HAL
open science

A reconstruction of Peters's six-place table of trigonometric functions for the new division (1930).

Denis Roegel

To cite this version:

Denis Roegel. A reconstruction of Peters's six-place table of trigonometric functions for the new division (1930).. [Research Report] LORIA, UMR 7503, Université de Lorraine, CNRS, Vandoeuvre-lès-Nancy. 2016. hal-01357831

HAL Id: hal-01357831

https://inria.hal.science/hal-01357831

Submitted on 30 Aug 2016

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

A reconstruction of Peters's six-place table of trigonometric functions for the new division (1930)

Denis Roegel

29 August 2016

This document is part of the LOCOMAT project:
`http://locomat.loria.fr`

Introduction

Johann Theodor Peters (1869–1941) was a German astronomer and computer of mathematical and astronomical tables. In 1910 and 1911, together with Julius Bauschinger, he published the first widely available 8-place table of logarithms [15]. This work was the basis of many later tables, most of which have been reconstructed by us.[1]

The present table is a table of trigonometrical functions, following the footsteps of the 7-place table published in 1918 [40] and the 6-place table published in 1929 [46].

But contrary to the two previous tables, the present table uses the new (centesimal) division of the quadrant in which the quadrant is divided in 100 degrees (g), each degree in 100 minutes (c), and each minute in 100 seconds (cc). In a first part, Peters gives the values of csc and cot for every 1000th of a centesimal degree and to six places. In a second part, Peters gives the values of all six functions for every 100th of a centesimal degree, also to six places. The arrangement of these two parts is similar to the one used in the table published in 1929 [46], but the small interpolation tables are set at the bottom of the pages. An appendix of this volume gathers the interpolation tables for differences from 1 to 999. This appendix has not been reproduced here, but in a separate volume [48].

The main table is based on an unpublished manuscript giving the values of the trigonometrical functions to 8 places for each 1000th of the sexagesimal degree. Peters does not give any details about how he constructed the 8-place table, but since this table divided the quadrant in $90 \times 1000 = 90000$ values, and since the new table divides the quadrant in $100 \times 100 = 10000$ values, all that Peters had to do was to drop eight out of nine values of the 8-place table, and to round the remaining values to six places, as well as recomputing a number of these values. It is possible that Peters also used this unpublished manuscript for the calculation of the 6-place table published in 1938 [54].

The present volume also contains three pages with the values of $w \cdot \cot(w)$ and $w \cdot \csc(w)$, two pages of conversion tables between the new division and the old division of the quadrant, and between the new division and time, with a quadrant being equal to 6 hours, as well as one page giving mathematical and geodetical constants. These tables have not (yet) been reproduced.

It should be observed that one critique made for the table published in 1929, namely the order of the values of csc and cot, has been corrected here, although it may be unrelated to that critique.

[1] For more information on Peters's tables, we refer the reader to our summary [90].

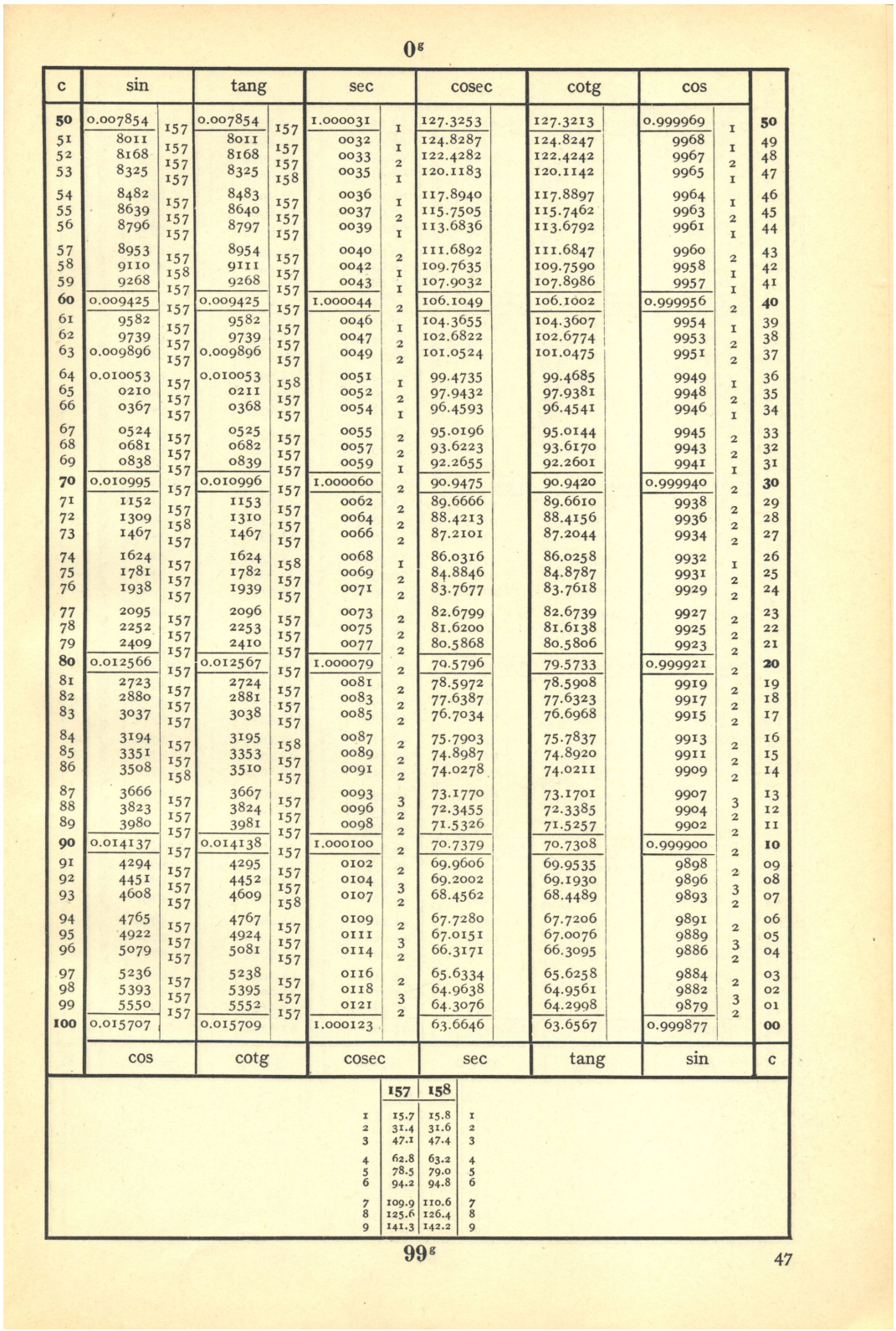
cosec 2^g

c	00cc	10cc	20cc	30cc	40cc	50cc	60cc	70cc	80cc	90cc	100cc	
00	31. 8362	8203	8044	7886	7727	7569	7410	7252	7094	6937	6779	99
01	6779	6621	6464	6307	6150	5993	5836	5680	5523	5367	5211	98
02	5211	5055	4900	4744	4588	4433	4278	4123	3968	3813	3659	97
03	3659	3505	3350	3196	3042	2889	2735	2581	2428	2275	2122	96
04	2122	1969	1816	1664	1511	1359	1207	1055	0903	0751	0600	95
05	31. 0600	0449	0297	0146	*9995	*9844	*9694	*9543	*9393	*9243	*9093	94
06	30. 9093	8943	8793	8643	8494	8345	8195	8046	7897	7749	7600	93
07	7600	7452	7303	7155	7007	6859	6711	6564	6416	6269	6122	92
08	6122	5975	5828	5681	5534	5388	5241	5095	4949	4803	4657	91
09	4657	4512	4366	4221	4076	3931	3786	3641	3496	3352	3207	**90**
10	30. 3207	3063	2919	2775	2631	2487	2344	2200	2057	1914	1771	89
11	1771	1628	1485	1342	1200	1058	0915	0773	0631	0490	0348	88
12	30. 0348	0206	0065	*9924	*9782	*9641	*9501	*9360	*9219	*9079	*8938	87
13	29. 8938	8798	8658	8518	8378	8238	8099	7959	7820	7681	7542	86
14	7542	7403	7264	7126	6987	6849	6710	6572	6434	6296	6159	85
15	29. 6159	6021	5883	5746	5609	5472	5335	5198	5061	4924	4788	84
16	4788	4652	4515	4379	4243	4107	3972	3836	3701	3565	3430	83
17	3430	3295	3160	3025	2890	2756	2621	2487	2353	2218	2084	82
18	2084	1951	1817	1683	1550	1416	1283	1150	1017	0884	0751	81
19	29. 0751	0619	0486	0354	0221	0089	*9957	*9825	*9693	*9562	*9430	**80**
20	28. 9430	9299	9167	9036	8905	8774	8643	8513	8382	8251	8121	79
21	8121	7991	7861	7731	7601	7471	7341	7212	7082	6953	6824	78
22	6824	6695	6566	6437	6308	6180	6051	5923	5794	5666	5538	77
23	5538	5410	5282	5155	5027	4900	4772	4645	4518	4391	4264	76
24	4264	4137	4010	3884	3757	3631	3505	3379	3253	3127	3001	75
25	28. 3001	2875	2750	2624	2499	2374	2249	2124	1999	1874	1749	74
26	1749	1625	1500	1376	1252	1128	1004	0880	0756	0632	0509	73
27	28. 0509	0385	0262	0139	0015	*9892	*9770	*9647	*9524	*9401	*9279	72
28	27. 9279	9157	9034	8912	8790	8668	8546	8424	8303	8181	8060	71
29	8060	7939	7817	7696	7575	7454	7334	7213	7092	6972	6851	**70**
30	27. 6851	6731	6611	6491	6371	6251	6131	6012	5892	5773	5653	69
31	5653	5534	5415	5296	5177	5058	4940	4821	4703	4584	4466	68
32	4466	4348	4230	4112	3994	3876	3758	3641	3523	3406	3288	67
33	3288	3171	3054	2937	2820	2703	2587	2470	2354	2237	2121	66
34	2121	2005	1889	1773	1657	1541	1425	1310	1194	1079	0964	65
35	27. 0964	0848	0733	0618	0503	0389	0274	0159	0045	*9930	*9816	64
36	26. 9816	9702	9588	9474	9360	9246	9132	9018	8905	8791	8678	63
37	8678	8565	8452	8338	8226	8113	8000	7887	7775	7662	7550	62
38	7550	7437	7325	7213	7101	6989	6877	6765	6654	6542	6431	61
39	6431	6319	6208	6097	5986	5875	5764	5653	5542	5432	5321	**60**
40	26. 5321	5211	5100	4990	4880	4770	4660	4550	4440	4330	4221	59
41	4221	4111	4002	3892	3783	3674	3565	3456	3347	3238	3129	58
42	3129	3021	2912	2804	2695	2587	2479	2371	2263	2155	2047	57
43	2047	1939	1832	1724	1617	1509	1402	1295	1188	1081	0974	56
44	26. 0974	0867	0760	0653	0547	0440	0334	0227	0121	0015	*9909	55
45	25. 9909	9803	9697	9591	9486	9380	9274	9169	9063	8958	8853	54
46	8853	8748	8643	8538	8433	8328	8223	8119	8014	7910	7805	53
47	7805	7701	7597	7493	7389	7285	7181	7077	6974	6870	6766	52
48	6766	6663	6560	6456	6353	6250	6147	6044	5941	5838	5736	51
49	5736	5633	5531	5428	5326	5224	5121	5019	4917	4815	4713	**50**
	100cc	90cc	80cc	70cc	60cc	50cc	40cc	30cc	20cc	10cc	00cc	c

	102	103	104	105	106	107	108	109	110	111	112	113	114	115	117	119	121	123	
1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.7	11.9	12.1	12.3	1
2	20.4	20.6	20.8	21.0	21.2	21.4	21.6	21.8	22.0	22.2	22.4	22.6	22.8	23.0	23.4	23.8	24.2	24.6	2
3	30.6	30.9	31.2	31.5	31.8	32.1	32.4	32.7	33.0	33.3	33.6	33.9	34.2	34.5	35.1	35.7	36.3	36.9	3
4	40.8	41.2	41.6	42.0	42.4	42.8	43.2	43.6	44.0	44.4	44.8	45.2	45.6	46.0	46.8	47.6	48.4	49.2	4
5	51.0	51.5	52.0	52.5	53.0	53.5	54.0	54.5	55.0	55.5	56.0	56.5	57.0	57.5	58.5	59.5	60.5	61.5	5
6	61.2	61.8	62.4	63.0	63.6	64.2	64.8	65.4	66.0	66.6	67.2	67.8	68.4	69.0	70.2	71.4	72.6	73.8	6
7	71.4	72.1	72.8	73.5	74.2	74.9	75.6	76.3	77.0	77.7	78.4	79.1	79.8	80.5	81.9	83.3	84.7	86.1	7
8	81.6	82.4	83.2	84.0	84.8	85.6	86.4	87.2	88.0	88.8	89.6	90.4	91.2	92.0	93.6	95.2	96.8	98.4	8
9	91.8	92.7	93.6	94.5	95.4	96.3	97.2	98.1	99.0	99.9	100.8	101.7	102.6	103.5	105.3	107.1	108.9	110.7	9

sec 97^g

Figure 1: Excerpt of Peters's table.



