5
8911	'94993	5	8941	'95139	4	8971	'95284	5
8912	'94998	4	8942	'95143	5	8972	'95289	5
8913	'95002	5	8943	'95148	5	8973	'95294	5
8914	'95007	5	8944	'95153	5	8974	'95299	4
8915	'95012	5	8945	'95158	5	8975	'95303	5
8916	'95017	5	8946	'95163	5	8976	'95308	5
8917	'95022	5	8947	'95168	5	8977	'95313	5
8918	'95027	5	8948	'95173	4	8978	'95318	5
8919	'95032	4	8949	'95177	5	8979	'95323	5
8920	'95036	5	8950	'95182	5	8980	'95328	4
8921	'95041	5	8951	'95187	5	8981	'95332	5
8922	'95046	5	8952	'95192	5	8982	'95337	5
8923	'95051	5	8953	'95197	5	8983	'95342	5
8924	'95056	5	8954	'95202	5	8984	'95347	5
8925	'95061	5	8955	'95207	5	8985	'95352	5
8926	'95066	5	8956	'95211	4	8986	'95357	5
8927	'95071	5	8957	'95216	5	8987	'95361	4
8928	'95075	4	8958	'95221	5	8988	'95366	5
8929	'95080	5	8959	'95226	5	8989	'95371	5
8930	'95085	5	8960	'95231	5	8990	'95376	5
8931	'95090	5	8961	'95236	5	8991	'95381	5
8932	'95095	5	8962	'95240	4	8992	'95386	5
8933	'95100	5	8963	'95245	5	8993	'95390	4
8934	'95105	5	8964	'95250	5	8994	'95395	5
8935	'95109	4	8965	'95255	5	8995	'95400	5
8936	'95114	5	8966	'95260	5	8996	'95405	5
8937	'95119	5	8967	'95265	5	8997	'95410	5
8938	'95124	5	8968	'95270	5	8998	'95415	5
8939	'95129	5	8969	'95274	4	8999	'95419	4
8940	'95134	5	8970	'95279	5	9000	'95424	5

9000	'95424
9090	'95856

9000" = 2° 30' 0"		D.	9030" = 2° 30' 30"		D.	9060" = 2° 31' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
9000	'95424	5	9030	'95569	5	9060	'95713	5
9001	'95429	5	9031	'95574	4	9061	'95718	4
9002	'95434	5	9032	'95578	5	9062	'95722	5
9003	'95439	5	9033	'95583	5	9063	'95727	5
9004	'95444	4	9034	'95588	5	9064	'95732	5
9005	'95448	5	9035	'95593	5	9065	'95737	5
9006	'95453	5	9036	'95598	4	9066	'95742	4
9007	'95458	5	9037	'95602	5	9067	'95746	5
9008	'95463	5	9038	'95607	5	9068	'95751	5
9009	'95468	4	9039	'95612	5	9069	'95756	5
9010	'95472	5	9040	'95617	5	9070	'95761	5
9011	'95477	5	9041	'95622	4	9071	'95766	4
9012	'95482	5	9042	'95626	5	9072	'95770	5
9013	'95487	5	9043	'95631	5	9073	'95775	5
9014	'95492	5	9044	'95636	5	9074	'95780	5
9015	'95497	4	9045	'95641	5	9075	'95785	4
9016	'95501	5	9046	'95646	4	9076	'95789	5
9017	'95506	5	9047	'95650	5	9077	'95794	5
9018	'95511	5	9048	'95655	5	9078	'95799	5
9019	'95516	5	9049	'95660	5	9079	'95804	5
9020	'95521	4	9050	'95665	5	9080	'95809	4
9021	'95525	5	9051	'95670	4	9081	'95813	5
9022	'95530	5	9052	'95674	5	9082	'95818	5
9023	'95535	5	9053	'95679	5	9083	'95823	5
9024	'95540	5	9054	'95684	5	9084	'95828	4
9025	'95545	5	9055	'95689	5	9085	'95832	5
9026	'95550	4	9056	'95694	4	9086	'95837	5
9027	'95554	5	9057	'95698	5	9087	'95842	5
9028	'95559	5	9058	'95703	5	9088	'95847	5
9029	'95564	5	9059	'95708	5	9089	'95852	5
9030	'95569	5	9060	'95713	5	9090	'95856	4

9090	'95856
9090	'96284

9090" = 2° 31' 30"		D.	9120" = 2° 32' 0"		D.	9150" = 2° 32' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
9090	'95856	5	9120	'95999	5	9150	'96142	5
9091	'95861	5	9121	'96004	5	9151	'96147	5
9092	'95866	5	9122	'96009	5	9152	'96152	5
9093	'95871	4	9123	'96014	5	9153	'96156	4
9094	'95875	5	9124	'96019	5	9154	'96161	5
9095	'95880	5	9125	'96023	4	9155	'96166	5
9096	'95885	5	9126	'96028	5	9156	'96171	5
9097	'95890	5	9127	'96033	5	9157	'96175	4
9098	'95895	5	9128	'96038	5	9158	'96180	5
9099	'95899	4	9129	'96042	4	9159	'96185	5
9100	'95904	5	9130	'96047	5	9160	'96190	5
9101	'95909	5	9131	'96052	5	9161	'96194	4
9102	'95914	5	9132	'96057	5	9162	'96199	5
9103	'95918	4	9133	'96061	4	9163	'96204	5
9104	'95923	5	9134	'96066	5	9164	'96209	5
9105	'95928	5	9135	'96071	5	9165	'96213	4
9106	'95933	5	9136	'96076	5	9166	'96218	5
9107	'95938	5	9137	'96080	4	9167	'96223	5
9108	'95942	4	9138	'96085	5	9168	'96227	4
9109	'95947	5	9139	'96090	5	9169	'96232	5
9110	'95952	5	9140	'96095	5	9170	'96237	5
9111	'95957	5	9141	'96099	4	9171	'96242	5
9112	'95961	4	9142	'96104	5	9172	'96246	4
9113	'95966	5	9143	'96109	5	9173	'96251	5
9114	'95971	5	9144	'96114	5	9174	'96256	5
9115	'95976	5	9145	'96118	4	9175	'96261	5
9116	'95980	4	9146	'96123	5	9176	'96265	4
9117	'95985	5	9147	'96128	5	9177	'96270	5
9118	'95990	5	9148	'96133	5	9178	'96275	5
9119	'95995	5	9149	'96137	4	9179	'96280	5
9120	'95999	4	9150	'96142	5	9180	'96284	4

9180	96224
9270	96708

9180" = 2° 33' 0"		D.	9210" = 2° 33' 30"		D.	9240" = 2° 34' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
9180	96224	5	9210	96426	5	9240	96567	5
9181	96229	5	9211	96431	5	9241	96572	5
9182	96294	4	9212	96435	4	9242	96577	5
9183	96298	5	9213	96440	5	9243	96581	4
9184	96303	5	9214	96445	5	9244	96586	5
9185	96308	5	9215	96450	4	9245	96591	4
9186	96313	4	9216	96454	5	9246	96595	5
9187	96317	5	9217	96459	5	9247	96600	5
9188	96322	5	9218	96464	4	9248	96605	4
9189	96327	5	9219	96468	5	9249	96609	5
9190	96332	4	9220	96473	5	9250	96614	5
9191	96336	5	9221	96478	5	9251	96619	5
9192	96341	5	9222	96483	5	9252	96624	4
9193	96346	4	9223	96487	4	9253	96628	5
9194	96350	5	9224	96492	5	9254	96633	5
9195	96355	5	9225	96497	4	9255	96638	4
9196	96360	5	9226	96501	5	9256	96642	5
9197	96365	4	9227	96506	5	9257	96647	5
9198	96369	5	9228	96511	4	9258	96652	4
9199	96374	5	9229	96515	5	9259	96656	5
9200	96379	5	9230	96520	5	9260	96661	5
9201	96384	4	9231	96525	5	9261	96666	4
9202	96388	5	9232	96530	4	9262	96670	5
9203	96393	5	9233	96534	5	9263	96675	5
9204	96398	4	9234	96539	5	9264	96680	5
9205	96402	5	9235	96544	4	9265	96685	4
9206	96407	5	9236	96548	5	9266	96689	5
9207	96412	5	9237	96553	5	9267	96694	5
9208	96417	4	9238	96558	4	9268	96699	4
9209	96421	5	9239	96562	5	9269	96703	5
9210	96426	5	9240	96567	5	9270	96708	5

9270	'96708
9360	'97128

9270' - 2° 34' 30"		D.	9300' - 2° 35' 0"		D.	9330' - 2° 35' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
9270	'96708	5	9300	'96848	5	9330	'96988	5
9271	'96713	4	9301	'96853	5	9331	'96993	4
9272	'96717	5	9302	'96858	4	9332	'96997	5
9273	'96722	5	9303	'96862	5	9333	'97002	5
9274	'96727	4	9304	'96867	5	9334	'97007	4
9275	'96731	5	9305	'96872	4	9335	'97011	5
9276	'96736	5	9306	'96876	5	9336	'97016	5
9277	'96741	4	9307	'96881	5	9337	'97021	4
9278	'96745	5	9308	'96886	4	9338	'97025	5
9279	'96750	5	9309	'96890	5	9339	'97030	5
9280	'96755	4	9310	'96895	5	9340	'97035	4
9281	'96759	5	9311	'96900	4	9341	'97039	5
9282	'96764	5	9312	'96904	5	9342	'97044	5
9283	'96769	5	9313	'96909	5	9343	'97049	4
9284	'96774	4	9314	'96914	4	9344	'97053	5
9285	'96778	5	9315	'96918	5	9345	'97058	5
9286	'96783	5	9316	'96923	5	9346	'97063	4
9287	'96788	4	9317	'96928	4	9347	'97067	5
9288	'96792	5	9318	'96932	5	9348	'97072	5
9289	'96797	5	9319	'96937	5	9349	'97077	4
9290	'96802	4	9320	'96942	4	9350	'97081	5
9291	'96806	5	9321	'96946	5	9351	'97086	4
9292	'96811	5	9322	'96951	5	9352	'97090	5
9293	'96816	4	9323	'96956	4	9353	'97095	5
9294	'96820	5	9324	'96960	5	9354	'97100	4
9295	'96825	5	9325	'96965	5	9355	'97104	5
9296	'96830	4	9326	'96970	4	9356	'97109	5
9297	'96834	5	9327	'96974	5	9357	'97114	4
9298	'96839	5	9328	'96979	5	9358	'97118	5
9299	'96844	4	9329	'96984	5	9359	'97123	5
9300	'96848	4	9330	'96988	4	9360	'97128	5

9360" = 2°36'0"		D.	9390" = 2°36'30"		D.	9420" = 2°37'0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
9360	'97128	4	9390	'97267	4	9420	'97405	5
9361	'97132	5	9391	'97271	5	9421	'97410	4
9362	'97137	5	9392	'97276	4	9422	'97414	5
9363	'97142	4	9393	'97280	5	9423	'97419	5
9364	'97146	5	9394	'97285	5	9424	'97424	4
9365	'97151	4	9395	'97290	4	9425	'97428	5
9366	'97155	5	9396	'97294	5	9426	'97433	4
9367	'97160	5	9397	'97299	5	9427	'97437	5
9368	'97165	4	9398	'97304	4	9428	'97442	4
9369	'97169	5	9399	'97308	5	9429	'97447	5
9370	'97174	5	9400	'97313	4	9430	'97451	4
9371	'97179	4	9401	'97317	5	9431	'97456	5
9372	'97183	5	9402	'97322	4	9432	'97460	4
9373	'97188	4	9403	'97327	5	9433	'97465	5
9374	'97192	5	9404	'97331	4	9434	'97470	4
9375	'97197	5	9405	'97336	5	9435	'97474	5
9376	'97202	4	9406	'97340	4	9436	'97479	4
9377	'97206	5	9407	'97345	5	9437	'97483	5
9378	'97211	5	9408	'97350	4	9438	'97488	5
9379	'97216	4	9409	'97354	5	9439	'97493	4
9380	'97220	5	9410	'97359	5	9440	'97497	5
9381	'97225	5	9411	'97364	4	9441	'97502	4
9382	'97230	4	9412	'97368	5	9442	'97506	5
9383	'97234	5	9413	'97373	4	9443	'97511	5
9384	'97239	4	9414	'97377	5	9444	'97516	4
9385	'97243	5	9415	'97382	5	9445	'97520	5
9386	'97248	5	9416	'97387	4	9446	'97525	4
9387	'97253	4	9417	'97391	5	9447	'97529	5
9388	'97257	5	9418	'97396	4	9448	'97534	5
9389	'97262	5	9419	'97400	5	9449	'97539	4
9390	'97267	5	9420	'97405	5	9450	'97543	4

9450	'97543
9450	'97955

9450" = 2° 37' 30"		D.	9480" = 2° 38' 0"		D.	9510" = 2° 38' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
9450	'97543	5	9480	'97681	4	9510	'97818	5
9451	'97548	4	9481	'97685	5	9511	'97823	4
9452	'97552	5	9482	'97690	5	9512	'97827	5
9453	'97557	5	9483	'97695	4	9513	'97832	4
9454	'97562	4	9484	'97699	5	9514	'97836	5
9455	'97566	5	9485	'97704	4	9515	'97841	4
9456	'97571	4	9486	'97708	5	9516	'97845	5
9457	'97575	5	9487	'97713	4	9517	'97850	5
9458	'97580	5	9488	'97717	5	9518	'97855	4
9459	'97585	4	9489	'97722	5	9519	'97859	5
9460	'97589	5	9490	'97727	4	9520	'97864	4
9461	'97594	4	9491	'97731	5	9521	'97868	5
9462	'97598	5	9492	'97736	4	9522	'97873	4
9463	'97603	4	9493	'97740	5	9523	'97877	5
9464	'97607	5	9494	'97745	4	9524	'97882	4
9465	'97612	5	9495	'97749	5	9525	'97886	5
9466	'97617	4	9496	'97754	5	9526	'97891	4
9467	'97621	5	9497	'97759	4	9527	'97896	5
9468	'97626	4	9498	'97763	5	9528	'97900	4
9469	'97630	5	9499	'97768	4	9529	'97905	5
9470	'97635	5	9500	'97772	5	9530	'97909	4
9471	'97640	4	9501	'97777	5	9531	'97914	5
9472	'97644	5	9502	'97782	4	9532	'97918	4
9473	'97649	4	9503	'97786	5	9533	'97923	5
9474	'97653	5	9504	'97791	4	9534	'97928	4
9475	'97658	5	9505	'97795	5	9535	'97932	5
9476	'97663	4	9506	'97800	4	9536	'97937	4
9477	'97667	5	9507	'97804	5	9537	'97941	5
9478	'97672	4	9508	'97809	4	9538	'97946	4
9479	'97676	5	9509	'97813	5	9539	'97950	5
9480	'97681	5	9510	'97818	4	9540	'97955	5



9540" = 2° 39' 0"			9570" = 2° 39' 30"			9600" = 2° 40' 0"		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
9540	97955		9570	98091		9600	98227	
9541	97959	4	9571	98096	5	9601	98232	5
9542	97964	5	9572	98100	4	9602	98236	4
		4			5			5
9543	97968	5	9573	98105	4	9603	98241	4
9544	97973	5	9574	98109	5	9604	98245	5
9545	97978	4	9575	98114	4	9605	98250	4
		5			5			5
9546	97982	4	9576	98118	4	9606	98254	4
9547	97987	5	9577	98123	5	9607	98259	5
9548	97991	4	9578	98127	4	9608	98263	4
		5			5			5
9549	97996	4	9579	98132	5	9609	98268	4
9550	98000	5	9580	98137	4	9610	98272	5
9551	98005	4	9581	98141	5	9611	98277	4
		5			4			5
9552	98009	5	9582	98146	4	9612	98281	5
9553	98014	5	9583	98150	5	9613	98286	4
9554	98019	4	9584	98155	4	9614	98290	5
		5			5			4
9555	98023	4	9585	98159	4	9615	98295	4
9556	98028	5	9586	98164	5	9616	98299	5
9557	98032	4	9587	98168	4	9617	98304	4
		5			5			5
9558	98037	4	9588	98173	4	9618	98308	4
9559	98041	5	9589	98177	5	9619	98313	5
9560	98046	4	9590	98182	4	9620	98318	4
		5			5			5
9561	98050	4	9591	98186	4	9621	98322	4
9562	98055	5	9592	98191	5	9622	98327	5
9563	98059	4	9593	98195	4	9623	98331	4
		5			5			5
9564	98064	4	9594	98200	4	9624	98336	4
9565	98068	5	9595	98204	5	9625	98340	5
9566	98073	4	9596	98209	4	9626	98345	4
		5			5			5
9567	98078	4	9597	98214	4	9627	98349	4
9568	98082	5	9598	98218	5	9628	98354	5
9569	98087	4	9599	98223	4	9629	98358	4
9570	98091	5	9600	98227	5	9630	98363	5

9630	'98363
9720	'98767

9630" = 2° 40' 30"		D.	9660" = 2° 41' 0"		D.	9690" = 2° 41' 30"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
9630	'98363	4	9660	'98498	4	9690	'98632	5
9631	'98367	5	9661	'98502	5	9691	'98637	4
9632	'98372	4	9662	'98507	5	9692	'98641	5
9633	'98376	5	9663	'98511	4	9693	'98646	4
9634	'98381	4	9664	'98516	5	9694	'98650	5
9635	'98385	5	9665	'98520	4	9695	'98655	4
9636	'98390	4	9666	'98525	5	9696	'98659	5
9637	'98394	5	9667	'98529	4	9697	'98664	4
9638	'98399	4	9668	'98534	5	9698	'98668	5
9639	'98403	5	9669	'98538	4	9699	'98673	4
9640	'98408	4	9670	'98543	5	9700	'98677	5
9641	'98412	5	9671	'98547	4	9701	'98682	4
9642	'98417	4	9672	'98552	4	9702	'98686	5
9643	'98421	5	9673	'98556	5	9703	'98691	4
9644	'98426	4	9674	'98561	4	9704	'98695	5
9645	'98430	5	9675	'98565	5	9705	'98700	4
9646	'98435	4	9676	'98570	4	9706	'98704	5
9647	'98439	5	9677	'98574	5	9707	'98709	4
9648	'98444	4	9678	'98579	4	9708	'98713	4
9649	'98448	5	9679	'98583	5	9709	'98717	5
9650	'98453	4	9680	'98588	4	9710	'98722	4
9651	'98457	5	9681	'98592	5	9711	'98726	5
9652	'98462	4	9682	'98597	4	9712	'98731	4
9653	'98466	5	9683	'98601	4	9713	'98735	5
9654	'98471	4	9684	'98605	5	9714	'98740	4
9655	'98475	5	9685	'98610	4	9715	'98744	5
9656	'98480	4	9686	'98614	5	9716	'98749	4
9657	'98484	5	9687	'98619	4	9717	'98753	5
9658	'98489	4	9688	'98623	5	9718	'98758	4
9659	'98493	5	9689	'98628	4	9719	'98762	5
9660	'98498	4	9690	'98632	4	9720	'98767	5

9720	·98767
9810	·99167

9720" = 2° 42' 0"		D.	9750" = 2° 42' 30"		D.	9780" = 2° 43' 0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
9720	·98767	4	9750	·98900	5	9780	·99034	4
9721	·98771		9751	·98905		9781	·99038	
9722	·98776	5	9752	·98909	5	9782	·99043	5
9723	·98780	4	9753	·98914	4	9783	·99047	4
9724	·98784	4	9754	·98918	4	9784	·99052	4
9725	·98789	5	9755	·98923	5	9785	·99056	5
9726	·98793	4	9756	·98927	4	9786	·99061	4
9727	·98798	5	9757	·98932	5	9787	·99065	5
9728	·98802	4	9758	·98936	4	9788	·99069	4
9729	·98807	5	9759	·98941	5	9789	·99074	5
9730	·98811	4	9760	·98945	4	9790	·99078	4
9731	·98816	5	9761	·98949	5	9791	·99083	5
9732	·98820	4	9762	·98954	4	9792	·99087	4
9733	·98825	5	9763	·98958	5	9793	·99092	5
9734	·98829	4	9764	·98963	4	9794	·99096	4
9735	·98834	5	9765	·98967	5	9795	·99100	5
9736	·98838	4	9766	·98972	4	9796	·99105	4
9737	·98843	5	9767	·98976	5	9797	·99109	5
9738	·98847	4	9768	·98981	4	9798	·99114	4
9739	·98851	5	9769	·98985	5	9799	·99118	5
9740	·98856	4	9770	·98989	4	9800	·99123	4
9741	·98860	5	9771	·98994	5	9801	·99127	5
9742	·98865	4	9772	·98998	4	9802	·99131	4
9743	·98869	5	9773	·99003	5	9803	·99136	5
9744	·98874	4	9774	·99007	4	9804	·99140	4
9745	·98878	5	9775	·99012	5	9805	·99145	5
9746	·98883	4	9776	·99016	4	9806	·99149	4
9747	·98887	5	9777	·99021	5	9807	·99154	5
9748	·98892	4	9778	·99025	4	9808	·99158	4
9749	·98896	5	9779	·99029	5	9809	·99162	5
9750	·98900	4	9780	·99034	4	9810	·99167	4

9810	'99167
9900	'99564

9810" = 2° 43' 30"			9840" = 2° 44' 0"			9870" = 2° 44' 30"		
Nam.	Log.	D.	Nam.	Log.	D.	Nam.	Log.	D.
9810	'99167		9840	'99300		9870	'99432	
9811	'99171	4	9841	'99304	4	9871	'99436	4
9812	'99176	5	9842	'99308	4	9872	'99441	5
		4			5			4
9813	'99180	5	9843	'99313	4	9873	'99445	4
9814	'99185	4	9844	'99317	5	9874	'99449	5
9815	'99189	4	9845	'99322	4	9875	'99454	4
		5			4			5
9816	'99193	5	9846	'99326	4	9876	'99458	5
9817	'99198	4	9847	'99330	5	9877	'99463	4
9818	'99202	5	9848	'99335	4	9878	'99467	4
		4			5			4
9819	'99207	4	9849	'99339	5	9879	'99471	5
9820	'99211	5	9850	'99344	4	9880	'99476	4
9821	'99216	4	9851	'99348	4	9881	'99480	4
		4			5			5
9822	'99220	4	9852	'99352	5	9882	'99484	5
9823	'99224	5	9853	'99357	4	9883	'99489	4
9824	'99229	4	9854	'99361	5	9884	'99493	5
		5			4			4
9825	'99233	4	9855	'99366	4	9885	'99498	4
9826	'99238	4	9856	'99370	4	9886	'99502	4
9827	'99242	5	9857	'99374	5	9887	'99506	5
		4			4			4
9828	'99247	4	9858	'99379	4	9888	'99511	4
9829	'99251	4	9859	'99383	5	9889	'99515	5
9830	'99255	5	9860	'99388	4	9890	'99520	4
		4			4			4
9831	'99260	4	9861	'99392	4	9891	'99524	4
9832	'99264	5	9862	'99396	5	9892	'99528	5
9833	'99269	4	9863	'99401	4	9893	'99533	4
		4			5			5
9834	'99273	4	9864	'99405	5	9894	'99537	5
9835	'99277	5	9865	'99410	4	9895	'99542	4
9836	'99282	4	9866	'99414	5	9896	'99546	5
		5			4			4
9837	'99286	4	9867	'99419	4	9897	'99550	4
9838	'99291	5	9868	'99423	4	9898	'99555	5
9839	'99295	4	9869	'99427	4	9899	'99559	4
9840	'99300	5	9870	'99432	5	9900	'99564	5

9900" = 2°45'0"		D.	9930" = 2°45'30"		D.	9960" = 2°46'0"		D.
Num.	Log.		Num.	Log.		Num.	Log.	
9900	*99564	4	9930	*99695	4	9960	*99826	4
9901	*99568	4	9931	*99699	5	9961	*99830	5
9902	*99572	5	9932	*99704	4	9962	*99835	4
9903	*99577	4	9933	*99708	4	9963	*99839	4
9904	*99581	4	9934	*99712	5	9964	*99843	5
9905	*99585	5	9935	*99717	4	9965	*99848	4
9906	*99590	4	9936	*99721	5	9966	*99852	4
9907	*99594	5	9937	*99726	4	9967	*99856	5
9908	*99599	4	9938	*99730	4	9968	*99861	4
9909	*99603	4	9939	*99734	5	9969	*99865	5
9910	*99607	5	9940	*99739	4	9970	*99870	4
9911	*99612	4	9941	*99743	4	9971	*99874	4
9912	*99616	5	9942	*99747	5	9972	*99878	5
9913	*99621	4	9943	*99752	4	9973	*99883	4
9914	*99625	4	9944	*99756	4	9974	*99887	4
9915	*99629	5	9945	*99760	5	9975	*99891	5
9916	*99634	4	9946	*99765	4	9976	*99896	4
9917	*99638	4	9947	*99769	5	9977	*99900	4
9918	*99642	5	9948	*99774	4	9978	*99904	5
9919	*99647	4	9949	*99778	4	9979	*99909	4
9920	*99651	5	9950	*99782	5	9980	*99913	4
9921	*99656	4	9951	*99787	4	9981	*99917	5
9922	*99660	4	9952	*99791	4	9982	*99922	4
9923	*99664	5	9953	*99795	5	9983	*99926	4
9924	*99669	4	9954	*99800	4	9984	*99930	5
9925	*99673	4	9955	*99804	4	9985	*99935	4
9926	*99677	5	9956	*99808	5	9986	*99939	5
9927	*99682	4	9957	*99813	4	9987	*99944	4
9928	*99686	5	9958	*99817	5	9988	*99948	4
9929	*99691	4	9959	*99822	4	9989	*99952	5
9930	*99695	4	9960	*99826	4	9990	*99957	5

9990'' = 2°46'30''			9994'' = 2°46'34''			9997'' = 2°46'37''		
Num.	Log.	D.	Num.	Log.	D.	Num.	Log.	D.
9990	.99957		4	9994		.99974	4	
9991	.99961	4	9995	.99978	5	9998	.99991	5
9992	.99965	5	9996	.99983	4	9999	.99996	4
9993	.99970		9997	.99987		10000	.00000	



Num.	Log.	Num.	Log.	Num.	Log.	Num.	Log.
1001	.0004341	1026	.0111474	1051	.0216027	1076	.0318123
1002	.0008677	1027	.0115704	1052	.0220157	1077	.0322157
1003	.0013009	1028	.0119931	1053	.0224284	1078	.0326188
1004	.0017337	1029	.0124154	1054	.0228406	1079	.0330214
1005	.0021661	1030	.0128372	1055	.0232525	1080	.0334238
1006	.0025980	1031	.0132587	1056	.0236639	1081	.0338257
1007	.0030295	1032	.0136797	1057	.0240750	1082	.0342273
1008	.0034605	1033	.0141003	1058	.0244857	1083	.0346285
1009	.0038912	1034	.0145205	1059	.0248960	1084	.0350293
1010	.0043214	1035	.0149403	1060	.0253059	1085	.0354297
1011	.0047512	1036	.0153598	1061	.0257154	1086	.0358298
1012	.0051805	1037	.0157788	1062	.0261245	1087	.0362295
1013	.0056094	1038	.0161974	1063	.0265333	1088	.0366289
1014	.0060380	1039	.0166155	1064	.0269416	1089	.0370279
1015	.0064660	1040	.0170333	1065	.0273496	1090	.0374265
1016	.0068937	1041	.0174507	1066	.0277572	1091	.0378248
1017	.0073210	1042	.0178677	1067	.0281644	1092	.0382226
1018	.0077478	1043	.0182843	1068	.0285713	1093	.0386202
1019	.0081742	1044	.0187005	1069	.0289777	1094	.0390173
1020	.0086002	1045	.0191163	1070	.0293838	1095	.0394141
1021	.0090257	1046	.0195317	1071	.0297895	1096	.0398106
1022	.0094509	1047	.0199467	1072	.0301948	1097	.0402066
1023	.0098756	1048	.0203613	1073	.0305997	1098	.0406023
1024	.0103000	1049	.0207755	1074	.0310043	1099	.0409977
1025	.0107239	1050	.0211893	1075	.0314085	1100	.0413927

**LOGARITHMS**  
**OF**  
**SINES AND TANGENTS**  
**TO**  
**EVERY MINUTE**  
**OF THE QUADRANT.**

[0 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	
0	- ∞	+ ∞	- ∞	∞	+ ∞	0.00000	60
1	6.46373	30103	6.46373	30103	13.53627	0.00000	59
2	6.76476	17609	6.76476	17609	13.23524	0.00000	58
3	6.94085	12494	6.94085	12494	13.05915	0.00000	57
4	7.06579	9691	7.06579	9691	12.93421	0.00000	56
5	7.16270	7918	7.16270	7918	12.83730	0.00000	55
6	7.24188	6694	7.24188	6694	12.75812	0.00000	54
7	7.30882	5800	7.30882	5800	12.69118	0.00000	53
8	7.36682	5115	7.36682	5115	12.63318	0.00000	52
9	7.41797	4576	7.41797	4576	12.58203	0.00000	51
10	7.46373	4139	7.46373	4139	12.53627	0.00000	50
11	7.50512	3779	7.50512	3779	12.49488	0.00000	49
12	7.54291	3476	7.54291	3476	12.45709	0.00000	48
13	7.57767	3218	7.57767	3219	12.42233	0.00000	47
14	7.60985	2997	7.60986	2996	12.39014	0.00000	46
15	7.63982	2802	7.63982	2803	12.36018	0.00000	45
16	7.66784	2633	7.66785	2633	12.33215	0.00000	44
17	7.69417	2483	7.69418	2482	12.30582	9.99999	43
18	7.71900	2348	7.71900	2348	12.28100	9.99999	42
19	7.74248	2227	7.74248	2228	12.25752	9.99999	41
20	7.76475	2119	7.76476	2119	12.23524	9.99999	40
21	7.78594	2021	7.78595	2020	12.21405	9.99999	39
22	7.80615	1930	7.80615	1931	12.19385	9.99999	38
23	7.82545	1848	7.82546	1848	12.17454	9.99999	37
24	7.84393	1773	7.84394	1773	12.15606	9.99999	36
25	7.86166	1704	7.86167	1704	12.13833	9.99999	35
26	7.87870	1639	7.87871	1639	12.12129	9.99999	34
27	7.89509	1579	7.89510	1579	12.10490	9.99999	33
28	7.91088	1524	7.91089	1524	12.08911	9.99999	32
29	7.92612	1472	7.92613	1473	12.07387	9.99998	31
30	7.94084		7.94086		12.05914	9.99998	30
'	Cosine.		Cotang.		Tangent.	Sine.	'

[89 degrees.]



[0 degrees.]

°	Sine.	Diff.	Tangent.		Cotang.	Cosine.	'
				Diff.			
30	7'94084	1424	7'94086	1424	12'05914	9'99998	30
31	7'95508	1379	7'95510	1379	12'04490	9'99998	29
32	7'96887	1336	7'96889	1336	12'03111	9'99998	28
33	7'98223	1297	7'98225	1297	12'01775	9'99998	27
34	7'99520	1259	7'99522	1259	12'00478	9'99998	26
35	8'00779	1223	8'00781	1223	11'99219	9'99998	25
36	8'02002	1190	8'02004	1190	11'97996	9'99998	24
37	8'03192	1158	8'03194	1159	11'96807	9'99997	23
38	8'04350	1128	8'04353	1128	11'95647	9'99997	22
39	8'05478	1100	8'05481	1100	11'94519	9'99997	21
40	8'06578	1072	8'06581	1072	11'93419	9'99997	20
41	8'07650	1046	8'07653	1047	11'92347	9'99997	19
42	8'08696	1022	8'08700	1022	11'91300	9'99997	18
43	8'09718	999	8'09722	998	11'90278	9'99997	17
44	8'10717	976	8'10720	976	11'89280	9'99996	16
45	8'11693	954	8'11696	955	11'88304	9'99996	15
46	8'12647	934	8'12651	934	11'87349	9'99996	14
47	8'13581	914	8'13585	915	11'86415	9'99996	13
48	8'14495	896	8'14500	895	11'85500	9'99996	12
49	8'15391	877	8'15395	878	11'84605	9'99996	11
50	8'16268	860	8'16273	860	11'83727	9'99995	10
51	8'17128	843	8'17133	843	11'82867	9'99995	9
52	8'17971	827	8'17976	828	11'82024	9'99995	8
53	8'18798	812	8'18804	812	11'81196	9'99995	7
54	8'19610	797	8'19616	797	11'80384	9'99995	6
55	8'20407	782	8'20413	782	11'79587	9'99994	5
56	8'21189	769	8'21195	769	11'78805	9'99994	4
57	8'21958	755	8'21964	756	11'78036	9'99994	3
58	8'22713	743	8'22720	742	11'77280	9'99994	2
59	8'23456	730	8'23462	730	11'76538	9'99994	1
60	8'24186		8'24192		11'75808	9'99993	0
	Cosine.		Cotang.		Tangent.	Sine.	

[89 degrees.]