0g

c	sin		tang		sec		cosec		cotg		cos		
50	0.007854	157	0.007854	157	1.000031	1	127.3253		127.3213		0.999969	1	**50**
51	8011	157	8011	157	0032	1	124.8287		124.8247		9968	1	49
52	8168	157	8168	157	0033	2	122.4282		122.4242		9967	2	48
53	8325	157	8325	158	0035	1	120.1183		120.1142		9965	1	47
54	8482	157	8483	157	0036	1	117.8940		117.8897		9964	1	46
55	8639	157	8640	157	0037	2	115.7505		115.7462		9963	2	45
56	8796	157	8797	157	0039	1	113.6836		113.6792		9961	1	44
57	8953	157	8954	157	0040	2	111.6892		111.6847		9960	2	43
58	9110	158	9111	157	0042	1	109.7635		109.7590		9958	1	42
59	9268	157	9268	157	0043	1	107.9032		107.8986		9957	1	41
60	0.009425	157	0.009425	157	1.000044	2	106.1049		106.1002		0.999956	2	**40**
61	9582	157	9582	157	0046	1	104.3655		104.3607		9954	1	39
62	9739	157	9739	157	0047	2	102.6822		102.6774		9953	2	38
63	0.009896	157	0.009896	157	0049	2	101.0524		101.0475		9951	2	37
64	0.010053	157	0.010053	158	0051	1	99.4735		99.4685		9949	1	36
65	0210	157	0211	157	0052	2	97.9432		97.9381		9948	2	35
66	0367	157	0368	157	0054	1	96.4593		96.4541		9946	1	34
67	0524	157	0525	157	0055	2	95.0196		95.0144		9945	2	33
68	0681	157	0682	157	0057	2	93.6223		93.6170		9943	2	32
69	0838	157	0839	157	0059	1	92.2655		92.2601		9941	1	31
70	0.010995	157	0.010996	157	1.000060	2	90.9475		90.9420		0.999940	2	**30**
71	1152	157	1153	157	0062	2	89.6666		89.6610		9938	2	29
72	1309	158	1310	157	0064	2	88.4213		88.4156		9936	2	28
73	1467	157	1467	157	0066	2	87.2101		87.2044		9934	2	27
74	1624	157	1624	158	0068	1	86.0316		86.0258		9932	1	26
75	1781	157	1782	157	0069	2	84.8846		84.8787		9931	2	25
76	1938	157	1939	157	0071	2	83.7677		83.7618		9929	2	24
77	2095	157	2096	157	0073	2	82.6799		82.6739		9927	2	23
78	2252	157	2253	157	0075	2	81.6200		81.6138		9925	2	22
79	2409	157	2410	157	0077	2	80.5868		80.5806		9923	2	21
80	0.012566	157	0.012567	157	1.000079	2	79.5796		79.5733		0.999921	2	**20**
81	2723	157	2724	157	0081	2	78.5972		78.5908		9919	2	19
82	2880	157	2881	157	0083	2	77.6387		77.6323		9917	2	18
83	3037	157	3038	157	0085	2	76.7034		76.6968		9915	2	17
84	3194	157	3195	158	0087	2	75.7903		75.7837		9913	2	16
85	3351	157	3353	157	0089	2	74.8987		74.8920		9911	2	15
86	3508	158	3510	157	0091	2	74.0278		74.0211		9909	2	14
87	3666	157	3667	157	0093	3	73.1770		73.1701		9907	3	13
88	3823	157	3824	157	0096	2	72.3455		72.3385		9904	2	12
89	3980	157	3981	157	0098	2	71.5326		71.5257		9902	2	11
90	0.014137	157	0.014138	157	1.000100	2	70.7379		70.7308		0.999900	2	**10**
91	4294	157	4295	157	0102	2	69.9606		69.9535		9898	2	09
92	4451	157	4452	157	0104	3	69.2002		69.1930		9896	3	08
93	4608	157	4609	158	0107	2	68.4562		68.4489		9893	2	07
94	4765	157	4767	157	0109	2	67.7280		67.7206		9891	2	06
95	4922	157	4924	157	0111	3	67.0151		67.0076		9889	3	05
96	5079	157	5081	157	0114	2	66.3171		66.3095		9886	2	04
97	5236	157	5238	157	0116	2	65.6334		65.6258		9884	2	03
98	5393	157	5395	157	0118	3	64.9638		64.9561		9882	3	02
99	5550	157	5552	157	0121	2	64.3076		64.2998		9879	2	01
100	0.015707		0.015709		1.000123		63.6646		63.6567		0.999877		**00**
	cos		cotg		cosec		sec		tang		sin		c

	157	158	
1	15.7	15.8	1
2	31.4	31.6	2
3	47.1	47.4	3
4	62.8	63.2	4
5	78.5	79.0	5
6	94.2	94.8	6
7	109.9	110.6	7
8	125.6	126.4	8
9	141.3	142.2	9

99g

47

Figure 2: Excerpt of Peters's table.

c	sin		tang		sec		cosec		cotg		cos		
00	0.495459	136	0.570390	208	1.151236	103	2.018332	556	1.753187	640	0.868632	78	100
01	5595	137	0598	208	1339	104	7776	555	2547	639	8554	78	99
02	5732	136	0806	209	1443	103	7221	555	1908	639	8476	78	98
03	5868	136	1015	208	1546	103	6666	555	1269	639	8398	78	97
04	6004	137	1223	208	1649	103	6111	554	1.750630	638	8320	78	96
05	6141	136	1431	209	1752	104	5557	554	1.749992	638	8242	78	95
06	6277	136	1640	208	1856	103	5003	553	9354	638	8164	78	94
07	6413	137	1848	209	1959	104	4450	553	8716	637	8086	78	93
08	6550	136	2057	208	2063	103	3897	553	8079	637	8008	78	92
09	6686	136	2265	209	2166	104	3344	553	7442	637	7930	78	91
10	0.496822	137	0.572474	208	1.152270	104	2.012791	552	1.746805	636	0.867852	78	90
11	6959	136	2682	209	2374	103	2239	552	6169	636	7774	78	89
12	7095	136	2891	208	2477	104	1687	551	5533	635	7696	78	88
13	7231	137	3099	209	2581	104	1136	551	4898	635	7618	78	87
14	7368	136	3308	209	2685	104	0585	551	4263	635	7540	78	86
15	7504	136	3517	209	2789	104	2.010034	550	3628	635	7462	78	85
16	7640	136	3726	208	2893	103	2.009484	550	2993	634	7384	79	84
17	7776	137	3934	209	2996	104	8934	550	2359	634	7305	78	83
18	7913	136	4143	209	3100	104	8384	549	1725	633	7227	78	82
19	8049	136	4352	209	3204	104	7835	549	1092	633	7149	78	81
20	0.498185	136	0.574561	209	1.153308	105	2.007286	549	1.740459	633	0.867071	79	80
21	8321	136	4770	209	3413	104	6737	548	1.739826	632	6992	78	79
22	8457	137	4979	209	3517	104	6189	548	9194	632	6914	78	78
23	8594	136	5188	209	3621	104	5641	547	8562	632	6836	78	77
24	8730	136	5397	209	3725	105	5094	547	7930	631	6758	79	76
25	8866	136	5606	209	3830	104	4547	547	7299	631	6679	78	75
26	9002	136	5815	210	3934	104	4000	547	6668	631	6601	79	74
27	9138	136	6025	209	4038	105	3453	546	6037	630	6522	78	73
28	9274	136	6234	209	4143	104	2907	546	5407	630	6444	78	72
29	9410	136	6443	209	4247	105	2361	545	4777	630	6366	79	71
30	0.499546	137	0.576652	210	1.154352	104	2.001816	545	1.734147	629	0.866287	78	70
31	9683	136	6862	209	4456	105	1271	545	3518	629	6209	79	69
32	9819	136	7071	209	4561	105	0726	545	2889	629	6130	78	68
33	0.499955	136	7280	210	4666	104	2.000181	544	2260	628	6052	79	67
34	0.500091	136	7490	209	4770	105	1.999637	543	1632	628	5973	79	66
35	0227	136	7699	210	4875	105	9094	544	1004	627	5894	78	65
36	0363	136	7909	209	4980	105	8550	543	1.730377	628	5816	79	64
37	0499	136	8118	210	5085	105	8007	543	1.729749	627	5737	78	63
38	0635	136	8328	210	5190	105	7464	542	9122	626	5659	79	62
39	0771	136	8538	209	5295	105	6922	542	8496	626	5580	79	61
40	0.500907	136	0.578747	210	1.155400	105	1.996380	542	1.727870	626	0.865501	78	60
41	1043	136	8957	210	5505	105	5838	541	7244	626	5423	79	59
42	1179	135	9167	210	5610	105	5297	541	6618	625	5344	79	58
43	1314	136	9377	209	5715	105	4756	541	5993	625	5265	79	57
44	1450	136	9586	210	5820	106	4215	540	5368	624	5186	78	56
45	1586	136	0.579796	210	5926	105	3675	540	4744	625	5108	79	55
46	1722	136	0.580006	210	6031	105	3135	539	4119	623	5029	79	54
47	1858	136	0216	210	6136	106	2596	540	3496	624	4950	79	53
48	1994	136	0426	210	6242	105	2056	539	2872	623	4871	79	52
49	2130	136	0636	210	6347	105	1517	538	2249	623	4792	79	51
50	0.502266		0.580846		1.156452		1.990979		1.721626		0.864713		50
	cos		cotg		cosec		sec		tang		sin		c

	78	79	80	103	104	105	106	107	108	135	136	137	208	209	210	211	212	522	
1	7.8	7.9	8.0	10.3	10.4	10.5	10.6	10.7	10.8	13.5	13.6	13.7	20.8	20.9	21.0	21.1	21.2	52.2	1
2	15.6	15.8	16.0	20.6	20.8	21.0	21.2	21.4	21.6	27.0	27.2	27.4	41.6	41.8	42.0	42.2	42.4	104.4	2
3	23.4	23.7	24.0	30.9	31.2	31.5	31.8	32.1	32.4	40.5	40.8	41.1	62.4	62.7	63.0	63.3	63.6	156.6	3
4	31.2	31.6	32.0	41.2	41.6	42.0	42.4	42.8	43.2	54.0	54.4	54.8	83.2	83.6	84.0	84.4	84.8	208.8	4
5	39.0	39.5	40.0	51.5	52.0	52.5	53.0	53.5	54.0	67.5	68.0	68.5	104.0	104.5	105.0	105.5	106.0	261.0	5
6	46.8	47.4	48.0	61.8	62.4	63.0	63.6	64.2	64.8	81.0	81.6	82.2	124.8	125.4	126.0	126.6	127.2	313.2	6
7	54.6	55.3	56.0	72.1	72.8	73.5	74.2	74.9	75.6	94.5	95.2	95.9	145.6	146.3	147.0	147.7	148.4	365.4	7
8	62.4	63.2	64.0	82.4	83.2	84.0	84.8	85.6	86.4	108.0	108.8	109.6	166.4	167.2	168.0	168.8	169.6	417.6	8
9	70.2	71.1	72.0	92.7	93.6	94.5	95.4	96.3	97.2	121.5	122.4	123.3	187.2	188.1	189.0	189.9	190.8	469.8	9

Figure 3: Excerpt of Peters's table.

References

The following list covers the most important references[2] related to Peters's table. Not all items of this list are mentioned in the text, and the sources which have not been seen are marked so. We have added notes about the contents of the articles in certain cases.

[1] ???? On the eight-figure table of Peters and Comrie. *Mathematical Tables and other Aids to Computation*, 1(2):64–65, 1943. [The title is ours, and there are actually two notices, on the accuracy of the table published in 1939 [55], and its comparison with other tables.]

[2] Marie Henri Andoyer. *Nouvelles tables trigonométriques fondamentales contenant les logarithmes des lignes trigonométriques....* Paris: Librairie A. Hermann et fils, 1911. [Reconstruction by D. Roegel in 2010 [65].]

[3] Marie Henri Andoyer. *Nouvelles tables trigonométriques fondamentales contenant les valeurs naturelles des lignes trigonométriques....* Paris: Librairie A. Hermann et fils, 1915–1918. [3 volumes, reconstruction by D. Roegel in 2010 [66].]

[4] Raymond Clare Archibald. J. T. Peters, Achtstellige Tafel der trigonometrischen Funktionen für jede Sexagesimalsekunde des Quadranten. *Mathematical Tables and other Aids to Computation*, 1(1):11–12, 1943. [review of the edition published in 1939 [55]]

[5] Raymond Clare Archibald. J. T. Peters, Seven-place values of trigonometric functions for every thousandth of a degree. *Mathematical Tables and other Aids to Computation*, 1(1):12–13, 1943. [review of the edition published in 1942 [40]]

[6] Raymond Clare Archibald. Tables of trigonometric functions in non-sexagesimal arguments. *Mathematical Tables and other Aids to Computation*, 1(2):33–44, 1943.

[7] Raymond Clare Archibald. J. T. Peters, Eight-place table of trigonometric functions for every sexagesimal second of the quadrant. Achtstellige Tafel der trigonometrischen Funktionen für jede Sexagesimalsekunde des Quadranten. *Mathematical Tables and other Aids to Computation*, 1:147–148, 1944. [review of the edition published in 1939 [55]]

[8] Raymond Clare Archibald. J. T. Peters, Siebenstellige Logarithmentafel. *Mathematical Tables and other Aids to Computation*, 1:143–146, 1944. [review of the edition published in 1940 [56]]

[2] **Note on the titles of the works:** Original titles come with many idiosyncrasies and features (line splitting, size, fonts, etc.) which can often not be reproduced in a list of references. It has therefore seemed pointless to capitalize works according to conventions which not only have no relation with the original work, but also do not restore the title entirely. In the following list of references, most title words (except in German) will therefore be left uncapitalized. The names of the authors have also been homogenized and initials expanded, as much as possible.

The reader should keep in mind that this list is not meant as a facsimile of the original works. The original style information could no doubt have been added as a note, but we have not done it here.

[9] Raymond Clare Archibald. Johann Theodor Peters. *Mathematical Tables and other Aids to Computation*, 1(5):168–169, 1944. [obituary notice]

[10] Raymond Clare Archibald. J. T. Peters, Sechsstellige Werte der trigonometrischen Funktionen von Tausendstel zu Tausendstel des Neugrades. *Mathematical Tables and other Aids to Computation*, 2(19):298–299, 1947. [review of 9th edition of [54] published in 1944]

[11] Raymond Clare Archibald. J. T. Peters, Siebenstellige Werte der trigonometrischen Funktionen von Tausendstel zu Tausendstel des Neugrades. *Mathematical Tables and other Aids to Computation*, 2(19):299, 1947. [review of the 1941 edition [57]]

[12] Raymond Clare Archibald. *Mathematical table makers. Portraits, paintings, busts, monument. Bio-bibliographical notes.* New York: Scripta Mathematica, 1948. [contains a photograph of Peters]

[13] Julius Bauschinger. Interpolation. In Wilhelm Franz Meyer, editor, *Encyklopädie der mathematischen Wissenschaften mit Einschluss ihrer Anwendungen*, volume 1(2), pages 799–820. Leipzig: B. G. Teubner, 1904. [a French translation appeared in [93]]

[14] Julius Bauschinger and Johann Theodor Peters. *Logarithmic-trigonometrical tables with eight decimal places etc.* Leipzig: Wilhelm Engelmann, 1910–1911. [2 volumes, English introduction. See [15] for the German edition.]

[15] Julius Bauschinger and Johann Theodor Peters. *Logarithmisch-trigonometrische Tafeln mit acht Dezimalstellen etc.* Leipzig: Wilhelm Engelmann, 1910–1911. [2 volumes, German introduction. See [14] for the English edition; these volumes have been reprinted in 1936, 1958 and 1970, but the introductions vary. In particular, details of the construction of Hamann's machine were dropped in the last editions. Reconstructions are given in [70] and [71].]

[16] Henry Briggs. *Arithmetica logarithmica.* London: William Jones, 1624. [The tables were reconstructed by D. Roegel in 2010. [68]]

[17] Henry Briggs and Henry Gellibrand. *Trigonometria Britannica.* Gouda: Pieter Rammazeyn, 1633. [The tables were reconstructed by D. Roegel in 2010. [67]]

[18] Heinrich Bruns. *Grundlinien des wissenschaftlichen Rechnens.* Leipzig: B. G. Teubner, 1903.

[19] Heinrich Bruns and Julius Bauschinger. Denkschrift über neue achtstellige Logarithmentafeln für den astronomischen Gebrauch. *Vierteljahrsschrift der Astronomischen Gesellschaft*, 39:158, 232–240, 1904.

[20] Leslie John Comrie. Logarithmic and trigonometrical tables. *Monthly Notices of the Royal Astronomical Society*, 85(4):386–388, 1925. [mentions several of Peters's tables]

[21] Leslie John Comrie. J. T. Peters, Sechsstellige Tafel der trigonometrischen Funktionen,. . . , Berlin, 1929. *Mathematical Tables and other Aids to Computation*, 1(5):162, 1944. [Attributes errors in the first edition of [46] to one of the proofreaders of the table.]

[22] Harold Thayer Davis, editor. *Tables of the higher mathematical functions.* Bloomington, In.: The principia press, Inc., 1933, 1935. [2 volumes]

[23] Alan Fletcher, Jeffery Charles Percy Miller, and Louis Rosenhead. *An index of mathematical tables.* London: Scientific computing service limited, 1946.

[24] Alan Fletcher, Jeffery Charles Percy Miller, Louis Rosenhead, and Leslie John Comrie. *An index of mathematical tables (second edition).* Reading, Ma.: Addison-Wesley publishing company, 1962. [2 volumes]

[25] Erwin Gigas. Professor Dr. Peters und sein Werk. *Nachrichten aus dem Reichsvermessungsdienst. Mitteilungen des Reichsamts für Landesaufnahme*, 17:346–350, 1941.

[26] James Henderson. *Bibliotheca tabularum mathematicarum, being a descriptive catalogue of mathematical tables. Part I: Logarithmic tables (A. Logarithms of numbers)*, volume XIII of *Tracts for computers.* London: Cambridge University Press, 1926.

[27] Samuel Herrick, Jr. Natural-value trigonometric tables. *Publications of the Astronomical Society of the Pacific*, 50(296):234–237, 1938.

[28] Peter Holland. Biographical notes on Johann Theodor Peters, 2011. `www.rechnerlexikon.de/en/artikel/Johann_Theodor_Peters`

[29] Wilhelm Rudolf Alfred Klose. Prof. Dr. Jean Peters gestorben. *Zeitschrift für Angewandte Mathematik und Mechanik*, 22(2):120, 1942. [obituary notice]

[30] Otto Kohl. Jean Peters. *Vierteljahresschrift der Astronomischen Gesellschaft*, 77:16–20, 1942. [includes one photograph]

[31] August Kopff. Jean Peters †. *Astronomische Nachrichten*, 272(1):47–48, 1941.

[32] Christine Krause. Das Positive von Differenzen : Die Rechenmaschinen von Müller, Babbage, Scheutz, Wiberg, . . . , 2007.

[33] A. V. Lebedev and R. M. Fedorova. *A guide to mathematical tables.* Oxford: Pergamon Press, 1960.

[34] Johann Theodor Peters. *Neue Rechentafeln für Multiplikation und Division mit allen ein- bis vierstelligen Zahlen.* Berlin: G. Reimer, 1909. [also published in 1919 and 1924 by Walter de Gruyter & Co.; the library of the Paris observatory also has a variant of the 1909 edition with the French title "Nouvelles tables de calcul pour la multiplication et la division de tous les nombres de un à quatre chiffres" (as well as a French introduction), which the library kindly checked for us; and the 1924 edition seems to be an English one with the title

"New calculating tables for multiplication and division by all numbers of from one to four places." We have only had the 1919 edition in hands, and we reconstructed it in [87].]

[35] Johann Theodor Peters. *Einundzwanzigstellige Werte der Funktionen Sinus und Cosinus : zur genauen Berechnung von zwanzigstelligen Werten sämtlicher trigonometrischen Funktionen eines beliebigen Arguments sowie ihrer Logarithmen.* Berlin: Verlag der Königl. Akademie der Wissenschaften, 1911. [54 pages, Appendix 1 to the "Abhandlungen der Preußischen Akademie der Wissenschaften, Physikalisch-Mathematische Klasse.", not seen, but reprinted at the end of the English edition of [55]]

[36] Johann Theodor Peters. *Siebenstellige Logarithmentafel der trigonometrischen Funktionen für jede Bogensekunde des Quadranten.* Leipzig: Wilhelm Engelmann, 1911. [reconstructed in [77]]

[37] Johann Theodor Peters. *Fünfstellige Logarithmentafel der trigonometrischen Funktionen für jede Zeitsekunde des Quadranten.* Berlin: Reimer, 1912. [reconstructed in [75]]

[38] Johann Theodor Peters. *Tafeln zur Berechnung der Mittelpunktsgleichung und des Radiusvektors in elliptischen Bahnen für Excentrizitätswinkel von 0° bis 24°.* Berlin: Ferd. Dümmler, 1912. [second edition in 1933]

[39] Johann Theodor Peters. *Dreistellige Tafeln für logarithmisches und numerisches Rechnen.* Berlin: P. Stankiewicz, 1913. [not seen, second edition in 1948 (seen), reconstructed in [72]]

[40] Johann Theodor Peters. *Siebenstellige Werte der trigonometrischen Funktionen von Tausendstel zu Tausendstel des Grades.* Berlin-Friedenau: Verlag der Optischen Anst. Goerz, 1918. [Reprinted in 1938 and 1941, as well as in 1942 in English with the title "Seven-place Values of trigonometric functions for every thousandth of a degree.", all four editions seen. Reconstructed in [78].]

[41] Johann Theodor Peters. *Zehnstellige Logarithmentafel : Hilfstafeln zur zehnstelligen Logarithmentafel.* Berlin: Preuß. Landesaufnahme, 1919. [not seen, second edition in 1957 (seen), reconstructed in [73]]

[42] Johann Theodor Peters. *Zehnstellige Logarithmentafel, volume 2 : Zehnstellige Logarithmen der trigonometrischen Funktionen von 0° bis 90° für jedes Tausendstel des Grades.* Berlin: Reichsamt f. Landesaufnahme, 1919. [not seen, second edition in 1957 (seen); also Russian editions in 1964 and 1975; reconstructed in [89]]

[43] Johann Theodor Peters. *Sechsstellige Logarithmen der trigonometrischen Funktionen von 0° bis 90° für jedes Tausendstel des Grades.* Berlin: Verlag der preussischen Landesaufnahme, 1921. [reconstructed in [85]]

[44] Johann Theodor Peters. *Siebenstellige Logarithmen der trigonometrischen Funktionen von 0° bis 90° für jedes Tausendstel des Grades.* Berlin: Verlag der preussischen Landesaufnahme, 1921. [reconstructed in [86]]

[45] Johann Theodor Peters. *Zehnstellige Logarithmentafel volume 1 : Zehnstellige Logarithmen von 1 bis 100000 nebst einem Anhang mathematischer Tafeln.* Berlin: Reichsamt f. Landesaufnahme, 1922. [not seen, second edition in 1957 (seen); also Russian edition in 1964 and perhaps in 1975; reconstructed in [88]; the appendices on mathematical tables are by Peters, J. Stein and G. Witt]

[46] Johann Theodor Peters. *Sechsstellige Tafel der trigonometrischen Funktionen : enthaltend die Werte der sechs trigonometrischen Funktionen von zehn zu zehn Bogensekunden des in 90° geteilten Quadranten u. d. Werte d. Kotangente u. Kosekante f. jede Bogensekunde von 0° 0′ bis 1° 20′.* Berlin: Ferd. Dümmler, 1929. [seen, reprinted in 1939, 1946, 1953, 1962, 1968 and 1971; in Russian in 1975, and perhaps already in 1937 and 1938; reconstructed in [79]]

[47] Johann Theodor Peters. *Tafeln zur Verwandlung von rechtwinkligen Platten-Koordinaten und sphärischen Koordinaten ineinander.* Berlin: Ferd. Dümmler, 1929. [Veröffentlichungen des Astronomischen Rechen-Instituts zu Berlin-Dahlem, number 47]

[48] Johann Theodor Peters. *Multiplikations- und Interpolationstafeln für alle ein- bis dreistelligen Zahlen.* Berlin: Wichmann, 1930. [reprinted from [49]; reconstructed in [76]]

[49] Johann Theodor Peters. *Sechsstellige trigonometrische Tafel für neue Teilung.* Berlin: Wichmann, 1930. [seen, third edition in 1939 and fourth in 1942; an excerpt was reprinted as [48]]

[50] Johann Theodor Peters. *Präzessionstafeln für das Äquinoktium 1950.0.* Berlin: Ferd. Dümmler, 1934. [Veröffentlichungen des Astronomischen Rechen-Instituts zu Berlin-Dahlem, number 50]

[51] Johann Theodor Peters. *Tafeln zur Berechnung der jährlichen Präzession in Rektaszension für das Äquinoktium 1950.0.* Berlin: Ferd. Dümmler, 1934. [Veröffentlichungen des Astronomischen Rechen-Instituts zu Berlin-Dahlem, number 51]

[52] Johann Theodor Peters. *Hilfstafeln zur Verwandlung von Tangentialkoordinaten in Rektaszension und Deklination.* Berlin: Ferd. Dümmler, 1936. [Veröffentlichungen des Astronomischen Rechen-Instituts zu Berlin-Dahlem, number 52]

[53] Johann Theodor Peters. *Sechsstellige Werte der Kreis- und Evolventen-Funktionen von Hundertstel zu Hundertstel des Grades nebst einigen Hilfstafeln für die Zahnradtechnik.* Berlin: Ferd. Dümmler, 1937. [not seen, reprinted in 1951 and 1963 (seen); reconstructed in [84]]

[54] Johann Theodor Peters. *Sechsstellige Werte der trigonometrischen Funktionen von Tausendstel zu Tausendstel des Neugrades.* Berlin: Wichmann, 1938. [seen, 3rd edition in 1940, 5th and 6th in 1942, 7th in 1943, 9th in 1944, 10th in 1953, 12th in 1959, 14th in 1970, and other editions in 1973 and other years; reconstructed in [80]]

[55] Johann Theodor Peters. *Achtstellige Tafel der trigonometrischen Funktionen für jede Sexagesimalsekunde des Quadranten.* Berlin: Verlag des Reichsamts für

Landesaufnahme, 1939. [reprinted in 1943 (Ann Arbor, Michigan, perhaps in German, but with an English title) and in 1963, 1965 and 1968 in English under the title "Eight-Place Tables of trigonometric functions for every second of arc."; the last three editions have [35] as an appendix; there have also been two limited English editions in 1939 and 1940 [4]; the main table was reconstructed in [74]]

[56] Johann Theodor Peters. *Siebenstellige Logarithmentafel.* Berlin: Verlag des Reichsamts für Landesaufnahme, 1940. [2 volumes, 1: Logarithmen der Zahlen, Antilogarithmen, etc., 2: Logarithmen der trigonometrischen Funktionen für jede 10. Sekunde d. Neugrades, etc.; reconstructed in [81] and [82]]

[57] Johann Theodor Peters. *Siebenstellige Werte der trigonometrischen Funktionen von Tausendstel zu Tausendstel des Neugrades.* Berlin: Verlag des Reichsamts für Landesaufnahme, 1941. [reprinted in 1952, 1956 and 1967; reconstructed in [83]]

[58] Johann Theodor Peters, Alfred Lodge, Elsie Jane Ternouth, and Emma Gifford. *Factor table giving the complete decomposition of all numbers less than 100,000.* London: Office of the British Association, 1935. [introduction by Leslie J. Comrie, and bibliography of tables by James Henderson, reprinted in 1963] [reconstructed in [69]]

[59] Johann Theodor Peters and Karl Pilowski. *Tafeln zur Berechnung der Präzessionen zwischen den Äquinoktien 1875.0 und 1950.0.* Berlin: Ferd. Dümmler, 1930. [Veröffentlichungen des Astronomischen Rechen-Instituts zu Berlin-Dahlem, number 49]

[60] Johann Theodor Peters and Johannes Stein. *Zweiundfünfzigstellige Logarithmen.* Berlin: Ferd. Dümmler, 1919. [Veröffentlichungen des Astronomischen Rechen-Instituts zu Berlin, number 43]

[61] Johann Theodor Peters, Walter Storck, and F. Ludloff. *Hütte Hilfstafeln : zur I. Verwandlung von echten Brüchen in Dezimalbrüche ; II. Zerlegung der Zahlen bis 10000 in Primfaktoren ; ein Hilfsbuch zur Ermittelung geeigneter Zähnezahlen für Räderübersetzungen.* Berlin: Wilhelm Ernst & Sohn, 1922. [3rd edition]

[62] Johann Theodor Peters and Gustav Stracke. *Tafeln zur Berechnung der Mittelpunktsgleichung und des Radiusvektors in elliptischen Bahnen für Exzentrizitätswinkel von 0° bis 26°.* Berlin: Ferd. Dümmler, 1933. [Veröffentlichungen des Astronomischen Rechen-Instituts zu Berlin-Dahlem, number 41; second edition, first edition in 1912]

[63] Denis Roegel. A reconstruction of Adriaan Vlacq's tables in the *Trigonometria artificialis* (1633). Technical report, LORIA, Nancy, 2010. [This is a recalculation of the tables of [98].]