[1 degree.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	
0	8.24186		8.24192		11.75808	9.99993	60
1	8.24903	717	8.24910	718	11.75090	9.99993	59
2	8.25609	706	8.25616	706	11.74384	9.99993	58
		695		696			
3	8.26304	684	8.26312	684	11.73688	9.99993	57
4	8.26988	673	8.26996	673	11.73004	9.99992	56
5	8.27661	663	8.27669	663	11.72331	9.99992	55
6	8.28324	653	8.28332	654	11.71668	9.99992	54
7	8.28977	644	8.28986	643	11.71014	9.99992	53
8	8.29621	634	8.29629	634	11.70371	9.99992	52
9	8.30255	624	8.30263	625	11.69737	9.99991	51
10	8.30879	616	8.30888	617	11.69112	9.99991	50
11	8.31495	608	8.31505	607	11.68495	9.99991	49
12	8.32103	599	8.32112	599	11.67888	9.99990	48
13	8.32702	590	8.32711	591	11.67289	9.99990	47
14	8.33292	583	8.33302	584	11.66698	9.99990	46
15	8.33875	575	8.33886	575	11.66114	9.99990	45
16	8.34450	568	8.34461	568	11.65539	9.99989	44
17	8.35018	560	8.35029	561	11.64971	9.99989	43
18	8.35578	553	8.35590	553	11.64410	9.99989	42
19	8.36131	547	8.36143	546	11.63857	9.99989	41
20	8.36678	539	8.36689	540	11.63311	9.99988	40
21	8.37217	533	8.37229	533	11.62771	9.99988	39
22	8.37750	526	8.37762	527	11.62238	9.99988	38
23	8.38276	520	8.38289	520	11.61711	9.99987	37
24	8.38796	514	8.38809	514	11.61191	9.99987	36
25	8.39310	508	8.39323	509	11.60677	9.99987	35
26	8.39818	502	8.39832	502	11.60168	9.99986	34
27	8.40320	496	8.40334	496	11.59666	9.99986	33
28	8.40816	491	8.40830	491	11.59170	9.99986	32
29	8.41307	485	8.41321	486	11.58679	9.99985	31
30	8.41792		8.41807		11.58193	9.99985	30
	Cosine.		Cotang.		Tangent.	Sine.	

[88 degrees.]

[1 degree.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	
30	8°41792	480	8°41807	480	11°58193	9°99985	30
31	8°42272	474	8°42287	475	11°57713	9°99985	29
32	8°42746	470	8°42762	470	11°57238	9°99984	28
33	8°43216	464	8°43232	464	11°56768	9°99984	27
34	8°43680	459	8°43696	460	11°56304	9°99984	26
35	8°44139	455	8°44156	455	11°55844	9°99983	25
36	8°44594	450	8°44611	450	11°55389	9°99983	24
37	8°45044	445	8°45061	446	11°54939	9°99983	23
38	8°45489	441	8°45507	441	11°54493	9°99982	22
39	8°45930	436	8°45948	437	11°54052	9°99982	21
40	8°46366	433	8°46385	432	11°53615	9°99982	20
41	8°46799	427	8°46817	428	11°53183	9°99981	19
42	8°47226	424	8°47245	424	11°52755	9°99981	18
43	8°47650	419	8°47669	420	11°52331	9°99981	17
44	8°48069	416	8°48089	416	11°51911	9°99980	16
45	8°48485	411	8°48505	412	11°51495	9°99980	15
46	8°48896	408	8°48917	408	11°51083	9°99979	14
47	8°49304	404	8°49325	404	11°50675	9°99979	13
48	8°49708	400	8°49729	401	11°50271	9°99979	12
49	8°50108	396	8°50130	397	11°49870	9°99978	11
50	8°50504	393	8°50527	393	11°49473	9°99978	10
51	8°50897	390	8°50920	390	11°49080	9°99977	9
52	8°51287	386	8°51310	386	11°48690	9°99977	8
53	8°51673	382	8°51696	383	11°48304	9°99977	7
54	8°52055	379	8°52079	380	11°47921	9°99976	6
55	8°52434	376	8°52459	376	11°47541	9°99976	5
56	8°52810	373	8°52835	373	11°47165	9°99975	4
57	8°53183	369	8°53208	370	11°46792	9°99975	3
58	8°53552	367	8°53578	367	11°46422	9°99974	2
59	8°53919	363	8°53945	363	11°46055	9°99974	1
60	8°54282		8°54308		11°45692	9°99974	0
	Cosine.		Cotang.		Tangent.	Sine.	

[88 degrees.]

[2 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	
0	8.54282		8.54308		11.45692	9.99974	60
1	8.54642	360	8.54669	361	11.45331	9.99973	59
2	8.54999	357	8.55027	358	11.44973	9.99973	58
		355		355			
3	8.55354	351	8.55382	352	11.44618	9.99972	57
4	8.55705	349	8.55734	349	11.44266	9.99972	56
5	8.56054	346	8.56083	346	11.43917	9.99971	55
		343		344			
6	8.56400	343	8.56429	344	11.43571	9.99971	54
7	8.56743	341	8.56773	341	11.43227	9.99970	53
8	8.57084	337	8.57114	338	11.42886	9.99970	52
		336		336			
9	8.57421	336	8.57452	336	11.42548	9.99969	51
10	8.57757	332	8.57788	333	11.42212	9.99969	50
11	8.58089	330	8.58121	330	11.41879	9.99968	49
		328		328			
12	8.58419	328	8.58451	328	11.41549	9.99968	48
13	8.58747	325	8.58779	326	11.41221	9.99967	47
14	8.59072	323	8.59105	323	11.40895	9.99967	46
		320		321			
15	8.59395	320	8.59428	321	11.40572	9.99967	45
16	8.59715	318	8.59749	319	11.40251	9.99966	44
17	8.60033	316	8.60068	316	11.39932	9.99966	43
		313		314			
18	8.60349	313	8.60384	314	11.39616	9.99965	42
19	8.60662	311	8.60698	311	11.39302	9.99964	41
20	8.60973	309	8.61009	310	11.38991	9.99964	40
		307		307			
21	8.61282	307	8.61319	307	11.38681	9.99963	39
22	8.61589	305	8.61626	305	11.38374	9.99963	38
23	8.61894	302	8.61931	303	11.38069	9.99962	37
		301		301			
24	8.62196	301	8.62234	301	11.37766	9.99962	36
25	8.62497	298	8.62535	299	11.37465	9.99961	35
26	8.62795	296	8.62834	297	11.37166	9.99961	34
		294		295			
27	8.63091	294	8.63131	295	11.36869	9.99960	33
28	8.63385	293	8.63426	292	11.36574	9.99960	32
29	8.63678	290	8.63718	291	11.36282	9.99959	31
30	8.63968		8.64009		11.35991	9.99959	30
	Cosine.		Cotang.		Tangent.	Sine.	

[87 degrees.]

[2 degrees.]

	Sine.		Tangent.		Cotang.	Cosine.	
		Diff.		Diff.			
30	8·63968	288	8·64009	289	11·35991	9·99959	30
31	8·64256	287	8·64298	287	11·35702	9·99958	29
32	8·64543	284	8·64585	285	11·35415	9·99958	28
33	8·64827	283	8·64870	284	11·35130	9·99957	27
34	8·65110	281	8·65154	281	11·34846	9·99956	26
35	8·65391	279	8·65435	280	11·34565	9·99956	25
36	8·65670	277	8·65715	278	11·34285	9·99955	24
37	8·65947	276	8·65993	276	11·34007	9·99955	23
38	8·66223	274	8·66269	274	11·33731	9·99954	22
39	8·66497	272	8·66543	273	11·33457	9·99954	21
40	8·66769	270	8·66816	271	11·33184	9·99953	20
41	8·67039	269	8·67087	269	11·32913	9·99952	19
42	8·67308	267	8·67356	268	11·32644	9·99952	18
43	8·67575	266	8·67624	266	11·32376	9·99951	17
44	8·67841	263	8·67890	264	11·32110	9·99951	16
45	8·68104	263	8·68154	263	11·31846	9·99950	15
46	8·68367	260	8·68417	261	11·31583	9·99949	14
47	8·68627	259	8·68678	260	11·31322	9·99949	13
48	8·68886	258	8·68938	258	11·31062	9·99948	12
49	8·69144	256	8·69196	257	11·30804	9·99948	11
50	8·69400	254	8·69453	255	11·30547	9·99947	10
51	8·69654	253	8·69708	254	11·30292	9·99946	9
52	8·69907	252	8·69962	252	11·30038	9·99946	8
53	8·70159	250	8·70214	251	11·29786	9·99945	7
54	8·70409	249	8·70465	249	11·29535	9·99944	6
55	8·70658	247	8·70714	248	11·29286	9·99944	5
56	8·70905	246	8·70962	246	11·29038	9·99943	4
57	8·71151	244	8·71208	245	11·28792	9·99942	3
58	8·71395	243	8·71453	244	11·28547	9·99942	2
59	8·71638	242	8·71697	243	11·28303	9·99941	1
60	8·71880		8·71940		11·28060	9·99940	0
	Cosine.		Cotang.		Tangent.	Sine.	

[87 degrees.]

[3 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	
0	8·71880		8·71940		11·28060	9·99940	60
1	8·72120	240	8·72181	241	11·27819	9·99940	59
2	8·72359	239	8·72420	239	11·27580	9·99939	58
		238		239			
3	8·72597	237	8·72659	237	11·27341	9·99938	57
4	8·72834	235	8·72896	236	11·27104	9·99938	56
5	8·73069	234	8·73132	234	11·26868	9·99937	55
		232		234			
6	8·73303	232	8·73366	234	11·26634	9·99936	54
7	8·73535	232	8·73600	232	11·26400	9·99936	53
8	8·73767	230	8·73832	231	11·26168	9·99935	52
		229		229			
9	8·73997	229	8·74063	229	11·25937	9·99934	51
10	8·74226	228	8·74292	229	11·25708	9·99934	50
11	8·74454	226	8·74521	227	11·25479	9·99933	49
		226		226			
12	8·74680	226	8·74748	226	11·25252	9·99932	48
13	8·74906	224	8·74974	225	11·25026	9·99932	47
14	8·75130	223	8·75199	224	11·24801	9·99931	46
		222		222			
15	8·75353	222	8·75423	222	11·24577	9·99930	45
16	8·75575	220	8·75645	222	11·24355	9·99929	44
17	8·75795	220	8·75867	220	11·24133	9·99929	43
		219		219			
18	8·76015	219	8·76087	219	11·23913	9·99928	42
19	8·76234	217	8·76306	219	11·23694	9·99927	41
20	8·76451	216	8·76525	217	11·23475	9·99926	40
		216		216			
21	8·76667	216	8·76742	216	11·23258	9·99926	39
22	8·76883	214	8·76958	215	11·23042	9·99925	38
23	8·77097	213	8·77173	214	11·22827	9·99924	37
		212		213			
24	8·77310	212	8·77387	213	11·22613	9·99923	36
25	8·77522	211	8·77600	211	11·22400	9·99923	35
26	8·77733	210	8·77811	211	11·22189	9·99922	34
		209		210			
27	8·77943	208	8·78022	209	11·21978	9·99921	33
28	8·78152	208	8·78232	209	11·21768	9·99920	32
29	8·78360	208	8·78441	208	11·21559	9·99920	31
30	8·78568		8·78649		11·21351	9·99919	30
	Cosine.		Cotang.		Tangent.	Sine.	

[86 degrees.]

120

[ 3 degrees.]

'	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	'
30	8·78568	206	8·78649	206	11·21351	9·99919	30
31	8·78774	205	8·78855	206	11·21145	9·99918	29
32	8·78979	204	8·79061	205	11·20939	9·99917	28
33	8·79183	203	8·79266	204	11·20734	9·99917	27
34	8·79386	202	8·79470	203	11·20530	9·99916	26
35	8·79588	201	8·79673	202	11·20327	9·99915	25
36	8·79789	201	8·79875	201	11·20125	9·99914	24
37	8·79990	199	8·80076	201	11·19924	9·99913	23
38	8·80189	199	8·80277	199	11·19723	9·99913	22
39	8·80388	197	8·80476	198	11·19524	9·99912	21
40	8·80585	197	8·80674	198	11·19326	9·99911	20
41	8·80782	196	8·80872	196	11·19128	9·99910	19
42	8·80978	195	8·81068	196	11·18932	9·99909	18
43	8·81173	194	8·81264	195	11·18736	9·99909	17
44	8·81367	193	8·81459	194	11·18541	9·99908	16
45	8·81560	192	8·81653	193	11·18347	9·99907	15
46	8·81752	192	8·81846	192	11·18154	9·99906	14
47	8·81944	190	8·82038	192	11·17962	9·99905	13
48	8·82134	190	8·82230	190	11·17770	9·99904	12
49	8·82324	189	8·82420	190	11·17580	9·99904	11
50	8·82513	188	8·82610	189	11·17390	9·99903	10
51	8·82701	187	8·82799	188	11·17201	9·99902	9
52	8·82888	187	8·82987	188	11·17013	9·99901	8
53	8·83075	186	8·83175	186	11·16825	9·99900	7
54	8·83261	185	8·83361	186	11·16639	9·99899	6
55	8·83446	184	8·83547	185	11·16453	9·99898	5
56	8·83630	183	8·83732	184	11·16268	9·99898	4
57	8·83813	183	8·83916	184	11·16084	9·99897	3
58	8·83996	181	8·84100	182	11·15900	9·99896	2
59	8·84177	181	8·84282	182	11·15718	9·99895	1
60	8·84358		8·84464		11·15536	9·99894	0
'	Cosine.		Cotang.		Tangent.	Sine.	'

[ 86 degrees.]

[4 degrees.]

	Sine.		Tangent.		Cotang.	Cosine.	
0	8·84358		8·84464		11·15536	9·99894	60
1	8·84539	181	8·84646	182	11·15354	9·99893	59
2	8·84718	179	8·84826	180	11·15174	9·99892	58
		179		180			
3	8·84897		8·85006		11·14994	9·99891	57
4	8·85075	178	8·85185	179	11·14815	9·99891	56
5	8·85252	177	8·85363	178	11·14637	9·99890	55
		177		177			
6	8·85429	176	8·85540	177	11·14460	9·99889	54
7	8·85605	175	8·85717	176	11·14283	9·99888	53
8	8·85780	175	8·85893	176	11·14107	9·99887	52
		175		176			
9	8·85955	173	8·86069	174	11·13931	9·99886	51
10	8·86128	173	8·86243	174	11·13757	9·99885	50
11	8·86301		8·86417		11·13583	9·99884	49
		173		174			
12	8·86474	171	8·86591	172	11·13409	9·99883	48
13	8·86645	171	8·86763	172	11·13237	9·99882	47
14	8·86816		8·86935		11·13065	9·99881	46
		171		171			
15	8·86987	169	8·87106	171	11·12894	9·99880	45
16	8·87156	169	8·87277	170	11·12723	9·99879	44
17	8·87325		8·87447		11·12553	9·99879	43
		169		169			
18	8·87494	167	8·87616	169	11·12384	9·99878	42
19	8·87661	168	8·87785	168	11·12215	9·99877	41
20	8·87829		8·87953		11·12047	9·99876	40
		166		167			
21	8·87995	166	8·88120	167	11·11880	9·99875	39
22	8·88161	165	8·88287	166	11·11713	9·99874	38
23	8·88326		8·88453		11·11547	9·99873	37
		164		165			
24	8·88490	164	8·88618	165	11·11382	9·99872	36
25	8·88654	163	8·88783	165	11·11217	9·99871	35
26	8·88817		8·88948		11·11052	9·99870	34
		163		163			
27	8·88980	162	8·89111	163	11·10889	9·99869	33
28	8·89142	162	8·89274	163	11·10726	9·99868	32
29	8·89304	160	8·89437	161	11·10563	9·99867	31
30	8·89464		8·89598		11·10402	9·99866	30
		160					
'	Cosine.		Cotang.		Tangent.	Sine.	'

[85 degrees.]



[4 degrees.]

✓	Sine.		Tangent.		Cotang.	Cosine.	✓
		Diff.		Diff.			
30	8·89464		8·89598		11·10402	9·99866	30
31	8·89625	161	8·89760	162	11·10240	9·99865	29
32	8·89784	159	8·89920	160	11·10080	9·99864	28
		159		160			
33	8·89943	159	8·90080	160	11·09920	9·99863	27
34	8·90102	158	8·90240	159	11·09760	9·99862	26
35	8·90260	157	8·90399	158	11·09601	9·99861	25
		157		158			
36	8·90417	157	8·90557	158	11·09443	9·99860	24
37	8·90574	156	8·90715	157	11·09285	9·99859	23
38	8·90730	155	8·90872	157	11·09128	9·99858	22
		155		157			
39	8·90885	155	8·91029	156	11·08971	9·99857	21
40	8·91040	155	8·91185	155	11·08815	9·99856	20
41	8·91195	154	8·91340	155	11·08660	9·99855	19
		154		155			
42	8·91349	153	8·91495	155	11·08505	9·99854	18
43	8·91502	153	8·91650	153	11·08350	9·99853	17
44	8·91655	152	8·91803	154	11·08197	9·99852	16
		152		154			
45	8·91807	152	8·91957	153	11·08043	9·99851	15
46	8·91959	151	8·92110	152	11·07890	9·99850	14
47	8·92110	151	8·92262	152	11·07738	9·99848	13
		151		152			
48	8·92261	150	8·92414	151	11·07586	9·99847	12
49	8·92411	150	8·92565	151	11·07435	9·99846	11
50	8·92561	149	8·92716	150	11·07284	9·99845	10
		149		150			
51	8·92710	149	8·92866	150	11·07134	9·99844	9
52	8·92859	148	8·93016	149	11·06984	9·99843	8
53	8·93007	147	8·93165	148	11·06835	9·99842	7
		147		148			
54	8·93154	147	8·93313	149	11·06687	9·99841	6
55	8·93301	147	8·93462	147	11·06538	9·99840	5
56	8·93448	146	8·93609	147	11·06391	9·99839	4
		146		147			
57	8·93594	146	8·93756	147	11·06244	9·99838	3
58	8·93740	145	8·93903	146	11·06097	9·99837	2
59	8·93885	145	8·94049	146	11·05951	9·99836	1
60	8·94030		8·94195		11·05805	9·99834	0
	Cosine.		Cotang.		Tangent.	Sine.	

[85 degrees.]

[5 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	'
0	8·94030	144	8·94195	145	11·05805	9·99834	60
1	8·94174	143	8·94340	145	11·05660	9·99833	59
2	8·94317	144	8·94485	145	11·05515	9·99832	58
		144		145			
3	8·94461	142	8·94630	143	11·05370	9·99831	57
4	8·94603	143	8·94773	144	11·05227	9·99830	56
5	8·94746	141	8·94917	143	11·05083	9·99829	55
		142		142			
6	8·94887	142	8·95060	142	11·04940	9·99828	54
7	8·95029	141	8·95202	142	11·04798	9·99827	53
8	8·95170	140	8·95344	142	11·04656	9·99825	52
		140		141			
9	8·95310	140	8·95486	141	11·04514	9·99824	51
10	8·95450	139	8·95627	140	11·04373	9·99823	50
11	8·95589	139	8·95767	141	11·04233	9·99822	49
		139		139			
12	8·95728	139	8·95908	139	11·04092	9·99821	48
13	8·95867	138	8·96047	140	11·03953	9·99820	47
14	8·96005	138	8·96187	138	11·03813	9·99819	46
		137		139			
15	8·96143	137	8·96325	139	11·03675	9·99817	45
16	8·96280	137	8·96464	138	11·03536	9·99816	44
17	8·96417	136	8·96602	137	11·03398	9·99815	43
		136		138			
18	8·96553	136	8·96739	138	11·03261	9·99814	42
19	8·96689	136	8·96877	136	11·03123	9·99813	41
20	8·96825	135	8·97013	137	11·02987	9·99812	40
		135		135			
21	8·96960	135	8·97150	135	11·02850	9·99810	39
22	8·97095	134	8·97285	136	11·02715	9·99809	38
23	8·97229	134	8·97421	135	11·02579	9·99808	37
		133		135			
24	8·97363	133	8·97556	135	11·02444	9·99807	36
25	8·97496	133	8·97691	134	11·02309	9·99806	35
26	8·97629	133	8·97825	134	11·02175	9·99804	34
		132		133			
27	8·97762	132	8·97959	133	11·02041	9·99803	33
28	8·97894	132	8·98092	133	11·01908	9·99802	32
29	8·98026	131	8·98225	133	11·01775	9·99801	31
30	8·98157		8·98358		11·01642	9·99800	30
'	Cosine.		Cotang.		Tangent.	Sine.	'

[84 degrees.]

[5 degrees.]

'	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	'
30	8·98157		8·98358		11·01642	9·99800	30
31	8·98288	131	8·98490	132	11·01510	9·99798	29
32	8·98419	131	8·98622	132	11·01378	9·99797	28
		130		131			
33	8·98549	130	8·98753	131	11·01247	9·99796	27
34	8·98679	129	8·98884	131	11·01116	9·99795	26
35	8·98808	129	8·99015	130	11·00985	9·99793	25
		129		130			
36	8·98937	129	8·99145	130	11·00855	9·99792	24
37	8·99066	128	8·99275	130	11·00725	9·99791	23
38	8·99194	128	8·99405	129	11·00595	9·99790	22
		128		129			
39	8·99322	128	8·99534	128	11·00466	9·99788	21
40	8·99450	127	8·99662	129	11·00338	9·99787	20
41	8·99577	127	8·99791	128	11·00209	9·99786	19
		127		128			
42	8·99704	126	8·99919	127	11·00081	9·99785	18
43	8·99830	126	9·00046	128	10·99954	9·99783	17
44	8·99956	126	9·00174	127	10·99826	9·99782	16
		126		127			
45	9·00082	125	9·00301	126	10·99699	9·99781	15
46	9·00207	125	9·00427	126	10·99573	9·99780	14
47	9·00332	124	9·00553	126	10·99447	9·99778	13
		124		126			
48	9·00456	125	9·00679	126	10·99321	9·99777	12
49	9·00581	123	9·00805	125	10·99195	9·99776	11
50	9·00704	124	9·00930	125	10·99070	9·99775	10
		124		125			
51	9·00828	123	9·01055	124	10·98945	9·99773	9
52	9·00951	123	9·01179	124	10·98821	9·99772	8
53	9·01074	122	9·01303	124	10·98697	9·99771	7
		122		124			
54	9·01196	122	9·01427	123	10·98573	9·99769	6
55	9·01318	122	9·01550	123	10·98450	9·99768	5
56	9·01440	121	9·01673	123	10·98327	9·99767	4
		121		123			
57	9·01561	121	9·01796	122	10·98204	9·99765	3
58	9·01682	121	9·01918	122	10·98082	9·99764	2
59	9·01803	120	9·02040	122	10·97960	9·99763	1
60	9·01923		9·02162		10·97838	9·99761	0
'	Cosine.		Cotang.		Tangent.	Sine.	'

[84 degrees.]

[6 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	'
0	9°01923		9°02162		10°97838	9°99761	60
1	9°02043	120	9°02283	121	10°97717	9°99760	59
2	9°02163	120	9°02404	121	10°97596	9°99759	58
		120		121			
3	9°02283	119	9°02525	120	10°97475	9°99757	57
4	9°02402	118	9°02645	121	10°97355	9°99756	56
5	9°02520	119	9°02766	119	10°97234	9°99755	55
		118		120			
6	9°02639	118	9°02885	120	10°97115	9°99753	54
7	9°02757	117	9°03005	119	10°96995	9°99752	53
8	9°02874	118	9°03124	118	10°96876	9°99751	52
		117		119			
9	9°02992	117	9°03242	119	10°96758	9°99749	51
10	9°03109	117	9°03361	118	10°96639	9°99748	50
11	9°03226	116	9°03479	118	10°96521	9°99747	49
		116		117			
12	9°03342	116	9°03597	117	10°96403	9°99745	48
13	9°03458	116	9°03714	118	10°96286	9°99744	47
14	9°03574	116	9°03832	116	10°96168	9°99742	46
		115		117			
15	9°03690	115	9°03948	117	10°96052	9°99741	45
16	9°03805	115	9°04065	116	10°95935	9°99740	44
17	9°03920	114	9°04181	116	10°95819	9°99738	43
		115		116			
18	9°04034	115	9°04297	116	10°95703	9°99737	42
19	9°04149	113	9°04413	115	10°95587	9°99736	41
20	9°04262	114	9°04528	115	10°95472	9°99734	40
		114		115			
21	9°04376	114	9°04643	115	10°95357	9°99733	39
22	9°04490	113	9°04758	115	10°95242	9°99731	38
23	9°04603	112	9°04873	114	10°95127	9°99730	37
		113		114			
24	9°04715	113	9°04987	114	10°95013	9°99728	36
25	9°04828	112	9°05101	113	10°94899	9°99727	35
26	9°04940	112	9°05214	114	10°94786	9°99726	34
		112		113			
27	9°05052	112	9°05328	113	10°94672	9°99724	33
28	9°05164	111	9°05441	112	10°94559	9°99723	32
29	9°05275	111	9°05553	113	10°94447	9°99721	31
30	9°05386		9°05666		10°94334	9°99720	30
	Cosine.		Cotang.		Tangent.	Sine.	'

[83 degrees.]

## [6 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	
30	9°05386		9°05666		10°94334	9°99720	30
31	9°05497	111	9°05778	112	10°94222	9°99718	29
32	9°05607	110	9°05890	112	10°94110	9°99717	28
33	9°05717	110	9°06002	111	10°93998	9°99716	27
34	9°05827	110	9°06113	111	10°93887	9°99714	26
35	9°05937	109	9°06224	111	10°93776	9°99713	25
36	9°06046	109	9°06335	110	10°93665	9°99711	24
37	9°06155	109	9°06445	110	10°93555	9°99710	23
38	9°06264	108	9°06556	110	10°93444	9°99708	22
39	9°06372	109	9°06666	109	10°93334	9°99707	21
40	9°06481	108	9°06775	110	10°93222	9°99705	20
41	9°06589	107	9°06885	109	10°93115	9°99704	19
42	9°06696	108	9°06994	109	10°93006	9°99702	18
43	9°06804	107	9°07103	108	10°92897	9°99701	17
44	9°06911	107	9°07211	109	10°92789	9°99699	16
45	9°07018	106	9°07320	108	10°92680	9°99698	15
46	9°07124	107	9°07428	108	10°92572	9°99696	14
47	9°07231	106	9°07536	107	10°92464	9°99695	13
48	9°07337	105	9°07643	108	10°92357	9°99693	12
49	9°07442	106	9°07751	107	10°92249	9°99692	11
50	9°07548	105	9°07858	106	10°92142	9°99690	10
51	9°07653	105	9°07964	107	10°92036	9°99689	9
52	9°07758	105	9°08071	106	10°91929	9°99687	8
53	9°07863	105	9°08177	106	10°91823	9°99686	7
54	9°07968	104	9°08283	106	10°91717	9°99684	6
55	9°08072	104	9°08389	106	10°91611	9°99683	5
56	9°08176	104	9°08495	105	10°91505	9°99681	4
57	9°08280	103	9°08600	105	10°91400	9°99680	3
58	9°08383	103	9°08705	105	10°91295	9°99678	2
59	9°08486	103	9°08810	104	10°91190	9°99677	1
60	9°08589		9°08914		10°91086	9°99675	0
	Cosine.		Cotang.		Tangent.	Sine.	

## [83 degrees.]

[7 degrees.]

	Sine.		Tangent.		Cotang.	Cosine.	
0	9°08589		9°08914		10°91086	9°99675	60
1	9°08692	103	9°09019	105	10°90981	9°99674	59
2	9°08795	103	9°09123	104	10°90877	9°99672	58
		102		104			
3	9°08897	102	9°09227	103	10°90773	9°99670	57
4	9°08999	102	9°09330	104	10°90670	9°99669	56
5	9°09101	101	9°09434	103	10°90566	9°99667	55
		102		103			
6	9°09202	102	9°09537	103	10°90463	9°99666	54
7	9°09304	101	9°09640	102	10°90360	9°99664	53
8	9°09405	101	9°09742	103	10°90258	9°99663	52
		101		103			
9	9°09506	100	9°09845	102	10°90155	9°99661	51
10	9°09606	101	9°09947	102	10°90053	9°99659	50
11	9°09707	100	9°10049	101	10°89951	9°99658	49
		100		101			
12	9°09807	100	9°10150	102	10°89850	9°99656	48
13	9°09907	99	9°10252	101	10°89748	9°99655	47
14	9°10006	100	9°10353	101	10°89647	9°99653	46
		100		101			
15	9°10106	99	9°10454	101	10°89546	9°99651	45
16	9°10205	99	9°10555	101	10°89445	9°99650	44
17	9°10304	98	9°10656	100	10°89344	9°99648	43
		98		100			
18	9°10402	99	9°10756	100	10°89244	9°99647	42
19	9°10501	98	9°10856	100	10°89144	9°99645	41
20	9°10599	98	9°10956	100	10°89044	9°99643	40
		98		100			
21	9°10697	98	9°11056	99	10°88944	9°99642	39
22	9°10795	98	9°11155	99	10°88845	9°99640	38
23	9°10893	97	9°11254	99	10°88746	9°99638	37
		97		99			
24	9°10990	97	9°11353	99	10°88647	9°99637	36
25	9°11087	97	9°11452	99	10°88548	9°99635	35
26	9°11184	97	9°11551	98	10°88449	9°99633	34
		97		98			
27	9°11281	96	9°11649	98	10°88351	9°99632	33
28	9°11377	97	9°11747	98	10°88253	9°99630	32
29	9°11474	96	9°11845	98	10°88155	9°99629	31
30	9°11570		9°11943		10°88057	9°99627	30
'	Cosine.		Cotang.		Tangent.	Sine.	'

[82 degrees.]

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[7 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°11570	96	9°11943	97	10°88057	9°99627	2	30
31	9°11666	95	9°12040	97	10°87960	9°99625	1	29
32	9°11761	95	9°12138	98	10°87862	9°99624	1	28
		96		97			2	
33	9°11857	95	9°12235	97	10°87765	9°99622	2	27
34	9°11952	95	9°12332	97	10°87668	9°99620	2	26
35	9°12047	95	9°12428	96	10°87572	9°99618	2	25
		95		97			1	
36	9°12142	94	9°12525	96	10°87475	9°99617	2	24
37	9°12236	94	9°12621	96	10°87379	9°99615	2	23
38	9°12331	95	9°12717	96	10°87283	9°99613	2	22
		94		96			1	
39	9°12425	94	9°12813	96	10°87187	9°99612	2	21
40	9°12519	93	9°12909	96	10°87091	9°99610	2	20
41	9°12612	93	9°13004	95	10°86996	9°99608	2	19
		94		95			1	
42	9°12706	93	9°13099	95	10°86901	9°99607	2	18
43	9°12799	93	9°13194	95	10°86806	9°99605	2	17
44	9°12892	93	9°13289	95	10°86711	9°99603	2	16
		93		95			2	
45	9°12985	93	9°13384	94	10°86616	9°99601	1	15
46	9°13078	93	9°13478	95	10°86522	9°99600	2	14
47	9°13171	92	9°13573	94	10°86427	9°99598	2	13
		92		94			2	
48	9°13263	92	9°13667	94	10°86333	9°99596	1	12
49	9°13355	92	9°13761	93	10°86239	9°99595	2	11
50	9°13447	92	9°13854	93	10°86146	9°99593	2	10
		92		94			2	
51	9°13539	91	9°13948	93	10°86052	9°99591	2	9
52	9°13630	92	9°14041	93	10°85959	9°99589	1	8
53	9°13722	91	9°14134	93	10°85866	9°99588	2	7
		91		93			2	
54	9°13813	91	9°14227	93	10°85773	9°99586	2	6
55	9°13904	90	9°14320	92	10°85680	9°99584	2	5
56	9°13994	91	9°14412	92	10°85588	9°99582	1	4
		91		92			1	
57	9°14085	90	9°14504	93	10°85496	9°99581	2	3
58	9°14175	91	9°14597	91	10°85403	9°99579	2	2
59	9°14266	90	9°14688	92	10°85312	9°99577	2	1
60	9°14356		9°14780		10°85220	9°99575		0
	Cosine.		Cotang.		Tangent.	Sine.		

[82 degrees.]