[64] Denis Roegel. A reconstruction of De Decker-Vlacq's tables in the *Arithmetica logarithmica* (1628). Technical report, LORIA, Nancy, 2010. [This is a recalculation of the tables of [97].]

[65] Denis Roegel. A reconstruction of Henri Andoyer's table of logarithms (1911). Technical report, LORIA, Nancy, 2010. [This is a reconstruction of [2].]

[66] Denis Roegel. A reconstruction of Henri Andoyer's trigonometric tables (1915–1918). Technical report, LORIA, Nancy, 2010. [This is a reconstruction of [3].]

[67] Denis Roegel. A reconstruction of the tables of Briggs and Gellibrand's *Trigonometria Britannica* (1633). Technical report, LORIA, Nancy, 2010. [This is a recalculation of the tables of [17].]

[68] Denis Roegel. A reconstruction of the tables of Briggs' *Arithmetica logarithmica* (1624). Technical report, LORIA, Nancy, 2010. [This is a recalculation of the tables of [16].]

[69] Denis Roegel. A reconstruction of the table of factors of Peters, Lodge, Ternouth, and Gifford (1935). Technical report, LORIA, Nancy, 2011. [This is a recalculation of the tables of [58].]

[70] Denis Roegel. A reconstruction of Bauschinger and Peters's eight-place table of logarithms (volume 1, 1910). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [15].]

[71] Denis Roegel. A reconstruction of Bauschinger and Peters's eight-place table of logarithms (volume 2, 1911). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [15].]

[72] Denis Roegel. A reconstruction of Peters's 3-place tables (1913). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [39].]

[73] Denis Roegel. A reconstruction of Peters's auxiliary tables to his ten-place logarithms (1919). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [41].]

[74] Denis Roegel. A reconstruction of Peters's eight-place table of trigonometric functions (1939). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [55].]

[75] Denis Roegel. A reconstruction of Peters's five-place table of logarithms of trigonometric functions (1912). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [37].]

[76] Denis Roegel. A reconstruction of Peters's multiplication and interpolation tables (1930). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [48].]

[77] Denis Roegel. A reconstruction of Peters's seven-place table of logarithms of trigonometric functions (1911). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [36].]

[78] Denis Roegel. A reconstruction of Peters's seven-place table of trigonometric functions (1918). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [40].]

[79] Denis Roegel. A reconstruction of Peters's six-place table of trigonometric functions (1929). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [46].]

[80] Denis Roegel. A reconstruction of Peters's six-place table of trigonometric functions for the new division (1938). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [54].]

[81] Denis Roegel. A reconstruction of Peters's table of 7-place logarithms (volume 1, 1940). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [56].]

[82] Denis Roegel. A reconstruction of Peters's table of 7-place logarithms (volume 2, 1940). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [56].]

[83] Denis Roegel. A reconstruction of Peters's table of 7-place trigonometrical values for the new division (1941). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [57].]

[84] Denis Roegel. A reconstruction of Peters's table of involutes (1937). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [53].]

[85] Denis Roegel. A reconstruction of Peters's table of logarithms to 6 places (1921). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [43].]

[86] Denis Roegel. A reconstruction of Peters's table of logarithms to 7 places (1921). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [44].]

[87] Denis Roegel. A reconstruction of Peters's table of products (1909). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [34].]

[88] Denis Roegel. A reconstruction of Peters's ten-place table of logarithms (volume 1, 1922). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [45].]

[89] Denis Roegel. A reconstruction of Peters's ten-place table of logarithms (volume 2, 1919). Technical report, LORIA, Nancy, 2016. [This is a reconstruction of [42].]

[90] Denis Roegel. The genealogy of Johann Theodor Peters's great mathematical tables. Technical report, LORIA, Nancy, 2016.

[91] Sa. Review of "J. Peters: Achtstellige Tafel der trigonometrischen Funktionen für jede Sexagesimalsekunde des Quadranten". *Astronomische Nachrichten*, 269(2):120, 1939. [review of [55]]

[92] Karl Schütte. *Index mathematischer Tafelwerke und Tabellen aus allen Gebieten der Naturwissenschaften*. München: R. Oldenbourg, 1955.

[93] Dmitriĭ Selivanov, Julius Bauschinger, and Marie Henri Andoyer. Le calcul des différences et interpolation. In Jules Molk, editor, *Encyclopédie des sciences mathématiques pures et appliquées*, volume 1(4) (fasc. 1), pages 47–160. Paris: Gauthier-Villars, 1906. [includes a French edition of [13]]

[94] Daniel Shanks. Jean Peters, Eight-place tables of trigonometric functions for every second of arc. *Mathematics of Computation*, 18(87):509, 1964. [review of the edition published in 1963 [55]]

[95] Gustav Stracke. Julius Bauschinger. *Monthly Notices of the Royal Astronomical Society*, 95(4):336–337, 1935.

[96] John Todd. J. Peters, Ten-place logarithm table. *Mathematical Tables and other Aids to Computation*, 12:61–63, 1958. [review of the 2nd edition published in 1957 [45, 42]]

[97] Adriaan Vlacq. *Arithmetica logarithmica*. Gouda: Pieter Rammazeyn, 1628. [The introduction was reprinted in 1976 by Olms and the tables were reconstructed by D. Roegel in 2010. [64]]

[98] Adriaan Vlacq. *Trigonometria artificialis*. Gouda: Pieter Rammazeyn, 1633. [The tables were reconstructed by D. Roegel in 2010. [63]]

[99] Stephan Weiss. Die Differenzmaschine von Hamann und die Berechnung der Logarithmen, 2006. `www.mechrech.info/publikat/HamDiffM.pdf`

[100] Stephan Weiss. Difference engines in the 20th century. In *Proceedings 16th International Meeting of Collectors of Historical Calculating Instruments, September 2010, Leiden*, pages 157–164, 2010.

[101] Roland Wielen and Ute Wielen. *Die Reglements und Statuten des Astronomischen Rechen-Instituts und zugehörige Schriftstücke im Archiv des Instituts. Edition der Dokumente*. Heidelberg: Astronomisches Rechen-Institut, 2011. [pp. 255–258 on some archives on Peters]

[102] Roland Wielen and Ute Wielen. *Von Berlin über Sermuth nach Heidelberg : Das Schicksal des Astronomischen Rechen-Instituts in der Zeit von 1924 bis 1954 anhand von Schriftstücken aus dem Archiv des Instituts*. Heidelberg: Astronomisches Rechen-Institut, 2012. [various information on Peters, including photographs]

[103] Roland Wielen, Ute Wielen, Herbert Hefele, and Inge Heinrich. *Die Geschichte der Bibliothek des Astronomischen Rechen-Instituts*. Heidelberg: Astronomisches Rechen-Institut, 2014. [various information on Peters]

[104] Roland Wielen, Ute Wielen, Herbert Hefele, and Inge Heinrich. *Supplement zur Geschichte der Bibliothek des Astronomischen Rechen-Instituts*. Heidelberg: Astronomisches Rechen-Institut, 2014. [lists several of Peters's tables]

cosec 0^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	∞	63662	31831	21221	15915	12732	10610	9094.6	7957.7	7073.6	6366.2	99
01	6366.2	5787.5	5305.2	4897.1	4547.3	4244.1	3978.9	3744.8	3536.8	3350.6	3183.1	98
02	3183.1	3031.5	2893.7	2767.9	2652.6	2546.5	2448.5	2357.9	2273.6	2195.2	2122.1	97
03	2122.1	2053.6	1989.4	1929.2	1872.4	1818.9	1768.4	1720.6	1675.3	1632.4	1591.5	96
04	1591.5	1552.7	1515.8	1480.5	1446.9	1414.7	1384.0	1354.5	1326.3	1299.2	1273.2	95
05	1273.2	1248.3	1224.3	1201.2	1178.9	1157.5	1136.8	1116.9	1097.6	1079.0	1061.0	94
06	1061.0	1043.6	1026.8	1010.5	994.72	979.42	964.58	950.18	936.21	922.64	909.46	93
07	909.46	896.65	884.19	872.08	860.30	848.83	837.66	826.78	816.18	805.85	795.77	92
08	795.77	785.95	776.37	767.01	757.88	748.96	740.26	731.75	723.43	715.30	707.36	91
09	707.36	699.58	691.98	684.54	677.26	670.13	663.15	656.31	649.61	643.05	636.62	**90**
10	636.62	630.32	624.14	618.08	612.13	606.30	600.58	594.97	589.46	584.06	578.75	89
11	578.75	573.53	568.41	563.38	558.44	553.58	548.81	544.12	539.51	534.97	530.52	88
12	530.52	526.13	521.82	517.58	513.40	509.30	505.25	501.28	497.36	493.50	489.71	87
13	489.71	485.97	482.29	478.66	475.09	471.57	468.10	464.69	461.32	458.00	454.73	86
14	454.73	451.50	448.32	445.19	442.10	439.05	436.04	433.08	430.15	427.26	424.41	85
15	424.41	421.60	418.83	416.09	413.39	410.72	408.09	405.49	402.92	400.39	397.89	84
16	397.89	395.42	392.98	390.56	388.18	385.83	383.51	381.21	378.94	376.70	374.48	83
17	374.48	372.29	370.13	367.99	365.87	363.78	361.72	359.67	357.65	355.65	353.68	82
18	353.68	351.72	349.79	347.88	345.99	344.12	342.27	340.44	338.63	336.84	335.06	81
19	335.06	333.31	331.57	329.86	328.16	326.47	324.81	323.16	321.53	319.91	318.31	**80**
20	318.31	316.73	315.16	313.61	312.07	310.55	309.04	307.55	306.07	304.60	303.15	79
21	303.15	301.72	300.29	298.88	297.49	296.10	294.73	293.37	292.03	290.69	289.37	78
22	289.37	288.06	286.77	285.48	284.21	282.94	281.69	280.45	279.22	278.00	276.79	77
23	276.79	275.59	274.41	273.23	272.06	270.90	269.75	268.62	267.49	266.37	265.26	76
24	265.26	264.16	263.07	261.98	260.91	259.85	258.79	257.74	256.70	255.67	254.65	75
25	254.65	253.63	252.63	251.63	250.64	249.66	248.68	247.71	246.75	245.80	244.85	74
26	244.85	243.92	242.99	242.06	241.14	240.23	239.33	238.44	237.55	236.66	235.79	73
27	235.79	234.92	234.05	233.19	232.34	231.50	230.66	229.83	229.00	228.18	227.36	72
28	227.36	226.56	225.75	224.95	224.16	223.38	222.60	221.82	221.05	220.28	219.52	71
29	219.52	218.77	218.02	217.28	216.54	215.80	215.08	214.35	213.63	212.92	212.21	**70**
30	212.21	211.50	210.80	210.11	209.42	208.73	208.05	207.37	206.70	206.03	205.36	69
31	205.36	204.70	204.05	203.39	202.75	202.10	201.46	200.83	200.20	199.57	198.94	68
32	198.94	198.32	197.71	197.10	196.49	195.88	195.28	194.69	194.09	193.50	192.92	67
33	192.92	192.33	191.75	191.18	190.61	190.04	189.47	188.91	188.35	187.79	187.24	66
34	187.24	186.69	186.15	185.60	185.06	184.53	184.00	183.46	182.94	182.41	181.89	65
35	181.89	181.37	180.86	180.35	179.84	179.33	178.83	178.33	177.83	177.33	176.84	64
36	176.84	176.35	175.86	175.38	174.90	174.42	173.94	173.47	173.00	172.53	172.06	63
37	172.06	171.60	171.14	170.68	170.22	169.77	169.31	168.87	168.42	167.97	167.53	62
38	167.53	167.09	166.66	166.22	165.79	165.36	164.93	164.50	164.08	163.66	163.24	61
39	163.24	162.82	162.40	161.99	161.58	161.17	160.76	160.36	159.96	159.55	159.16	**60**
40	159.16	158.76	158.36	157.97	157.58	157.19	156.80	156.42	156.04	155.65	155.27	59
41	155.27	154.90	154.52	154.15	153.77	153.40	153.03	152.67	152.30	151.94	151.58	58
42	151.58	151.22	150.86	150.50	150.15	149.79	149.44	149.09	148.74	148.40	148.05	57
43	148.05	147.71	147.37	147.03	146.69	146.35	146.01	145.68	145.35	145.02	144.69	56
44	144.69	144.36	144.03	143.71	143.38	143.06	142.74	142.42	142.10	141.79	141.47	55
45	141.47	141.16	140.85	140.54	140.23	139.92	139.61	139.31	139.00	138.70	138.40	54
46	138.40	138.10	137.80	137.50	137.20	136.91	136.61	136.32	136.03	135.74	135.45	53
47	135.45	135.16	134.88	134.59	134.31	134.03	133.74	133.46	133.19	132.91	132.63	52
48	132.63	132.35	132.08	131.81	131.53	131.26	130.99	130.72	130.46	130.19	129.92	51
49	129.92	129.66	129.40	129.13	128.87	128.61	128.35	128.09	127.84	127.58	127.33	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	25	**28**	**31**	**34**	**37**	**40**	**43**	**46**	**49**	**52**	**55**	**58**	**61**	**64**	**67**	**70**	**73**	**76**	
1	2.5	2.8	3.1	3.4	3.7	4.0	4.3	4.6	4.9	5.2	5.5	5.8	6.1	6.4	6.7	7.0	7.3	7.6	1
2	5.0	5.6	6.2	6.8	7.4	8.0	8.6	9.2	9.8	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.6	15.2	2
3	7.5	8.4	9.3	10.2	11.1	12.0	12.9	13.8	14.7	15.6	16.5	17.4	18.3	19.2	20.1	21.0	21.9	22.8	3
4	10.0	11.2	12.4	13.6	14.8	16.0	17.2	18.4	19.6	20.8	22.0	23.2	24.4	25.6	26.8	28.0	29.2	30.4	4
5	12.5	14.0	15.5	17.0	18.5	20.0	21.5	23.0	24.5	26.0	27.5	29.0	30.5	32.0	33.5	35.0	36.5	38.0	5
6	15.0	16.8	18.6	20.4	22.2	24.0	25.8	27.6	29.4	31.2	33.0	34.8	36.6	38.4	40.2	42.0	43.8	45.6	6
7	17.5	19.6	21.7	23.8	25.9	28.0	30.1	32.2	34.3	36.4	38.5	40.6	42.7	44.8	46.9	49.0	51.1	53.2	7
8	20.0	22.4	24.8	27.2	29.6	32.0	34.4	36.8	39.2	41.6	44.0	46.4	48.8	51.2	53.6	56.0	58.4	60.8	8
9	22.5	25.2	27.9	30.6	33.3	36.0	38.7	41.4	44.1	46.8	49.5	52.2	54.9	57.6	60.3	63.0	65.7	68.4	9

sec 99^g

cotg 0^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	∞	63662	31831	21221	15915	12732	10610	9094.6	7957.7	7073.6	6366.2	99
01	6366.2	5787.5	5305.2	4897.1	4547.3	4244.1	3978.9	3744.8	3536.8	3350.6	3183.1	98
02	3183.1	3031.5	2893.7	2767.9	2652.6	2546.5	2448.5	2357.9	2273.6	2195.2	2122.1	97
03	2122.1	2053.6	1989.4	1929.2	1872.4	1818.9	1768.4	1720.6	1675.3	1632.4	1591.5	96
04	1591.5	1552.7	1515.8	1480.5	1446.9	1414.7	1384.0	1354.5	1326.3	1299.2	1273.2	95
05	1273.2	1248.3	1224.3	1201.2	1178.9	1157.5	1136.8	1116.9	1097.6	1079.0	1061.0	94
06	1061.0	1043.6	1026.8	1010.5	994.72	979.41	964.58	950.18	936.21	922.64	909.46	93
07	909.46	896.65	884.19	872.08	860.30	848.83	837.66	826.78	816.18	805.85	795.77	92
08	795.77	785.95	776.37	767.01	757.88	748.96	740.26	731.75	723.43	715.30	707.35	91
09	707.35	699.58	691.98	684.54	677.25	670.13	663.15	656.31	649.61	643.05	636.62	**90**
10	636.62	630.32	624.14	618.08	612.13	606.30	600.58	594.97	589.46	584.05	578.74	89
11	578.74	573.53	568.41	563.38	558.44	553.58	548.81	544.12	539.51	534.97	530.52	88
12	530.52	526.13	521.82	517.58	513.40	509.30	505.25	501.27	497.36	493.50	489.71	87
13	489.71	485.97	482.29	478.66	475.09	471.57	468.10	464.69	461.32	458.00	454.73	86
14	454.73	451.50	448.32	445.19	442.10	439.05	436.04	433.07	430.15	427.26	424.41	85
15	424.41	421.60	418.83	416.09	413.39	410.72	408.09	405.49	402.92	400.39	397.89	84
16	397.89	395.42	392.97	390.56	388.18	385.83	383.51	381.21	378.94	376.70	374.48	83
17	374.48	372.29	370.13	367.99	365.87	363.78	361.71	359.67	357.65	355.65	353.68	82
18	353.68	351.72	349.79	347.88	345.99	344.12	342.27	340.44	338.63	336.83	335.06	81
19	335.06	333.31	331.57	329.85	328.15	326.47	324.80	323.16	321.52	319.91	318.31	**80**
20	318.31	316.73	315.16	313.60	312.07	310.55	309.04	307.54	306.07	304.60	303.15	79
21	303.15	301.71	300.29	298.88	297.48	296.10	294.73	293.37	292.03	290.69	289.37	78
22	289.37	288.06	286.76	285.48	284.20	282.94	281.69	280.45	279.22	278.00	276.79	77
23	276.79	275.59	274.40	273.23	272.06	270.90	269.75	268.61	267.49	266.37	265.26	76
24	265.26	264.16	263.06	261.98	260.91	259.84	258.79	257.74	256.70	255.67	254.65	75
25	254.65	253.63	252.63	251.63	250.64	249.65	248.68	247.71	246.75	245.80	244.85	74
26	244.85	243.91	242.98	242.06	241.14	240.23	239.33	238.43	237.54	236.66	235.78	73
27	235.78	234.91	234.05	233.19	232.34	231.50	230.66	229.83	229.00	228.18	227.36	72
28	227.36	226.55	225.75	224.95	224.16	223.37	222.59	221.82	221.05	220.28	219.52	71
29	219.52	218.77	218.02	217.27	216.54	215.80	215.07	214.35	213.63	212.91	212.21	**70**
30	212.21	211.50	210.80	210.10	209.41	208.73	208.04	207.37	206.69	206.02	205.36	69
31	205.36	204.70	204.04	203.39	202.74	202.10	201.46	200.82	200.19	199.57	198.94	68
32	198.94	198.32	197.71	197.09	196.49	195.88	195.28	194.68	194.09	193.50	192.91	67
33	192.91	192.33	191.75	191.18	190.60	190.03	189.47	188.91	188.35	187.79	187.24	66
34	187.24	186.69	186.14	185.60	185.06	184.53	183.99	183.46	182.93	182.41	181.89	65
35	181.89	181.37	180.86	180.34	179.83	179.33	178.82	178.32	177.82	177.33	176.84	64
36	176.84	176.35	175.86	175.38	174.89	174.41	173.94	173.46	172.99	172.52	172.06	63
37	172.06	171.59	171.13	170.67	170.22	169.76	169.31	168.86	168.42	167.97	167.53	62
38	167.53	167.09	166.65	166.22	165.78	165.35	164.93	164.50	164.08	163.65	163.23	61
39	163.23	162.82	162.40	161.99	161.58	161.17	160.76	160.36	159.95	159.55	159.15	**60**
40	159.15	158.76	158.36	157.97	157.58	157.19	156.80	156.42	156.03	155.65	155.27	59
41	155.27	154.89	154.52	154.14	153.77	153.40	153.03	152.66	152.30	151.94	151.57	58
42	151.57	151.21	150.86	150.50	150.14	149.79	149.44	149.09	148.74	148.39	148.05	57
43	148.05	147.71	147.36	147.02	146.68	146.35	146.01	145.68	145.34	145.01	144.68	56
44	144.68	144.36	144.03	143.70	143.38	143.06	142.74	142.42	142.10	141.78	141.47	55
45	141.47	141.16	140.84	140.53	140.22	139.91	139.61	139.30	139.00	138.69	138.39	54
46	138.39	138.09	137.79	137.50	137.20	136.91	136.61	136.32	136.03	135.74	135.45	53
47	135.45	135.16	134.87	134.59	134.31	134.02	133.74	133.46	133.18	132.90	132.63	52
48	132.63	132.35	132.08	131.80	131.53	131.26	130.99	130.72	130.45	130.19	129.92	51
49	129.92	129.66	129.39	129.13	128.87	128.61	128.35	128.09	127.83	127.58	127.32	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	79	**82**	**85**	**88**	**91**	**94**	**97**	**100**	**103**	**106**	**109**	**112**	**115**	**118**	**121**	**124**	**127**	**130**	
1	7.9	8.2	8.5	8.8	9.1	9.4	9.7	10.0	10.3	10.6	10.9	11.2	11.5	11.8	12.1	12.4	12.7	13.0	1
2	15.8	16.4	17.0	17.6	18.2	18.8	19.4	20.0	20.6	21.2	21.8	22.4	23.0	23.6	24.2	24.8	25.4	26.0	2
3	23.7	24.6	25.5	26.4	27.3	28.2	29.1	30.0	30.9	31.8	32.7	33.6	34.5	35.4	36.3	37.2	38.1	39.0	3
4	31.6	32.8	34.0	35.2	36.4	37.6	38.8	40.0	41.2	42.4	43.6	44.8	46.0	47.2	48.4	49.6	50.8	52.0	4
5	39.5	41.0	42.5	44.0	45.5	47.0	48.5	50.0	51.5	53.0	54.5	56.0	57.5	59.0	60.5	62.0	63.5	65.0	5
6	47.4	49.2	51.0	52.8	54.6	56.4	58.2	60.0	61.8	63.6	65.4	67.2	69.0	70.8	72.6	74.4	76.2	78.0	6
7	55.3	57.4	59.5	61.6	63.7	65.8	67.9	70.0	72.1	74.2	76.3	78.4	80.5	82.6	84.7	86.8	88.9	91.0	7
8	63.2	65.6	68.0	70.4	72.8	75.2	77.6	80.0	82.4	84.8	87.2	89.6	92.0	94.4	96.8	99.2	101.6	104.0	8
9	71.1	73.8	76.5	79.2	81.9	84.6	87.3	90.0	92.7	95.4	98.1	100.8	103.5	106.2	108.9	111.6	114.3	117.0	9

tang 99^g

cosec 0^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	127.33	127.07	126.82	126.57	126.31	126.06	125.82	125.57	125.32	125.07	124.83	49
51	124.83	124.58	124.34	124.10	123.86	123.62	123.38	123.14	122.90	122.66	122.43	48
52	122.43	122.19	121.96	121.73	121.49	121.26	121.03	120.80	120.57	120.35	120.12	47
53	120.12	119.89	119.67	119.44	119.22	119.00	118.77	118.55	118.33	118.11	117.89	46
54	117.89	117.68	117.46	117.24	117.03	116.81	116.60	116.39	116.17	115.96	115.75	45
55	115.75	115.54	115.33	115.12	114.91	114.71	114.50	114.30	114.09	113.89	113.68	44
56	113.68	113.48	113.28	113.08	112.88	112.68	112.48	112.28	112.08	111.89	111.69	43
57	111.69	111.49	111.30	111.10	110.91	110.72	110.53	110.33	110.14	109.95	109.76	42
58	109.76	109.57	109.39	109.20	109.01	108.83	108.64	108.45	108.27	108.09	107.90	41
59	107.90	107.72	107.54	107.36	107.18	107.00	106.82	106.64	106.46	106.28	106.10	**40**
60	106.10	105.93	105.75	105.58	105.40	105.23	105.05	104.88	104.71	104.54	104.37	39
61	104.37	104.19	104.02	103.85	103.69	103.52	103.35	103.18	103.01	102.85	102.68	38
62	102.68	102.52	102.35	102.19	102.02	101.86	101.70	101.54	101.37	101.21	101.05	37
63	101.05	100.89	100.73	100.57	100.41	100.26	100.10	99.942	99.785	99.629	99.474	36
64	99.474	99.318	99.164	99.009	98.856	98.702	98.550	98.397	98.245	98.094	97.943	35
65	97.943	97.793	97.643	97.493	97.344	97.196	97.047	96.900	96.752	96.606	96.459	34
66	96.459	96.313	96.168	96.023	95.878	95.734	95.590	95.447	95.304	95.162	95.020	33
67	95.020	94.878	94.737	94.596	94.456	94.316	94.176	94.037	93.898	93.760	93.622	32
68	93.622	93.485	93.348	93.211	93.075	92.939	92.804	92.668	92.534	92.399	92.266	31
69	92.266	92.132	91.999	91.866	91.734	91.602	91.470	91.339	91.208	91.078	90.948	**30**
70	90.948	90.818	90.688	90.559	90.431	90.303	90.175	90.047	89.920	89.793	89.667	29
71	89.667	89.541	89.415	89.289	89.164	89.040	88.915	88.791	88.668	88.544	88.421	28
72	88.421	88.299	88.176	88.054	87.933	87.812	87.691	87.570	87.450	87.330	87.210	27
73	87.210	87.091	86.972	86.853	86.735	86.617	86.499	86.382	86.265	86.148	86.032	26
74	86.032	85.916	85.800	85.684	85.569	85.454	85.340	85.225	85.112	84.998	84.885	25
75	84.885	84.772	84.659	84.546	84.434	84.322	84.211	84.100	83.989	83.878	83.768	24
76	83.768	83.658	83.548	83.438	83.329	83.220	83.112	83.003	82.895	82.787	82.680	23
77	82.680	82.573	82.466	82.359	82.253	82.147	82.041	81.935	81.830	81.725	81.620	22
78	81.620	81.515	81.411	81.307	81.204	81.100	80.997	80.894	80.791	80.689	80.587	21
79	80.587	80.485	80.383	80.282	80.181	80.080	79.979	79.879	79.779	79.679	79.580	**20**
80	79.580	79.480	79.381	79.282	79.184	79.085	78.987	78.889	78.792	78.694	78.597	19
81	78.597	78.500	78.404	78.307	78.211	78.115	78.019	77.924	77.829	77.733	77.639	18
82	77.639	77.544	77.450	77.356	77.262	77.168	77.075	76.982	76.889	76.796	76.703	17
83	76.703	76.611	76.519	76.427	76.335	76.244	76.153	76.062	75.971	75.881	75.790	16
84	75.790	75.700	75.610	75.521	75.431	75.342	75.253	75.164	75.075	74.987	74.899	15
85	74.899	74.811	74.723	74.635	74.548	74.461	74.374	74.287	74.200	74.114	74.028	14
86	74.028	73.942	73.856	73.770	73.685	73.600	73.515	73.430	73.346	73.261	73.177	13
87	73.177	73.093	73.009	72.926	72.842	72.759	72.676	72.593	72.510	72.428	72.345	12
88	72.345	72.263	72.181	72.100	72.018	71.937	71.856	71.775	71.694	71.613	71.533	11
89	71.533	71.452	71.372	71.292	71.213	71.133	71.054	70.974	70.895	70.817	70.738	**10**
90	70.738	70.659	70.581	70.503	70.425	70.347	70.269	70.192	70.115	70.038	69.961	09
91	69.961	69.884	69.807	69.731	69.654	69.578	69.502	69.427	69.351	69.276	69.200	08
92	69.200	69.125	69.050	68.975	68.901	68.826	68.752	68.678	68.604	68.530	68.456	07
93	68.456	68.383	68.309	68.236	68.163	68.090	68.017	67.945	67.872	67.800	67.728	06
94	67.728	67.656	67.584	67.513	67.441	67.370	67.298	67.227	67.156	67.086	67.015	05
95	67.015	66.945	66.874	66.804	66.734	66.664	66.595	66.525	66.456	66.386	66.317	04
96	66.317	66.248	66.179	66.110	66.042	65.973	65.905	65.837	65.769	65.701	65.633	03
97	65.633	65.566	65.498	65.431	65.364	65.297	65.230	65.163	65.097	65.030	64.964	02
98	64.964	64.898	64.831	64.766	64.700	64.634	64.568	64.503	64.438	64.373	64.308	01
99	64.308	64.243	64.178	64.113	64.049	63.984	63.920	63.856	63.792	63.728	63.665	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	15	**17**	**19**	**21**	**23**	**26**	**63**	**66**	**69**	**72**	**75**	**78**	**81**	**84**	**87**	**90**	**93**	**96**	
1	1.5	1.7	1.9	2.1	2.3	2.6	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7	9.0	9.3	9.6	1
2	3.0	3.4	3.8	4.2	4.6	5.2	12.6	13.2	13.8	14.4	15.0	15.6	16.2	16.8	17.4	18.0	18.6	19.2	2
3	4.5	5.1	5.7	6.3	6.9	7.8	18.9	19.8	20.7	21.6	22.5	23.4	24.3	25.2	26.1	27.0	27.9	28.8	3
4	6.0	6.8	7.6	8.4	9.2	10.4	25.2	26.4	27.6	28.8	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	4
5	7.5	8.5	9.5	10.5	11.5	13.0	31.5	33.0	34.5	36.0	37.5	39.0	40.5	42.0	43.5	45.0	46.5	48.0	5
6	9.0	10.2	11.4	12.6	13.8	15.6	37.8	39.6	41.4	43.2	45.0	46.8	48.6	50.4	52.2	54.0	55.8	57.6	6
7	10.5	11.9	13.3	14.7	16.1	18.2	44.1	46.2	48.3	50.4	52.5	54.6	56.7	58.8	60.9	63.0	65.1	67.2	7
8	12.0	13.6	15.2	16.8	18.4	20.8	50.4	52.8	55.2	57.6	60.0	62.4	64.8	67.2	69.6	72.0	74.4	76.8	8
9	13.5	15.3	17.1	18.9	20.7	23.4	56.7	59.4	62.1	64.8	67.5	70.2	72.9	75.6	78.3	81.0	83.7	86.4	9