[ 8 degrees. ]

'	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	'
0	9°14356	89	9°14780	98	10°85220	9°99575	1	60
1	9°14445	90	9°14872	91	10°85128	9°99574	1	59
2	9°14535	89	9°14963	91	10°85037	9°99572	2	58
3	9°14624	90	9°15054	91	10°84946	9°99570	2	57
4	9°14714	89	9°15145	91	10°84855	9°99568	2	56
5	9°14803	88	9°15236	91	10°84764	9°99566	2	55
6	9°14891	89	9°15327	90	10°84673	9°99565	1	54
7	9°14980	89	9°15417	90	10°84583	9°99563	2	53
8	9°15069	88	9°15508	91	10°84492	9°99561	2	52
9	9°15157	88	9°15598	90	10°84402	9°99559	2	51
10	9°15245	88	9°15688	89	10°84312	9°99557	1	50
11	9°15333	88	9°15777	90	10°84223	9°99556	2	49
12	9°15421	87	9°15867	89	10°84133	9°99554	2	48
13	9°15508	88	9°15956	90	10°84044	9°99552	2	47
14	9°15596	87	9°16046	89	10°83954	9°99550	2	46
15	9°15683	87	9°16135	89	10°83865	9°99548	2	45
16	9°15770	87	9°16224	88	10°83776	9°99546	1	44
17	9°15857	87	9°16312	89	10°83688	9°99545	2	43
18	9°15944	86	9°16401	88	10°83599	9°99543	2	42
19	9°16030	86	9°16489	88	10°83511	9°99541	2	41
20	9°16116	87	9°16577	88	10°83423	9°99539	2	40
21	9°16203	86	9°16665	88	10°83335	9°99537	2	39
22	9°16289	85	9°16753	88	10°83247	9°99535	2	38
23	9°16374	86	9°16841	87	10°83159	9°99533	1	37
24	9°16460	85	9°16928	88	10°83072	9°99532	2	36
25	9°16545	86	9°17016	87	10°82984	9°99530	2	35
26	9°16631	85	9°17103	87	10°82897	9°99528	2	34
27	9°16716	85	9°17190	87	10°82810	9°99526	2	33
28	9°16801	85	9°17277	86	10°82723	9°99524	2	32
29	9°16886	84	9°17363	87	10°82637	9°99522	2	31
30	9°16970		9°17450		10°82550	9°99520		30
'	Cosine.		Cotang.		Tangent.	Sine.	'	

[ 81 degrees. ]



[8 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9°16970	85	9°17450	86	10°82550	9°99520	2	30
31	9°17055	84	9°17536	86	10°82464	9°99518	1	29
32	9°17139	84	9°17622	86	10°82378	9°99517	2	28
33	9°17223	84	9°17708	86	10°82292	9°99515	2	27
34	9°17307	84	9°17794	86	10°82206	9°99513	2	26
35	9°17391	83	9°17880	85	10°82120	9°99511	2	25
36	9°17474	84	9°17965	86	10°82035	9°99509	2	24
37	9°17558	83	9°18051	85	10°81949	9°99507	2	23
38	9°17641	83	9°18136	85	10°81864	9°99505	2	22
39	9°17724	83	9°18221	85	10°81779	9°99503	2	21
40	9°17807	83	9°18306	85	10°81694	9°99501	2	20
41	9°17890	83	9°18391	84	10°81609	9°99499	2	19
42	9°17973	82	9°18475	85	10°81525	9°99497	2	18
43	9°18055	82	9°18560	84	10°81440	9°99495	1	17
44	9°18137	83	9°18644	84	10°81356	9°99494	2	16
45	9°18220	82	9°18728	84	10°81272	9°99492	2	15
46	9°18302	81	9°18812	84	10°81188	9°99490	2	14
47	9°18383	82	9°18896	83	10°81104	9°99488	2	13
48	9°18465	82	9°18979	84	10°81021	9°99486	2	12
49	9°18547	81	9°19063	83	10°80937	9°99484	2	11
50	9°18628	81	9°19146	83	10°80854	9°99482	2	10
51	9°18709	81	9°19229	83	10°80771	9°99480	2	9
52	9°18790	81	9°19312	83	10°80688	9°99478	2	8
53	9°18871	81	9°19395	83	10°80605	9°99476	2	7
54	9°18952	81	9°19478	83	10°80522	9°99474	2	6
55	9°19033	80	9°19561	82	10°80439	9°99472	2	5
56	9°19113	80	9°19643	82	10°80357	9°99470	2	4
57	9°19193	80	9°19725	82	10°80275	9°99468	2	3
58	9°19273	80	9°19807	82	10°80193	9°99466	2	2
59	9°19353	80	9°19889	82	10°80111	9°99464	2	1
60	9°19433		9°19971		10°80029	9°99462		0
	Cosine.		Cotang.		Tangent.	Sine.		

[8 degrees.]

[9 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
0	9°19433	80	9°19971	82	10°80029	9°99462	2	60
1	9°19513	79	9°20053	81	10°79947	9°99460	2	59
2	9°19592	80	9°20134	82	10°79866	9°99458	2	58
3	9°19672	79	9°20216	81	10°79784	9°99456	2	57
4	9°19751	79	9°20297	81	10°79703	9°99454	2	56
5	9°19830	79	9°20378	81	10°79622	9°99452	2	55
6	9°19909	79	9°20459	81	10°79541	9°99450	2	54
7	9°19988	79	9°20540	81	10°79460	9°99448	2	53
8	9°20067	78	9°20621	80	10°79379	9°99446	2	52
9	9°20145	78	9°20701	81	10°79299	9°99444	2	51
10	9°20223	79	9°20782	80	10°79218	9°99442	2	50
11	9°20302	78	9°20862	80	10°79138	9°99440	2	49
12	9°20380	78	9°20942	80	10°79058	9°99438	2	48
13	9°20458	77	9°21022	80	10°78978	9°99436	2	47
14	9°20535	78	9°21102	80	10°78898	9°99434	2	46
15	9°20613	78	9°21182	79	10°78818	9°99432	2	45
16	9°20691	77	9°21261	80	10°78739	9°99429	3	44
17	9°20768	77	9°21341	79	10°78659	9°99427	2	43
18	9°20845	77	9°21420	79	10°78580	9°99425	2	42
19	9°20922	77	9°21499	79	10°78501	9°99423	2	41
20	9°20999	77	9°21578	79	10°78422	9°99421	2	40
21	9°21076	77	9°21657	79	10°78343	9°99419	2	39
22	9°21153	76	9°21736	78	10°78264	9°99417	2	38
23	9°21229	77	9°21814	79	10°78186	9°99415	2	37
24	9°21306	76	9°21893	78	10°78107	9°99413	2	36
25	9°21382	76	9°21971	78	10°78029	9°99411	2	35
26	9°21458	76	9°22049	78	10°77951	9°99409	2	34
27	9°21534	76	9°22127	78	10°77873	9°99407	3	33
28	9°21610	75	9°22205	78	10°77795	9°99404	2	32
29	9°21685	76	9°22283	78	10°77717	9°99402	2	31
30	9°21761		9°22361		10°77639	9°99400		30
	Cosine.		Cotang.		Tangent.	Sine.		

[80 degrees.]

[9 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9°21761		9°22361		10°77639	9°99400		30
31	9°21836	75	9°22438	77	10°77562	9°99398	2	29
32	9°21912	76	9°22516	78	10°77484	9°99396	2	28
		75		77			2	
33	9°21987		9°22593		10°77407	9°99394		27
34	9°22062	75	9°22670	77	10°77330	9°99392	2	26
35	9°22137	75	9°22747	77	10°77253	9°99390	2	25
		74		77			2	
36	9°22211		9°22824		10°77176	9°99388		24
37	9°22286	75	9°22901	77	10°77099	9°99385	3	23
38	9°22361	75	9°22977	76	10°77023	9°99383	2	22
		74		77			2	
39	9°22435		9°23054		10°76946	9°99381		21
40	9°22509	74	9°23130	76	10°76870	9°99379	2	20
41	9°22583	74	9°23206	76	10°76794	9°99377	2	19
		74		77			2	
42	9°22657		9°23283		10°76717	9°99375		18
43	9°22731	74	9°23359	76	10°76641	9°99372	3	17
44	9°22805	74	9°23435	76	10°76565	9°99370	2	16
		73		75			2	
45	9°22878		9°23510		10°76490	9°99368		15
46	9°22952	74	9°23586	76	10°76414	9°99366	2	14
47	9°23025	73	9°23661	75	10°76339	9°99364	2	13
		73		76			2	
48	9°23098		9°23737		10°76263	9°99362		12
49	9°23171	73	9°23812	75	10°76188	9°99359	3	11
50	9°23244	73	9°23887	75	10°76113	9°99357	2	10
		73		75			2	
51	9°23317		9°23962		10°76038	9°99355		9
52	9°23390	73	9°24037	75	10°75963	9°99353	2	8
53	9°23462	72	9°24112	75	10°75888	9°99351	2	7
		73		74			3	
54	9°23535		9°24186		10°75814	9°99348		6
55	9°23607	72	9°24261	75	10°75739	9°99346	2	5
56	9°23679	72	9°24335	74	10°75665	9°99344	2	4
		73		75			2	
57	9°23752		9°24410		10°75590	9°99342		3
58	9°23823	71	9°24484	74	10°75516	9°99340	3	2
59	9°23895	72	9°24558	74	10°75442	9°99337	2	1
60	9°23967	72	9°24632	74	10°75368	9°99335	2	0
	Cosine.		Cotang.		Tangent.	Sine.		

[80 degrees.]

[10 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9'23967	72	9'24632	74	10'75368	9'99335	2	50
1	9'24039	71	9'24706	73	10'75294	9'99333	2	59
2	9'24110	71	9'24779	74	10'75221	9'99331	2	58
3	9'24181	72	9'24853	73	10'75147	9'99328	2	57
4	9'24253	71	9'24926	74	10'75074	9'99326	2	56
5	9'24324	71	9'25000	73	10'75000	9'99324	2	55
6	9'24395	71	9'25073	73	10'74927	9'99322	3	54
7	9'24466	70	9'25146	73	10'74854	9'99319	2	53
8	9'24536	71	9'25219	73	10'74781	9'99317	2	52
9	9'24607	70	9'25292	73	10'74708	9'99315	2	51
10	9'24677	71	9'25365	72	10'74635	9'99313	3	50
11	9'24748	70	9'25437	73	10'74563	9'99310	2	49
12	9'24818	70	9'25510	72	10'74490	9'99308	2	48
13	9'24888	70	9'25582	73	10'74418	9'99306	2	47
14	9'24958	70	9'25655	72	10'74345	9'99304	3	46
15	9'25028	70	9'25727	72	10'74273	9'99301	2	45
16	9'25098	70	9'25799	72	10'74201	9'99299	2	44
17	9'25168	69	9'25871	72	10'74129	9'99297	3	43
18	9'25237	70	9'25943	72	10'74057	9'99294	2	42
19	9'25307	69	9'26015	71	10'73985	9'99292	2	41
20	9'25376	69	9'26086	72	10'73914	9'99290	2	40
21	9'25445	69	9'26158	71	10'73842	9'99288	3	39
22	9'25514	69	9'26229	72	10'73771	9'99285	2	38
23	9'25583	69	9'26301	71	10'73700	9'99283	2	37
24	9'25652	69	9'26372	71	10'73628	9'99281	3	36
25	9'25721	69	9'26443	71	10'73557	9'99278	2	35
26	9'25790	68	9'26514	71	10'73486	9'99276	2	34
27	9'25858	69	9'26585	70	10'73415	9'99274	3	33
28	9'25927	68	9'26655	71	10'73345	9'99271	2	32
29	9'25995	68	9'26726	71	10'73274	9'99269	2	31
30	9'26063		9'26797		10'73203	9'99267		30
	Cosine.		Cotang.		Tangent.	Sine.		

[79 degrees.]

[10 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9°26063	68	9°26797	70	10°73203	9°99267	3	30
31	9°26131	68	9°26867	70	10°73133	9°99264	2	29
32	9°26199	68	9°26937	71	10°73063	9°99262	2	28
33	9°26267	68	9°27008	70	10°72992	9°99260	3	27
34	9°26335	68	9°27078	70	10°72922	9°99257	2	26
35	9°26403	67	9°27148	70	10°72852	9°99255	3	25
36	9°26470	68	9°27218	70	10°72782	9°99252	2	24
37	9°26538	67	9°27288	69	10°72712	9°99250	2	23
38	9°26605	67	9°27357	70	10°72643	9°99248	3	22
39	9°26672	67	9°27427	69	10°72573	9°99245	2	21
40	9°26739	67	9°27496	70	10°72504	9°99243	2	20
41	9°26806	67	9°27566	69	10°72434	9°99241	2	19
42	9°26873	67	9°27635	69	10°72365	9°99238	3	18
43	9°26940	67	9°27704	69	10°72296	9°99236	2	17
44	9°27007	66	9°27773	69	10°72227	9°99233	3	16
45	9°27073	67	9°27842	69	10°72158	9°99231	2	15
46	9°27140	66	9°27911	69	10°72089	9°99229	3	14
47	9°27206	67	9°27980	69	10°72020	9°99226	2	13
48	9°27273	66	9°28049	68	10°71951	9°99224	3	12
49	9°27339	66	9°28117	69	10°71883	9°99221	2	11
50	9°27405	66	9°28186	68	10°71814	9°99219	2	10
51	9°27471	66	9°28254	69	10°71746	9°99217	3	9
52	9°27537	65	9°28323	68	10°71677	9°99214	2	8
53	9°27602	66	9°28391	68	10°71609	9°99212	3	7
54	9°27668	66	9°28459	68	10°71541	9°99209	2	6
55	9°27734	65	9°28527	68	10°71473	9°99207	3	5
56	9°27799	65	9°28595	67	10°71405	9°99204	2	4
57	9°27864	66	9°28662	68	10°71338	9°99202	2	3
58	9°27930	65	9°28730	68	10°71270	9°99200	3	2
59	9°27995	65	9°28798	67	10°71202	9°99197	3	1
60	9°28060	65	9°28865	67	10°71135	9°99195	2	0
	Cosine.		Cotang.		Tangent.	Sine.		

[79 degrees.]

[11 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°28060	65	9°28865	68	10°71135	9°99195	3	60
1	9°28125	65	9°28933	67	10°71067	9°99192	2	59
2	9°28190	64	9°29000	67	10°71000	9°99190	3	58
3	9°28254	65	9°29067	67	10°70933	9°99187	2	57
4	9°28319	65	9°29134	67	10°70866	9°99185	3	56
5	9°28384	64	9°29201	67	10°70799	9°99182	2	55
6	9°28448	64	9°29268	67	10°70732	9°99180	3	54
7	9°28512	65	9°29335	67	10°70665	9°99177	2	53
8	9°28577	64	9°29402	66	10°70598	9°99175	3	52
9	9°28641	64	9°29468	67	10°70532	9°99172	2	51
10	9°28705	64	9°29535	66	10°70465	9°99170	3	50
11	9°28769	64	9°29601	67	10°70399	9°99167	2	49
12	9°28833	63	9°29668	66	10°70332	9°99165	3	48
13	9°28896	63	9°29734	66	10°70266	9°99162	2	47
14	9°28960	64	9°29800	66	10°70200	9°99160	a	46
15	9°29024	63	9°29866	66	10°70134	9°99157	~	45
16	9°29087	63	9°29932	66	10°70068	9°99155	3	44
17	9°29150	64	9°29998	66	10°70002	9°99152	2	43
18	9°29214	63	9°30064	66	10°69936	9°99150	3	42
19	9°29277	63	9°30130	65	10°69870	9°99147	2	41
20	9°29340	63	9°30195	66	10°69805	9°99145	3	40
21	9°29403	63	9°30261	65	10°69739	9°99142	2	39
22	9°29466	63	9°30326	65	10°69674	9°99140	3	38
23	9°29529	62	9°30391	66	10°69609	9°99137	2	37
24	9°29591	63	9°30457	65	10°69543	9°99135	3	36
25	9°29654	62	9°30522	65	10°69478	9°99132	2	35
26	9°29716	63	9°30587	65	10°69413	9°99130	3	34
27	9°29779	62	9°30652	65	10°69348	9°99127	3	33
28	9°29841	62	9°30717	65	10°69283	9°99124	2	32
29	9°29903	63	9°30782	65	10°69218	9°99122	3	31
30	9°29966	63	9°30846	64	10°69154	9°99119	3	30
	Cosine.		Cotang.		Tangent.	Sine.		

[78 degrees.]

[11 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9'29966	62	9'30846	65	10'69154	9'99119	2	30
31	9'30028	62	9'30911	64	10'69089	9'99117	3	29
32	9'30090	61	9'30975	65	10'69025	9'99114	2	28
33	9'30151	62	9'31040	64	10'68960	9'99112	3	27
34	9'30213	62	9'31104	64	10'68896	9'99109	3	26
35	9'30275	61	9'31168	65	10'68832	9'99106	2	25
36	9'30336	62	9'31233	64	10'68767	9'99104	3	24
37	9'30398	61	9'31297	64	10'68703	9'99101	2	23
38	9'30459	62	9'31361	64	10'68639	9'99099	3	22
39	9'30521	61	9'31425	64	10'68575	9'99096	3	21
40	9'30582	61	9'31489	63	10'68511	9'99093	2	20
41	9'30643	61	9'31552	64	10'68448	9'99091	3	19
42	9'30704	61	9'31616	63	10'68384	9'99088	2	18
43	9'30765	61	9'31679	64	10'68321	9'99086	3	17
44	9'30826	61	9'31743	63	10'68257	9'99083	3	16
45	9'30887	60	9'31806	64	10'68194	9'99080	2	15
46	9'30947	61	9'31870	63	10'68130	9'99078	3	14
47	9'31008	60	9'31933	63	10'68067	9'99075	3	13
48	9'31068	61	9'31996	63	10'68004	9'99072	2	12
49	9'31129	60	9'32059	63	10'67941	9'99070	3	11
50	9'31189	61	9'32122	63	10'67878	9'99067	3	10
51	9'31250	60	9'32185	63	10'67815	9'99064	2	9
52	9'31310	60	9'32248	63	10'67752	9'99062	3	8
53	9'31370	60	9'32311	62	10'67689	9'99059	3	7
54	9'31430	60	9'32373	63	10'67627	9'99056	2	6
55	9'31490	59	9'32436	62	10'67564	9'99054	3	5
56	9'31549	60	9'32498	63	10'67502	9'99051	3	4
57	9'31609	60	9'32561	62	10'67439	9'99048	2	3
58	9'31669	59	9'32623	62	10'67377	9'99046	3	2
59	9'31728	60	9'32685	62	10'67315	9'99043	3	1
60	9'31788		9'32747		10'67253	9'99040		0
	Cosine.		Cotang.		Tangent.	Sine.		

[78 degrees.]

[13 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°35209		9°36336		10°63664	9°98872		60
1	9°35263	54	9°36394	58	10°63606	9°98869	3	59
2	9°35318	55	9°36452	58	10°63548	9°98867	2	58
		55		57			3	
3	9°35373	54	9°36509	57	10°63491	9°98864	3	57
4	9°35427	54	9°36566	57	10°63434	9°98861	3	56
5	9°35481	54	9°36624	58	10°63376	9°98858	3	55
		55		57			3	
6	9°35536	54	9°36681	57	10°63319	9°98855	3	54
7	9°35590	54	9°36738	57	10°63262	9°98852	3	53
8	9°35644	54	9°36795	57	10°63205	9°98849	3	52
		54		57			3	
9	9°35698	54	9°36852	57	10°63148	9°98846	3	51
10	9°35752	54	9°36909	57	10°63091	9°98843	3	50
11	9°35806	54	9°36966	57	10°63034	9°98840	3	49
		54		57			3	
12	9°35860	54	9°37023	57	10°62977	9°98837	3	48
13	9°35914	54	9°37080	57	10°62920	9°98834	3	47
14	9°35968	54	9°37137	57	10°62863	9°98831	3	46
		54		56			3	
15	9°36022	53	9°37193	57	10°62807	9°98828	3	45
16	9°36075	54	9°37250	56	10°62750	9°98825	3	44
17	9°36129	54	9°37306	56	10°62694	9°98822	3	43
		53		57			3	
18	9°36182	54	9°37363	56	10°62637	9°98819	3	42
19	9°36236	53	9°37419	57	10°62581	9°98816	3	41
20	9°36289	53	9°37476	56	10°62524	9°98813	3	40
		53		56			3	
21	9°36342	53	9°37532	56	10°62468	9°98810	3	39
22	9°36395	54	9°37588	56	10°62412	9°98807	3	38
23	9°36449	53	9°37644	56	10°62356	9°98804	3	37
		53		56			3	
24	9°36502	53	9°37700	56	10°62300	9°98801	3	36
25	9°36555	53	9°37756	56	10°62244	9°98798	3	35
26	9°36608	52	9°37812	56	10°62188	9°98795	3	34
		53		56			3	
27	9°36660	53	9°37868	56	10°62132	9°98792	3	33
28	9°36713	53	9°37924	56	10°62076	9°98789	3	32
29	9°36766	53	9°37980	55	10°62020	9°98786	3	31
30	9°36819		9°38035		10°61965	9°98783	3	30
	Cosine.		Cotang.		Tangent.	Sine.		

[76 degrees.]



[13 degrees.]

'	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	'
30	9°36819	52	9°38035	56	10°61965	9°98783	3	30
31	9°36871	53	9°38091	56	10°61909	9°98780	3	29
32	9°36924	52	9°38147	55	10°61853	9°98777	3	28
33	9°36976	52	9°38202	55	10°61798	9°98774	3	27
34	9°37028	53	9°38257	56	10°61743	9°98771	3	26
35	9°37081	52	9°38313	55	10°61687	9°98768	3	25
36	9°37133	52	9°38368	55	10°61632	9°98765	3	24
37	9°37185	52	9°38423	56	10°61577	9°98762	3	23
38	9°37237	52	9°38479	55	10°61521	9°98759	3	22
39	9°37289	52	9°38534	55	10°61466	9°98756	3	21
40	9°37341	52	9°38589	55	10°61411	9°98753	3	20
41	9°37393	52	9°38644	55	10°61356	9°98750	3	19
42	9°37445	52	9°38699	55	10°61301	9°98746	3	18
43	9°37497	52	9°38754	54	10°61246	9°98743	3	17
44	9°37549	51	9°38808	55	10°61192	9°98740	3	16
45	9°37600	52	9°38863	55	10°61137	9°98737	3	15
46	9°37652	51	9°38918	54	10°61082	9°98734	3	14
47	9°37703	52	9°38972	55	10°61028	9°98731	3	13
48	9°37755	51	9°39027	55	10°60973	9°98728	3	12
49	9°37806	52	9°39082	54	10°60918	9°98725	3	11
50	9°37858	51	9°39136	54	10°60864	9°98722	3	10
51	9°37909	51	9°39190	55	10°60810	9°98719	4	9
52	9°37960	51	9°39245	54	10°60755	9°98715	3	8
53	9°38011	51	9°39299	54	10°60701	9°98712	3	7
54	9°38062	51	9°39353	54	10°60647	9°98709	3	6
55	9°38113	51	9°39407	54	10°60593	9°98706	3	5
56	9°38164	51	9°39461	54	10°60539	9°98703	3	4
57	9°38215	51	9°39515	54	10°60485	9°98700	3	3
58	9°38266	51	9°39569	54	10°60431	9°98697	3	2
59	9°38317	51	9°39623	54	10°60377	9°98694	3	1
60	9°38368	51	9°39677	54	10°60323	9°98690	4	0
'	Cosine.		Cotang.		Tangent.	Sine.		'

[76 degrees.]

[14 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
60	9°38368		9°39677		10°60323	9°98690		60
1	9°38418	50	9°39731	54	10°60269	9°98687	3	59
2	9°38469	51	9°39785	54	10°60215	9°98684	3	58
		50		53			3	
3	9°38519	51	9°39838	54	10°60162	9°98681	3	57
4	9°38570	51	9°39892	54	10°60108	9°98678	3	56
5	9°38620	50	9°39945	53	10°60055	9°98675	3	55
		50		54			4	
6	9°38670	51	9°39999	53	10°60001	9°98671	3	54
7	9°38721	50	9°40052	54	10°59948	9°98668	3	53
8	9°38771	50	9°40106	54	10°59894	9°98665	3	52
		50		53			3	
9	9°38821	50	9°40159	53	10°59841	9°98662	3	51
10	9°38871	50	9°40212	54	10°59788	9°98659	3	50
11	9°38921	50	9°40266	54	10°59734	9°98656	3	49
		50		53			4	
12	9°38971	50	9°40319	53	10°59681	9°98652	3	48
13	9°39021	50	9°40372	53	10°59628	9°98649	3	47
14	9°39071	50	9°40425	53	10°59575	9°98646	3	46
		50		53			3	
15	9°39121	49	9°40478	53	10°59522	9°98643	3	45
16	9°39170	50	9°40531	53	10°59469	9°98640	3	44
17	9°39220	50	9°40584	53	10°59416	9°98636	4	43
		50		52			3	
18	9°39270	49	9°40636	53	10°59364	9°98633	3	42
19	9°39319	50	9°40689	53	10°59311	9°98630	3	41
20	9°39369	50	9°40742	53	10°59258	9°98627	3	40
		49		53			4	
21	9°39418	49	9°40795	52	10°59205	9°98623	3	39
22	9°39467	50	9°40847	52	10°59153	9°98620	3	38
23	9°39517	50	9°40900	53	10°59100	9°98617	3	37
		49		52			3	
24	9°39566	49	9°40952	52	10°59048	9°98614	4	36
25	9°39615	49	9°41005	52	10°58995	9°98610	3	35
26	9°39664	49	9°41057	52	10°58943	9°98607	4	34
		49		52			3	
27	9°39713	49	9°41109	52	10°58891	9°98604	3	33
28	9°39762	49	9°41161	52	10°58839	9°98601	4	32
29	9°39811	49	9°41214	53	10°58786	9°98597	3	31
30	9°39860	49	9°41266	52	10°58734	9°98594	3	30
		49		52			3	
	Cosine.		Cotang.		Tangent.	Sine.		

[75 degrees.]

[14 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°39860		9°41266	52	10°52734	9°98594	3	30
31	9°39909	49	9°41318	52	10°52682	9°98592	3	29
32	9°39952	49	9°41370	52	10°52630	9°98588	3	28
		48		52			4	
33	9°40006	49	9°41422	52	10°52578	9°98584	3	27
34	9°40055	48	9°41474	52	10°52526	9°98581	3	26
35	9°40109	49	9°41526	52	10°52474	9°98578	3	25
		48		52			4	
36	9°40152	48	9°41578	51	10°52422	9°98574	3	24
37	9°40200	49	9°41629	52	10°52371	9°98571	3	23
38	9°40249	48	9°41681	52	10°52319	9°98568	3	22
		49		52			4	
39	9°40297	49	9°41733	51	10°52267	9°98565	3	21
40	9°40346	48	9°41784	52	10°52216	9°98561	3	20
41	9°40394	48	9°41836	51	10°52164	9°98558	3	19
		48		52			4	
42	9°40442	48	9°41887	52	10°52113	9°98555	3	18
43	9°40490	48	9°41939	51	10°52061	9°98551	3	17
44	9°40538	48	9°41990	51	10°52009	9°98548	3	16
		48		52			4	
45	9°40586	48	9°42041	52	10°51959	9°98545	3	15
46	9°40634	48	9°42093	51	10°51907	9°98541	3	14
47	9°40682	48	9°42144	51	10°51856	9°98538	3	13
		48		52			4	
48	9°40730	48	9°42195	51	10°51805	9°98535	3	12
49	9°40778	47	9°42246	51	10°51754	9°98531	3	11
50	9°40825	48	9°42297	51	10°51703	9°98528	3	10
		48		51			4	
51	9°40873	48	9°42348	51	10°51652	9°98525	3	9
52	9°40921	47	9°42399	52	10°51601	9°98521	3	8
53	9°40968	48	9°42450	51	10°51550	9°98518	3	7
		47		51			4	
54	9°41016	47	9°42501	52	10°51499	9°98515	3	6
55	9°41063	48	9°42552	52	10°51448	9°98511	3	5
56	9°41111	47	9°42603	50	10°51397	9°98508	3	4
		47		51			4	
57	9°41158	47	9°42653	51	10°51347	9°98505	3	3
58	9°41205	47	9°42704	51	10°51296	9°98501	3	2
59	9°41252	48	9°42755	50	10°51245	9°98498	3	1
60	9°41300		9°42805		10°51195	9°98494	4	0
	Cosine.		Cotang.		Tangent.	Sine.		

[76 degrees.]

[15 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9'41300		9'42805		10'57195	9'98494		60
1	9'41347	47	9'42856	51	10'57144	9'98491	3	59
2	9'41394	47	9'42906	50	10'57094	9'98488	3	58
		47		51			4	
3	9'41441	47	9'42957	50	10'57043	9'98484	3	57
4	9'41488	47	9'43007	50	10'56993	9'98481	3	56
5	9'41535	47	9'43057	50	10'56943	9'98477	4	55
		47		51			3	
6	9'41582	46	9'43108	50	10'56892	9'98474	3	54
7	9'41628	47	9'43158	50	10'56842	9'98471	4	53
8	9'41675	47	9'43208	50	10'56792	9'98467	3	52
		47		50			3	
9	9'41722	46	9'43258	50	10'56742	9'98464	4	51
10	9'41768	47	9'43308	50	10'56692	9'98460	3	50
11	9'41815	46	9'43358	50	10'56642	9'98457	3	49
		47		50			4	
12	9'41861	47	9'43408	50	10'56592	9'98453	3	48
13	9'41908	46	9'43458	50	10'56542	9'98450	3	47
14	9'41954	47	9'43508	50	10'56492	9'98447	3	46
		47		50			4	
15	9'42001	46	9'43558	49	10'56442	9'98443	3	45
16	9'42047	46	9'43607	50	10'56393	9'98440	4	44
17	9'42093	47	9'43657	50	10'56343	9'98436	4	43
		47		50			3	
18	9'42140	46	9'43707	49	10'56293	9'98433	4	42
19	9'42186	46	9'43756	50	10'56244	9'98429	4	41
20	9'42232	46	9'43806	49	10'56194	9'98426	3	40
		46		49			4	
21	9'42278	46	9'43855	50	10'56145	9'98422	3	39
22	9'42324	46	9'43905	49	10'56095	9'98419	3	38
23	9'42370	46	9'43954	49	10'56046	9'98415	4	37
		46		50			3	
24	9'42416	45	9'44004	49	10'55996	9'98412	3	36
25	9'42461	46	9'44053	49	10'55947	9'98409	3	35
26	9'42507	46	9'44102	49	10'55898	9'98405	4	34
		46		49			3	
27	9'42553	46	9'44151	50	10'55849	9'98402	3	33
28	9'42599	45	9'44201	49	10'55799	9'98398	4	32
29	9'42644	46	9'44250	49	10'55750	9'98395	3	31
30	9'42690		9'44299		10'55701	9'98391	4	30
	Cosine.		Cotang.		Tangent.	Sine.		

[74 degrees.]

[15 degrees.]

	Sine.	DIFF.	Tangent.	DIFF.	Cotang.	Cosine.	DIFF.	
30	9°42690		9°44299		10°55701	9°98391		30
31	9°42735	45	9°44348	49	10°55652	9°98388	3	29
32	9°42781	46	9°44397	49	10°55603	9°98384	4	28
		45		49			3	
33	9°42826	46	9°44446	49	10°55554	9°98381	4	27
34	9°42872	45	9°44495	49	10°55505	9°98377	4	26
35	9°42917	45	9°44544	48	10°55456	9°98373	3	25
		46		49			4	
36	9°42962	46	9°44592	49	10°55408	9°98370	4	24
37	9°43008	45	9°44641	49	10°55359	9°98366	3	23
38	9°43053	45	9°44690	48	10°55310	9°98363	4	22
		45		48			3	
39	9°43098	45	9°44738	49	10°55262	9°98359	3	21
40	9°43143	45	9°44787	49	10°55213	9°98356	4	20
41	9°43188	45	9°44836	48	10°55164	9°98352	3	19
		45		48			4	
42	9°43233	45	9°44884	49	10°55116	9°98349	4	18
43	9°43278	45	9°44933	48	10°55067	9°98345	3	17
44	9°43323	44	9°44981	48	10°55019	9°98342	4	16
		45		49			4	
45	9°43367	45	9°45029	49	10°54971	9°98338	4	15
46	9°43412	45	9°45078	48	10°54922	9°98334	3	14
47	9°43457	45	9°45126	48	10°54874	9°98331	4	13
		44		48			3	
48	9°43502	44	9°45174	48	10°54826	9°98327	3	12
49	9°43546	45	9°45222	49	10°54778	9°98324	4	11
50	9°43591	44	9°45271	48	10°54729	9°98320	3	10
		45		48			4	
51	9°43635	45	9°45319	48	10°54681	9°98317	4	9
52	9°43680	44	9°45367	48	10°54633	9°98313	4	8
53	9°43724	45	9°45415	48	10°54585	9°98309	3	7
		44		48			4	
54	9°43769	44	9°45463	48	10°54537	9°98306	3	6
55	9°43813	44	9°45511	48	10°54489	9°98302	4	5
56	9°43857	44	9°45559	47	10°54441	9°98299	3	4
		45		48			4	
57	9°43901	45	9°45606	48	10°54394	9°98295	4	3
58	9°43946	44	9°45654	48	10°54346	9°98291	3	2
59	9°43990	44	9°45702	48	10°54298	9°98288	3	1
60	9°44034	44	9°45750	48	10°54250	9°98284	4	0
	Cosine.		Cotang.		Tangent.	Sine.		

[ 16 degrees. ]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	'
0	9'44034		9'45750		10'54250	9'98284		60
1	9'44078	44	9'45797	47	10'54203	9'98281	3	59
2	9'44122	44	9'45845	48	10'54155	9'98277	4	58
		44		47			4	
3	9'44166	44	9'45892	48	10'54108	9'98273	3	57
4	9'44210	44	9'45940	47	10'54060	9'98270	4	56
5	9'44253	43	9'45987	47	10'54013	9'98266	4	55
		44		48			4	
6	9'44297	44	9'46035	47	10'53965	9'98262	3	54
7	9'44341	44	9'46082	47	10'53918	9'98259	4	53
8	9'44385	44	9'46130	48	10'53870	9'98255	4	52
		43		47			4	
9	9'44428	44	9'46177	47	10'53823	9'98251	3	51
10	9'44472	44	9'46224	47	10'53776	9'98248	4	50
11	9'44516	44	9'46271	47	10'53729	9'98244	4	49
		43		48			4	
12	9'44559	43	9'46319	47	10'53681	9'98240	3	48
13	9'44602	44	9'46366	47	10'53634	9'98237	4	47
14	9'44646	44	9'46413	47	10'53587	9'98233	4	46
		43		47			4	
15	9'44689	44	9'46460	47	10'53540	9'98229	3	45
16	9'44733	43	9'46507	47	10'53493	9'98226	4	44
17	9'44776	43	9'46554	47	10'53446	9'98222	4	43
		43		47			4	
18	9'44819	43	9'46601	47	10'53399	9'98218	3	42
19	9'44862	43	9'46648	46	10'53352	9'98215	4	41
20	9'44905	43	9'46694	47	10'53306	9'98211	4	40
		43		47			4	
21	9'44948	44	9'46741	47	10'53259	9'98207	3	39
22	9'44992	43	9'46788	47	10'53212	9'98204	4	38
23	9'45035	43	9'46835	46	10'53165	9'98200	4	37
		42		46			4	
24	9'45077	43	9'46881	47	10'53119	9'98196	4	36
25	9'45120	43	9'46928	47	10'53072	9'98192	3	35
26	9'45163	43	9'46975	46	10'53025	9'98189	4	34
		43		46			4	
27	9'45206	43	9'47021	47	10'52979	9'98185	4	33
28	9'45249	43	9'47068	46	10'52932	9'98181	4	32
29	9'45292	43	9'47114	46	10'52886	9'98177	4	31
30	9'45334	42	9'47160	46	10'52840	9'98174	3	30
'	Cosine.		Cotang.		Tangent.	Sine.		'

[ 73 degrees. ]

[16 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9'45334		9'47160		10'52840	9'98174		30
31	9'45377	43	9'47207	47	10'52793	9'98170	4	29
32	9'45419	42	9'47253	46	10'52747	9'98166	4	28
		43		46			4	
33	9'45462	42	9'47299	47	10'52701	9'98162	4	27
34	9'45504	43	9'47346	46	10'52654	9'98159	3	26
35	9'45547	43	9'47392	46	10'52608	9'98155	4	25
		42		46			4	
36	9'45589	43	9'47438	46	10'52562	9'98151	4	24
37	9'45632	42	9'47484	46	10'52516	9'98147	4	23
38	9'45674	42	9'47530	46	10'52470	9'98144	3	22
		42		46			4	
39	9'45716	42	9'47576	46	10'52424	9'98140	4	21
40	9'45758	43	9'47622	46	10'52378	9'98136	4	20
41	9'45801	42	9'47668	46	10'52332	9'98132	4	19
		42		46			3	
42	9'45843	42	9'47714	46	10'52286	9'98129	4	18
43	9'45885	42	9'47760	46	10'52240	9'98125	4	17
44	9'45927	42	9'47806	46	10'52194	9'98121	4	16
		42		46			4	
45	9'45969	42	9'47852	45	10'52148	9'98117	4	15
46	9'46011	42	9'47897	46	10'52103	9'98113	4	14
47	9'46053	42	9'47943	46	10'52057	9'98110	3	13
		42		46			4	
48	9'46095	41	9'47989	46	10'52011	9'98106	4	12
49	9'46136	42	9'48035	45	10'51965	9'98102	4	11
50	9'46178	42	9'48080	45	10'51920	9'98098	4	10
		42		46			4	
51	9'46220	42	9'48126	45	10'51874	9'98094	4	9
52	9'46262	41	9'48171	46	10'51829	9'98090	4	8
53	9'46303	42	9'48217	46	10'51783	9'98087	3	7
		42		45			4	
54	9'46345	41	9'48262	45	10'51738	9'98083	4	6
55	9'46386	42	9'48307	45	10'51693	9'98079	4	5
56	9'46428	42	9'48353	46	10'51647	9'98075	4	4
		41		45			4	
57	9'46469	42	9'48398	45	10'51602	9'98071	4	3
58	9'46511	41	9'48443	46	10'51557	9'98067	4	2
59	9'46552	42	9'48489	46	10'51511	9'98063	4	1
60	9'46594	42	9'48534	45	10'51466	9'98060	3	0
'	Cosine.		Cotang.		Tangent.	Sine.		'

[73 degrees.]

[17 degrees.]

'	Sine.	DIR.	Tangent.	DIR.	Cotang.	Cosine.	DIR.	'
0	9'46594	41	9'48534		10'51466	9'98060		60
1	9'46635	41	9'48579	45	10'51421	9'98056	4	59
2	9'46676	41	9'48624	45	10'51376	9'98052	4	58
				45			4	
3	9'46717	41	9'48669	45	10'51331	9'98048	4	57
4	9'46758	42	9'48714	45	10'51286	9'98044	4	56
5	9'46800	41	9'48759	45	10'51241	9'98040	4	55
				45			4	
6	9'46841	41	9'48804	45	10'51196	9'98036	4	54
7	9'46882	41	9'48849	45	10'51151	9'98032	4	53
8	9'46923	41	9'48894	45	10'51106	9'98029	3	52
				45			4	
9	9'46964	41	9'48939	45	10'51061	9'98025	4	51
10	9'47005	40	9'48984	45	10'51016	9'98021	4	50
11	9'47045	41	9'49029	45	10'50971	9'98017	4	49
				44			4	
12	9'47086	41	9'49073	45	10'50927	9'98013	4	48
13	9'47127	41	9'49118	45	10'50882	9'98009	4	47
14	9'47168	41	9'49163	45	10'50837	9'98005	4	46
				44			4	
15	9'47209	40	9'49207	45	10'50793	9'98001	4	45
16	9'47249	41	9'49252	45	10'50748	9'97997	4	44
17	9'47290	40	9'49296	44	10'50704	9'97993	4	43
				45			4	
18	9'47330	41	9'49341	44	10'50659	9'97989	4	42
19	9'47371	40	9'49385	44	10'50615	9'97986	3	41
20	9'47411	41	9'49430	45	10'50570	9'97982	4	40
				44			4	
21	9'47452	40	9'49474	45	10'50526	9'97978	4	39
22	9'47492	41	9'49519	44	10'50481	9'97974	4	38
23	9'47533	40	9'49563	44	10'50437	9'97970	4	37
				45			4	
24	9'47573	40	9'49607	45	10'50393	9'97966	4	36
25	9'47613	41	9'49652	44	10'50348	9'97962	4	35
26	9'47654	40	9'49696	44	10'50304	9'97958	4	34
				44			4	
27	9'47694	40	9'49740	44	10'50260	9'97954	4	33
28	9'47734	40	9'49784	44	10'50216	9'97950	4	32
29	9'47774	40	9'49828	44	10'50172	9'97946	4	31
30	9'47814	40	9'49872	44	10'50128	9'97942	4	30
'	Cosine.		Cotang.		Tangent.	Sine.		'

[72 degrees.]



[17 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9'47814	40	9'49872	44	10'50128	9'97942	4	30
31	9'47854	40	9'49916	44	10'50084	9'97938	4	29
32	9'47894	40	9'49960	44	10'50040	9'97934	4	28
		40		44			4	
33	9'47934	40	9'50004	44	10'49996	9'97930	4	27
34	9'47974	40	9'50048	44	10'49952	9'97926	4	26
35	9'48014	40	9'50092	44	10'49908	9'97922	4	25
		40		44			4	
36	9'48054	40	9'50136	44	10'49864	9'97918	4	24
37	9'48094	39	9'50180	43	10'49820	9'97914	4	23
38	9'48133	40	9'50223	44	10'49777	9'97910	4	22
		40		44			4	
39	9'48173	40	9'50267	44	10'49733	9'97906	4	21
40	9'48213	39	9'50311	44	10'49689	9'97902	4	20
41	9'48252	40	9'50355	43	10'49645	9'97898	4	19
		40		43			4	
42	9'48292	40	9'50398	44	10'49602	9'97894	4	18
43	9'48332	39	9'50442	43	10'49558	9'97890	4	17
44	9'48371	40	9'50485	44	10'49515	9'97886	4	16
		40		44			4	
45	9'48411	39	9'50529	43	10'49471	9'97882	4	15
46	9'48450	40	9'50572	44	10'49428	9'97878	4	14
47	9'48490	39	9'50616	43	10'49384	9'97874	4	13
		39		43			4	
48	9'48529	39	9'50659	44	10'49341	9'97870	4	12
49	9'48568	39	9'50703	43	10'49297	9'97866	5	11
50	9'48607	40	9'50746	43	10'49254	9'97861	4	10
		40		43			4	
51	9'48647	39	9'50789	44	10'49211	9'97857	4	9
52	9'48686	39	9'50833	43	10'49167	9'97853	4	8
53	9'48725	39	9'50876	43	10'49124	9'97849	4	7
		39		43			4	
54	9'48764	39	9'50919	43	10'49081	9'97845	4	6
55	9'48803	39	9'50962	43	10'49038	9'97841	4	5
56	9'48842	39	9'51005	43	10'48995	9'97837	4	4
		39		43			4	
57	9'48881	39	9'51048	44	10'48952	9'97833	4	3
58	9'48920	39	9'51092	43	10'48908	9'97829	4	2
59	9'48959	39	9'51135	43	10'48865	9'97825	4	1
60	9'48998	39	9'51178	43	10'48822	9'97821	4	0
		39		43			4	
	Cosine.		Cotang.		Tangent.	Sine.		

[72 degrees.]

## [18 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°48998		9°51178		10°48822	9°97821		60
1	9°49037	39	9°51221	43	10°48779	9°97817	4	59
2	9°49076	39	9°51264	43	10°48736	9°97812	5	58
		39		42			4	
3	9°49115	38	9°51306	43	10°48694	9°97808	4	57
4	9°49153	39	9°51349	43	10°48651	9°97804	4	56
5	9°49192	39	9°51392	43	10°48608	9°97800	4	55
		39		43			4	
6	9°49231	38	9°51435	43	10°48565	9°97796	4	54
7	9°49269	39	9°51478	42	10°48522	9°97792	4	53
8	9°49308	39	9°51520	42	10°48480	9°97788	4	52
		39		43			4	
9	9°49347	38	9°51563	43	10°48437	9°97784	5	51
10	9°49385	39	9°51606	42	10°48394	9°97779	4	50
11	9°49424	38	9°51648	43	10°48352	9°97775	4	49
		38		43			4	
12	9°49462	38	9°51691	43	10°48309	9°97771	4	48
13	9°49500	39	9°51734	42	10°48266	9°97767	4	47
14	9°49539	38	9°51776	43	10°48224	9°97763	4	46
		38		42			4	
15	9°49577	38	9°51819	42	10°48181	9°97759	5	45
16	9°49615	39	9°51861	42	10°48139	9°97754	4	44
17	9°49654	38	9°51903	43	10°48097	9°97750	4	43
		38		42			4	
18	9°49692	38	9°51946	42	10°48054	9°97746	4	42
19	9°49730	38	9°51988	43	10°48012	9°97742	4	41
20	9°49768	38	9°52031	42	10°47969	9°97738	4	40
		38		42			4	
21	9°49806	38	9°52073	42	10°47927	9°97734	5	39
22	9°49844	38	9°52115	42	10°47885	9°97729	4	38
23	9°49882	38	9°52157	43	10°47843	9°97725	4	37
		38		42			4	
24	9°49920	38	9°52200	42	10°47800	9°97721	4	36
25	9°49958	38	9°52242	42	10°47758	9°97717	4	35
26	9°49996	38	9°52284	42	10°47716	9°97713	4	34
		38		42			5	
27	9°50034	38	9°52326	42	10°47674	9°97708	4	33
28	9°50072	38	9°52368	42	10°47632	9°97704	4	32
29	9°50110	38	9°52410	42	10°47590	9°97700	4	31
30	9°50148		9°52452		10°47548	9°97696		30
	Cosine.		Cotang.		Tangent.	Sine.		

## [71 degrees.]

[18 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9°50148		9°52452		10°47548	9°97696		30
31	9°50185	37	9°52494	42	10°47506	9°97691	5	29
32	9°50223	38	9°52536	42	10°47464	9°97687	4	28
		38		42			4	
33	9°50261	37	9°52578	42	10°47422	9°97683	4	27
34	9°50298	37	9°52620	42	10°47380	9°97679	4	26
35	9°50336	38	9°52661	41	10°47339	9°97674	5	25
		38		42			4	
36	9°50374	37	9°52703	42	10°47297	9°97670	4	24
37	9°50411	37	9°52745	42	10°47255	9°97666	4	23
38	9°50449	38	9°52787	42	10°47213	9°97662	4	22
		37		42			5	
39	9°50486	37	9°52829	41	10°47171	9°97657	4	21
40	9°50523	38	9°52870	42	10°47130	9°97653	4	20
41	9°50561	37	9°52912	41	10°47088	9°97649	4	19
		37		42			4	
42	9°50598	37	9°52953	42	10°47047	9°97645	5	18
43	9°50635	38	9°52995	42	10°47005	9°97640	4	17
44	9°50673	37	9°53037	41	10°46963	9°97636	4	16
		37		42			4	
45	9°50710	37	9°53078	42	10°46922	9°97632	4	15
46	9°50747	37	9°53120	41	10°46880	9°97628	4	14
47	9°50784	37	9°53161	41	10°46839	9°97623	5	13
		37		41			4	
48	9°50821	37	9°53202	42	10°46798	9°97619	4	12
49	9°50858	38	9°53244	41	10°46756	9°97615	4	11
50	9°50896	37	9°53285	42	10°46715	9°97610	5	10
		37		42			4	
51	9°50933	37	9°53327	41	10°46673	9°97606	4	9
52	9°50970	37	9°53368	41	10°46632	9°97602	4	8
53	9°51007	36	9°53409	41	10°46591	9°97597	5	7
		37		41			4	
54	9°51043	37	9°53450	42	10°46550	9°97593	4	6
55	9°51080	37	9°53492	41	10°46508	9°97589	4	5
56	9°51117	37	9°53533	41	10°46467	9°97584	5	4
		37		41			4	
57	9°51154	37	9°53574	41	10°46426	9°97580	4	3
58	9°51191	36	9°53615	41	10°46385	9°97576	4	2
59	9°51227	37	9°53656	41	10°46344	9°97571	5	1
60	9°51264	37	9°53697	41	10°46303	9°97567	4	0
	Cosine.		Cotang.		Tangent.	Sine.		

[71 degrees.]

[19 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°51264		9°53697		10°46303	9°97567		60
1	9°51301	37	9°53738	41	10°46262	9°97563	4	59
2	9°51338	37	9°53779	41	10°46221	9°97558	5	58
		36		41			4	
3	9°51374	37	9°53820	41	10°46180	9°97554	4	57
4	9°51411	37	9°53861	41	10°46139	9°97550	4	56
5	9°51447	36	9°53902	41	10°46098	9°97545	5	55
		37		41			4	
6	9°51484	36	9°53943	41	10°46057	9°97541	5	54
7	9°51520	37	9°53984	41	10°46016	9°97536	4	53
8	9°51557	37	9°54025	41	10°45975	9°97532	4	52
		36		40			4	
9	9°51593	36	9°54065	41	10°45935	9°97528	5	51
10	9°51629	37	9°54106	41	10°45894	9°97523	4	50
11	9°51666	37	9°54147	41	10°45853	9°97519	4	49
		36		40			4	
12	9°51702	36	9°54187	41	10°45813	9°97515	5	48
13	9°51738	36	9°54228	41	10°45772	9°97510	4	47
14	9°51774	36	9°54269	41	10°45731	9°97506	4	46
		37		40			5	
15	9°51811	36	9°54309	41	10°45691	9°97501	4	45
16	9°51847	36	9°54350	41	10°45650	9°97497	5	44
17	9°51883	36	9°54390	41	10°45610	9°97492	4	43
		36		41			4	
18	9°51919	36	9°54431	40	10°45569	9°97488	4	42
19	9°51955	36	9°54471	41	10°45529	9°97484	5	41
20	9°51991	36	9°54512	41	10°45488	9°97479	4	40
		36		40			4	
21	9°52027	36	9°54552	41	10°45448	9°97475	5	39
22	9°52063	36	9°54593	40	10°45407	9°97470	4	38
23	9°52099	36	9°54633	40	10°45367	9°97466	5	37
		36		40			4	
24	9°52135	36	9°54673	41	10°45327	9°97461	4	36
25	9°52171	36	9°54714	40	10°45286	9°97457	4	35
26	9°52207	35	9°54754	40	10°45246	9°97453	5	34
		36		41			4	
27	9°52242	36	9°54794	41	10°45206	9°97448	4	33
28	9°52278	36	9°54835	40	10°45165	9°97444	5	32
29	9°52314	36	9°54875	40	10°45125	9°97439	4	31
30	9°52350	36	9°54915	40	10°45085	9°97435	4	30
	Cosine.		Tangent.		Cotang.	Sine.		

[70 degrees.]

[19 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°52350	35	9°54915	40	10°45085	9°97435	5	30
31	9°52385	36	9°54955	40	10°45045	9°97430	4	29
32	9°52421	35	9°54995	40	10°45005	9°97426	4	28
		35		40			5	
33	9°52456	36	9°55035	40	10°44965	9°97421	4	27
34	9°52492	35	9°55075	40	10°44925	9°97417	4	26
35	9°52527	36	9°55115	40	10°44885	9°97412	5	25
		36		40			4	
36	9°52563	35	9°55155	40	10°44845	9°97408	5	24
37	9°52598	36	9°55195	40	10°44805	9°97403	4	23
38	9°52634	35	9°55235	40	10°44765	9°97399	4	22
		35		40			5	
39	9°52669	36	9°55275	40	10°44725	9°97394	4	21
40	9°52705	35	9°55315	40	10°44685	9°97390	5	20
41	9°52740	35	9°55355	40	10°44645	9°97385	4	19
		35		40			4	
42	9°52775	36	9°55395	39	10°44605	9°97381	5	18
43	9°52811	35	9°55434	40	10°44566	9°97376	4	17
44	9°52846	35	9°55474	40	10°44526	9°97372	4	16
		35		40			5	
45	9°52881	35	9°55514	40	10°44486	9°97367	4	15
46	9°52916	35	9°55554	39	10°44446	9°97363	5	14
47	9°52951	35	9°55593	40	10°44407	9°97358	5	13
		35		40			5	
48	9°52986	35	9°55633	40	10°44367	9°97353	4	12
49	9°53021	35	9°55673	39	10°44327	9°97349	5	11
50	9°53056	36	9°55712	40	10°44288	9°97344	4	10
		34		39			5	
51	9°53092	35	9°55752	40	10°44248	9°97340	4	9
52	9°53126	35	9°55791	40	10°44209	9°97335	4	8
53	9°53161	35	9°55831	39	10°44169	9°97331	5	7
		35		40			5	
54	9°53196	35	9°55870	40	10°44130	9°97326	4	6
55	9°53231	35	9°55910	39	10°44090	9°97322	5	5
56	9°53266	35	9°55949	40	10°44051	9°97317	5	4
		35		40			5	
57	9°53301	35	9°55989	39	10°44011	9°97312	4	3
58	9°53336	34	9°56028	39	10°43972	9°97308	5	2
59	9°53370	35	9°56067	40	10°43933	9°97303	4	1
60	9°53405		9°56107		10°43893	9°97299		0
	Cosine.		Cotang.		Tangent.	Sine.		

[70 degrees.]

[20 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°53405	35	9°56107	39	10°43893	9°97299	5	60
1	9°53440	35	9°56146	39	10°43854	9°97294	5	59
2	9°53475	34	9°56185	39	10°43815	9°97289	5	58
3	9°53509	35	9°56224	40	10°43776	9°97285	4	57
4	9°53544	34	9°56264	39	10°43736	9°97280	5	56
5	9°53578	35	9°56303	39	10°43697	9°97276	4	55
6	9°53613	34	9°56342	39	10°43658	9°97271	5	54
7	9°53647	35	9°56381	39	10°43619	9°97266	5	53
8	9°53682	34	9°56420	39	10°43580	9°97262	4	52
9	9°53716	35	9°56459	39	10°43541	9°97257	5	51
10	9°53751	34	9°56498	39	10°43502	9°97252	5	50
11	9°53785	34	9°56537	39	10°43463	9°97248	4	49
12	9°53819	35	9°56576	39	10°43424	9°97243	5	48
13	9°53854	34	9°56615	39	10°43385	9°97238	4	47
14	9°53888	34	9°56654	39	10°43346	9°97234	5	46
15	9°53922	35	9°56693	39	10°43307	9°97229	5	45
16	9°53957	34	9°56732	39	10°43268	9°97224	4	44
17	9°53991	34	9°56771	39	10°43229	9°97220	5	43
18	9°54025	34	9°56810	39	10°43190	9°97215	5	42
19	9°54059	34	9°56849	38	10°43151	9°97210	4	41
20	9°54093	34	9°56887	39	10°43113	9°97206	5	40
21	9°54127	34	9°56926	39	10°43074	9°97201	5	39
22	9°54161	34	9°56965	39	10°43035	9°97196	4	38
23	9°54195	34	9°57004	38	10°42996	9°97192	5	37
24	9°54229	34	9°57042	39	10°42958	9°97187	5	36
25	9°54263	34	9°57081	39	10°42919	9°97182	4	35
26	9°54297	34	9°57120	38	10°42880	9°97178	5	34
27	9°54331	34	9°57158	39	10°42842	9°97173	5	33
28	9°54365	34	9°57197	38	10°42803	9°97168	5	32
29	9°54399	34	9°57235	39	10°42765	9°97163	4	31
30	9°54433		9°57274		10°42726	9°97159		30
	Cosine.		Cotang.		Tangent.	Sine.		

[69 degrees.]

[20 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9'54433		9'57274		10'42726	9'97159		30
31	9'54466	33	9'57312	38	10'42688	9'97154	5	29
32	9'54500	34	9'57351	39	10'42649	9'97149	5	28
		34		38			4	
33	9'54534	33	9'57389	39	10'42611	9'97145	5	27
34	9'54567	34	9'57428	38	10'42572	9'97140	5	26
35	9'54601	34	9'57466	38	10'42534	9'97135	5	25
		33		39			4	
36	9'54635	33	9'57504	39	10'42496	9'97130	4	24
37	9'54668	34	9'57543	38	10'42457	9'97126	5	23
38	9'54702	33	9'57581	38	10'42419	9'97121	5	22
		34		38			5	
39	9'54735	34	9'57619	39	10'42381	9'97116	5	21
40	9'54769	33	9'57658	38	10'42342	9'97111	4	20
41	9'54802	34	9'57696	38	10'42304	9'97107	5	19
		33		38			5	
42	9'54836	33	9'57734	38	10'42266	9'97102	5	18
43	9'54869	34	9'57772	38	10'42228	9'97097	5	17
44	9'54903	33	9'57810	39	10'42190	9'97092	5	16
		33		38			5	
45	9'54936	33	9'57849	38	10'42151	9'97087	4	15
46	9'54969	34	9'57887	38	10'42113	9'97083	5	14
47	9'55003	33	9'57925	38	10'42075	9'97078	5	13
		33		38			5	
48	9'55036	33	9'57963	38	10'42037	9'97073	5	12
49	9'55069	33	9'58001	38	10'41999	9'97068	5	11
50	9'55102	34	9'58039	38	10'41961	9'97063	4	10
		33		38			5	
51	9'55136	33	9'58077	38	10'41923	9'97059	5	9
52	9'55169	33	9'58115	38	10'41885	9'97054	5	8
53	9'55202	33	9'58153	38	10'41847	9'97049	5	7
		33		38			5	
54	9'55235	33	9'58191	38	10'41809	9'97044	5	6
55	9'55268	33	9'58229	38	10'41771	9'97039	4	5
56	9'55301	33	9'58267	37	10'41733	9'97035	5	4
		33		38			5	
57	9'55334	33	9'58304	38	10'41696	9'97030	5	3
58	9'55367	33	9'58342	38	10'41658	9'97025	5	2
59	9'55400	33	9'58380	38	10'41620	9'97020	5	1
60	9'55433	33	9'58418		10'41582	9'97015		0
	Cosine.		Cotang.		Tangent.	Sine.		

[69 degrees.]

[21 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	'
0	9°55433		9°58418		10°41582	9°97015	D.	60
1	9°55466	33	9°58455	37	10°41545	9°97010	5	59
2	9°55499	33	9°58493	38	10°41507	9°97005	5	58
		33		38			4	
3	9°55532	32	9°58531	38	10°41469	9°97001	5	57
4	9°55564	33	9°58569	37	10°41431	9°96996	5	56
5	9°55597	33	9°58606	38	10°41394	9°96991	5	55
		33		38			5	
6	9°55630	33	9°58644	37	10°41356	9°96986	5	54
7	9°55663	32	9°58681	38	10°41319	9°96981	5	53
8	9°55695	33	9°58719	38	10°41281	9°96976	5	52
		33		37			5	
9	9°55728	33	9°58757	37	10°41243	9°96971	5	51
10	9°55761	32	9°58794	38	10°41206	9°96966	4	50
11	9°55793	33	9°58832	37	10°41168	9°96962	5	49
		32		38			5	
12	9°55826	32	9°58869	38	10°41131	9°96957	5	48
13	9°55858	33	9°58907	37	10°41093	9°96952	5	47
14	9°55891	32	9°58944	37	10°41056	9°96947	5	46
		33		38			5	
15	9°55923	33	9°58981	38	10°41019	9°96942	5	45
16	9°55956	32	9°59019	37	10°40981	9°96937	5	44
17	9°55988	33	9°59056	38	10°40944	9°96932	5	43
		32		37			5	
18	9°56021	32	9°59094	37	10°40906	9°96927	5	42
19	9°56053	32	9°59131	37	10°40869	9°96922	5	41
20	9°56085	33	9°59168	37	10°40832	9°96917	5	40
		32		38			5	
21	9°56118	32	9°59205	38	10°40795	9°96912	5	39
22	9°56150	32	9°59243	37	10°40757	9°96907	4	38
23	9°56182	33	9°59280	37	10°40720	9°96903	5	37
		32		37			5	
24	9°56215	32	9°59317	37	10°40683	9°96898	5	36
25	9°56247	32	9°59354	37	10°40646	9°96893	5	35
26	9°56279	32	9°59391	38	10°40609	9°96888	5	34
		32		37			5	
27	9°56311	32	9°59429	37	10°40571	9°96883	5	33
28	9°56343	32	9°59466	37	10°40534	9°96878	5	32
29	9°56375	33	9°59503	37	10°40497	9°96873	5	31
30	9°56408		9°59540		10°40460	9°96868		30
	Cosine.		Cotang.		Tangent.	Sine.		'

[68 degrees.]



[21 degree.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°56408	32	9°59540	37	10°40460	9°96868	5	30
31	9°56440	32	9°59577	37	10°40423	9°96863	5	29
32	9°56472	32	9°59614	37	10°40386	9°96858	5	28
33	9°56504	32	9°59651	37	10°40349	9°96853	5	27
34	9°56536	32	9°59688	37	10°40312	9°96848	5	26
35	9°56568	31	9°59725	37	10°40275	9°96843	5	25
36	9°56599	32	9°59762	37	10°40238	9°96838	5	24
37	9°56631	32	9°59799	36	10°40201	9°96833	5	23
38	9°56663	32	9°59835	37	10°40165	9°96828	5	22
39	9°56695	32	9°59872	37	10°40128	9°96823	5	21
40	9°56727	32	9°59909	37	10°40091	9°96818	5	20
41	9°56759	31	9°59946	37	10°40054	9°96813	5	19
42	9°56790	32	9°59983	36	10°40017	9°96808	5	18
43	9°56822	32	9°60019	37	10°39981	9°96803	5	17
44	9°56854	32	9°60056	37	10°39944	9°96798	5	16
45	9°56886	31	9°60093	37	10°39907	9°96793	5	15
46	9°56917	32	9°60130	36	10°39870	9°96788	5	14
47	9°56949	31	9°60166	37	10°39834	9°96783	5	13
48	9°56980	32	9°60203	37	10°39797	9°96778	6	12
49	9°57012	32	9°60240	36	10°39760	9°96772	5	11
50	9°57044	31	9°60276	37	10°39724	9°96767	5	10
51	9°57075	32	9°60313	36	10°39687	9°96762	5	9
52	9°57107	31	9°60349	37	10°39651	9°96757	5	8
53	9°57138	31	9°60386	36	10°39614	9°96752	5	7
54	9°57169	32	9°60422	37	10°39578	9°96747	5	6
55	9°57201	31	9°60459	36	10°39541	9°96742	5	5
56	9°57232	32	9°60495	37	10°39505	9°96737	5	4
57	9°57264	31	9°60532	36	10°39468	9°96732	5	3
58	9°57295	31	9°60568	37	10°39432	9°96727	5	2
59	9°57326	32	9°60605	36	10°39395	9°96722	5	1
60	9°57358		9°60641		10°39359	9°96717		0
	Cosine.		Cotang.		Tangent.	Sine.		

[68 degrees.]

[22 degrees.]

'	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	'
0	9°57358		9°60641		10°39359	9°96717		60
1	9°57389	31	9°60677	36	10°39323	9°96711	6	59
2	9°57420	31	9°60714	37	10°39286	9°96706	5	58
		31		36			5	
3	9°57451	31	9°60750	36	10°39250	9°96701	5	57
4	9°57482	32	9°60786	37	10°39214	9°96696	5	56
5	9°57514	31	9°60823	36	10°39177	9°96691	5	55
		31		36			5	
6	9°57545	31	9°60859	36	10°39141	9°96686	5	54
7	9°57576	31	9°60895	36	10°39105	9°96681	5	53
8	9°57607	31	9°60931	36	10°39069	9°96676	6	52
		31		37			5	
9	9°57638	31	9°60967	37	10°39033	9°96670	5	51
10	9°57669	31	9°61004	36	10°38996	9°96665	5	50
11	9°57700	31	9°61040	36	10°38960	9°96660	5	49
		31		36			5	
12	9°57731	31	9°61076	36	10°38924	9°96655	5	48
13	9°57762	31	9°61112	36	10°38888	9°96650	5	47
14	9°57793	31	9°61148	36	10°38852	9°96645	5	46
		31		36			5	
15	9°57824	31	9°61184	36	10°38816	9°96640	6	45
16	9°57855	30	9°61220	36	10°38780	9°96634	5	44
17	9°57885	31	9°61256	36	10°38744	9°96629	5	43
		31		36			5	
18	9°57916	31	9°61292	36	10°38708	9°96624	5	42
19	9°57947	31	9°61328	36	10°38672	9°96619	5	41
20	9°57978	30	9°61364	36	10°38636	9°96614	6	40
		31		36			5	
21	9°58008	31	9°61400	36	10°38600	9°96608	5	39
22	9°58039	31	9°61436	36	10°38564	9°96603	5	38
23	9°58070	31	9°61472	36	10°38528	9°96598	5	37
		31		36			5	
24	9°58101	30	9°61508	36	10°38492	9°96593	5	36
25	9°58131	31	9°61544	35	10°38456	9°96588	6	35
26	9°58162	30	9°61579	36	10°38421	9°96582	5	34
		31		36			5	
27	9°58192	31	9°61615	36	10°38385	9°96577	5	33
28	9°58223	30	9°61651	36	10°38349	9°96572	5	32
29	9°58253	31	9°61687	35	10°38313	9°96567	5	31
30	9°58284		9°61722		10°38278	9°96562		30
'	Cosine.		Cotang.		Tangent.	Sine.		'

[67 degrees.]

[22 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°58284		9°61722		10°38278	9°96562		30
31	9°58314	30	9°61758	36	10°38242	9°96556	6	29
32	9°58345	31	9°61794	36	10°38206	9°96551	5	28
		30		36			5	
33	9°58375		9°61830		10°38170	9°96546		27
34	9°58406	31	9°61865	35	10°38135	9°96541	5	26
35	9°58436	30	9°61901	36	10°38099	9°96535	6	25
		31		35			5	
36	9°58467		9°61936		10°38064	9°96530		24
37	9°58497	30	9°61972	36	10°38028	9°96525	5	23
38	9°58527	30	9°62008	36	10°37992	9°96520	6	22
		30		35			5	
39	9°58557	31	9°62043	36	10°37957	9°96514	6	21
40	9°58588	30	9°62079	35	10°37921	9°96509	5	20
41	9°58618	30	9°62114	36	10°37886	9°96504	6	19
		30		35			5	
42	9°58648		9°62150		10°37850	9°96498		18
43	9°58678	31	9°62185	36	10°37815	9°96493	5	17
44	9°58709	30	9°62221	35	10°37779	9°96488	6	16
		30		36			5	
45	9°58739		9°62256		10°37744	9°96483		15
46	9°58769	30	9°62292	35	10°37708	9°96477	6	14
47	9°58799	30	9°62327	35	10°37673	9°96472	5	13
		30		36			5	
48	9°58829		9°62362		10°37638	9°96467		12
49	9°58859	30	9°62398	36	10°37602	9°96461	6	11
50	9°58889	30	9°62433	35	10°37567	9°96456	5	10
		30		35			5	
51	9°58919		9°62468		10°37532	9°96451		9
52	9°58949	30	9°62504	36	10°37496	9°96445	6	8
53	9°58979	30	9°62539	35	10°37461	9°96440	5	7
		30		35			5	
54	9°59009		9°62574		10°37426	9°96435		6
55	9°59039	30	9°62609	35	10°37391	9°96429	6	5
56	9°59069	30	9°62645	36	10°37355	9°96424	5	4
		29		35			5	
57	9°59098		9°62680		10°37320	9°96419		3
58	9°59128	30	9°62715	35	10°37285	9°96413	6	2
59	9°59158	30	9°62750	35	10°37250	9°96408	5	1
60	9°59188	30	9°62785	35	10°37215	9°96403	5	0
	Cosine.		Cotang.		Tangent.	Sine.		