sec 99^g

cotg 0^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	127.32	127.07	126.81	126.56	126.31	126.06	125.81	125.56	125.32	125.07	124.82	49
51	124.82	124.58	124.34	124.09	123.85	123.61	123.37	123.13	122.90	122.66	122.42	48
52	122.42	122.19	121.96	121.72	121.49	121.26	121.03	120.80	120.57	120.34	120.11	47
53	120.11	119.89	119.66	119.44	119.21	118.99	118.77	118.55	118.33	118.11	117.89	46
54	117.89	117.67	117.45	117.24	117.02	116.81	116.59	116.38	116.17	115.96	115.75	45
55	115.75	115.54	115.33	115.12	114.91	114.70	114.50	114.29	114.09	113.88	113.68	44
56	113.68	113.48	113.27	113.07	112.87	112.67	112.47	112.28	112.08	111.88	111.68	43
57	111.68	111.49	111.29	111.10	110.91	110.71	110.52	110.33	110.14	109.95	109.76	42
58	109.76	109.57	109.38	109.19	109.01	108.82	108.64	108.45	108.27	108.08	107.90	41
59	107.90	107.72	107.53	107.35	107.17	106.99	106.81	106.63	106.46	106.28	106.10	**40**
60	106.10	105.92	105.75	105.57	105.40	105.22	105.05	104.88	104.70	104.53	104.36	39
61	104.36	104.19	104.02	103.85	103.68	103.51	103.34	103.18	103.01	102.84	102.68	38
62	102.68	102.51	102.35	102.18	102.02	101.86	101.69	101.53	101.37	101.21	101.05	37
63	101.05	100.89	100.73	100.57	100.41	100.25	100.09	99.937	99.780	99.624	99.468	36
64	99.468	99.313	99.159	99.004	98.851	98.697	98.545	98.392	98.240	98.089	97.938	35
65	97.938	97.788	97.638	97.488	97.339	97.190	97.042	96.895	96.747	96.600	96.454	34
66	96.454	96.308	96.163	96.018	95.873	95.729	95.585	95.442	95.299	95.156	95.014	33
67	95.014	94.873	94.732	94.591	94.450	94.311	94.171	94.032	93.893	93.755	93.617	32
68	93.617	93.480	93.342	93.206	93.069	92.934	92.798	92.663	92.528	92.394	92.260	31
69	92.260	92.127	91.993	91.861	91.728	91.596	91.465	91.333	91.203	91.072	90.942	**30**
70	90.942	90.812	90.683	90.554	90.425	90.297	90.169	90.042	89.914	89.788	89.661	29
71	89.661	89.535	89.409	89.284	89.159	89.034	88.910	88.786	88.662	88.539	88.416	28
72	88.416	88.293	88.171	88.049	87.927	87.806	87.685	87.564	87.444	87.324	87.204	27
73	87.204	87.085	86.966	86.847	86.729	86.611	86.493	86.376	86.259	86.142	86.026	26
74	86.026	85.910	85.794	85.678	85.563	85.448	85.334	85.220	85.106	84.992	84.879	25
75	84.879	84.766	84.653	84.541	84.428	84.317	84.205	84.094	83.983	83.872	83.762	24
76	83.762	83.652	83.542	83.432	83.323	83.214	83.106	82.997	82.889	82.781	82.674	23
77	82.674	82.567	82.460	82.353	82.247	82.140	82.035	81.929	81.824	81.719	81.614	22
78	81.614	81.509	81.405	81.301	81.197	81.094	80.991	80.888	80.785	80.683	80.581	21
79	80.581	80.479	80.377	80.276	80.175	80.074	79.973	79.873	79.773	79.673	79.573	**20**
80	79.573	79.474	79.375	79.276	79.177	79.079	78.981	78.883	78.785	78.688	78.591	19
81	78.591	78.494	78.397	78.301	78.205	78.109	78.013	77.917	77.822	77.727	77.632	18
82	77.632	77.538	77.443	77.349	77.255	77.162	77.068	76.975	76.882	76.789	76.697	17
83	76.697	76.605	76.512	76.421	76.329	76.238	76.146	76.055	75.965	75.874	75.784	16
84	75.784	75.694	75.604	75.514	75.424	75.335	75.246	75.157	75.069	74.980	74.892	15
85	74.892	74.804	74.716	74.629	74.541	74.454	74.367	74.280	74.194	74.107	74.021	14
86	74.021	73.935	73.849	73.764	73.678	73.593	73.508	73.423	73.339	73.254	73.170	13
87	73.170	73.086	73.002	72.919	72.835	72.752	72.669	72.586	72.503	72.421	72.339	12
88	72.339	72.256	72.174	72.093	72.011	71.930	71.849	71.768	71.687	71.606	71.526	11
89	71.526	71.445	71.365	71.285	71.206	71.126	71.047	70.967	70.888	70.810	70.731	**10**
90	70.731	70.652	70.574	70.496	70.418	70.340	70.262	70.185	70.108	70.030	69.953	09
91	69.953	69.877	69.800	69.724	69.647	69.571	69.495	69.419	69.344	69.268	69.193	08
92	69.193	69.118	69.043	68.968	68.893	68.819	68.745	68.670	68.596	68.523	68.449	07
93	68.449	68.375	68.302	68.229	68.156	68.083	68.010	67.937	67.865	67.793	67.721	06
94	67.721	67.649	67.577	67.505	67.434	67.362	67.291	67.220	67.149	67.078	67.008	05
95	67.008	66.937	66.867	66.797	66.727	66.657	66.587	66.517	66.448	66.379	66.310	04
96	66.310	66.241	66.172	66.103	66.034	65.966	65.898	65.829	65.761	65.694	65.626	03
97	65.626	65.558	65.491	65.423	65.356	65.289	65.222	65.156	65.089	65.022	64.956	02
98	64.956	64.890	64.824	64.758	64.692	64.626	64.561	64.495	64.430	64.365	64.300	01
99	64.300	64.235	64.170	64.106	64.041	63.977	63.912	63.848	63.784	63.720	63.657	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	99	**102**	**105**	**108**	**111**	**114**	**117**	**120**	**123**	**126**	**129**	**132**	**135**	**140**	**145**	**150**	**153**	**156**	
1	9.9	10.2	10.5	10.8	11.1	11.4	11.7	12.0	12.3	12.6	12.9	13.2	13.5	14.0	14.5	15.0	15.3	15.6	1
2	19.8	20.4	21.0	21.6	22.2	22.8	23.4	24.0	24.6	25.2	25.8	26.4	27.0	28.0	29.0	30.0	30.6	31.2	2
3	29.7	30.6	31.5	32.4	33.3	34.2	35.1	36.0	36.9	37.8	38.7	39.6	40.5	42.0	43.5	45.0	45.9	46.8	3
4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	56.0	58.0	60.0	61.2	62.4	4
5	49.5	51.0	52.5	54.0	55.5	57.0	58.5	60.0	61.5	63.0	64.5	66.0	67.5	70.0	72.5	75.0	76.5	78.0	5
6	59.4	61.2	63.0	64.8	66.6	68.4	70.2	72.0	73.8	75.6	77.4	79.2	81.0	84.0	87.0	90.0	91.8	93.6	6
7	69.3	71.4	73.5	75.6	77.7	79.8	81.9	84.0	86.1	88.2	90.3	92.4	94.5	98.0	101.5	105.0	107.1	109.2	7
8	79.2	81.6	84.0	86.4	88.8	91.2	93.6	96.0	98.4	100.8	103.2	105.6	108.0	112.0	116.0	120.0	122.4	124.8	8
9	89.1	91.8	94.5	97.2	99.9	102.6	105.3	108.0	110.7	113.4	116.1	118.8	121.5	126.0	130.5	135.0	137.7	140.4	9

tang 99^g

cosec 1^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	63.665	63.601	63.538	63.474	63.411	63.348	63.285	63.222	63.159	63.097	63.034	99
01	63.034	62.972	62.910	62.848	62.786	62.724	62.662	62.600	62.539	62.478	62.416	98
02	62.416	62.355	62.294	62.233	62.173	62.112	62.051	61.991	61.931	61.871	61.810	97
03	61.810	61.750	61.691	61.631	61.571	61.512	61.452	61.393	61.334	61.275	61.216	96
04	61.216	61.157	61.099	61.040	60.982	60.923	60.865	60.807	60.749	60.691	60.633	95
05	60.633	60.576	60.518	60.460	60.403	60.346	60.289	60.232	60.175	60.118	60.061	94
06	60.061	60.005	59.948	59.892	59.835	59.779	59.723	59.667	59.611	59.556	59.500	93
07	59.500	59.444	59.389	59.334	59.278	59.223	59.168	59.113	59.058	59.004	58.949	92
08	58.949	58.895	58.840	58.786	58.732	58.677	58.623	58.570	58.516	58.462	58.408	91
09	58.408	58.355	58.301	58.248	58.195	58.142	58.089	58.036	57.983	57.930	57.877	**90**
10	57.877	57.825	57.772	57.720	57.668	57.616	57.563	57.511	57.460	57.408	57.356	89
11	57.356	57.304	57.253	57.201	57.150	57.099	57.048	56.997	56.946	56.895	56.844	88
12	56.844	56.793	56.743	56.692	56.642	56.591	56.541	56.491	56.441	56.391	56.341	87
13	56.341	56.291	56.241	56.192	56.142	56.093	56.043	55.994	55.945	55.896	55.847	86
14	55.847	55.798	55.749	55.700	55.652	55.603	55.554	55.506	55.458	55.409	55.361	85
15	55.361	55.313	55.265	55.217	55.169	55.122	55.074	55.026	54.979	54.931	54.884	84
16	54.884	54.837	54.790	54.742	54.695	54.649	54.602	54.555	54.508	54.462	54.415	83
17	54.415	54.369	54.322	54.276	54.230	54.183	54.137	54.091	54.046	54.000	53.954	82
18	53.954	53.908	53.863	53.817	53.772	53.726	53.681	53.636	53.591	53.546	53.501	81
19	53.501	53.456	53.411	53.366	53.321	53.277	53.232	53.188	53.143	53.099	53.055	**80**
20	53.055	53.011	52.967	52.922	52.879	52.835	52.791	52.747	52.703	52.660	52.616	79
21	52.616	52.573	52.530	52.486	52.443	52.400	52.357	52.314	52.271	52.228	52.185	78
22	52.185	52.142	52.100	52.057	52.015	51.972	51.930	51.887	51.845	51.803	51.761	77
23	51.761	51.719	51.677	51.635	51.593	51.551	51.510	51.468	51.426	51.385	51.344	76
24	51.344	51.302	51.261	51.220	51.178	51.137	51.096	51.055	51.014	50.974	50.933	75
25	50.933	50.892	50.852	50.811	50.770	50.730	50.690	50.649	50.609	50.569	50.529	74
26	50.529	50.489	50.449	50.409	50.369	50.329	50.289	50.250	50.210	50.170	50.131	73
27	50.131	50.091	50.052	50.013	49.973	49.934	49.895	49.856	49.817	49.778	49.739	72
28	49.739	49.700	49.662	49.623	49.584	49.546	49.507	49.469	49.430	49.392	49.354	71
29	49.354	49.316	49.277	49.239	49.201	49.163	49.125	49.087	49.050	49.012	48.974	**70**
30	48.974	48.937	48.899	48.861	48.824	48.787	48.749	48.712	48.675	48.637	48.600	69
31	48.600	48.563	48.526	48.489	48.452	48.416	48.379	48.342	48.305	48.269	48.232	68
32	48.232	48.196	48.159	48.123	48.087	48.050	48.014	47.978	47.942	47.906	47.870	67
33	47.870	47.834	47.798	47.762	47.726	47.690	47.655	47.619	47.583	47.548	47.512	66
34	47.512	47.477	47.442	47.406	47.371	47.336	47.301	47.266	47.231	47.196	47.161	65
35	47.161	47.126	47.091	47.056	47.021	46.987	46.952	46.917	46.883	46.848	46.814	64
36	46.814	46.779	46.745	46.711	46.677	46.642	46.608	46.574	46.540	46.506	46.472	63
37	46.472	46.438	46.404	46.371	46.337	46.303	46.270	46.236	46.202	46.169	46.135	62
38	46.135	46.102	46.069	46.035	46.002	45.969	45.936	45.903	45.870	45.837	45.804	61
39	45.804	45.771	45.738	45.705	45.672	45.639	45.607	45.574	45.542	45.509	45.477	**60**
40	45.477	45.444	45.412	45.379	45.347	45.315	45.282	45.250	45.218	45.186	45.154	59
41	45.154	45.122	45.090	45.058	45.026	44.995	44.963	44.931	44.899	44.868	44.836	58
42	44.836	44.805	44.773	44.742	44.710	44.679	44.647	44.616	44.585	44.554	44.523	57
43	44.523	44.492	44.460	44.429	44.398	44.368	44.337	44.306	44.275	44.244	44.213	56
44	44.213	44.183	44.152	44.122	44.091	44.061	44.030	44.000	43.969	43.939	43.909	55
45	43.909	43.878	43.848	43.818	43.788	43.758	43.728	43.698	43.668	43.638	43.608	54
46	43.608	43.578	43.548	43.519	43.489	43.459	43.429	43.400	43.370	43.341	43.311	53
47	43.311	43.282	43.252	43.223	43.194	43.165	43.135	43.106	43.077	43.048	43.019	52
48	43.019	42.990	42.961	42.932	42.903	42.874	42.845	42.816	42.787	42.759	42.730	51
49	42.730	42.701	42.673	42.644	42.616	42.587	42.559	42.530	42.502	42.474	42.445	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	28	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	
1	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	1
2	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.6	8.8	9.0	2
3	8.4	8.7	9.0	9.3	9.6	9.9	10.2	10.5	10.8	11.1	11.4	11.7	12.0	12.3	12.6	12.9	13.2	13.5	3
4	11.2	11.6	12.0	12.4	12.8	13.2	13.6	14.0	14.4	14.8	15.2	15.6	16.0	16.4	16.8	17.2	17.6	18.0	4
5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0	22.5	5
6	16.8	17.4	18.0	18.6	19.2	19.8	20.4	21.0	21.6	22.2	22.8	23.4	24.0	24.6	25.2	25.8	26.4	27.0	6
7	19.6	20.3	21.0	21.7	22.4	23.1	23.8	24.5	25.2	25.9	26.6	27.3	28.0	28.7	29.4	30.1	30.8	31.5	7
8	22.4	23.2	24.0	24.8	25.6	26.4	27.2	28.0	28.8	29.6	30.4	31.2	32.0	32.8	33.6	34.4	35.2	36.0	8
9	25.2	26.1	27.0	27.9	28.8	29.7	30.6	31.5	32.4	33.3	34.2	35.1	36.0	36.9	37.8	38.7	39.6	40.5	9

sec 98^g

cotg 1^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	63.657	63.593	63.530	63.466	63.403	63.340	63.277	63.214	63.151	63.089	63.026	99
01	63.026	62.964	62.902	62.840	62.778	62.716	62.654	62.592	62.531	62.470	62.408	98
02	62.408	62.347	62.286	62.225	62.165	62.104	62.043	61.983	61.923	61.862	61.802	97
03	61.802	61.742	61.683	61.623	61.563	61.504	61.444	61.385	61.326	61.267	61.208	96
04	61.208	61.149	61.090	61.032	60.973	60.915	60.857	60.799	60.741	60.683	60.625	95
05	60.625	60.567	60.510	60.452	60.395	60.338	60.280	60.223	60.166	60.110	60.053	94
06	60.053	59.996	59.940	59.883	59.827	59.771	59.715	59.659	59.603	59.547	59.492	93
07	59.492	59.436	59.381	59.325	59.270	59.215	59.160	59.105	59.050	58.995	58.941	92
08	58.941	58.886	58.832	58.777	58.723	58.669	58.615	58.561	58.507	58.453	58.400	91
09	58.400	58.346	58.293	58.239	58.186	58.133	58.080	58.027	57.974	57.921	57.869	**90**
10	57.869	57.816	57.764	57.711	57.659	57.607	57.555	57.503	57.451	57.399	57.347	89
11	57.347	57.296	57.244	57.193	57.141	57.090	57.039	56.988	56.937	56.886	56.835	88
12	56.835	56.784	56.734	56.683	56.633	56.583	56.532	56.482	56.432	56.382	56.332	87
13	56.332	56.282	56.233	56.183	56.133	56.084	56.035	55.985	55.936	55.887	55.838	86
14	55.838	55.789	55.740	55.691	55.643	55.594	55.545	55.497	55.449	55.400	55.352	85
15	55.352	55.304	55.256	55.208	55.160	55.113	55.065	55.017	54.970	54.922	54.875	84
16	54.875	54.828	54.780	54.733	54.686	54.639	54.593	54.546	54.499	54.452	54.406	83
17	54.406	54.359	54.313	54.267	54.220	54.174	54.128	54.082	54.036	53.990	53.945	82
18	53.945	53.899	53.853	53.808	53.762	53.717	53.672	53.626	53.581	53.536	53.491	81
19	53.491	53.446	53.401	53.357	53.312	53.267	53.223	53.178	53.134	53.090	53.045	**80**
20	53.045	53.001	52.957	52.913	52.869	52.825	52.781	52.738	52.694	52.650	52.607	79
21	52.607	52.563	52.520	52.477	52.433	52.390	52.347	52.304	52.261	52.218	52.176	78
22	52.176	52.133	52.090	52.048	52.005	51.963	51.920	51.878	51.836	51.793	51.751	77
23	51.751	51.709	51.667	51.625	51.583	51.542	51.500	51.458	51.417	51.375	51.334	76
24	51.334	51.292	51.251	51.210	51.169	51.128	51.087	51.046	51.005	50.964	50.923	75
25	50.923	50.882	50.842	50.801	50.761	50.720	50.680	50.639	50.599	50.559	50.519	74
26	50.519	50.479	50.439	50.399	50.359	50.319	50.279	50.240	50.200	50.160	50.121	73
27	50.121	50.081	50.042	50.003	49.963	49.924	49.885	49.846	49.807	49.768	49.729	72
28	49.729	49.690	49.652	49.613	49.574	49.536	49.497	49.459	49.420	49.382	49.344	71
29	49.344	49.305	49.267	49.229	49.191	49.153	49.115	49.077	49.039	49.002	48.964	**70**
30	48.964	48.926	48.889	48.851	48.814	48.776	48.739	48.702	48.664	48.627	48.590	69
31	48.590	48.553	48.516	48.479	48.442	48.405	48.368	48.332	48.295	48.258	48.222	68
32	48.222	48.185	48.149	48.112	48.076	48.040	48.004	47.967	47.931	47.895	47.859	67
33	47.859	47.823	47.787	47.751	47.716	47.680	47.644	47.609	47.573	47.537	47.502	66
34	47.502	47.466	47.431	47.396	47.361	47.325	47.290	47.255	47.220	47.185	47.150	65
35	47.150	47.115	47.080	47.045	47.011	46.976	46.941	46.907	46.872	46.838	46.803	64
36	46.803	46.769	46.734	46.700	46.666	46.632	46.598	46.563	46.529	46.495	46.461	63
37	46.461	46.428	46.394	46.360	46.326	46.292	46.259	46.225	46.192	46.158	46.125	62
38	46.125	46.091	46.058	46.025	45.991	45.958	45.925	45.892	45.859	45.826	45.793	61
39	45.793	45.760	45.727	45.694	45.661	45.629	45.596	45.563	45.531	45.498	45.466	**60**
40	45.466	45.433	45.401	45.368	45.336	45.304	45.271	45.239	45.207	45.175	45.143	59
41	45.143	45.111	45.079	45.047	45.015	44.983	44.952	44.920	44.888	44.857	44.825	58
42	44.825	44.793	44.762	44.730	44.699	44.668	44.636	44.605	44.574	44.543	44.511	57
43	44.511	44.480	44.449	44.418	44.387	44.356	44.325	44.294	44.264	44.233	44.202	56
44	44.202	44.171	44.141	44.110	44.080	44.049	44.019	43.988	43.958	43.928	43.897	55
45	43.897	43.867	43.837	43.807	43.776	43.746	43.716	43.686	43.656	43.626	43.596	54
46	43.596	43.567	43.537	43.507	43.477	43.448	43.418	43.388	43.359	43.329	43.300	53
47	43.300	43.270	43.241	43.212	43.182	43.153	43.124	43.094	43.065	43.036	43.007	52
48	43.007	42.978	42.949	42.920	42.891	42.862	42.833	42.805	42.776	42.747	42.718	51
49	42.718	42.690	42.661	42.632	42.604	42.575	42.547	42.519	42.490	42.462	42.433	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	46	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**64**	
1	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.4	1
2	9.2	9.4	9.6	9.8	10.0	10.2	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.8	2
3	13.8	14.1	14.4	14.7	15.0	15.3	15.6	15.9	16.2	16.5	16.8	17.1	17.4	17.7	18.0	18.3	18.6	19.2	3
4	18.4	18.8	19.2	19.6	20.0	20.4	20.8	21.2	21.6	22.0	22.4	22.8	23.2	23.6	24.0	24.4	24.8	25.6	4
5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0	32.0	5
6	27.6	28.2	28.8	29.4	30.0	30.6	31.2	31.8	32.4	33.0	33.6	34.2	34.8	35.4	36.0	36.6	37.2	38.4	6
7	32.2	32.9	33.6	34.3	35.0	35.7	36.4	37.1	37.8	38.5	39.2	39.9	40.6	41.3	42.0	42.7	43.4	44.8	7
8	36.8	37.6	38.4	39.2	40.0	40.8	41.6	42.4	43.2	44.0	44.8	45.6	46.4	47.2	48.0	48.8	49.6	51.2	8
9	41.4	42.3	43.2	44.1	45.0	45.9	46.8	47.7	48.6	49.5	50.4	51.3	52.2	53.1	54.0	54.9	55.8	57.6	9

tang 98^g

cosec 1^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	42.445	42.417	42.389	42.361	42.332	42.304	42.276	42.248	42.220	42.192	42.164	49
51	42.164	42.136	42.108	42.081	42.053	42.025	41.997	41.970	41.942	41.914	41.887	48
52	41.887	41.859	41.832	41.804	41.777	41.750	41.722	41.695	41.668	41.640	41.613	47
53	41.613	41.586	41.559	41.532	41.505	41.478	41.451	41.424	41.397	41.370	41.343	46
54	41.343	41.316	41.289	41.263	41.236	41.209	41.183	41.156	41.129	41.103	41.076	45
55	41.076	41.050	41.023	40.997	40.971	40.944	40.918	40.892	40.865	40.839	40.813	44
56	40.813	40.787	40.761	40.735	40.709	40.683	40.657	40.631	40.605	40.579	40.553	43
57	40.553	40.527	40.502	40.476	40.450	40.424	40.399	40.373	40.348	40.322	40.297	42
58	40.297	40.271	40.246	40.220	40.195	40.169	40.144	40.119	40.094	40.068	40.043	41
59	40.043	40.018	39.993	39.968	39.943	39.918	39.893	39.868	39.843	39.818	39.793	**40**
60	39.793	39.768	39.743	39.718	39.694	39.669	39.644	39.620	39.595	39.570	39.546	39
61	39.546	39.521	39.497	39.472	39.448	39.423	39.399	39.375	39.350	39.326	39.302	38
62	39.302	39.278	39.253	39.229	39.205	39.181	39.157	39.133	39.109	39.085	39.061	37
63	39.061	39.037	39.013	38.989	38.965	38.941	38.917	38.894	38.870	38.846	38.823	36
64	38.823	38.799	38.775	38.752	38.728	38.705	38.681	38.658	38.634	38.611	38.587	35
65	38.587	38.564	38.541	38.517	38.494	38.471	38.448	38.424	38.401	38.378	38.355	34
66	38.355	38.332	38.309	38.286	38.263	38.240	38.217	38.194	38.171	38.148	38.125	33
67	38.125	38.103	38.080	38.057	38.034	38.012	37.989	37.966	37.944	37.921	37.898	32
68	37.898	37.876	37.853	37.831	37.808	37.786	37.764	37.741	37.719	37.697	37.674	31
69	37.674	37.652	37.630	37.607	37.585	37.563	37.541	37.519	37.497	37.475	37.453	**30**
70	37.453	37.431	37.409	37.387	37.365	37.343	37.321	37.299	37.277	37.255	37.234	29
71	37.234	37.212	37.190	37.169	37.147	37.125	37.104	37.082	37.060	37.039	37.017	28
72	37.017	36.996	36.974	36.953	36.931	36.910	36.889	36.867	36.846	36.825	36.803	27
73	36.803	36.782	36.761	36.740	36.718	36.697	36.676	36.655	36.634	36.613	36.592	26
74	36.592	36.571	36.550	36.529	36.508	36.487	36.466	36.445	36.424	36.404	36.383	25
75	36.383	36.362	36.341	36.321	36.300	36.279	36.259	36.238	36.217	36.197	36.176	24
76	36.176	36.156	36.135	36.115	36.094	36.074	36.053	36.033	36.013	35.992	35.972	23
77	35.972	35.952	35.931	35.911	35.891	35.871	35.850	35.830	35.810	35.790	35.770	22
78	35.770	35.750	35.730	35.710	35.690	35.670	35.650	35.630	35.610	35.590	35.570	21
79	35.570	35.550	35.530	35.511	35.491	35.471	35.451	35.432	35.412	35.392	35.372	**20**
80	35.372	35.353	35.333	35.314	35.294	35.275	35.255	35.235	35.216	35.197	35.177	19
81	35.177	35.158	35.138	35.119	35.100	35.080	35.061	35.042	35.022	35.003	34.984	18
82	34.984	34.965	34.945	34.926	34.907	34.888	34.869	34.850	34.831	34.812	34.793	17
83	34.793	34.774	34.755	34.736	34.717	34.698	34.679	34.660	34.641	34.623	34.604	16
84	34.604	34.585	34.566	34.547	34.529	34.510	34.491	34.473	34.454	34.435	34.417	15
85	34.417	34.398	34.380	34.361	34.342	34.324	34.305	34.287	34.269	34.250	34.232	14
86	34.232	34.213	34.195	34.177	34.158	34.140	34.122	34.103	34.085	34.067	34.049	13
87	34.049	34.031	34.012	33.994	33.976	33.958	33.940	33.922	33.904	33.886	33.868	12
88	33.868	33.850	33.832	33.814	33.796	33.778	33.760	33.742	33.724	33.706	33.689	11
89	33.689	33.671	33.653	33.635	33.617	33.600	33.582	33.564	33.547	33.529	33.511	**10**
90	33.511	33.494	33.476	33.458	33.441	33.423	33.406	33.388	33.371	33.353	33.336	09
91	33.336	33.318	33.301	33.284	33.266	33.249	33.232	33.214	33.197	33.180	33.162	08
92	33.162	33.145	33.128	33.111	33.093	33.076	33.059	33.042	33.025	33.008	32.991	07
93	32.991	32.973	32.956	32.939	32.922	32.905	32.888	32.871	32.854	32.837	32.821	06
94	32.821	32.804	32.787	32.770	32.753	32.736	32.719	32.703	32.686	32.669	32.652	05
95	32.652	32.636	32.619	32.602	32.585	32.569	32.552	32.536	32.519	32.502	32.486	04
96	32.486	32.469	32.453	32.436	32.420	32.403	32.387	32.370	32.354	32.337	32.321	03
97	32.321	32.304	32.288	32.272	32.255	32.239	32.223	32.206	32.190	32.174	32.158	02
98	32.158	32.141	32.125	32.109	32.093	32.077	32.061	32.044	32.028	32.012	31.996	01
99	31.996	31.980	31.964	31.948	31.932	31.916	31.900	31.884	31.868	31.852	31.836	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	
1	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	1
2	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	2
3	4.8	5.1	5.4	5.7	6.0	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7	3
4	6.4	6.8	7.2	7.6	8.0	8.4	8.8	9.2	9.6	10.0	10.4	10.8	11.2	11.6	4
5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	5
6	9.6	10.2	10.8	11.4	12.0	12.6	13.2	13.8	14.4	15.0	15.6	16.2	16.8	17.4	6
7	11.2	11.9	12.6	13.3	14.0	14.7	15.4	16.1	16.8	17.5	18.2	18.9	19.6	20.3	7
8	12.8	13.6	14.4	15.2	16.0	16.8	17.6	18.4	19.2	20.0	20.8	21.6	22.4	23.2	8
9	14.4	15.3	16.2	17.1	18.0	18.9	19.8	20.7	21.6	22.5	23.4	24.3	25.2	26.1	9