[67 degrees.]

[23 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
0	9°59188		9°62785		10°37215	9°96403		60
1	9°59218	30	9°62820	35	10°37180	9°96397	6	59
2	9°59247	29	9°62855	35	10°37145	9°96392	5	58
		30		35			5	
3	9°59277	30	9°62890	36	10°37110	9°96387	6	57
4	9°59307	29	9°62926	35	10°37074	9°96381	5	56
5	9°59336	30	9°62961	35	10°37039	9°96376	6	55
		30		35			6	
6	9°59366	30	9°62996	35	10°37004	9°96370	5	54
7	9°59396	29	9°63031	35	10°36969	9°96365	5	53
8	9°59425	30	9°63066	35	10°36934	9°96360	5	52
		30		35			6	
9	9°59455	29	9°63101	34	10°36899	9°96354	5	51
10	9°59484	30	9°63135	35	10°36865	9°96349	6	50
11	9°59514	29	9°63170	35	10°36830	9°96343	5	49
		30		35			5	
12	9°59543	30	9°63205	35	10°36795	9°96338	6	48
13	9°59573	29	9°63240	35	10°36760	9°96333	5	47
14	9°59602	30	9°63275	35	10°36725	9°96327	6	46
		30		35			5	
15	9°59632	29	9°63310	35	10°36690	9°96322	6	45
16	9°59661	29	9°63345	34	10°36655	9°96316	5	44
17	9°59690	30	9°63379	35	10°36621	9°96311	6	43
		30		35			6	
18	9°59720	29	9°63414	35	10°36586	9°96305	5	42
19	9°59749	29	9°63449	35	10°36551	9°96300	5	41
20	9°59778	29	9°63484	35	10°36516	9°96294	6	40
		30		35			5	
21	9°59808	29	9°63519	34	10°36481	9°96289	5	39
22	9°59837	29	9°63553	35	10°36447	9°96284	6	38
23	9°59866	29	9°63588	35	10°36412	9°96278	5	37
		30		35			5	
24	9°59895	29	9°63623	34	10°36377	9°96273	6	36
25	9°59924	30	9°63657	35	10°36343	9°96267	5	35
26	9°59954	29	9°63692	34	10°36308	9°96262	6	34
		30		34			6	
27	9°59983	29	9°63726	35	10°36274	9°96256	5	33
28	9°60012	29	9°63761	35	10°36239	9°96251	6	32
29	9°60041	29	9°63796	35	10°36204	9°96245	5	31
30	9°60070	29	9°63830	34	10°36170	9°96240	5	30
		30		34			5	
	Cosine.		Cotang.		Tangent.	Sine.		

[66 degrees.]

[23 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9.60070	29	9.63830	35	10.36170	9.96240	6	30
31	9.60099	29	9.63865	34	10.36135	9.96234	5	29
32	9.60128	29	9.63899	35	10.36101	9.96229	6	28
33	9.60157	29	9.63934	34	10.36066	9.96223	5	27
34	9.60186	29	9.63968	35	10.36032	9.96218	6	26
35	9.60215	29	9.64003	34	10.35997	9.96212	5	25
36	9.60244	29	9.64037	35	10.35963	9.96207	6	24
37	9.60273	29	9.64072	34	10.35928	9.96201	5	23
38	9.60302	29	9.64106	34	10.35894	9.96196	6	22
39	9.60331	28	9.64140	35	10.35860	9.96190	5	21
40	9.60359	29	9.64175	34	10.35825	9.96185	6	20
41	9.60388	29	9.64209	34	10.35791	9.96179	5	19
42	9.60417	29	9.64243	35	10.35757	9.96174	6	18
43	9.60446	28	9.64278	34	10.35722	9.96168	6	17
44	9.60474	29	9.64312	34	10.35688	9.96162	5	16
45	9.60503	29	9.64346	35	10.35654	9.96157	6	15
46	9.60532	29	9.64381	34	10.35619	9.96151	5	14
47	9.60561	28	9.64415	34	10.35585	9.96146	6	13
48	9.60589	29	9.64449	34	10.35551	9.96140	5	12
49	9.60618	28	9.64483	34	10.35517	9.96135	6	11
50	9.60646	29	9.64517	35	10.35483	9.96129	6	10
51	9.60675	29	9.64552	34	10.35448	9.96123	5	9
52	9.60704	28	9.64586	34	10.35414	9.96118	6	8
53	9.60732	29	9.64620	34	10.35380	9.96112	5	7
54	9.60761	28	9.64654	34	10.35346	9.96107	6	6
55	9.60789	29	9.64688	34	10.35312	9.96101	6	5
56	9.60818	28	9.64722	34	10.35278	9.96095	5	4
57	9.60846	29	9.64756	34	10.35244	9.96090	6	3
58	9.60875	28	9.64790	34	10.35210	9.96084	5	2
59	9.60903	28	9.64824	34	10.35176	9.96079	6	1
60	9.60931	28	9.64858	34	10.35142	9.96073	6	0
'	Cosine.		Cotang.		Tangent.	Sine.		'

## [24 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°60931		9°64858		10°35142	9°96073		60
1	9°60960	29	9°64892	34	10°35108	9°96067	6	59
2	9°60988	28	9°64926	34	10°35074	9°96062	5	58
		28		34			6	
3	9°61016	29	9°64960	34	10°35040	9°96056	6	57
4	9°61045	28	9°64994	34	10°35006	9°96050	5	56
5	9°61073	28	9°65028	34	10°34972	9°96045	6	55
		28		34			5	
6	9°61101	28	9°65062	34	10°34938	9°96039	6	54
7	9°61129	29	9°65096	34	10°34904	9°96034	5	53
8	9°61158	28	9°65130	34	10°34870	9°96028	6	52
		28		34			5	
9	9°61186	28	9°65164	33	10°34836	9°96022	6	51
10	9°61214	28	9°65197	34	10°34803	9°96017	5	50
11	9°61242	28	9°65231	34	10°34769	9°96011	6	49
		28		34			5	
12	9°61270	28	9°65265	34	10°34735	9°96005	6	48
13	9°61298	28	9°65299	34	10°34701	9°96000	5	47
14	9°61326	28	9°65333	33	10°34667	9°95994	6	46
		28		34			6	
15	9°61354	28	9°65366	34	10°34634	9°95988	6	45
16	9°61382	29	9°65400	34	10°34600	9°95982	5	44
17	9°61411	27	9°65434	33	10°34566	9°95977	6	43
		28		34			6	
18	9°61438	28	9°65467	34	10°34533	9°95971	6	42
19	9°61466	28	9°65501	34	10°34499	9°95965	5	41
20	9°61494	28	9°65535	33	10°34465	9°95960	6	40
		28		34			6	
21	9°61522	28	9°65568	34	10°34432	9°95954	6	39
22	9°61550	28	9°65602	34	10°34398	9°95948	6	38
23	9°61578	28	9°65636	33	10°34364	9°95942	5	37
		28		34			6	
24	9°61606	28	9°65669	34	10°34331	9°95937	6	36
25	9°61634	28	9°65703	33	10°34297	9°95931	6	35
26	9°61662	27	9°65736	34	10°34264	9°95925	5	34
		28		33			6	
27	9°61689	28	9°65770	33	10°34230	9°95920	6	33
28	9°61717	28	9°65803	34	10°34197	9°95914	6	32
29	9°61745	28	9°65837	33	10°34163	9°95908	6	31
30	9°61773		9°65870		10°34130	9°95902		30
	Cosine.		Cotang.		Tangent.	Sine.		

## [65 degrees.]

[24 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9·61773		9·65870		10·34130	9·95902		30
31	9·61800	27	9·65904	34	10·34096	9·95897	5	29
32	9·61828	28	9·65937	33	10·34063	9·95891	6	28
		28		34			6	
33	9·61856	27	9·65971	33	10·34029	9·95885	6	27
34	9·61883	28	9·66004	33	10·33996	9·95879	6	26
35	9·61911	28	9·66038	34	10·33962	9·95873	5	25
		28		33			6	
36	9·61939	27	9·66071	33	10·33929	9·95868	6	24
37	9·61966	28	9·66104	33	10·33896	9·95862	6	23
38	9·61994	27	9·66138	34	10·33862	9·95856	6	22
		28		33			6	
39	9·62021	28	9·66171	33	10·33829	9·95850	6	21
40	9·62049	27	9·66204	33	10·33796	9·95844	5	20
41	9·62076	28	9·66238	34	10·33762	9·95839	6	19
		27		33			6	
42	9·62104	27	9·66271	33	10·33729	9·95833	6	18
43	9·62131	28	9·66304	33	10·33696	9·95827	6	17
44	9·62159	27	9·66337	34	10·33663	9·95821	6	16
		28		33			6	
45	9·62186	28	9·66371	33	10·33629	9·95815	5	15
46	9·62214	27	9·66404	33	10·33596	9·95810	6	14
47	9·62241	27	9·66437	33	10·33563	9·95804	6	13
		28		33			6	
48	9·62268	28	9·66470	33	10·33530	9·95798	6	12
49	9·62296	27	9·66503	33	10·33497	9·95792	6	11
50	9·62323	27	9·66537	34	10·33463	9·95786	6	10
		27		33			6	
51	9·62350	27	9·66570	33	10·33430	9·95780	5	9
52	9·62377	28	9·66603	33	10·33397	9·95775	6	8
53	9·62405	27	9·66636	33	10·33364	9·95769	6	7
		27		33			6	
54	9·62432	27	9·66669	33	10·33331	9·95763	6	6
55	9·62459	27	9·66702	33	10·33298	9·95757	6	5
56	9·62486	27	9·66735	33	10·33265	9·95751	6	4
		27		33			6	
57	9·62513	28	9·66768	33	10·33232	9·95745	6	3
58	9·62541	27	9·66801	33	10·33199	9·95739	6	2
59	9·62568	27	9·66834	33	10·33166	9·95733	5	1
60	9·62595	27	9·66867	33	10·33133	9·95728		0
	Cosine.		Cotang.		Tangent.	Sine.		

[65 degrees.]

[25 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9.62595	27	9.66867		10.33133	9.95728	6	60
1	9.62622	27	9.66900	33	10.33100	9.95722	6	59
2	9.62649	27	9.66933	33	10.33067	9.95716	6	58
3	9.62676	27	9.66966	33	10.33034	9.95710	6	57
4	9.62703	27	9.66999	33	10.33001	9.95704	6	56
5	9.62730	27	9.67032	33	10.32968	9.95698	6	55
6	9.62757	27	9.67065	33	10.32935	9.95692	6	54
7	9.62784	27	9.67098	33	10.32902	9.95686	6	53
8	9.62811	27	9.67131	32	10.32869	9.95680	6	52
9	9.62838	27	9.67163	33	10.32837	9.95674	6	51
10	9.62865	27	9.67196	33	10.32804	9.95668	5	50
11	9.62892	26	9.67229	33	10.32771	9.95663	6	49
12	9.62918	27	9.67262	33	10.32738	9.95657	6	48
13	9.62945	27	9.67295	32	10.32705	9.95651	6	47
14	9.62972	27	9.67327	33	10.32673	9.95645	6	46
15	9.62999	27	9.67360	33	10.32640	9.95639	6	45
16	9.63026	26	9.67393	33	10.32607	9.95633	6	44
17	9.63052	27	9.67426	32	10.32574	9.95627	6	43
18	9.63079	27	9.67458	33	10.32542	9.95621	6	42
19	9.63106	27	9.67491	33	10.32509	9.95615	6	41
20	9.63133	26	9.67524	32	10.32476	9.95609	6	40
21	9.63159	27	9.67556	33	10.32444	9.95603	6	39
22	9.63186	27	9.67589	33	10.32411	9.95597	6	38
23	9.63213	26	9.67622	32	10.32378	9.95591	6	37
24	9.63239	27	9.67654	33	10.32346	9.95585	6	36
25	9.63266	26	9.67687	32	10.32313	9.95579	6	35
26	9.63292	27	9.67719	33	10.32281	9.95573	6	34
27	9.63319	26	9.67752	33	10.32248	9.95567	6	33
28	9.63345	27	9.67785	32	10.32215	9.95561	6	32
29	9.63372	26	9.67817	33	10.32183	9.95555	6	31
30	9.63398		9.67850		10.32150	9.95549	6	30
	Cosine.		Cotang.		Tangent.	Sine.		

[64 degrees.]



[25 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9°63398		9°67850		10°32150	9°95549	6	30
31	9°63425	27	9°67882	32	10°32118	9°95543	6	29
32	9°63451	26	9°67915	33	10°32085	9°95537	6	28
				32			6	
33	9°63478	27	9°67947	33	10°32053	9°95531	6	27
34	9°63504	27	9°67980	33	10°32020	9°95525	6	26
35	9°63531	26	9°68012	32	10°31988	9°95519	6	25
				32			6	
36	9°63557	26	9°68044	33	10°31956	9°95513	6	24
37	9°63583	27	9°68077	32	10°31923	9°95507	7	23
38	9°63610	26	9°68109	33	10°31891	9°95500	6	22
				32			6	
39	9°63636	26	9°68142	32	10°31858	9°95494	6	21
40	9°63662	27	9°68174	32	10°31826	9°95488	6	20
41	9°63689	26	9°68206	33	10°31794	9°95482	6	19
				32			6	
42	9°63715	26	9°68239	32	10°31761	9°95476	6	18
43	9°63741	26	9°68271	32	10°31729	9°95470	6	17
44	9°63767	27	9°68303	33	10°31697	9°95464	6	16
				32			6	
45	9°63794	26	9°68336	32	10°31664	9°95458	6	15
46	9°63820	26	9°68368	32	10°31632	9°95452	6	14
47	9°63846	26	9°68400	32	10°31600	9°95446	6	13
				32			6	
48	9°63872	26	9°68432	33	10°31568	9°95440	6	12
49	9°63898	26	9°68465	32	10°31535	9°95434	7	11
50	9°63924	26	9°68497	32	10°31503	9°95427	6	10
				32			6	
51	9°63950	26	9°68529	32	10°31471	9°95421	6	9
52	9°63976	26	9°68561	32	10°31439	9°95415	6	8
53	9°64002	26	9°68593	33	10°31407	9°95409	6	7
				32			6	
54	9°64028	26	9°68626	32	10°31374	9°95403	6	6
55	9°64054	26	9°68658	32	10°31342	9°95397	6	5
56	9°64080	26	9°68690	32	10°31310	9°95391	7	4
				32			6	
57	9°64106	26	9°68722	32	10°31278	9°95384	6	3
58	9°64132	26	9°68754	32	10°31246	9°95378	6	2
59	9°64158	26	9°68786	32	10°31214	9°95372	6	1
60	9°64184		9°68818		10°31182	9°95366		0
'	Cosine.		Cotang.		Tangent.	Sine.		'

[64 degrees.]

## [26 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9·64184	26	9·68818	32	10·31182	9·95366	6	60
1	9·64210	26	9·68850	32	10·31150	9·95360	6	59
2	9·64236	26	9·68882	32	10·31118	9·95354	6	58
3	9·64262	26	9·68914	32	10·31086	9·95348	7	57
4	9·64288	25	9·68946	32	10·31054	9·95341	6	56
5	9·64313	26	9·68978	32	10·31022	9·95335	6	55
6	9·64339	26	9·69010	32	10·30990	9·95329	6	54
7	9·64365	26	9·69042	32	10·30958	9·95323	6	53
8	9·64391	26	9·69074	32	10·30926	9·95317	7	52
9	9·64417	25	9·69106	32	10·30894	9·95310	6	51
10	9·64442	26	9·69138	32	10·30862	9·95304	6	50
11	9·64468	26	9·69170	32	10·30830	9·95298	6	49
12	9·64494	25	9·69202	32	10·30798	9·95292	6	48
13	9·64519	26	9·69234	32	10·30766	9·95286	7	47
14	9·64545	26	9·69266	32	10·30734	9·95279	6	46
15	9·64571	25	9·69298	31	10·30702	9·95273	6	45
16	9·64596	26	9·69329	32	10·30671	9·95267	6	44
17	9·64622	25	9·69361	32	10·30639	9·95261	7	43
18	9·64647	26	9·69393	32	10·30607	9·95254	6	42
19	9·64673	25	9·69425	32	10·30575	9·95248	6	41
20	9·64698	26	9·69457	31	10·30543	9·95242	6	40
21	9·64724	25	9·69488	32	10·30512	9·95236	7	39
22	9·64749	26	9·69520	32	10·30480	9·95229	6	38
23	9·64775	25	9·69552	32	10·30448	9·95223	6	37
24	9·64800	26	9·69584	31	10·30416	9·95217	6	36
25	9·64826	25	9·69615	32	10·30385	9·95211	7	35
26	9·64851	26	9·69647	32	10·30353	9·95204	6	34
27	9·64877	25	9·69679	31	10·30321	9·95198	6	33
28	9·64902	25	9·69710	32	10·30290	9·95192	7	32
29	9·64927	26	9·69742	32	10·30258	9·95185	6	31
30	9·64953		9·69774	32	10·30226	9·95179		30
	Cosine.		Cotang.		Tangent.	Sine.		

## [63 degrees.]

[26 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9.64953		9.69774		10.30226	9.95179	7	30
31	9.64978	25	9.69805	31	10.30195	9.95173	6	29
32	9.65003	25	9.69837	32	10.30163	9.95167	6	28
		26		31			7	
33	9.65029	25	9.69868	32	10.30132	9.95160	6	27
34	9.65054	25	9.69900	32	10.30100	9.95154	6	26
35	9.65079	25	9.69932	31	10.30068	9.95148	6	25
		25		31			7	
36	9.65104	26	9.69963	32	10.30037	9.95141	6	24
37	9.65130	25	9.69995	31	10.30005	9.95135	6	23
38	9.65155	25	9.70026	31	10.29974	9.95129	6	22
		25		32			7	
39	9.65180	25	9.70058	31	10.29942	9.95122	6	21
40	9.65205	25	9.70089	32	10.29911	9.95116	6	20
41	9.65230	25	9.70121	31	10.29879	9.95110	6	19
		25		31			7	
42	9.65255	26	9.70152	32	10.29848	9.95103	6	18
43	9.65281	25	9.70184	31	10.29816	9.95097	6	17
44	9.65306	25	9.70215	31	10.29785	9.95090	6	16
		25		32			6	
45	9.65331	25	9.70247	31	10.29753	9.95084	6	15
46	9.65356	25	9.70278	31	10.29722	9.95078	6	14
47	9.65381	25	9.70309	31	10.29691	9.95071	6	13
		25		32			6	
48	9.65406	25	9.70341	31	10.29659	9.95065	6	12
49	9.65431	25	9.70372	31	10.29628	9.95059	6	11
50	9.65456	25	9.70404	32	10.29596	9.95052	6	10
		25		31			6	
51	9.65481	25	9.70435	31	10.29565	9.95046	6	9
52	9.65506	25	9.70466	32	10.29534	9.95039	7	8
53	9.65531	25	9.70498	31	10.29502	9.95033	6	7
		25		31			6	
54	9.65556	24	9.70529	31	10.29471	9.95027	7	6
55	9.65580	25	9.70560	32	10.29440	9.95020	6	5
56	9.65605	25	9.70592	31	10.29408	9.95014	6	4
		25		31			7	
57	9.65630	25	9.70623	31	10.29377	9.95007	6	3
58	9.65655	25	9.70654	31	10.29346	9.95001	6	2
59	9.65680	25	9.70685	31	10.29315	9.94995	6	1
60	9.65705	25	9.70717	32	10.29283	9.94988	7	0
		25					7	
	Cosine.		Cotang.		Tangent.	Sine.		

[63 degrees.]

[27 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9'65705		9'70717		10'29283	9'94988		60
1	9'65729	24	9'70748	31	10'29252	9'94982	6	59
2	9'65754	25	9'70779	31	10'29221	9'94975	7	58
		25		31			6	
3	9'65779	25	9'70810	31	10'29190	9'94969	7	57
4	9'65804	25	9'70841	31	10'29159	9'94962	6	56
5	9'65828	24	9'70873	32	10'29127	9'94956	7	55
		25		31			7	
6	9'65853	25	9'70904	31	10'29096	9'94949	6	54
7	9'65878	25	9'70935	31	10'29065	9'94943	7	53
8	9'65902	24	9'70966	31	10'29034	9'94936	7	52
		25		31			6	
9	9'65927	25	9'70997	31	10'29003	9'94930	7	51
10	9'65952	25	9'71028	31	10'28972	9'94923	6	50
11	9'65976	24	9'71059	31	10'28941	9'94917	7	49
		25		31			6	
12	9'66001	25	9'71090	31	10'28910	9'94911	7	48
13	9'66025	24	9'71121	32	10'28879	9'94904	6	47
14	9'66050	25	9'71153	31	10'28847	9'94898	7	46
		25		31			7	
15	9'66075	24	9'71184	31	10'28816	9'94891	6	45
16	9'66099	25	9'71215	31	10'28785	9'94885	7	44
17	9'66124	25	9'71246	31	10'28754	9'94878	7	43
		24		31			7	
18	9'66148	25	9'71277	31	10'28723	9'94871	6	42
19	9'66173	25	9'71308	31	10'28692	9'94865	7	41
20	9'66197	24	9'71339	31	10'28661	9'94858	7	40
		24		31			6	
21	9'66221	25	9'71370	31	10'28630	9'94852	7	39
22	9'66246	25	9'71401	30	10'28599	9'94845	6	38
23	9'66270	24	9'71431	31	10'28569	9'94839	7	37
		25		31			7	
24	9'66295	24	9'71462	31	10'28538	9'94832	6	36
25	9'66319	24	9'71493	31	10'28507	9'94826	7	35
26	9'66343	25	9'71524	31	10'28476	9'94819	6	34
		25		31			6	
27	9'66368	24	9'71555	31	10'28445	9'94813	7	33
28	9'66392	24	9'71586	31	10'28414	9'94806	7	32
29	9'66416	25	9'71617	31	10'28383	9'94799	7	31
30	9'66441	25	9'71648	31	10'28352	9'94793	6	30
	Cosine.		Cotang.		Tangent.	Sine.		

[62 degrees.]

[27 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9.66441	24	9.71648	31	10.28352	9.94793	7	30
31	9.66465	24	9.71679	30	10.28321	9.94786	6	29
32	9.66489	24	9.71709	31	10.28291	9.94780	7	28
33	9.66513	24	9.71740	31	10.28260	9.94773	6	27
34	9.66537	25	9.71771	31	10.28229	9.94767	7	26
35	9.66562	24	9.71802	31	10.28198	9.94760	7	25
36	9.66586	24	9.71833	30	10.28167	9.94753	6	24
37	9.66610	24	9.71863	31	10.28137	9.94747	7	23
38	9.66634	24	9.71894	31	10.28106	9.94740	6	22
39	9.66658	24	9.71925	30	10.28075	9.94734	7	21
40	9.66682	24	9.71955	31	10.28045	9.94727	7	20
41	9.66706	25	9.71986	31	10.28014	9.94720	6	19
42	9.66731	24	9.72017	31	10.27983	9.94714	7	18
43	9.66755	24	9.72048	30	10.27952	9.94707	7	17
44	9.66779	24	9.72078	31	10.27922	9.94700	6	16
45	9.66803	24	9.72109	31	10.27891	9.94694	7	15
46	9.66827	24	9.72140	30	10.27860	9.94687	7	14
47	9.66851	24	9.72170	31	10.27830	9.94680	6	13
48	9.66875	24	9.72201	30	10.27799	9.94674	7	12
49	9.66899	23	9.72231	31	10.27769	9.94667	7	11
50	9.66922	24	9.72262	31	10.27738	9.94660	6	10
51	9.66946	24	9.72293	30	10.27707	9.94654	7	9
52	9.66970	24	9.72323	31	10.27677	9.94647	7	8
53	9.66994	24	9.72354	30	10.27646	9.94640	6	7
54	9.67018	24	9.72384	31	10.27616	9.94634	7	6
55	9.67042	24	9.72415	30	10.27585	9.94627	7	5
56	9.67066	24	9.72445	31	10.27555	9.94620	6	4
57	9.67090	23	9.72476	30	10.27524	9.94614	7	3
58	9.67113	24	9.72506	31	10.27494	9.94607	7	2
59	9.67137	24	9.72537	30	10.27463	9.94600	7	1
60	9.67161	24	9.72567	30	10.27433	9.94593	7	0
	Cosine.		Cotang.		Tangent.	Sine.		

[62 degrees.]

[28 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	m.
0	9·67161	24	9·72567	31	10·27433	9·94593	6	60
1	9·67185	23	9·72598	30	10·27402	9·94587	7	59
2	9·67208	24	9·72628	31	10·27372	9·94580	7	58
3	9·67232	24	9·72659	30	10·27341	9·94573	6	57
4	9·67256	24	9·72689	31	10·27311	9·94567	7	56
5	9·67280	24	9·72720	30	10·27280	9·94560	7	55
6	9·67303	23	9·72750	30	10·27250	9·94553	7	54
7	9·67327	24	9·72780	31	10·27220	9·94546	6	53
8	9·67350	23	9·72811	30	10·27189	9·94540	7	52
9	9·67374	24	9·72841	31	10·27159	9·94533	7	51
10	9·67398	24	9·72872	30	10·27128	9·94526	7	50
11	9·67421	23	9·72902	30	10·27098	9·94519	6	49
12	9·67445	24	9·72932	31	10·27068	9·94513	7	48
13	9·67468	23	9·72963	30	10·27037	9·94506	7	47
14	9·67492	24	9·72993	30	10·27007	9·94499	7	46
15	9·67515	23	9·73023	31	10·26977	9·94492	7	45
16	9·67539	24	9·73054	30	10·26946	9·94485	6	44
17	9·67562	23	9·73084	30	10·26916	9·94479	7	43
18	9·67586	24	9·73114	30	10·26886	9·94472	7	42
19	9·67609	23	9·73144	31	10·26856	9·94465	7	41
20	9·67633	24	9·73175	30	10·26825	9·94458	7	40
21	9·67656	23	9·73205	30	10·26795	9·94451	6	39
22	9·67680	24	9·73235	30	10·26765	9·94445	7	38
23	9·67703	23	9·73265	30	10·26735	9·94438	7	37
24	9·67726	24	9·73295	31	10·26705	9·94431	7	36
25	9·67750	23	9·73326	30	10·26674	9·94424	7	35
26	9·67773	24	9·73356	30	10·26644	9·94417	7	34
27	9·67796	23	9·73386	30	10·26614	9·94410	6	33
28	9·67820	24	9·73416	30	10·26584	9·94404	7	32
29	9·67843	23	9·73446	30	10·26554	9·94397	7	31
30	9·67866	23	9·73476	30	10·26524	9·94390	7	30
'	Cosine.		Cotang.		Tangent.	Sine.		'

[61 degrees.]

[28 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9'67866		9'73476		10'26524	9'94390		30
31	9'67890	24	9'73507	31	10'26493	9'94383	7	29
32	9'67913	23	9'73537	30	10'26463	9'94376	7	28
		23		30			7	
33	9'67936	23	9'73567	30	10'26433	9'94369	7	27
34	9'67959	23	9'73597	30	10'26403	9'94362	7	26
35	9'67982	23	9'73627	30	10'26373	9'94355	6	25
		24		30			7	
36	9'68006	23	9'73657	30	10'26343	9'94349	7	24
37	9'68029	23	9'73687	30	10'26313	9'94342	7	23
38	9'68052	23	9'73717	30	10'26283	9'94335	7	22
		23		30			7	
39	9'68075	23	9'73747	30	10'26253	9'94328	7	21
40	9'68098	23	9'73777	30	10'26223	9'94321	7	20
41	9'68121	23	9'73807	30	10'26193	9'94314	7	19
		23		30			7	
42	9'68144	23	9'73837	30	10'26163	9'94307	7	18
43	9'68167	23	9'73867	30	10'26133	9'94300	7	17
44	9'68190	23	9'73897	30	10'26103	9'94293	7	16
		23		30			7	
45	9'68213	24	9'73927	30	10'26073	9'94286	7	15
46	9'68237	23	9'73957	30	10'26043	9'94279	6	14
47	9'68260	23	9'73987	30	10'26013	9'94273	7	13
		23		30			7	
48	9'68283	22	9'74017	30	10'25983	9'94266	7	12
49	9'68305	23	9'74047	30	10'25953	9'94259	7	11
50	9'68328	23	9'74077	30	10'25923	9'94252	7	10
		23		30			7	
51	9'68351	23	9'74107	30	10'25893	9'94245	7	9
52	9'68374	23	9'74137	29	10'25863	9'94238	7	8
53	9'68397	23	9'74166	30	10'25834	9'94231	7	7
		23		30			7	
54	9'68420	23	9'74196	30	10'25804	9'94224	7	6
55	9'68443	23	9'74226	30	10'25774	9'94217	7	5
56	9'68466	23	9'74256	30	10'25744	9'94210	7	4
		23		30			7	
57	9'68489	23	9'74286	30	10'25714	9'94203	7	3
58	9'68512	22	9'74316	29	10'25684	9'94196	7	2
59	9'68534	23	9'74345	30	10'25655	9'94189	7	1
60	9'68557		9'74375		10'25625	9'94182		0
	Cosine.		Cotang.		Tangent.	Sine.		

[61 degrees.]

[29 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°68557		9°74375		10°25625	9°94182		60
1	9°68580	23	9°74405	30	10°25595	9°94175	7	59
2	9°68603	23	9°74435	30	10°25565	9°94168	7	58
		22		30			7	
3	9°68625	23	9°74465	29	10°25535	9°94161	7	57
4	9°68648	23	9°74494	30	10°25506	9°94154	7	56
5	9°68671	23	9°74524	30	10°25476	9°94147	7	55
		22		29			7	
6	9°68694	22	9°74554	29	10°25446	9°94140	7	54
7	9°68716	23	9°74583	30	10°25417	9°94133	7	53
8	9°68739	23	9°74613	30	10°25387	9°94126	7	52
		22		30			7	
9	9°68762	22	9°74643	30	10°25357	9°94119	7	51
10	9°68784	23	9°74673	29	10°25327	9°94112	7	50
11	9°68807	22	9°74702	30	10°25298	9°94105	7	49
		23		30			7	
12	9°68829	23	9°74732	30	10°25268	9°94098	8	48
13	9°68852	23	9°74762	29	10°25238	9°94090	7	47
14	9°68875	23	9°74791	30	10°25209	9°94083	7	46
		22		30			7	
15	9°68897	23	9°74821	30	10°25179	9°94076	7	45
16	9°68920	22	9°74851	29	10°25149	9°94069	7	44
17	9°68942	23	9°74880	30	10°25120	9°94062	7	43
		22		30			7	
18	9°68965	22	9°74910	29	10°25090	9°94055	7	42
19	9°68987	23	9°74939	30	10°25061	9°94048	7	41
20	9°69010	22	9°74969	29	10°25031	9°94041	7	40
		23		30			7	
21	9°69032	23	9°74998	30	10°25002	9°94034	7	39
22	9°69055	22	9°75028	30	10°24972	9°94027	7	38
23	9°69077	23	9°75058	29	10°24942	9°94020	8	37
		22		30			7	
24	9°69100	22	9°75087	30	10°24913	9°94012	7	36
25	9°69122	22	9°75117	29	10°24883	9°94005	7	35
26	9°69144	23	9°75146	30	10°24854	9°93998	7	34
		22		29			7	
27	9°69167	22	9°75176	29	10°24824	9°93991	7	33
28	9°69189	23	9°75205	30	10°24795	9°93984	7	32
29	9°69212	22	9°75235	29	10°24765	9°93977	7	31
30	9°69234	22	9°75264		10°24736	9°93970	7	30
	Cosine.		Cotang.		Tangent.	Sine.		

[60 degrees.]



[29 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9'69234		9'75264		10'24736	9'93970		30
31	9'69256	22	9'75294	30	10'24706	9'93963	7	29
32	9'69279	23	9'75323	29	10'24677	9'93955	8	28
		22		30			7	
33	9'69301	22	9'75353	29	10'24647	9'93948	7	27
34	9'69323	22	9'75382	29	10'24618	9'93941	7	26
35	9'69345	23	9'75411	29	10'24589	9'93934	7	25
		22		30			7	
36	9'69368	22	9'75441	29	10'24559	9'93927	7	24
37	9'69390	22	9'75470	29	10'24530	9'93920	8	23
38	9'69412	22	9'75500	30	10'24500	9'93912	8	22
		22		29			7	
39	9'69434	22	9'75529	29	10'24471	9'93905	7	21
40	9'69456	23	9'75558	29	10'24442	9'93898	7	20
41	9'69479	22	9'75588	30	10'24412	9'93891	7	19
		22		29			7	
42	9'69501	22	9'75617	29	10'24383	9'93884	7	18
43	9'69523	22	9'75647	30	10'24353	9'93876	8	17
44	9'69545	22	9'75676	29	10'24324	9'93869	7	16
		22		29			7	
45	9'69567	22	9'75705	30	10'24295	9'93862	7	15
46	9'69589	22	9'75735	29	10'24265	9'93855	8	14
47	9'69611	22	9'75764	29	10'24236	9'93847	7	13
		22		29			7	
48	9'69633	22	9'75793	29	10'24207	9'93840	7	12
49	9'69655	22	9'75822	29	10'24178	9'93833	7	11
50	9'69677	22	9'75852	30	10'24148	9'93826	7	10
		22		29			7	
51	9'69699	22	9'75881	29	10'24119	9'93819	8	9
52	9'69721	22	9'75910	29	10'24090	9'93811	7	8
53	9'69743	22	9'75939	29	10'24061	9'93804	7	7
		22		30			7	
54	9'69765	22	9'75969	29	10'24031	9'93797	8	6
55	9'69787	22	9'75998	29	10'24002	9'93789	7	5
56	9'69809	22	9'76027	29	10'23973	9'93782	7	4
		22		29			7	
57	9'69831	22	9'76056	30	10'23944	9'93775	7	3
58	9'69853	22	9'76086	29	10'23914	9'93768	8	2
59	9'69875	22	9'76115	29	10'23885	9'93760	7	1
60	9'69897		9'76144		10'23856	9'93753		0
	Cosine.		Cotang.		Tangent.	Sine.		

[60 degrees.]

[30 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°69897		9°76144		10°23856	9°93753		60
1	9°69919	22	9°76173	29	10°23827	9°93746	7	59
2	9°69941	22	9°76202	29	10°23798	9°93738	8	58
		22		29			7	
3	9°69963	21	9°76231	30	10°23769	9°93731	7	57
4	9°69984	22	9°76261	29	10°23739	9°93724	7	56
5	9°70006	22	9°76290	29	10°23710	9°93717	8	55
6	9°70028	22	9°76319	29	10°23681	9°93709	7	54
7	9°70050	22	9°76348	29	10°23652	9°93702	7	53
8	9°70072	21	9°76377	29	10°23623	9°93695	8	52
9	9°70093	22	9°76406	29	10°23594	9°93687	7	51
10	9°70115	22	9°76435	29	10°23565	9°93680	7	50
11	9°70137	22	9°76464	29	10°23536	9°93673	8	49
		21		29			7	
12	9°70159	21	9°76493	29	10°23507	9°93665	7	48
13	9°70180	22	9°76522	29	10°23478	9°93658	8	47
14	9°70202	22	9°76551	29	10°23449	9°93650	7	46
		21		29			7	
15	9°70224	21	9°76580	29	10°23420	9°93643	7	45
16	9°70245	22	9°76609	30	10°23391	9°93636	8	44
17	9°70267	21	9°76639	29	10°23361	9°93628	7	43
		22		29			7	
18	9°70288	22	9°76668	29	10°23332	9°93621	7	42
19	9°70310	22	9°76697	28	10°23303	9°93614	8	41
20	9°70332	21	9°76725	29	10°23275	9°93606	7	40
		22		29			7	
21	9°70353	22	9°76754	29	10°23246	9°93599	8	39
22	9°70375	21	9°76783	29	10°23217	9°93591	7	38
23	9°70396	22	9°76812	29	10°23188	9°93584	7	37
		21		29			8	
24	9°70418	21	9°76841	29	10°23159	9°93577	8	36
25	9°70439	22	9°76870	29	10°23130	9°93569	7	35
26	9°70461	21	9°76899	29	10°23101	9°93562	8	34
		22		29			7	
27	9°70482	22	9°76928	29	10°23072	9°93554	7	33
28	9°70504	21	9°76957	29	10°23043	9°93547	8	32
29	9°70525	22	9°76986	29	10°23014	9°93539	7	31
30	9°70547		9°77015		10°22985	9°93532		30
	Cosine.		Cotang.		Tangent.	Sine.		

[59 degrees.]

## [30 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9'70547		9'77015		10'22985	9'93532		30
31	9'70568	21	9'77044	29	10'22956	9'93525	7	29
32	9'70590	22	9'77073	29	10'22927	9'93517	8	28
		21		28			7	
33	9'70611	22	9'77101	29	10'22899	9'93510	8	27
34	9'70633	21	9'77130	29	10'22870	9'93502	7	26
35	9'70654	21	9'77159	29	10'22841	9'93495	8	25
		21		29			7	
36	9'70675	22	9'77188	29	10'22812	9'93487	8	24
37	9'70697	21	9'77217	29	10'22783	9'93480	7	23
38	9'70718	21	9'77246	28	10'22754	9'93472	8	22
		22		29			7	
39	9'70739	21	9'77274	29	10'22726	9'93465	8	21
40	9'70761	21	9'77303	29	10'22697	9'93457	7	20
41	9'70782	21	9'77332	29	10'22668	9'93450	8	19
		21		29			7	
42	9'70803	21	9'77361	29	10'22639	9'93442	8	18
43	9'70824	22	9'77390	28	10'22610	9'93435	7	17
44	9'70846	21	9'77418	29	10'22582	9'93427	8	16
		21		29			7	
45	9'70867	21	9'77447	29	10'22553	9'93420	8	15
46	9'70888	21	9'77476	29	10'22524	9'93412	7	14
47	9'70909	22	9'77505	28	10'22495	9'93405	8	13
		21		29			7	
48	9'70931	21	9'77533	29	10'22467	9'93397	8	12
49	9'70952	21	9'77562	29	10'22438	9'93390	7	11
50	9'70973	21	9'77591	28	10'22409	9'93382	8	10
		21		29			7	
51	9'70994	21	9'77619	29	10'22381	9'93375	8	9
52	9'71015	21	9'77648	29	10'22352	9'93367	7	8
53	9'71036	22	9'77677	29	10'22323	9'93360	8	7
		21		28			7	
54	9'71058	21	9'77706	29	10'22294	9'93352	8	6
55	9'71079	21	9'77734	29	10'22266	9'93344	7	5
56	9'71100	21	9'77763	28	10'22237	9'93337	8	4
		21		29			7	
57	9'71121	21	9'77791	29	10'22209	9'93329	8	3
58	9'71142	21	9'77820	29	10'22180	9'93322	7	2
59	9'71163	21	9'77849	28	10'22151	9'93314	8	1
60	9'71184		9'77877		10'22123	9'93307	7	0
	Cosine.		Cotang.		Tangent.	Sine.		

## [59 degrees.]

[31 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9'71184		9'77877		10'22123	9'93307		60
1	9'71205	21	9'77906	29	10'22094	9'93299	8	59
2	9'71226	21	9'77935	29	10'22065	9'93291	8	58
		21		28			7	
3	9'71247	21	9'77963	29	10'22037	9'93284	8	57
4	9'71268	21	9'77992	28	10'22008	9'93276	7	56
5	9'71289		9'78020		10'21980	9'93269		55
		21		29			8	
6	9'71310	21	9'78049	28	10'21951	9'93261	8	54
7	9'71331	21	9'78077	29	10'21923	9'93253	7	53
8	9'71352		9'78106		10'21894	9'93246		52
		21		29			8	
9	9'71373	20	9'78135	28	10'21865	9'93238	8	51
10	9'71393	21	9'78163	29	10'21837	9'93230	7	50
11	9'71414		9'78192		10'21808	9'93223		49
		21		28			8	
12	9'71435	21	9'78220	29	10'21780	9'93215	8	48
13	9'71456	21	9'78249	28	10'21751	9'93207	7	47
14	9'71477		9'78277		10'21723	9'93200		46
		21		29			8	
15	9'71498	21	9'78306	28	10'21694	9'93192	8	45
16	9'71519	20	9'78334	29	10'21666	9'93184	7	44
17	9'71539		9'78363		10'21637	9'93177		43
		21		28			8	
18	9'71560	21	9'78391	28	10'21609	9'93169	8	42
19	9'71581	21	9'78419	29	10'21581	9'93161	7	41
20	9'71602		9'78448		10'21552	9'93154		40
		20		28			8	
21	9'71622	21	9'78476	29	10'21524	9'93146	8	39
22	9'71643	21	9'78505	28	10'21495	9'93138	7	38
23	9'71664		9'78533		10'21467	9'93131		37
		21		29			8	
24	9'71685	20	9'78562	28	10'21438	9'93123	8	36
25	9'71705	21	9'78590	28	10'21410	9'93115	7	35
26	9'71726		9'78618		10'21382	9'93108		34
		21		29			8	
27	9'71747	20	9'78647	28	10'21353	9'93100	8	33
28	9'71767	21	9'78675	29	10'21325	9'93092	8	32
29	9'71788		9'78704		10'21296	9'93084		31
30	9'71809		9'78732		10'21268	9'93077		30
		21		28			7	
	Cosine.		Cotang.		Tangent.	Sine.		

[31 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9'71809	20	9'78732	28	10'21268	9'93077	8	30
31	9'71829	21	9'78760	29	10'21240	9'93069	8	29
32	9'71850	20	9'78789	28	10'21211	9'93061	8	28
33	9'71870	21	9'78817	28	10'21183	9'93053	7	27
34	9'71891	20	9'78845	29	10'21155	9'93046	8	26
35	9'71911	21	9'78874	28	10'21126	9'93038	8	25
36	9'71932	20	9'78902	28	10'21098	9'93030	8	24
37	9'71952	21	9'78930	29	10'21070	9'93022	8	23
38	9'71973	21	9'78959	28	10'21041	9'93014	8	22
39	9'71994	20	9'78987	28	10'21013	9'93007	7	21
40	9'72014	20	9'79015	28	10'20985	9'92999	8	20
41	9'72034	21	9'79043	29	10'20957	9'92991	8	19
42	9'72055	20	9'79072	28	10'20928	9'92983	8	18
43	9'72075	21	9'79100	28	10'20900	9'92976	7	17
44	9'72096	20	9'79128	28	10'20872	9'92968	8	16
45	9'72116	21	9'79156	29	10'20844	9'92960	8	15
46	9'72137	20	9'79185	28	10'20815	9'92952	8	14
47	9'72157	20	9'79213	28	10'20787	9'92944	8	13
48	9'72177	21	9'79241	28	10'20759	9'92936	7	12
49	9'72198	20	9'79269	28	10'20731	9'92929	8	11
50	9'72218	20	9'79297	29	10'20703	9'92921	8	10
51	9'72238	21	9'79326	28	10'20674	9'92913	8	9
52	9'72259	20	9'79354	28	10'20646	9'92905	8	8
53	9'72279	20	9'79382	28	10'20618	9'92897	8	7
54	9'72299	21	9'79410	28	10'20590	9'92889	8	6
55	9'72320	20	9'79438	28	10'20562	9'92881	7	5
56	9'72340	20	9'79466	29	10'20534	9'92874	8	4
57	9'72360	21	9'79495	28	10'20505	9'92866	8	3
58	9'72381	20	9'79523	28	10'20477	9'92858	8	2
59	9'72401	20	9'79551	28	10'20449	9'92850	8	1
60	9'72421		9'79579		10'20421	9'92842	8	0
	Cosine.		Cotang.		Tangent.	Sine.		

[32 degrees.]

	Sine.	Diff.	Tangent.	Diff	Cotang.	Cosine.	D.	
0	9°72421	20	9°79579	28	10°20421	9°92842	8	60
1	9°72441	20	9°79607	28	10°20393	9°92834	8	59
2	9°72461	21	9°79635	28	10°20365	9°92826	8	58
3	9°72482	20	9°79663	28	10°20337	9°92818	8	57
4	9°72502	20	9°79691	28	10°20309	9°92810	7	56
5	9°72522	20	9°79719	28	10°20281	9°92803	8	55
6	9°72542	20	9°79747	29	10°20253	9°92795	8	54
7	9°72562	20	9°79776	28	10°20224	9°92787	8	53
8	9°72582	20	9°79804	28	10°20196	9°92779	8	52
9	9°72602	20	9°79832	28	10°20168	9°92771	8	51
10	9°72622	21	9°79860	28	10°20140	9°92763	8	50
11	9°72643	20	9°79888	28	10°20112	9°92755	8	49
12	9°72663	20	9°79916	28	10°20084	9°92747	8	48
13	9°72683	20	9°79944	28	10°20056	9°92739	8	47
14	9°72703	20	9°79972	28	10°20028	9°92731	8	46
15	9°72723	20	9°80000	28	10°20000	9°92723	8	45
16	9°72743	20	9°80028	28	10°19972	9°92715	8	44
17	9°72763	20	9°80056	28	10°19944	9°92707	8	43
18	9°72783	20	9°80084	28	10°19916	9°92699	8	42
19	9°72803	20	9°80112	28	10°19888	9°92691	8	41
20	9°72823	20	9°80140	28	10°19860	9°92683	8	40
21	9°72843	20	9°80168	27	10°19832	9°92675	8	39
22	9°72863	20	9°80195	28	10°19805	9°92667	8	38
23	9°72883	19	9°80223	28	10°19777	9°92659	8	37
24	9°72902	20	9°80251	28	10°19749	9°92651	8	36
25	9°72922	20	9°80279	28	10°19721	9°92643	8	35
26	9°72942	20	9°80307	28	10°19693	9°92635	8	34
27	9°72962	20	9°80335	28	10°19665	9°92627	8	33
28	9°72982	20	9°80363	28	10°19637	9°92619	8	32
29	9°73002	20	9°80391	28	10°19609	9°92611	8	31
30	9°73022	20	9°80419	28	10°19581	9°92603	8	30
	Cosine.		Cotang.		Tangent.	Sine.		

[57 degrees.]

[32 degrees.]

'	Sine.		Tangent.		Cotang.	Cosine.		'
		Diff.		Diff.			D.	
30	9°73022	19	9°80419	28	10°19581	9°92603	8	30
31	9°73041	20	9°80447	27	10°19553	9°92595	8	29
32	9°73061	20	9°80474	28	10°19526	9°92587	8	28
33	9°73081	20	9°80502	28	10°19498	9°92579	8	27
34	9°73101	20	9°80530	28	10°19470	9°92571	8	26
35	9°73121	19	9°80558	28	10°19442	9°92563	8	25
36	9°73140	20	9°80586	28	10°19414	9°92555	9	24
37	9°73160	20	9°80614	28	10°19386	9°92546	8	23
38	9°73180	20	9°80642	27	10°19358	9°92538	8	22
39	9°73200	19	9°80669	28	10°19331	9°92530	8	21
40	9°73219	20	9°80697	28	10°19303	9°92522	8	20
41	9°73239	20	9°80725	28	10°19275	9°92514	8	19
42	9°73259	19	9°80753	28	10°19247	9°92506	8	18
43	9°73278	20	9°80781	27	10°19219	9°92498	8	17
44	9°73298	20	9°80808	28	10°19192	9°92490	8	16
45	9°73318	19	9°80836	28	10°19164	9°92482	9	15
46	9°73337	20	9°80864	28	10°19136	9°92473	8	14
47	9°73357	20	9°80892	27	10°19108	9°92465	8	13
48	9°73377	19	9°80919	28	10°19081	9°92457	8	12
49	9°73396	20	9°80947	28	10°19053	9°92449	8	11
50	9°73416	19	9°80975	28	10°19025	9°92441	8	10
51	9°73435	20	9°81003	27	10°18997	9°92433	8	9
52	9°73455	19	9°81030	28	10°18970	9°92425	9	8
53	9°73474	20	9°81058	28	10°18942	9°92416	8	7
54	9°73494	19	9°81086	27	10°18914	9°92408	8	6
55	9°73513	20	9°81113	28	10°18887	9°92400	8	5
56	9°73533	19	9°81141	28	10°18859	9°92392	8	4
57	9°73552	20	9°81169	27	10°18831	9°92384	8	3
58	9°73572	19	9°81196	28	10°18804	9°92376	9	2
59	9°73591	20	9°81224	28	10°18776	9°92367	8	1
60	9°73611		9°81252		10°18748	9°92359		0
'	Cosine.		Cotang.		Tangent.	Sine.		'

[57 degrees.]

[33 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9'73611	19	9'81252	27	10'18748	9'92359	8	60
1	9'73630	20	9'81279	28	10'18721	9'92351	8	59
2	9'73650	19	9'81307	28	10'18693	9'92343	8	58
3	9'73669	20	9'81335	27	10'18665	9'92335	9	57
4	9'73689	19	9'81362	28	10'18638	9'92326	8	56
5	9'73708	19	9'81390	28	10'18610	9'92318	8	55
6	9'73727	20	9'81418	27	10'18582	9'92310	8	54
7	9'73747	19	9'81445	28	10'18555	9'92302	9	53
8	9'73766	19	9'81473	27	10'18527	9'92293	8	52
9	9'73785	20	9'81500	28	10'18500	9'92285	8	51
10	9'73805	19	9'81528	28	10'18472	9'92277	8	50
11	9'73824	19	9'81556	27	10'18444	9'92269	9	49
12	9'73843	20	9'81583	28	10'18417	9'92260	8	48
13	9'73863	19	9'81611	27	10'18389	9'92252	8	47
14	9'73882	19	9'81638	28	10'18362	9'92244	9	46
15	9'73901	20	9'81666	27	10'18334	9'92235	8	45
16	9'73921	19	9'81693	28	10'18307	9'92227	8	44
17	9'73940	19	9'81721	27	10'18279	9'92219	8	43
18	9'73959	19	9'81748	28	10'18252	9'92211	9	42
19	9'73978	19	9'81776	27	10'18224	9'92202	8	41
20	9'73997	20	9'81803	28	10'18197	9'92194	8	40
21	9'74017	19	9'81831	27	10'18169	9'92186	9	39
22	9'74036	19	9'81858	28	10'18142	9'92177	8	38
23	9'74055	19	9'81886	27	10'18114	9'92169	8	37
24	9'74074	19	9'81913	28	10'18087	9'92161	9	36
25	9'74093	20	9'81941	27	10'18059	9'92152	8	35
26	9'74113	19	9'81968	28	10'18032	9'92144	8	34
27	9'74132	19	9'81996	27	10'18004	9'92136	9	33
28	9'74151	19	9'82023	28	10'17977	9'92127	8	32
29	9'74170	19	9'82051	27	10'17949	9'92119	8	31
30	9'74189	19	9'82078	27	10'17922	9'92111	8	30
	Cosine.		Cotang.		Tangent.	Sine.		

[56 degrees.]



[33 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°74189		9°82078		10°17922	9°92111		30
31	9°74208	19	9°82106	28	10°17894	9°92102	9	29
32	9°74227	19	9°82133	27	10°17867	9°92094	8	28
		19		28			8	
33	9°74246	19	9°82161	27	10°17839	9°92086	9	27
34	9°74265	19	9°82188	27	10°17812	9°92077	8	26
35	9°74284	19	9°82215	27	10°17785	9°92069	9	25
		19		28			8	
36	9°74303	19	9°82243	27	10°17757	9°92060	8	24
37	9°74322	19	9°82270	28	10°17730	9°92052	8	23
38	9°74341	19	9°82298	27	10°17702	9°92044	9	22
		19		27			8	
39	9°74360	19	9°82325	27	10°17675	9°92035	8	21
40	9°74379	19	9°82352	28	10°17648	9°92027	9	20
41	9°74398	19	9°82380	27	10°17620	9°92018	8	19
		19		28			8	
42	9°74417	19	9°82407	27	10°17593	9°92010	9	18
43	9°74436	19	9°82435	27	10°17565	9°92002	9	17
44	9°74455	19	9°82462	27	10°17538	9°91993	8	16
		19		28			9	
45	9°74474	19	9°82489	28	10°17511	9°91985	9	15
46	9°74493	19	9°82517	27	10°17483	9°91976	8	14
47	9°74512	19	9°82544	27	10°17456	9°91968	9	13
		19		28			8	
48	9°74531	18	9°82571	28	10°17429	9°91959	9	12
49	9°74549	19	9°82599	27	10°17401	9°91951	9	11
50	9°74568	19	9°82626	27	10°17374	9°91942	8	10
		19		28			9	
51	9°74587	19	9°82653	28	10°17347	9°91934	8	9
52	9°74606	19	9°82681	27	10°17319	9°91925	8	8
53	9°74625	19	9°82708	27	10°17292	9°91917	9	7
		19		28			8	
54	9°74644	18	9°82735	27	10°17265	9°91908	9	6
55	9°74662	19	9°82762	28	10°17238	9°91900	9	5
56	9°74681	19	9°82790	27	10°17210	9°91891	8	4
		19		28			9	
57	9°74700	19	9°82817	27	10°17183	9°91883	9	3
58	9°74719	18	9°82844	27	10°17156	9°91874	8	2
59	9°74737	19	9°82871	28	10°17129	9°91866	9	1
60	9°74756		9°82899		10°17101	9°91857		0
	Cosine.		Cotang.		Tangent.	Sine.		

[56 degrees.]

[34 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°74756		9°82899		10°17101	9°91857	8	60
1	9°74775	19	9°82926	27	10°17074	9°91849	8	59
2	9°74794	19	9°82953	27	10°17047	9°91840	8	58
		18		27				
3	9°74812		9°82980		10°17020	9°91832	9	57
4	9°74831	19	9°83008	28	10°16992	9°91823	8	56
5	9°74850	19	9°83035	27	10°16965	9°91815	9	55
		18		27				
6	9°74868		9°83062		10°16938	9°91806	8	54
7	9°74887	19	9°83089	28	10°16911	9°91798	9	53
8	9°74906	19	9°83117	27	10°16883	9°91789	8	52
		18		27				
9	9°74924		9°83144		10°16856	9°91781	9	51
10	9°74943	19	9°83171	27	10°16829	9°91772	9	50
11	9°74961	18	9°83198	27	10°16802	9°91763	8	49
		19		27				
12	9°74980		9°83225		10°16775	9°91755	9	48
13	9°74999	19	9°83252	28	10°16748	9°91746	8	47
14	9°75017	18	9°83280	27	10°16720	9°91738	8	46
		19		27				
15	9°75036		9°83307		10°16693	9°91729	9	45
16	9°75054	18	9°83334	27	10°16666	9°91720	8	44
17	9°75073	19	9°83361	27	10°16639	9°91712	9	43
		18		27				
18	9°75091		9°83388		10°16612	9°91703	8	42
19	9°75110	19	9°83415	27	10°16585	9°91695	9	41
20	9°75128	18	9°83442	27	10°16558	9°91686	9	40
		19		28				
21	9°75147		9°83470		10°16530	9°91677	9	39
22	9°75165	18	9°83497	27	10°16503	9°91669	8	38
23	9°75184	19	9°83524	27	10°16476	9°91660	9	37
		18		27				
24	9°75202		9°83551		10°16449	9°91651	9	36
25	9°75221	19	9°83578	27	10°16422	9°91643	8	35
26	9°75239	18	9°83605	27	10°16395	9°91634	9	34
		19		27				
27	9°75258		9°83632		10°16368	9°91625	8	33
28	9°75276	18	9°83659	27	10°16341	9°91617	9	32
29	9°75294	18	9°83686	27	10°16314	9°91608	9	31
30	9°75313	19	9°83713	27	10°16287	9°91599	9	30
	Cosine.		Cotang.		Tangent.	Sine.		

[55 degrees.]

[34 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
30	9'75313	18	9'83713	27	10'16287	9'91599	8	30
31	9'75331	19	9'83740	28	10'16260	9'91591	9	29
32	9'75350	18	9'83768	27	10'16232	9'91582	9	28
33	9'75368	18	9'83795	27	10'16205	9'91573	8	27
34	9'75386	19	9'83822	27	10'16178	9'91565	9	26
35	9'75405	18	9'83849	27	10'16151	9'91556	9	25
36	9'75423	18	9'83876	27	10'16124	9'91547	9	24
37	9'75441	18	9'83903	27	10'16097	9'91538	8	23
38	9'75459	19	9'83930	27	10'16070	9'91530	9	22
39	9'75478	18	9'83957	27	10'16043	9'91521	9	21
40	9'75496	18	9'83984	27	10'16016	9'91512	8	20
41	9'75514	19	9'84011	27	10'15989	9'91504	9	19
42	9'75533	18	9'84038	27	10'15962	9'91495	9	18
43	9'75551	18	9'84065	27	10'15935	9'91486	9	17
44	9'75569	18	9'84092	27	10'15908	9'91477	8	16
45	9'75587	18	9'84119	27	10'15881	9'91469	9	15
46	9'75605	19	9'84146	27	10'15854	9'91460	9	14
47	9'75624	18	9'84173	27	10'15827	9'91451	9	13
48	9'75642	18	9'84200	27	10'15800	9'91442	9	12
49	9'75660	18	9'84227	27	10'15773	9'91433	8	11
50	9'75678	18	9'84254	26	10'15746	9'91425	9	10
51	9'75696	19	9'84280	27	10'15720	9'91416	9	9
52	9'75714	18	9'84307	27	10'15693	9'91407	9	8
53	9'75733	18	9'84334	27	10'15666	9'91398	9	7
54	9'75751	18	9'84361	27	10'15639	9'91389	8	6
55	9'75769	18	9'84388	27	10'15612	9'91381	9	5
56	9'75787	18	9'84415	27	10'15585	9'91372	9	4
57	9'75805	18	9'84442	27	10'15558	9'91363	9	3
58	9'75823	18	9'84469	27	10'15531	9'91354	9	2
59	9'75841	18	9'84496	27	10'15504	9'91345	9	1
60	9'75859		9'84523	27	10'15477	9'91336	9	0
	Cosine.		Cotang.		Tangent.	Sine.		

[55 degrees.]

[35 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	D.	
0	9°75859	18	9°84523	27	10°15477	9°91336	8	60
1	9°75877	18	9°84550	26	10°15450	9°91328	9	59
2	9°75895	18	9°84576	27	10°15424	9°91319	9	58
3	9°75913	18	9°84603	27	10°15397	9°91310	9	57
4	9°75931	18	9°84630	27	10°15370	9°91301	9	56
5	9°75949	18	9°84657	27	10°15343	9°91292	9	55
6	9°75967	18	9°84684	27	10°15316	9°91283	9	54
7	9°75985	18	9°84711	27	10°15289	9°91274	8	53
8	9°76003	18	9°84738	26	10°15262	9°91266	9	52
9	9°76021	18	9°84764	27	10°15236	9°91257	9	51
10	9°76039	18	9°84791	27	10°15209	9°91248	9	50
11	9°76057	18	9°84818	27	10°15182	9°91239	9	49
12	9°76075	18	9°84845	27	10°15155	9°91230	9	48
13	9°76093	18	9°84872	27	10°15128	9°91221	9	47
14	9°76111	18	9°84899	26	10°15101	9°91212	9	46
15	9°76129	17	9°84925	27	10°15075	9°91203	9	45
16	9°76146	18	9°84952	27	10°15048	9°91194	9	44
17	9°76164	18	9°84979	27	10°15021	9°91185	9	43
18	9°76182	18	9°85006	27	10°14994	9°91176	9	42
19	9°76200	18	9°85033	26	10°14967	9°91167	9	41
20	9°76218	18	9°85059	27	10°14941	9°91158	9	40
21	9°76236	17	9°85086	27	10°14914	9°91149	8	39
22	9°76253	18	9°85113	27	10°14887	9°91141	9	38
23	9°76271	18	9°85140	26	10°14860	9°91132	9	37
24	9°76289	18	9°85166	27	10°14834	9°91123	9	36
25	9°76307	17	9°85193	27	10°14807	9°91114	9	35
26	9°76324	18	9°85220	27	10°14780	9°91105	9	34
27	9°76342	18	9°85247	26	10°14753	9°91096	9	33
28	9°76360	18	9°85273	27	10°14727	9°91087	9	32
29	9°76378	17	9°85300	27	10°14700	9°91078	9	31
30	9°76395	17	9°85327	27	10°14673	9°91069	9	30
	Cosine.		Cotang.		Tangent.	Sine.		

[54 degrees.]

[35 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°76395	18	9°85327	27	10°14673	9°91069	9	30
31	9°76413	18	9°85354	26	10°14646	9°91060	9	29
32	9°76431	17	9°85380	27	10°14620	9°91051	9	28
33	9°76448	18	9°85407	27	10°14593	9°91042	9	27
34	9°76466	18	9°85434	26	10°14566	9°91033	10	26
35	9°76484	17	9°85460	27	10°14540	9°91023	9	25
36	9°76501	18	9°85487	27	10°14513	9°91014	9	24
37	9°76519	18	9°85514	26	10°14486	9°91005	9	23
38	9°76537	17	9°85540	27	10°14460	9°90996	9	22
39	9°76554	18	9°85567	27	10°14433	9°90987	9	21
40	9°76572	18	9°85594	26	10°14406	9°90978	9	20
41	9°76590	17	9°85620	27	10°14380	9°90969	9	19
42	9°76607	18	9°85647	27	10°14353	9°90960	9	18
43	9°76625	17	9°85674	26	10°14326	9°90951	9	17
44	9°76642	18	9°85700	27	10°14300	9°90942	9	16
45	9°76660	17	9°85727	27	10°14273	9°90933	9	15
46	9°76677	18	9°85754	26	10°14246	9°90924	9	14
47	9°76695	17	9°85780	27	10°14220	9°90915	9	13
48	9°76712	18	9°85807	27	10°14193	9°90906	10	12
49	9°76730	17	9°85834	26	10°14166	9°90896	9	11
50	9°76747	18	9°85860	27	10°14140	9°90887	9	10
51	9°76765	17	9°85887	26	10°14113	9°90878	9	9
52	9°76782	18	9°85913	27	10°14087	9°90869	9	8
53	9°76800	17	9°85940	27	10°14060	9°90860	9	7
54	9°76817	18	9°85967	26	10°14033	9°90851	9	6
55	9°76835	17	9°85993	27	10°14007	9°90842	10	5
56	9°76852	18	9°86020	26	10°13980	9°90832	9	4
57	9°76870	17	9°86046	27	10°13954	9°90823	9	3
58	9°76887	17	9°86073	27	10°13927	9°90814	9	2
59	9°76904	18	9°86100	26	10°13900	9°90805	9	1
60	9°76922		9°86126		10°13874	9°90796	9	0
	Cosine.		Cotang.		Tangent.	Sine.		

[54 degrees.]

[36 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
0	9.76922		9.86126		10.13874	9.90796		60
1	9.76939	17	9.86153	27	10.13847	9.90787	9	59
2	9.76957	18	9.86179	26	10.13821	9.90777	10	58
		17		27			9	
3	9.76974	17	9.86206	26	10.13794	9.90768	9	57
4	9.76991	18	9.86232	27	10.13768	9.90759	9	56
5	9.77009	17	9.86259	26	10.13741	9.90750	9	55
		17		27			9	
6	9.77026	17	9.86285	27	10.13715	9.90741	10	54
7	9.77043	18	9.86312	26	10.13688	9.90731	9	53
8	9.77061	17	9.86338	27	10.13662	9.90722	9	52
		17		27			9	
9	9.77078	17	9.86365	27	10.13635	9.90713	9	51
10	9.77095	17	9.86392	26	10.13608	9.90704	10	50
11	9.77112	18	9.86418	27	10.13582	9.90694	9	49
		17		26			9	
12	9.77130	17	9.86445	26	10.13555	9.90685	9	48
13	9.77147	17	9.86471	27	10.13529	9.90676	9	47
14	9.77164	17	9.86498	26	10.13502	9.90667	10	46
		17		27			9	
15	9.77181	18	9.86524	27	10.13476	9.90657	9	45
16	9.77199	17	9.86551	26	10.13449	9.90648	9	44
17	9.77216	17	9.86577	26	10.13423	9.90639	9	43
		17		26			9	
18	9.77233	17	9.86603	27	10.13397	9.90630	10	42
19	9.77250	18	9.86630	26	10.13370	9.90620	9	41
20	9.77268	17	9.86656	27	10.13344	9.90611	9	40
		17		27			9	
21	9.77285	17	9.86683	26	10.13317	9.90602	10	39
22	9.77302	17	9.86709	27	10.13291	9.90592	9	38
23	9.77319	17	9.86736	26	10.13264	9.90583	9	37
		17		26			9	
24	9.77336	17	9.86762	27	10.13238	9.90574	9	36
25	9.77353	17	9.86789	26	10.13211	9.90565	10	35
26	9.77370	17	9.86815	27	10.13185	9.90555	9	34
		17		27			9	
27	9.77387	18	9.86842	26	10.13158	9.90546	9	33
28	9.77405	17	9.86868	26	10.13132	9.90537	10	32
29	9.77422	17	9.86894	27	10.13106	9.90527	9	31
30	9.77439	17	9.86921	27	10.13079	9.90518	9	30
		17		27			9	
'	Cosine.		Cotang.		Tangent.	Sine.		'

[53 degrees.]

[36 degrees.]

'	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	'
30	9°77439	17	9°86921	26	10°13079	9°90518	9	30
31	9°77456	17	9°86947	27	10°13053	9°90509	10	29
32	9°77473	17	9°86974	26	10°13026	9°90499	9	28
33	9°77490	17	9°87000	27	10°13000	9°90490	10	27
34	9°77507	17	9°87027	26	10°12973	9°90480	9	26
35	9°77524	17	9°87053	26	10°12947	9°90471	9	25
36	9°77541	17	9°87079	27	10°12921	9°90462	10	24
37	9°77558	17	9°87106	26	10°12894	9°90452	9	23
38	9°77575	17	9°87132	26	10°12868	9°90443	9	22
39	9°77592	17	9°87158	27	10°12842	9°90434	10	21
40	9°77609	17	9°87185	26	10°12815	9°90424	9	20
41	9°77626	17	9°87211	27	10°12789	9°90415	10	19
42	9°77643	17	9°87238	26	10°12762	9°90405	9	18
43	9°77660	17	9°87264	26	10°12736	9°90396	10	17
44	9°77677	17	9°87290	27	10°12710	9°90386	9	16
45	9°77694	17	9°87317	26	10°12683	9°90377	9	15
46	9°77711	17	9°87343	26	10°12657	9°90368	10	14
47	9°77728	16	9°87369	27	10°12631	9°90358	9	13
48	9°77744	17	9°87396	26	10°12604	9°90349	10	12
49	9°77761	17	9°87422	26	10°12578	9°90339	9	11
50	9°77778	17	9°87448	27	10°12552	9°90330	10	10
51	9°77795	17	9°87475	26	10°12525	9°90320	9	9
52	9°77812	17	9°87501	26	10°12499	9°90311	10	8
53	9°77829	17	9°87527	27	10°12473	9°90301	9	7
54	9°77846	16	9°87554	26	10°12446	9°90292	10	6
55	9°77862	17	9°87580	26	10°12420	9°90282	9	5
56	9°77879	17	9°87606	27	10°12394	9°90273	10	4
57	9°77896	17	9°87633	26	10°12367	9°90263	9	3
58	9°77913	17	9°87659	26	10°12341	9°90254	10	2
59	9°77930	16	9°87685	26	10°12315	9°90244	9	1
60	9°77946		9°87711		10°12289	9°90235		0
'	Cosine.		Cotang.		Tangent.	Sine.		'

[53 degrees.]

[37 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
0	9°77946		9°87711		10°12289	9°90235		60
1	9°77963	17	9°87738	27	10°12262	9°90225	10	59
2	9°77980	17	9°87764	26	10°12236	9°90216	9	58
		17		26			10	
3	9°77997	16	9°87790	27	10°12210	9°90206	9	57
4	9°78013	17	9°87817	26	10°12183	9°90197	10	56
5	9°78030	17	9°87843	26	10°12157	9°90187	9	55
		17		26			10	
6	9°78047	16	9°87869	26	10°12131	9°90178	10	54
7	9°78063	17	9°87895	27	10°12105	9°90168	9	53
8	9°78080	17	9°87922	26	10°12078	9°90159	10	52
		17		26			10	
9	9°78097	16	9°87948	26	10°12052	9°90149	10	51
10	9°78113	17	9°87974	26	10°12026	9°90139	9	50
11	9°78130	17	9°88000	27	10°12000	9°90130	10	49
		17		26			10	
12	9°78147	16	9°88027	26	10°11973	9°90120	9	48
13	9°78163	17	9°88053	26	10°11947	9°90111	10	47
14	9°78180	17	9°88079	26	10°11921	9°90101	10	46
		17		26			10	
15	9°78197	16	9°88105	26	10°11895	9°90091	9	45
16	9°78213	17	9°88131	27	10°11869	9°90082	10	44
17	9°78230	17	9°88158	26	10°11842	9°90072	9	43
		16		26			10	
18	9°78246	17	9°88184	26	10°11816	9°90063	10	42
19	9°78263	17	9°88210	26	10°11790	9°90053	10	41
20	9°78280	16	9°88236	26	10°11764	9°90043	9	40
		16		26			10	
21	9°78296	17	9°88262	27	10°11738	9°90034	10	39
22	9°78313	16	9°88289	26	10°11711	9°90024	10	38
23	9°78329	17	9°88315	26	10°11685	9°90014	9	37
		17		26			10	
24	9°78346	16	9°88341	26	10°11659	9°90005	10	36
25	9°78362	17	9°88367	26	10°11633	9°89995	10	35
26	9°78379	16	9°88393	27	10°11607	9°89985	9	34
		16		26			10	
27	9°78395	17	9°88420	26	10°11580	9°89976	10	33
28	9°78412	16	9°88446	26	10°11554	9°89966	10	32
29	9°78428	17	9°88472	26	10°11528	9°89956	9	31
30	9°78445	17	9°88498	26	10°11502	9°89947	9	30
		17		26			10	
	Cosine.		Cotang.		Tangent.	Sine.		

[52 degrees.]



[37 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°78445	16	9°88498	26	10°11502	9°89947	10	30
31	9°78461	17	9°88524	26	10°11476	9°89937	10	29
32	9°78478	16	9°88550	27	10°11450	9°89927	9	28
33	9°78494	16	9°88577	26	10°11423	9°89918	10	27
34	9°78510	17	9°88603	26	10°11397	9°89908	10	26
35	9°78527	16	9°88629	26	10°11371	9°89898	10	25
36	9°78543	17	9°88655	26	10°11345	9°89888	9	24
37	9°78560	16	9°88681	26	10°11319	9°89879	10	23
38	9°78576	16	9°88707	26	10°11293	9°89869	10	22
39	9°78592	17	9°88733	26	10°11267	9°89859	10	21
40	9°78609	16	9°88759	27	10°11241	9°89849	9	20
41	9°78625	17	9°88786	26	10°11214	9°89840	10	19
42	9°78642	16	9°88812	26	10°11188	9°89830	10	18
43	9°78658	16	9°88838	26	10°11162	9°89820	10	17
44	9°78674	17	9°88864	26	10°11136	9°89810	9	16
45	9°78691	16	9°88890	26	10°11110	9°89801	10	15
46	9°78707	16	9°88916	26	10°11084	9°89791	10	14
47	9°78723	16	9°88942	26	10°11058	9°89781	10	13
48	9°78739	17	9°88968	26	10°11032	9°89771	10	12
49	9°78756	16	9°88994	26	10°11006	9°89761	9	11
50	9°78772	16	9°89020	26	10°10980	9°89752	10	10
51	9°78788	17	9°89046	27	10°10954	9°89742	10	9
52	9°78805	16	9°89073	26	10°10927	9°89732	10	8
53	9°78821	16	9°89099	26	10°10901	9°89722	10	7
54	9°78837	16	9°89125	26	10°10875	9°89712	10	6
55	9°78853	16	9°89151	26	10°10849	9°89702	9	5
56	9°78869	17	9°89177	26	10°10823	9°89693	10	4
57	9°78886	16	9°89203	26	10°10797	9°89683	10	3
58	9°78902	16	9°89229	26	10°10771	9°89673	10	2
59	9°78918	16	9°89255	26	10°10745	9°89663	10	1
60	9°78934		9°89281		10°10719	9°89653		0
	Cosine.		Cotang.		Tangent.	Sine.		

[52 degrees.]

## [38 degrees.]

'	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	'
0	9'78934	16	9'89281	26	10'10719	9'89653	10	60
1	9'78950	17	9'89307	26	10'10693	9'89643	10	59
2	9'78967	16	9'89333	26	10'10667	9'89633	9	58
3	9'78983	16	9'89359	26	10'10641	9'89624	10	57
4	9'78999	16	9'89385	26	10'10615	9'89614	10	56
5	9'79015	16	9'89411	26	10'10589	9'89604	10	55
6	9'79031	16	9'89437	26	10'10563	9'89594	10	54
7	9'79047	16	9'89463	26	10'10537	9'89584	10	53
8	9'79063	16	9'89489	26	10'10511	9'89574	10	52
9	9'79079	16	9'89515	26	10'10485	9'89564	10	51
10	9'79095	16	9'89541	26	10'10459	9'89554	10	50
11	9'79111	17	9'89567	26	10'10433	9'89544	10	49
12	9'79128	16	9'89593	26	10'10407	9'89534	10	48
13	9'79144	16	9'89619	26	10'10381	9'89524	10	47
14	9'79160	16	9'89645	26	10'10355	9'89514	10	46
15	9'79176	16	9'89671	26	10'10329	9'89504	9	45
16	9'79192	16	9'89697	26	10'10303	9'89495	10	44
17	9'79208	16	9'89723	26	10'10277	9'89485	10	43
18	9'79224	16	9'89749	26	10'10251	9'89475	10	42
19	9'79240	16	9'89775	26	10'10225	9'89465	10	41
20	9'79256	16	9'89801	26	10'10199	9'89455	10	40
21	9'79272	16	9'89827	26	10'10173	9'89445	10	39
22	9'79288	16	9'89853	26	10'10147	9'89435	10	38
23	9'79304	15	9'89879	26	10'10121	9'89425	10	37
24	9'79319	16	9'89905	26	10'10095	9'89415	10	36
25	9'79335	16	9'89931	26	10'10069	9'89405	10	35
26	9'79351	16	9'89957	26	10'10043	9'89395	10	34
27	9'79367	16	9'89983	26	10'10017	9'89385	10	33
28	9'79383	16	9'90009	26	10'09991	9'89375	11	32
29	9'79399	16	9'90035	26	10'09965	9'89364	10	31
30	9'79415		9'90061		10'09939	9'89354		30
'	Cosine.		Cotang.		Tangent.	Sine.		'

## [51 degrees.]

[38 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9'79415	16	9'90061	25	10'09939	9'89354	10	30
31	9'79431	16	9'90086	26	10'09914	9'89344	10	29
32	9'79447	16	9'90112	26	10'09888	9'89334	10	28
33	9'79463	15	9'90138	26	10'09862	9'89324	10	27
34	9'79478	16	9'90164	26	10'09836	9'89314	10	26
35	9'79494	16	9'90190	26	10'09810	9'89304	10	25
36	9'79510	16	9'90216	26	10'09784	9'89294	10	24
37	9'79526	16	9'90242	26	10'09758	9'89284	10	23
38	9'79542	16	9'90268	26	10'09732	9'89274	10	22
39	9'79558	15	9'90294	26	10'09706	9'89264	10	21
40	9'79573	16	9'90320	26	10'09680	9'89254	10	20
41	9'79589	16	9'90346	25	10'09654	9'89244	11	19
42	9'79605	16	9'90371	26	10'09629	9'89233	10	18
43	9'79621	15	9'90397	26	10'09603	9'89223	10	17
44	9'79636	16	9'90423	26	10'09577	9'89213	10	16
45	9'79652	16	9'90449	26	10'09551	9'89203	10	15
46	9'79668	16	9'90475	26	10'09525	9'89193	10	14
47	9'79684	15	9'90501	26	10'09499	9'89183	10	13
48	9'79699	16	9'90527	26	10'09473	9'89173	11	12
49	9'79715	16	9'90553	25	10'09447	9'89162	10	11
50	9'79731	15	9'90578	26	10'09422	9'89152	10	10
51	9'79746	16	9'90604	26	10'09396	9'89142	10	9
52	9'79762	16	9'90630	26	10'09370	9'89132	10	8
53	9'79778	15	9'90656	26	10'09344	9'89122	10	7
54	9'79793	16	9'90682	26	10'09318	9'89112	11	6
55	9'79809	16	9'90708	26	10'09292	9'89101	10	5
56	9'79825	15	9'90734	25	10'09266	9'89091	10	4
57	9'79840	16	9'90759	26	10'09241	9'89081	10	3
58	9'79856	16	9'90785	26	10'09215	9'89071	11	2
59	9'79872	15	9'90811	26	10'09189	9'89060	10	1
60	9'79887		9'90837		10'09163	9'89050		0
	Cosine.		Cotang.		Tangent.	Sine.		

[51 degrees.]

[39 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
0	9°79887	16	9°90837	26	10°09163	9°89050	10	60
1	9°79903	15	9°90863	26	10°09137	9°89040	10	59
2	9°79918	16	9°90889	25	10°09111	9°89030	10	58
3	9°79934	16	9°90914	26	10°09086	9°89020	11	57
4	9°79950	15	9°90940	26	10°09060	9°89009	10	56
5	9°79965	16	9°90966	26	10°09034	9°88999	10	55
6	9°79981	15	9°90992	26	10°09008	9°88989	11	54
7	9°79996	16	9°91018	25	10°08982	9°88978	10	53
8	9°80012	15	9°91043	26	10°08957	9°88968	10	52
9	9°80027	16	9°91069	26	10°08931	9°88958	10	51
10	9°80043	15	9°91095	26	10°08905	9°88948	11	50
11	9°80058	16	9°91121	26	10°08879	9°88937	10	49
12	9°80074	15	9°91147	25	10°08853	9°88927	10	48
13	9°80089	16	9°91172	26	10°08828	9°88917	11	47
14	9°80105	15	9°91198	26	10°08802	9°88906	10	46
15	9°80120	16	9°91224	26	10°08776	9°88896	10	45
16	9°80136	15	9°91250	26	10°08750	9°88886	11	44
17	9°80151	15	9°91276	25	10°08724	9°88875	10	43
18	9°80166	16	9°91301	26	10°08699	9°88865	10	42
19	9°80182	15	9°91327	26	10°08673	9°88855	11	41
20	9°80197	16	9°91353	26	10°08647	9°88844	10	40
21	9°80213	15	9°91379	25	10°08621	9°88834	10	39
22	9°80228	16	9°91404	26	10°08596	9°88824	11	38
23	9°80244	15	9°91430	26	10°08570	9°88813	10	37
24	9°80259	15	9°91456	26	10°08544	9°88803	10	36
25	9°80274	16	9°91482	25	10°08518	9°88793	11	35
26	9°80290	15	9°91507	26	10°08493	9°88782	10	34
27	9°80305	15	9°91533	26	10°08467	9°88772	11	33
28	9°80320	16	9°91559	26	10°08441	9°88761	10	32
29	9°80336	15	9°91585	25	10°08415	9°88751	10	31
30	9°80351		9°91610		10°08390	9°88741		30
	Cosine.		Cotang.		Tangent.	Sine.		

[50 degrees.]

[39 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9·80351	15	9·91610	26	10·08390	9·88741	11	30
31	9·80366	16	9·91636	26	10·08364	9·88730	11	29
32	9·80382	15	9·91662	26	10·08338	9·88720	11	28
33	9·80397	15	9·91688	25	10·08312	9·88709	10	27
34	9·80412	16	9·91713	26	10·08287	9·88699	11	26
35	9·80428	15	9·91739	26	10·08261	9·88688	10	25
36	9·80443	15	9·91765	26	10·08235	9·88678	10	24
37	9·80458	15	9·91791	25	10·08209	9·88668	11	23
38	9·80473	16	9·91816	26	10·08184	9·88657	10	22
39	9·80489	15	9·91842	26	10·08158	9·88647	11	21
40	9·80504	15	9·91868	25	10·08132	9·88636	10	20
41	9·80519	15	9·91893	26	10·08107	9·88626	11	19
42	9·80534	16	9·91919	26	10·08081	9·88615	10	18
43	9·80550	15	9·91945	26	10·08055	9·88605	11	17
44	9·80565	15	9·91971	25	10·08029	9·88594	10	16
45	9·80580	15	9·91996	26	10·08004	9·88584	11	15
46	9·80595	15	9·92022	26	10·07978	9·88573	10	14
47	9·80610	15	9·92048	25	10·07952	9·88563	11	13
48	9·80625	16	9·92073	26	10·07927	9·88552	10	12
49	9·80641	15	9·92099	26	10·07901	9·88542	11	11
50	9·80656	15	9·92125	25	10·07875	9·88531	10	10
51	9·80671	15	9·92150	26	10·07850	9·88521	11	9
52	9·80686	15	9·92176	26	10·07824	9·88510	11	8
53	9·80701	15	9·92202	25	10·07798	9·88499	10	7
54	9·80716	15	9·92227	26	10·07773	9·88489	11	6
55	9·80731	15	9·92253	26	10·07747	9·88478	10	5
56	9·80746	16	9·92279	25	10·07721	9·88468	11	4
57	9·80762	15	9·92304	26	10·07696	9·88457	10	3
58	9·80777	15	9·92330	26	10·07670	9·88447	11	2
59	9·80792	15	9·92356	25	10·07644	9·88436	11	1
60	9·80807		9·92381		10·07619	9·88425		0
	Cosine.		Cotang.		Tangent.	Sine.		

[40 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
0	9.80807	15	9.92381	26	10.07619	9.88425	10	60
1	9.80822	15	9.92407	26	10.07593	9.88415	11	59
2	9.80837	15	9.92433	25	10.07567	9.88404	10	58
3	9.80852	15	9.92458	26	10.07542	9.88394	11	57
4	9.80867	15	9.92484	26	10.07516	9.88383	11	56
5	9.80882	15	9.92510	25	10.07490	9.88372	10	55
6	9.80897	15	9.92535	26	10.07465	9.88362	11	54
7	9.80912	15	9.92561	26	10.07439	9.88351	11	53
8	9.80927	15	9.92587	25	10.07413	9.88340	10	52
9	9.80942	15	9.92612	26	10.07388	9.88330	11	51
10	9.80957	15	9.92638	25	10.07362	9.88319	11	50
11	9.80972	15	9.92663	26	10.07337	9.88308	10	49
12	9.80987	15	9.92689	26	10.07311	9.88298	11	48
13	9.81002	15	9.92715	25	10.07285	9.88287	11	47
14	9.81017	15	9.92740	26	10.07260	9.88276	10	46
15	9.81032	15	9.92766	26	10.07234	9.88266	11	45
16	9.81047	14	9.92792	25	10.07208	9.88255	11	44
17	9.81061	15	9.92817	26	10.07183	9.88244	10	43
18	9.81076	15	9.92843	25	10.07157	9.88234	11	42
19	9.81091	15	9.92868	26	10.07132	9.88223	11	41
20	9.81106	15	9.92894	26	10.07106	9.88212	11	40
21	9.81121	15	9.92920	25	10.07080	9.88201	10	39
22	9.81136	15	9.92945	26	10.07055	9.88191	11	38
23	9.81151	15	9.92971	25	10.07029	9.88180	11	37
24	9.81166	14	9.92996	26	10.07004	9.88169	11	36
25	9.81180	15	9.93022	26	10.06978	9.88158	10	35
26	9.81195	15	9.93048	25	10.06952	9.88148	11	34
27	9.81210	15	9.93073	26	10.06927	9.88137	11	33
28	9.81225	15	9.93099	25	10.06901	9.88126	11	32
29	9.81240	14	9.93124	26	10.06876	9.88115	10	31
30	9.81254		9.93150		10.06850	9.88105		30
'	Cosine.		Cotang.		Tangent.	Sine.		'

[49 degrees.]

[40 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9·81254		9·93150		10·06850	9·88105		30
31	9·81269	15	9·93175	25	10·06825	9·88094	11	29
32	9·81284	15	9·93201	26	10·06799	9·88083	11	28
		15		26			11	
33	9·81299	15	9·93227	25	10·06773	9·88072	11	27
34	9·81314	14	9·93252	26	10·06748	9·88061	10	26
35	9·81328	15	9·93278	25	10·06722	9·88051	11	25
		15		26			11	
36	9·81343	15	9·93303	26	10·06697	9·88040	11	24
37	9·81358	14	9·93329	25	10·06671	9·88029	11	23
38	9·81372	15	9·93354	26	10·06646	9·88018	11	22
		15		26			11	
39	9·81387	15	9·93380	26	10·06620	9·88007	11	21
40	9·81402	15	9·93406	25	10·06594	9·87996	11	20
41	9·81417	14	9·93431	26	10·06569	9·87985	10	19
		15		25			11	
42	9·81431	15	9·93457	25	10·06543	9·87975	11	18
43	9·81446	15	9·93482	26	10·06518	9·87964	11	17
44	9·81461	14	9·93508	25	10·06492	9·87953	11	16
		15		26			11	
45	9·81475	15	9·93533	26	10·06467	9·87942	11	15
46	9·81490	15	9·93559	25	10·06441	9·87931	11	14
47	9·81505	14	9·93584	26	10·06416	9·87920	11	13
		15		26			11	
48	9·81519	15	9·93610	26	10·06390	9·87909	11	12
49	9·81534	15	9·93636	25	10·06364	9·87898	11	11
50	9·81549	14	9·93661	26	10·06339	9·87887	10	10
		15		25			11	
51	9·81563	15	9·93687	25	10·06313	9·87877	11	9
52	9·81578	14	9·93712	26	10·06288	9·87866	11	8
53	9·81592	15	9·93738	25	10·06262	9·87855	11	7
		15		26			11	
54	9·81607	15	9·93763	26	10·06237	9·87844	11	6
55	9·81622	14	9·93789	25	10·06211	9·87833	11	5
56	9·81636	15	9·93814	26	10·06186	9·87822	11	4
		14		25			11	
57	9·81651	14	9·93840	25	10·06160	9·87811	11	3
58	9·81665	15	9·93865	26	10·06135	9·87800	11	2
59	9·81680	14	9·93891	25	10·06109	9·87789	11	1
60	9·81694		9·93916		10·06084	9·87778		0
	Cosine.		Cotang.		Tangent.	Sine.		

[49 degrees.]

[41 degrees.]

'	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	'
0	9°81694		9°93916		10°06084	9°87778		60
1	9°81709	15	9°93942	26	10°06058	9°87767	11	59
2	9°81723	14	9°93967	25	10°06033	9°87756	11	58
		15		26			11	
3	9°81738	14	9°93993	25	10°06007	9°87745	11	57
4	9°81752	15	9°94018	26	10°05982	9°87734	11	56
5	9°81767	14	9°94044	25	10°05956	9°87723	11	55
		15		26			11	
6	9°81781	14	9°94069	25	10°05931	9°87712	11	54
7	9°81796	15	9°94095	26	10°05905	9°87701	11	53
8	9°81810	14	9°94120	25	10°05880	9°87690	11	52
		15		26			11	
9	9°81825	14	9°94146	25	10°05854	9°87679	11	51
10	9°81839	15	9°94171	26	10°05829	9°87668	11	50
11	9°81854	14	9°94197	25	10°05803	9°87657	11	49
		15		26			11	
12	9°81868	14	9°94222	25	10°05778	9°87646	11	48
13	9°81882	15	9°94248	26	10°05752	9°87635	11	47
14	9°81897	14	9°94273	25	10°05727	9°87624	11	46
		15		26			11	
15	9°81911	14	9°94299	25	10°05701	9°87613	12	45
16	9°81926	15	9°94324	26	10°05676	9°87601	11	44
17	9°81940	14	9°94350	25	10°05650	9°87590	11	43
		15		26			11	
18	9°81955	14	9°94375	25	10°05625	9°87579	11	42
19	9°81969	15	9°94401	26	10°05599	9°87568	11	41
20	9°81983	14	9°94426	25	10°05574	9°87557	11	40
		15		26			11	
21	9°81998	14	9°94452	25	10°05548	9°87546	11	39
22	9°82012	15	9°94477	26	10°05523	9°87535	11	38
23	9°82026	14	9°94503	25	10°05497	9°87524	11	37
		15		26			11	
24	9°82041	14	9°94528	25	10°05472	9°87513	12	36
25	9°82055	15	9°94554	26	10°05446	9°87501	11	35
26	9°82069	14	9°94579	25	10°05421	9°87490	11	34
		15		26			11	
27	9°82084	14	9°94604	25	10°05396	9°87479	11	33
28	9°82098	15	9°94630	26	10°05370	9°87468	11	32
29	9°82112	14	9°94655	25	10°05345	9°87457	11	31
30	9°82126	14	9°94681	26	10°05319	9°87446	11	30
'	Cosine.		Cotang.		Tangent.	Sine.		'

[48 degrees.]



[41 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°82126		9°94681		10°05319	9°87446		30
31	9°82141	15	9°94706	25	10°05294	9°87434	12	29
32	9°82155	14	9°94732	26	10°05268	9°87423	11	28
		14		25			11	
33	9°82169		9°94757		10°05243	9°87412		27
34	9°82184	15	9°94783	26	10°05217	9°87401	11	26
35	9°82198	14	9°94808	25	10°05192	9°87390	12	25
		14		26			12	
36	9°82212		9°94834		10°05166	9°87378		24
37	9°82226	14	9°94859	25	10°05141	9°87367	11	23
38	9°82240	14	9°94884	25	10°05116	9°87356	11	22
		15		26			11	
39	9°82255		9°94910		10°05090	9°87345		21
40	9°82269	14	9°94935	25	10°05065	9°87334	12	20
41	9°82283	14	9°94961	26	10°05039	9°87322	11	19
		14		25			11	
42	9°82297		9°94986		10°05014	9°87311		18
43	9°82311	14	9°95012	26	10°04988	9°87300	11	17
44	9°82326	15	9°95037	25	10°04963	9°87288	12	16
		14		25			11	
45	9°82340		9°95062		10°04938	9°87277		15
46	9°82354	14	9°95088	26	10°04912	9°87266	11	14
47	9°82368	14	9°95113	25	10°04887	9°87255	12	13
		14		26			12	
48	9°82382		9°95139		10°04861	9°87243		12
49	9°82396	14	9°95164	25	10°04836	9°87232	11	11
50	9°82410	14	9°95190	26	10°04810	9°87221	11	10
		14		25			12	
51	9°82424		9°95215		10°04785	9°87209		9
52	9°82439	15	9°95240	25	10°04760	9°87198	11	8
53	9°82453	14	9°95266	26	10°04734	9°87187	11	7
		14		25			12	
54	9°82467		9°95291		10°04709	9°87175		6
55	9°82481	14	9°95317	26	10°04683	9°87164	11	5
56	9°82495	14	9°95342	25	10°04658	9°87153	11	4
		14		26			12	
57	9°82509		9°95368		10°04632	9°87141		3
58	9°82523	14	9°95393	25	10°04607	9°87130	11	2
59	9°82537	14	9°95418	25	10°04582	9°87119	11	1
60	9°82551	14	9°95444	26	10°04556	9°87107	12	0
	Cosine.		Cotang.		Tangent.	Sine.		

[48 degrees.]

[42 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
0	9·82551		9·95444		10·04556	9·87107		60
1	9·82565	14	9·95469	25	10·04531	9·87096	11	59
2	9·82579	14	9·95495	26	10·04505	9·87085	11	58
		14		25			12	
3	9·82593	14	9·95520	25	10·04480	9·87073	11	57
4	9·82607	14	9·95545	25	10·04455	9·87062	11	56
5	9·82621	14	9·95571	26	10·04429	9·87050	12	55
		14		25			11	
6	9·82635	14	9·95596	26	10·04404	9·87039	11	54
7	9·82649	14	9·95622	26	10·04378	9·87028	12	53
8	9·82663	14	9·95647	25	10·04353	9·87016	11	52
		14		25			11	
9	9·82677	14	9·95672	26	10·04328	9·87005	12	51
10	9·82691	14	9·95698	25	10·04302	9·86993	11	50
11	9·82705	14	9·95723	25	10·04277	9·86982	12	49
		14		25			12	
12	9·82719	14	9·95748	26	10·04252	9·86970	11	48
13	9·82733	14	9·95774	25	10·04226	9·86959	12	47
14	9·82747	14	9·95799	26	10·04201	9·86947	11	46
		14		26			11	
15	9·82761	14	9·95825	25	10·04175	9·86936	12	45
16	9·82775	13	9·95850	25	10·04150	9·86924	11	44
17	9·82788	14	9·95875	26	10·04125	9·86913	11	43
		14		26			11	
18	9·82802	14	9·95901	25	10·04099	9·86902	12	42
19	9·82816	14	9·95926	26	10·04074	9·86890	11	41
20	9·82830	14	9·95952	25	10·04048	9·86879	12	40
		14		25			12	
21	9·82844	14	9·95977	25	10·04023	9·86867	12	39
22	9·82858	14	9·96002	26	10·03998	9·86855	11	38
23	9·82872	14	9·96028	25	10·03972	9·86844	12	37
		13		25			12	
24	9·82885	14	9·96053	25	10·03947	9·86832	11	36
25	9·82899	14	9·96078	26	10·03922	9·86821	12	35
26	9·82913	14	9·96104	26	10·03896	9·86809	12	34
		14		25			11	
27	9·82927	14	9·96129	26	10·03871	9·86798	12	33
28	9·82941	14	9·96155	25	10·03845	9·86786	11	32
29	9·82955	14	9·96180	25	10·03820	9·86775	12	31
30	9·82968	13	9·96205	25	10·03795	9·86763	12	30
'	Cosine.		Cotang.		Tangent.	Sine.		'

[47 degrees,]

[42 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9.82968	14	9.96205	26	10.03795	9.86763	11	30
31	9.82982	14	9.96231	25	10.03769	9.86752	12	29
32	9.82996	14	9.96256	25	10.03744	9.86740	12	28
33	9.83010	13	9.96281	26	10.03719	9.86728	11	27
34	9.83023	14	9.96307	25	10.03693	9.86717	12	26
35	9.83037	14	9.96332	25	10.03668	9.86705	11	25
36	9.83051	14	9.96357	26	10.03643	9.86694	12	24
37	9.83065	13	9.96383	25	10.03617	9.86682	12	23
38	9.83078	14	9.96408	25	10.03592	9.86670	11	22
39	9.83092	14	9.96433	26	10.03567	9.86659	12	21
40	9.83106	14	9.96459	25	10.03541	9.86647	12	20
41	9.83120	13	9.96484	26	10.03516	9.86635	11	19
42	9.83133	14	9.96510	25	10.03490	9.86624	12	18
43	9.83147	14	9.96535	25	10.03465	9.86612	12	17
44	9.83161	13	9.96560	26	10.03440	9.86600	11	16
45	9.83174	14	9.96586	25	10.03414	9.86589	12	15
46	9.83188	14	9.96611	25	10.03389	9.86577	12	14
47	9.83202	13	9.96636	26	10.03364	9.86565	11	13
48	9.83215	14	9.96662	25	10.03338	9.86554	12	12
49	9.83229	13	9.96687	25	10.03313	9.86542	12	11
50	9.83242	14	9.96712	26	10.03288	9.86530	12	10
51	9.83256	14	9.96738	25	10.03262	9.86518	11	9
52	9.83270	13	9.96763	25	10.03237	9.86507	12	8
53	9.83283	14	9.96788	26	10.03212	9.86495	12	7
54	9.83297	13	9.96814	25	10.03186	9.86483	11	6
55	9.83310	14	9.96839	25	10.03161	9.86472	12	5
56	9.83324	14	9.96864	26	10.03136	9.86460	12	4
57	9.83338	13	9.96890	25	10.03110	9.86448	12	3
58	9.83351	14	9.96915	25	10.03085	9.86436	11	2
59	9.83365	14	9.96940	26	10.03060	9.86425	12	1
60	9.83378	13	9.96966	26	10.03034	9.86413		0
	Cosine.		Cotang.		Tangent.	Sine.		

[47 degrees.]

[43 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
0	9.83378		9.96966		10.03034	9.86413		60
1	9.83392	14	9.96991	25	10.03009	9.86401	12	59
2	9.83405	13	9.97016	25	10.02984	9.86389	12	58
		14		26			12	
3	9.83419	13	9.97042	25	10.02958	9.86377	11	57
4	9.83432	14	9.97067	25	10.02933	9.86366	12	56
5	9.83446	13	9.97092	26	10.02908	9.86354	12	55
		14		25			12	
6	9.83459	14	9.97118	25	10.02882	9.86342	12	54
7	9.83473	13	9.97143	25	10.02857	9.86330	12	53
8	9.83486	14	9.97168	25	10.02832	9.86318	12	52
		13		25			12	
9	9.83500	13	9.97193	26	10.02807	9.86306	11	51
10	9.83513	14	9.97219	25	10.02781	9.86295	12	50
11	9.83527	13	9.97244	25	10.02756	9.86283	12	49
		14		26			12	
12	9.83540	14	9.97269	26	10.02731	9.86271	12	48
13	9.83554	13	9.97295	25	10.02705	9.86259	12	47
14	9.83567	14	9.97320	25	10.02680	9.86247	12	46
		13		26			12	
15	9.83581	13	9.97345	26	10.02655	9.86235	12	45
16	9.83594	14	9.97371	25	10.02629	9.86223	12	44
17	9.83608	13	9.97396	25	10.02604	9.86211	11	43
		13		26			12	
18	9.83621	13	9.97421	26	10.02579	9.86200	12	42
19	9.83634	14	9.97447	25	10.02553	9.86188	12	41
20	9.83648	13	9.97472	25	10.02528	9.86176	12	40
		13		26			12	
21	9.83661	13	9.97497	26	10.02503	9.86164	12	39
22	9.83674	14	9.97523	25	10.02477	9.86152	12	38
23	9.83688	13	9.97548	25	10.02452	9.86140	12	37
		14		25			12	
24	9.83701	14	9.97573	25	10.02427	9.86128	12	36
25	9.83715	13	9.97598	26	10.02402	9.86116	12	35
26	9.83728	13	9.97624	26	10.02376	9.86104	12	34
		13		25			12	
27	9.83741	14	9.97649	25	10.02351	9.86092	12	33
28	9.83755	13	9.97674	26	10.02326	9.86080	12	32
29	9.83768	13	9.97700	25	10.02300	9.86068	12	31
30	9.83781	13	9.97725	25	10.02275	9.86056	12	30
	Cosine.		Cotang.		Tangent.	Sine.		

[46 degrees.]

[43 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9°83781		9°97725		10°02275	9°86056		30
31	9°83795	14	9°97750	25	10°02250	9°86044	12	29
32	9°83808	13	9°97776	26	10°02224	9°86032	12	28
		13		25			12	
33	9°83821	13	9°97801	25	10°02199	9°86020	12	27
34	9°83834	13	9°97826	25	10°02174	9°86008	12	26
35	9°83848	14	9°97851	25	10°02149	9°85996	12	25
		13		26			12	
36	9°83861	13	9°97877	25	10°02123	9°85984	12	24
37	9°83874	13	9°97902	25	10°02098	9°85972	12	23
38	9°83887	13	9°97927	25	10°02073	9°85960	12	22
		14		26			12	
39	9°83901	13	9°97953	25	10°02047	9°85948	12	21
40	9°83914	13	9°97978	25	10°02022	9°85936	12	20
41	9°83927	13	9°98003	26	10°01997	9°85924	12	19
		13		26			12	
42	9°83940	14	9°98029	25	10°01971	9°85912	12	18
43	9°83954	13	9°98054	25	10°01946	9°85900	12	17
44	9°83967	13	9°98079	25	10°01921	9°85888	12	16
		13		25			12	
45	9°83980	13	9°98104	26	10°01896	9°85876	12	15
46	9°83993	13	9°98130	25	10°01870	9°85864	13	14
47	9°84006	14	9°98155	25	10°01845	9°85851	13	13
		14		25			12	
48	9°84020	13	9°98180	26	10°01820	9°85839	12	12
49	9°84033	13	9°98206	25	10°01794	9°85827	12	11
50	9°84046	13	9°98231	25	10°01769	9°85815	12	10
		13		25			12	
51	9°84059	13	9°98256	25	10°01744	9°85803	12	9
52	9°84072	13	9°98281	26	10°01719	9°85791	12	8
53	9°84085	13	9°98307	26	10°01693	9°85779	12	7
		13		25			13	
54	9°84098	14	9°98332	25	10°01668	9°85766	12	6
55	9°84112	13	9°98357	26	10°01643	9°85754	12	5
56	9°84125	13	9°98383	26	10°01617	9°85742	12	4
		13		25			12	
57	9°84138	13	9°98408	25	10°01592	9°85730	12	3
58	9°84151	13	9°98433	25	10°01567	9°85718	12	2
59	9°84164	13	9°98458	25	10°01542	9°85706	13	1
60	9°84177	13	9°98484	26	10°01516	9°85693	13	0
		13		26			13	
	Cosine.		Cotang.		Tangent.	Sine.		

[46 degrees.]

[44 degrees.]

'	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	'
0	9°84177		9°98484		10°01516	9°85693		60
1	9°84190	13	9°98509	25	10°01491	9°85681	12	59
2	9°84203	13	9°98534	25	10°01466	9°85669	12	58
		13		26			12	
3	9°84216	13	9°98560	25	10°01440	9°85657	12	57
4	9°84229	13	9°98585	25	10°01415	9°85645	13	56
5	9°84242	13	9°98610	25	10°01390	9°85632	12	55
		13		25			12	
6	9°84255	14	9°98635	26	10°01365	9°85620	12	54
7	9°84269	14	9°98661	26	10°01339	9°85608	12	53
8	9°84282	13	9°98686	25	10°01314	9°85596	13	52
		13		25			13	
9	9°84295	13	9°98711	26	10°01289	9°85583	12	51
10	9°84308	13	9°98737	25	10°01263	9°85571	12	50
11	9°84321	13	9°98762	25	10°01238	9°85559	12	49
		13		25			12	
12	9°84334	13	9°98787	25	10°01213	9°85547	13	48
13	9°84347	13	9°98812	26	10°01188	9°85534	12	47
14	9°84360	13	9°98838	25	10°01162	9°85522	12	46
		13		25			12	
15	9°84373	12	9°98863	25	10°01137	9°85510	13	45
16	9°84385	13	9°98888	25	10°01112	9°85497	12	44
17	9°84398	13	9°98913	26	10°01087	9°85485	12	43
		13		26			12	
18	9°84411	13	9°98939	25	10°01061	9°85473	13	42
19	9°84424	13	9°98964	25	10°01036	9°85460	12	41
20	9°84437	13	9°98989	26	10°01011	9°85448	12	40
		13		26			12	
21	9°84450	13	9°99015	25	10°00985	9°85436	13	39
22	9°84463	13	9°99040	25	10°00960	9°85423	12	38
23	9°84476	13	9°99065	25	10°00935	9°85411	12	37
		13		25			12	
24	9°84489	13	9°99090	26	10°00910	9°85399	13	36
25	9°84502	13	9°99116	25	10°00884	9°85386	12	35
26	9°84515	13	9°99141	25	10°00859	9°85374	13	34
		13		25			13	
27	9°84528	12	9°99166	25	10°00834	9°85361	12	33
28	9°84540	13	9°99191	26	10°00809	9°85349	12	32
29	9°84553	13	9°99217	25	10°00783	9°85337	13	31
30	9°84566	13	9°99242	25	10°00758	9°85324	13	30
'	Cosine		Cotang.		Tangent.	Sine		'

[45 degrees.]

[44 degrees.]

	Sine.	Diff.	Tangent.	Diff.	Cotang.	Cosine.	Diff.	
30	9·84566		9·99242		10·00758	9·85324		30
31	9·84579	13	9·99267	25	10·00733	9·85312	12	29
32	9·84592	13	9·99293	26	10·00707	9·85299	13	28
		13		25			12	
33	9·84605	13	9·99318	25	10·00682	9·85287	13	27
34	9·84618	12	9·99343	25	10·00657	9·85274	12	26
35	9·84630	12	9·99368	25	10·00632	9·85262	12	25
		13		26			12	
36	9·84643	13	9·99394	25	10·00606	9·85250	13	24
37	9·84656	13	9·99419	25	10·00581	9·85237	12	23
38	9·84669	13	9·99444	25	10·00556	9·85225	13	22
		12		26			12	
39	9·84682	12	9·99469	26	10·00531	9·85212	12	21
40	9·84694	13	9·99495	25	10·00505	9·85200	13	20
41	9·84707	13	9·99520	25	10·00480	9·85187	12	19
		13		25			12	
42	9·84720	13	9·99545	25	10·00455	9·85175	13	18
43	9·84733	12	9·99570	26	10·00430	9·85162	12	17
44	9·84745	13	9·99596	25	10·00404	9·85150	13	16
		13		25			13	
45	9·84758	13	9·99621	25	10·00379	9·85137	12	15
46	9·84771	13	9·99646	26	10·00354	9·85125	13	14
47	9·84784	12	9·99672	25	10·00328	9·85112	12	13
		13		25			12	
48	9·84796	13	9·99697	25	10·00303	9·85100	13	12
49	9·84809	13	9·99722	25	10·00278	9·85087	13	11
50	9·84822	13	9·99747	26	10·00253	9·85074	12	10
		12		25			12	
51	9·84835	12	9·99773	25	10·00227	9·85062	13	9
52	9·84847	13	9·99798	25	10·00202	9·85049	12	8
53	9·84860	13	9·99823	25	10·00177	9·85037	13	7
		13		25			13	
54	9·84873	12	9·99848	26	10·00152	9·85024	12	6
55	9·84885	13	9·99874	25	10·00126	9·85012	13	5
56	9·84898	13	9·99899	25	10·00101	9·84999	13	4
		13		25			13	
57	9·84911	12	9·99924	25	10·00076	9·84986	12	3
58	9·84923	13	9·99949	26	10·00051	9·84974	13	2
59	9·84936	13	9·99975	25	10·00025	9·84961	12	1
60	9·84949	13	10·00000		10·00000	9·84949		0
	Cosine.		Cotang.		Tangent.	Sine.		

[45 degrees.]

[0 degrees.]

"	Sine.					"
	0'	1'	2'	3'	4'	
0	— ∞	6.46373	6.76476	6.94085	7.06579	60
1	4.68557	6.47090	6.76836	6.94325	7.06759	59
2	4.98660	6.47797	6.77193	6.94565	7.06939	58
3	5.16270	6.48492	6.77548	6.94803	7.07118	57
4	5.28763	6.49175	6.77900	6.95039	7.07296	56
5	5.38454	6.49849	6.78248	6.95275	7.07474	55
6	5.46373	6.50512	6.78595	6.95509	7.07651	54
7	5.53067	6.51165	6.78938	6.95742	7.07827	53
8	5.58866	6.51808	6.79278	6.95973	7.08003	52
9	5.63982	6.52442	6.79616	6.96204	7.08177	51
10	5.68557	6.53067	6.79952	6.96433	7.08351	50
11	5.72697	6.53683	6.80285	6.96661	7.08525	49
12	5.76476	6.54291	6.80615	6.96888	7.08698	48
13	5.79952	6.54890	6.80943	6.97113	7.08870	47
14	5.83170	6.55481	6.81268	6.97338	7.09041	46
15	5.86167	6.56064	6.81591	6.97561	7.09211	45
16	5.88969	6.56639	6.81911	6.97783	7.09381	44
17	5.91602	6.57207	6.82230	6.98004	7.09551	43
18	5.94085	6.57767	6.82545	6.98224	7.09719	42
19	5.96433	6.58320	6.82859	6.98443	7.09887	41
20	5.98660	6.58866	6.83170	6.98660	7.10055	40
21	6.00779	6.59406	6.83479	6.98877	7.10222	39
22	6.02800	6.59939	6.83786	6.99093	7.10388	38
23	6.04730	6.60465	6.84091	6.99307	7.10553	37
24	6.06579	6.60985	6.84394	6.99520	7.10718	36
25	6.08351	6.61499	6.84694	6.99733	7.10882	35
26	6.10055	6.62007	6.84993	6.99944	7.11046	34
27	6.11694	6.62509	6.85289	7.00155	7.11209	33
28	6.13273	6.63006	6.85584	7.00364	7.11371	32
29	6.14797	6.63496	6.85876	7.00572	7.11533	31
30	6.16270	6.63982	6.86167	7.00779	7.11694	30
"	59'	58'	57'	56'	55'	"
Cosine.						

[89 degrees.]



[0 degrees.]

"	Sine.					"
	0'	1'	2'	3'	4'	
30	6.16270	6.63982	6.86167	7.00779	7.11694	30
31	6.17694	6.64462	6.86455	7.00986	7.11854	29
32	6.19072	6.64936	6.86742	7.01191	7.12014	28
33	6.20409	6.65406	6.87027	7.01395	7.12174	27
34	6.21705	6.65870	6.87310	7.01599	7.12333	26
35	6.22964	6.66330	6.87591	7.01801	7.12491	25
36	6.24188	6.66785	6.87870	7.02003	7.12648	24
37	6.25378	6.67235	6.88147	7.02203	7.12805	23
38	6.26536	6.67680	6.88423	7.02403	7.12962	22
39	6.27664	6.68121	6.88697	7.02602	7.13118	21
40	6.28763	6.68557	6.88969	7.02800	7.13273	20
41	6.29836	6.68990	6.89240	7.02997	7.13428	19
42	6.30882	6.69418	6.89509	7.03193	7.13582	18
43	6.31904	6.69841	6.89776	7.03388	7.13736	17
44	6.32903	6.70261	6.90042	7.03582	7.13889	16
45	6.33879	6.70676	6.90306	7.03776	7.14042	15
46	6.34833	6.71088	6.90568	7.03968	7.14194	14
47	6.35767	6.71496	6.90829	7.04160	7.14346	13
48	6.36682	6.71900	6.91088	7.04351	7.14497	12
49	6.37577	6.72300	6.91346	7.04541	7.14647	11
50	6.38454	6.72697	6.91602	7.04730	7.14797	10
51	6.39315	6.73090	6.91857	7.04919	7.14947	9
52	6.40158	6.73479	6.92110	7.05106	7.15096	8
53	6.40985	6.73865	6.92362	7.05293	7.15244	7
54	6.41797	6.74248	6.92612	7.05479	7.15392	6
55	6.42594	6.74627	6.92861	7.05664	7.15540	5
56	6.43376	6.75003	6.93109	7.05849	7.15687	4
57	6.44145	6.75376	6.93355	7.06032	7.15833	3
58	6.44900	6.75746	6.93599	7.06215	7.15979	2
59	6.45643	6.76112	6.93843	7.06397	7.16125	1
60	6.46373	6.76476	6.94085	7.06579	7.16270	0
"	59'	58'	57'	56'	55'	"
Cosine.						

[89 degrees.]

[0 degrees.]

"	Sine.					"
	5'	6'	7'	8'	9'	
0	7°16270	7°24188	7°30882	7°36682	7°41797	60
1	7°16414	7°24308	7°30986	7°36772	7°41877	59
2	7°16558	7°24428	7°31089	7°36862	7°41957	58
3	7°16702	7°24548	7°31191	7°36952	7°42037	57
4	7°16845	7°24668	7°31294	7°37042	7°42117	56
5	7°16987	7°24787	7°31396	7°37132	7°42197	55
6	7°17130	7°24906	7°31498	7°37221	7°42277	54
7	7°17271	7°25024	7°31600	7°37310	7°42356	53
8	7°17413	7°25142	7°31702	7°37399	7°42435	52
9	7°17553	7°25260	7°31803	7°37488	7°42515	51
10	7°17694	7°25378	7°31904	7°37577	7°42594	50
11	7°17834	7°25495	7°32005	7°37666	7°42673	49
12	7°17973	7°25612	7°32106	7°37754	7°42751	48
13	7°18112	7°25728	7°32206	7°37842	7°42830	47
14	7°18250	7°25845	7°32306	7°37930	7°42908	46
15	7°18389	7°25961	7°32406	7°38018	7°42987	45
16	7°18526	7°26076	7°32506	7°38106	7°43065	44
17	7°18663	7°26192	7°32606	7°38193	7°43143	43
18	7°18800	7°26307	7°32705	7°38280	7°43221	42
19	7°18937	7°26421	7°32804	7°38367	7°43299	41
20	7°19072	7°26536	7°32903	7°38454	7°43376	40
21	7°19208	7°26650	7°33001	7°38541	7°43454	39
22	7°19343	7°26764	7°33100	7°38628	7°43531	38
23	7°19478	7°26877	7°33198	7°38714	7°43608	37
24	7°19612	7°26991	7°33296	7°38800	7°43685	36
25	7°19746	7°27104	7°33393	7°38887	7°43762	35
26	7°19879	7°27216	7°33491	7°38972	7°43839	34
27	7°20012	7°27329	7°33588	7°39058	7°43916	33
28	7°20145	7°27441	7°33685	7°39144	7°43992	32
29	7°20277	7°27552	7°33782	7°39229	7°44069	31
30	7°20409	7°27664	7°33879	7°39314	7°44145	30
"	54'	53'	52'	51'	50'	"
Cosine.						

[89 degrees.]

206

[0 degrees.]

"	Sine.					"
	5'	6'	7'	8'	9'	
30	7'20409	7'27664	7'33879	7'39314	7'44145	30
31	7'20540	7'27775	7'33975	7'39400	7'44221	29
32	7'20671	7'27886	7'34071	7'39484	7'44297	28
33	7'20802	7'27997	7'34167	7'39569	7'44373	27
34	7'20932	7'28107	7'34263	7'39654	7'44449	26
35	7'21062	7'28217	7'34359	7'39738	7'44524	25
36	7'21191	7'28327	7'34454	7'39822	7'44600	24
37	7'21320	7'28437	7'34549	7'39906	7'44675	23
38	7'21449	7'28546	7'34644	7'39990	7'44750	22
39	7'21577	7'28655	7'34739	7'40074	7'44825	21
40	7'21705	7'28763	7'34833	7'40158	7'44900	20
41	7'21833	7'28872	7'34928	7'40241	7'44975	19
42	7'21960	7'28980	7'35022	7'40324	7'45050	18
43	7'22087	7'29088	7'35116	7'40408	7'45124	17
44	7'22213	7'29196	7'35209	7'40491	7'45199	16
45	7'22339	7'29303	7'35303	7'40573	7'45273	15
46	7'22465	7'29410	7'35396	7'40656	7'45347	14
47	7'22590	7'29517	7'35489	7'40739	7'45421	13
48	7'22715	7'29623	7'35582	7'40821	7'45495	12
49	7'22840	7'29730	7'35675	7'40903	7'45569	11
50	7'22964	7'29836	7'35767	7'40985	7'45643	10
51	7'23088	7'29942	7'35860	7'41067	7'45716	9
52	7'23212	7'30047	7'35952	7'41149	7'45790	8
53	7'23335	7'30152	7'36044	7'41230	7'45863	7
54	7'23458	7'30257	7'36135	7'41312	7'45936	6
55	7'23580	7'30362	7'36227	7'41393	7'46009	5
56	7'23702	7'30467	7'36318	7'41474	7'46082	4
57	7'23824	7'30571	7'36409	7'41555	7'46155	3
58	7'23946	7'30675	7'36500	7'41636	7'46228	2
59	7'24067	7'30779	7'36591	7'41716	7'46300	1
60	7'24188	7'30882	7'36682	7'41797	7'46373	0
"	54'	53'	52'	51'	50'	"
Cosine.						

[89 degrees.]

[0 degrees.]

	Sine.					
	'0	'1	'2	'3	'4	
0	-∞	5.46373	5.76476	5.94085	6.06579	59
1	6.46373	6.50512	6.54291	6.57767	6.60985	58
2	6.76476	6.78595	6.80615	6.82545	6.84394	57
3	6.94085	6.95509	6.96888	6.98224	6.99520	56
4	7.06579	7.07651	7.08698	7.09719	7.10718	55
5	7.16270	7.17130	7.17973	7.18800	7.19612	54
6	7.24188	7.24906	7.25612	7.26307	7.26991	53
7	7.30882	7.31498	7.32106	7.32705	7.33296	52
8	7.36682	7.37221	7.37754	7.38280	7.38800	51
9	7.41797	7.42277	7.42751	7.43221	7.43685	50
10	7.46373	7.46805	7.47233	7.47656	7.48076	49
11	7.50512	7.50905	7.51294	7.51680	7.52063	48
12	7.54291	7.54651	7.55009	7.55363	7.55715	47
13	7.57767	7.58100	7.58430	7.58758	7.59083	46
14	7.60985	7.61294	7.61601	7.61906	7.62209	45
15	7.63982	7.64270	7.64557	7.64842	7.65125	44
16	7.66784	7.67055	7.67324	7.67591	7.67857	43
17	7.69417	7.69672	7.69925	7.70177	7.70427	42
18	7.71900	7.72140	7.72380	7.72618	7.72854	41
19	7.74248	7.74476	7.74703	7.74928	7.75153	40
20	7.76475	7.76692	7.76907	7.77122	7.77335	39
21	7.78594	7.78801	7.79006	7.79210	7.79414	38
22	7.80615	7.80812	7.81008	7.81203	7.81397	37
23	7.82545	7.82733	7.82921	7.83108	7.83294	36
24	7.84393	7.84574	7.84754	7.84933	7.85111	35
25	7.86166	7.86340	7.86512	7.86684	7.86856	34
26	7.87870	7.88036	7.88202	7.88368	7.88533	33
27	7.89509	7.89669	7.89829	7.89988	7.90147	32
28	7.91088	7.91243	7.91397	7.91551	7.91704	31
29	7.92612	7.92761	7.92910	7.93059	7.93207	30
	1.0	.9	.8	.7	.6	
Cosine.						

[89 degrees.]

[0 degrees.]

	Sine.						
	'5	'6	'7	'8	'9	'10	
0	6·16270	6·24188	6·30882	6·36682	6·41797	6·46373	59
1	6·63982	6·66785	6·69418	6·71900	6·74248	6·76476	58
2	6·86167	6·87870	6·89509	6·91088	6·92612	6·94085	57
3	7·00779	7·02003	7·03193	7·04351	7·05479	7·06579	56
4	7·11694	7·12648	7·13582	7·14497	7·15392	7·16270	55
5	7·20409	7·21191	7·21960	7·22715	7·23458	7·24188	54
6	7·27664	7·28327	7·28980	7·29623	7·30257	7·30882	53
7	7·33879	7·34454	7·35022	7·35582	7·36135	7·36682	52
8	7·39314	7·39822	7·40324	7·40821	7·41312	7·41797	51
9	7·44145	7·44600	7·45050	7·45495	7·45936	7·46373	50
10	7·48491	7·48903	7·49311	7·49715	7·50115	7·50512	49
11	7·52442	7·52818	7·53191	7·53561	7·53927	7·54291	48
12	7·56064	7·56410	7·56753	7·57094	7·57431	7·57767	47
13	7·59406	7·59726	7·60045	7·60360	7·60674	7·60985	46
14	7·62509	7·62808	7·63104	7·63399	7·63691	7·63982	45
15	7·65406	7·65685	7·65962	7·66238	7·66512	7·66784	44
16	7·68121	7·68383	7·68644	7·68903	7·69161	7·69417	43
17	7·70676	7·70924	7·71170	7·71414	7·71658	7·71900	42
18	7·73090	7·73324	7·73557	7·73788	7·74019	7·74248	41
19	7·75376	7·75598	7·75819	7·76039	7·76258	7·76475	40
20	7·77548	7·77759	7·77969	7·78179	7·78387	7·78594	39
21	7·79616	7·79818	7·80018	7·80218	7·80417	7·80615	38
22	7·81591	7·81783	7·81975	7·82166	7·82356	7·82545	37
23	7·83479	7·83663	7·83847	7·84030	7·84212	7·84393	36
24	7·85289	7·85466	7·85642	7·85817	7·85992	7·86166	35
25	7·87026	7·87196	7·87366	7·87534	7·87702	7·87870	34
26	7·88697	7·88860	7·89023	7·89186	7·89347	7·89509	33
27	7·90305	7·90463	7·90620	7·90777	7·90933	7·91088	32
28	7·91857	7·92009	7·92160	7·92311	7·92462	7·92612	31
29	7·93354	7·93501	7·93648	7·93794	7·93939	7·94084	30
	'5	'4	'3	'2	'1	'0	
Cosine.							

[0 degrees.]

	Sine.					
	'0	'1	'2	'3	'4	
30	7'94084	7'94229	7'94373	7'94516	7'94659	29
31	7'95508	7'95648	7'95787	7'95926	7'96065	28
32	7'96887	7'97022	7'97158	7'97292	7'97426	27
33	7'98223	7'98355	7'98486	7'98616	7'98747	26
34	7'99520	7'99647	7'99775	7'99901	8'00028	25
35	8'00779	8'00903	8'01026	8'01149	8'01272	24
36	8'02002	8'02123	8'02243	8'02362	8'02482	23
37	8'03192	8'03309	8'03426	8'03543	8'03659	22
38	8'04350	8'04464	8'04578	8'04692	8'04805	21
39	8'05478	8'05589	8'05700	8'05811	8'05921	20
40	8'06578	8'06686	8'06794	8'06902	8'07010	19
41	8'07650	8'07756	8'07861	8'07967	8'08072	18
42	8'08696	8'08800	8'08903	8'09006	8'09108	17
43	8'09718	8'09819	8'09920	8'10020	8'10120	16
44	8'10717	8'10815	8'10914	8'11012	8'11110	15
45	8'11693	8'11789	8'11885	8'11981	8'12077	14
46	8'12647	8'12741	8'12836	8'12929	8'13023	13
47	8'13581	8'13673	8'13765	8'13857	8'13949	12
48	8'14495	8'14586	8'14676	8'14766	8'14856	11
49	8'15391	8'15479	8'15568	8'15656	8'15744	10
50	8'16268	8'16355	8'16441	8'16528	8'16614	9
51	8'17128	8'17213	8'17298	8'17383	8'17467	8
52	8'17971	8'18055	8'18138	8'18221	8'18304	7
53	8'18798	8'18880	8'18962	8'19044	8'19125	6
54	8'19610	8'19691	8'19771	8'19851	8'19931	5
55	8'20407	8'20486	8'20565	8'20643	8'20722	4
56	8'21189	8'21267	8'21344	8'21422	8'21499	3
57	8'21958	8'22034	8'22110	8'22186	8'22262	2
58	8'22713	8'22788	8'22863	8'22937	8'23012	1
59	8'23456	8'23529	8'23603	8'23676	8'23749	0
	1'0	'9	'8	'7	'6	
	Cosine.					

[89 degrees.]

210

[0 degrees.]

		Sine.							
		'5	'6	'7	'8	'9	1'0		
30	7'94802	7'94944	7'95086	7'95227	7'95368	7'95508	29		
31	7'96203	7'96341	7'96478	7'96615	7'96751	7'96887	28		
32	7'97560	7'97694	7'97827	7'97959	7'98092	7'98223	27		
33	7'98876	7'99006	7'99135	7'99264	7'99392	7'99520	26		
34	8'00154	8'00279	8'00405	8'00530	8'00654	8'00779	25		
35	8'01395	8'01517	8'01639	8'01760	8'01881	8'02002	24		
36	8'02601	8'02720	8'02838	8'02957	8'03074	8'03192	23		
37	8'03775	8'03891	8'04006	8'04121	8'04236	8'04350	22		
38	8'04918	8'05030	8'05143	8'05255	8'05367	8'05478	21		
39	8'06031	8'06141	8'06251	8'06360	8'06469	8'06578	20		
40	8'07117	8'07224	8'07331	8'07438	8'07544	8'07650	19		
41	8'08176	8'08281	8'08385	8'08489	8'08593	8'08696	18		
42	8'09210	8'09312	8'09414	8'09516	8'09617	8'09718	17		
43	8'10220	8'10320	8'10420	8'10519	8'10618	8'10717	16		
44	8'11207	8'11305	8'11402	8'11499	8'11596	8'11693	15		
45	8'12172	8'12268	8'12363	8'12458	8'12553	8'12647	14		
46	8'13117	8'13210	8'13303	8'13396	8'13489	8'13581	13		
47	8'14041	8'14132	8'14223	8'14314	8'14405	8'14495	12		
48	8'14945	8'15035	8'15124	8'15213	8'15302	8'15391	11		
49	8'15832	8'15919	8'16007	8'16094	8'16181	8'16268	10		
50	8'16700	8'16786	8'16872	8'16957	8'17043	8'17128	9		
51	8'17552	8'17636	8'17720	8'17804	8'17888	8'17971	8		
52	8'18387	8'18469	8'18552	8'18634	8'18716	8'18798	7		
53	8'19206	8'19287	8'19368	8'19449	8'19530	8'19610	6		
54	8'20010	8'20090	8'20170	8'20249	8'20328	8'20407	5		
55	8'20800	8'20878	8'20956	8'21034	8'21112	8'21189	4		
56	8'21576	8'21652	8'21729	8'21805	8'21882	8'21958	3		
57	8'22337	8'22413	8'22488	8'22563	8'22638	8'22713	2		
58	8'23086	8'23160	8'23234	8'23308	8'23382	8'23456	1		
59	8'23822	8'23895	8'23968	8'24041	8'24113	8'24186	0		
		'5	'4	'3	'2	'1	'0		
		Cosine.							

[89 degrees.]

## TABLE OF CONSTANTS.

*From Babbage's Logarithms, with a few Additions.*

		Logarithm.	Comp. of Log.
Diam. = 1, circum- ference .....	$\pi = 3.1415927$	0.49715	9.50285
Diam. = 1, area of circle .....	$\frac{\pi}{4} = 0.7853982$	9.89509	0.10491
Diam. = 1, contents of sphere .....	$\frac{\pi}{6} = 0.5235988$	9.71900	0.28100
Area = 1, diameter of circle .....	$\sqrt{\frac{4}{\pi}} = 1.1283792$	0.05246	9.94754
Content = 1, diam. of sphere .....	$\sqrt[3]{\frac{6}{\pi}} = 1.2407010$	0.09367	9.90633
	$\sqrt[3]{\frac{2}{\pi}} = 1.4645919$	0.16572	9.83428
	$\sqrt{\frac{2}{\pi}} = 1.7724539$	0.24857	9.75143
	$\pi^2 = 9.8696044$	0.99430	9.00570
	Hyp. log. $\pi = 1.1447299$	0.05870	9.94130
Length of arc 1" = sin 1" =	0.000004848	4.68557	5.31443
Length of arc 2" = sin 2" =	0.000009696	4.98660	5.01340
Length of arc 3" = sin 3" =	0.000014544	5.16270	4.83730
Length of arc 1' = sin 1' =	0.000290888	6.46373	3.53627
Length of arc 1° =	0.017453293	8.24188	1.75812
Sin 1° =	0.017452406	8.24186	1.75814



		Logarithm.	Comp. of Log.
360 degrees expressed in } seconds ..... } =	1296000	6·11261	3·88739
Rad. reduced to seconds =	206264·8	5·31443	4·68557
Rad. reduced to minutes =	3437·74677	3·53627	6·46373
Rad. reduced to degrees =	57·295780	1·75812	8·24188
Number whose hyp. log. } is unity ..... } = 1 =	2·718281829	0·43429	9·56571
Modulus of common log. =	0·434294482	9·63778	0·36222
French toise = in metres .....	1·949040	0·28982	9·71018
French toise = in English yards	2·1315308	0·32869	9·67131
French toise = in English feet...	6·3945925	0·80581	9·19419
French metre = in English yards	1·0936331	0·03887	9·96113
French metre = in English feet	3·2808992	0·51599	9·48401
French foot = in English feet ...	1·0657654	0·02766	9·97234
French metre = in English inches	39·37079	1·59517	8·40483
French are = in English acres...	0·02471143	8·39290	1·60710
French gramme = in imperial } lbs. troy ..... }	0·00268098	7·42829	2·57171
French gramme = in imperial } lbs. avoirdupois .....	0·00220606	7·34362	2·65638
French kilogramme = in Eng- } lish cwts. .... }	0·0196969	8·29440	1·70560
French litre = in imperial gallons	0·22009687	9·34261	0·65739
Centl. degree = in sexl. degrees	0·9	9·95424	0·04576
Centl. minute = in sexl. minutes	0·54	9·73239	0·26761
Centl. second = in sexl. seconds	0·324	9·51055	0·48945

		Logarithm.	Comp. of Log.
24 hours expressed in seconds =	86400	4·93651	5·06349
Diurnal accel. of stars = 3 <sup>m</sup> 55 <sup>s</sup> ·9093 in mean sol. seconds . . . . . }	= 235·9093	2·37275	7·62725
Sid. day = 23 <sup>h</sup> 56 <sup>m</sup> 4 <sup>s</sup> ·09 in mean sol. days . . . . . }	= 0·99726967	9·99881	0·00119
Sol. m. day = 24 <sup>h</sup> 3 <sup>m</sup> 56 <sup>s</sup> ·5554 in sid. days . . . . . }	= 1·00273791	0·00119	9·99881
Sid. revolution of earth in mean sol. days . . . . . }	= 365·25636	2·56260	7·43740
Trop. revolution of earth in mean sol. days . . . . . }	= 365·24224	2·56258	7·43742
Earth's equatorial radius in English feet . . . . . }	= 20921665	7·32060	2·67940
Earth's polar radius in En- glish feet . . . . . }	= 20852394	7·31916	2·68084
Equatorial degree of lati- tude in English feet . . . . . }	= 362732	5·55959	4·44041
Degree in latitude 45° in English feet . . . . . }	= 364543·5	5·56175	4·43825
Degree in latitude 52° 50' in English feet . . . . . }	= 365000	5·56229	4·43771
Geographical mile in latitude 50½° = in statute miles . . . }	1·152	0·06145	9·93855
Sea league in latitude 50½° = in statute miles . . . . . }	3·456	0·53857	9·46143
Bar. 30 in. F. Ther. 62° . }			
Cubic inch of distilled water in grains . . . . . }	= 252·458	2·40219	7·59781
Ditto, cubic foot of water in ounces troy . . . . . }	= 908·848800	2·95849	7·04151
Ditto, cubic foot of water in pounds troy . . . . . }	= 75·7374000	1·87931	8·12069
Ditto, cubic foot of water in ounces avoirdupois . . . }	= 997·1369691	2·99875	7·00125

		Logarithm.	Comp. of Log.
Bar. 30 in F. Ther. 62°. Cubic foot of water in pounds avoirdupois.....	= 62·3210606	1·79463	8·20537
Length (in English inches) of the pendulum which vibrates seconds in the latitude of Greenwich ...	= 39·1393	1·59261	8·40739
Velocity (in English inches) acquired in one second by a body falling freely in vacuo in the latitude of Greenwich.....	g = 386·2894	2·58691	7·41309
The same in English feet.....	32·1908	1·50773	8·49227

For table of logarithms for questions in interest, see page 112.

[x] = 1. 2. 3. .... x

x	Log. [x]	x	Log. [x]	x	Log. [x]	x	Log. [x]
6	2·85733	23	22·41249	100	157·97000	185	340·61516
7	3·70243	24	23·79271	105	168·03399	190	351·98589
8	4·60552	25	25·19065	110	178·20092	195	363·41362
9	5·55976	30	32·42366	115	188·46614	200	374·89689
10	6·55976	35	40·01423	120	198·82539	205	386·43432
11	7·60116	40	47·91165	125	209·27478	210	398·02458
12	8·68034	45	56·07781	130	219·81069	215	409·66643
13	9·79428	50	64·48307	135	230·42983	220	421·35867
14	10·94041	55	73·10368	140	241·12911	225	433·10015
15	12·11650	60	81·92017	145	251·90568	230	444·88978
16	13·32062	65	90·91633	150	262·75689	235	456·72652
17	14·55107	70	100·07841	155	273·68026	240	468·60937
18	15·80634	75	109·39461	160	284·67346	245	480·53736
19	17·08509	80	118·85473	165	295·73431	250	492·50959
20	18·38612	85	128·44980	170	306·86078	255	504·52516
21	19·70834	90	138·17194	175	318·05094	260	516·58322
22	21·05077	95	148·01410	180	329·30297	265	528·68297

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$$a_n r^n e^{\frac{r}{2}} = (r - a)$$

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