sec 98^g

cotg 1^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	42.433	42.405	42.377	42.349	42.321	42.292	42.264	42.236	42.208	42.180	42.152	49
51	42.152	42.124	42.097	42.069	42.041	42.013	41.985	41.958	41.930	41.902	41.875	48
52	41.875	41.847	41.820	41.792	41.765	41.738	41.710	41.683	41.656	41.628	41.601	47
53	41.601	41.574	41.547	41.520	41.493	41.466	41.439	41.412	41.385	41.358	41.331	46
54	41.331	41.304	41.277	41.250	41.224	41.197	41.170	41.144	41.117	41.091	41.064	45
55	41.064	41.038	41.011	40.985	40.958	40.932	40.906	40.879	40.853	40.827	40.801	44
56	40.801	40.775	40.749	40.722	40.696	40.670	40.644	40.618	40.593	40.567	40.541	43
57	40.541	40.515	40.489	40.463	40.438	40.412	40.386	40.361	40.335	40.310	40.284	42
58	40.284	40.259	40.233	40.208	40.182	40.157	40.132	40.106	40.081	40.056	40.031	41
59	40.031	40.005	39.980	39.955	39.930	39.905	39.880	39.855	39.830	39.805	39.780	**40**
60	39.780	39.756	39.731	39.706	39.681	39.656	39.632	39.607	39.582	39.558	39.533	39
61	39.533	39.509	39.484	39.460	39.435	39.411	39.386	39.362	39.338	39.313	39.289	38
62	39.289	39.265	39.241	39.216	39.192	39.168	39.144	39.120	39.096	39.072	39.048	37
63	39.048	39.024	39.000	38.976	38.952	38.928	38.905	38.881	38.857	38.833	38.810	36
64	38.810	38.786	38.762	38.739	38.715	38.692	38.668	38.645	38.621	38.598	38.574	35
65	38.574	38.551	38.528	38.504	38.481	38.458	38.435	38.411	38.388	38.365	38.342	34
66	38.342	38.319	38.296	38.273	38.250	38.227	38.204	38.181	38.158	38.135	38.112	33
67	38.112	38.089	38.067	38.044	38.021	37.998	37.976	37.953	37.930	37.908	37.885	32
68	37.885	37.863	37.840	37.818	37.795	37.773	37.750	37.728	37.706	37.683	37.661	31
69	37.661	37.639	37.616	37.594	37.572	37.550	37.528	37.506	37.483	37.461	37.439	**30**
70	37.439	37.417	37.395	37.373	37.351	37.329	37.308	37.286	37.264	37.242	37.220	29
71	37.220	37.199	37.177	37.155	37.133	37.112	37.090	37.068	37.047	37.025	37.004	28
72	37.004	36.982	36.961	36.939	36.918	36.896	36.875	36.854	36.832	36.811	36.790	27
73	36.790	36.769	36.747	36.726	36.705	36.684	36.663	36.641	36.620	36.599	36.578	26
74	36.578	36.557	36.536	36.515	36.494	36.473	36.452	36.432	36.411	36.390	36.369	25
75	36.369	36.348	36.328	36.307	36.286	36.265	36.245	36.224	36.204	36.183	36.162	24
76	36.162	36.142	36.121	36.101	36.080	36.060	36.039	36.019	35.999	35.978	35.958	23
77	35.958	35.938	35.917	35.897	35.877	35.857	35.836	35.816	35.796	35.776	35.756	22
78	35.756	35.736	35.716	35.696	35.676	35.656	35.636	35.616	35.596	35.576	35.556	21
79	35.556	35.536	35.516	35.496	35.477	35.457	35.437	35.417	35.398	35.378	35.358	**20**
80	35.358	35.339	35.319	35.299	35.280	35.260	35.241	35.221	35.202	35.182	35.163	19
81	35.163	35.143	35.124	35.105	35.085	35.066	35.047	35.027	35.008	34.989	34.970	18
82	34.970	34.950	34.931	34.912	34.893	34.874	34.855	34.836	34.816	34.797	34.778	17
83	34.778	34.759	34.740	34.721	34.702	34.684	34.665	34.646	34.627	34.608	34.589	16
84	34.589	34.570	34.552	34.533	34.514	34.495	34.477	34.458	34.439	34.421	34.402	15
85	34.402	34.384	34.365	34.346	34.328	34.309	34.291	34.272	34.254	34.236	34.217	14
86	34.217	34.199	34.180	34.162	34.144	34.125	34.107	34.089	34.071	34.052	34.034	13
87	34.034	34.016	33.998	33.980	33.961	33.943	33.925	33.907	33.889	33.871	33.853	12
88	33.853	33.835	33.817	33.799	33.781	33.763	33.745	33.727	33.709	33.692	33.674	11
89	33.674	33.656	33.638	33.620	33.603	33.585	33.567	33.549	33.532	33.514	33.496	**10**
90	33.496	33.479	33.461	33.444	33.426	33.408	33.391	33.373	33.356	33.338	33.321	09
91	33.321	33.303	33.286	33.269	33.251	33.234	33.216	33.199	33.182	33.165	33.147	08
92	33.147	33.130	33.113	33.095	33.078	33.061	33.044	33.027	33.010	32.992	32.975	07
93	32.975	32.958	32.941	32.924	32.907	32.890	32.873	32.856	32.839	32.822	32.805	06
94	32.805	32.788	32.771	32.755	32.738	32.721	32.704	32.687	32.670	32.654	32.637	05
95	32.637	32.620	32.603	32.587	32.570	32.553	32.537	32.520	32.504	32.487	32.470	04
96	32.470	32.454	32.437	32.421	32.404	32.388	32.371	32.355	32.338	32.322	32.305	03
97	32.305	32.289	32.273	32.256	32.240	32.224	32.207	32.191	32.175	32.158	32.142	02
98	32.142	32.126	32.110	32.093	32.077	32.061	32.045	32.029	32.013	31.997	31.981	01
99	31.981	31.964	31.948	31.932	31.916	31.900	31.884	31.868	31.852	31.836	31.821	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	15	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	
1	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	1
2	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	2
3	4.5	4.8	5.1	5.4	5.7	6.0	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7	3
4	6.0	6.4	6.8	7.2	7.6	8.0	8.4	8.8	9.2	9.6	10.0	10.4	10.8	11.2	11.6	4
5	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	5
6	9.0	9.6	10.2	10.8	11.4	12.0	12.6	13.2	13.8	14.4	15.0	15.6	16.2	16.8	17.4	6
7	10.5	11.2	11.9	12.6	13.3	14.0	14.7	15.4	16.1	16.8	17.5	18.2	18.9	19.6	20.3	7
8	12.0	12.8	13.6	14.4	15.2	16.0	16.8	17.6	18.4	19.2	20.0	20.8	21.6	22.4	23.2	8
9	13.5	14.4	15.3	16.2	17.1	18.0	18.9	19.8	20.7	21.6	22.5	23.4	24.3	25.2	26.1	9

tang 98^g

cosec 2^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	31. 8362	8203	8044	7886	7727	7569	7410	7252	7094	6937	6779	99
01	6779	6621	6464	6307	6150	5993	5836	5680	5523	5367	5211	98
02	5211	5055	4900	4744	4588	4433	4278	4123	3968	3813	3659	97
03	3659	3505	3350	3196	3042	2889	2735	2581	2428	2275	2122	96
04	2122	1969	1816	1664	1511	1359	1207	1055	0903	0751	0600	95
05	31. 0600	0449	0297	0146	*9995	*9844	*9694	*9543	*9393	*9243	*9093	94
06	30. 9093	8943	8793	8643	8494	8345	8195	8046	7897	7749	7600	93
07	7600	7452	7303	7155	7007	6859	6711	6564	6416	6269	6122	92
08	6122	5975	5828	5681	5534	5388	5241	5095	4949	4803	4657	91
09	4657	4512	4366	4221	4076	3931	3786	3641	3496	3352	3207	**90**
10	30. 3207	3063	2919	2775	2631	2487	2344	2200	2057	1914	1771	89
11	1771	1628	1485	1342	1200	1058	0915	0773	0631	0490	0348	88
12	30. 0348	0206	0065	*9924	*9782	*9641	*9501	*9360	*9219	*9079	*8938	87
13	29. 8938	8798	8658	8518	8378	8238	8099	7959	7820	7681	7542	86
14	7542	7403	7264	7126	6987	6849	6710	6572	6434	6296	6159	85
15	29. 6159	6021	5883	5746	5609	5472	5335	5198	5061	4924	4788	84
16	4788	4652	4515	4379	4243	4107	3972	3836	3701	3565	3430	83
17	3430	3295	3160	3025	2890	2756	2621	2487	2353	2218	2084	82
18	2084	1951	1817	1683	1550	1416	1283	1150	1017	0884	0751	81
19	29. 0751	0619	0486	0354	0221	0089	*9957	*9825	*9693	*9562	*9430	**80**
20	28. 9430	9299	9167	9036	8905	8774	8643	8513	8382	8251	8121	79
21	8121	7991	7861	7731	7601	7471	7341	7212	7082	6953	6824	78
22	6824	6695	6566	6437	6308	6180	6051	5923	5794	5666	5538	77
23	5538	5410	5282	5155	5027	4900	4772	4645	4518	4391	4264	76
24	4264	4137	4010	3884	3757	3631	3505	3379	3253	3127	3001	75
25	28. 3001	2875	2750	2624	2499	2374	2249	2124	1999	1874	1749	74
26	1749	1625	1500	1376	1252	1128	1004	0880	0756	0632	0509	73
27	28. 0509	0385	0262	0139	0015	*9892	*9770	*9647	*9524	*9401	*9279	72
28	27. 9279	9157	9034	8912	8790	8668	8546	8424	8303	8181	8060	71
29	8060	7939	7817	7696	7575	7454	7334	7213	7092	6972	6851	**70**
30	27. 6851	6731	6611	6491	6371	6251	6131	6012	5892	5773	5653	69
31	5653	5534	5415	5296	5177	5058	4940	4821	4703	4584	4466	68
32	4466	4348	4230	4112	3994	3876	3758	3641	3523	3406	3288	67
33	3288	3171	3054	2937	2820	2703	2587	2470	2354	2237	2121	66
34	2121	2005	1889	1773	1657	1541	1425	1310	1194	1079	0964	65
35	27. 0964	0848	0733	0618	0503	0389	0274	0159	0045	*9930	*9816	64
36	26. 9816	9702	9588	9474	9360	9246	9132	9018	8905	8791	8678	63
37	8678	8565	8452	8338	8226	8113	8000	7887	7775	7662	7550	62
38	7550	7437	7325	7213	7101	6989	6877	6765	6654	6542	6431	61
39	6431	6319	6208	6097	5986	5875	5764	5653	5542	5432	5321	**60**
40	26. 5321	5211	5100	4990	4880	4770	4660	4550	4440	4330	4221	59
41	4221	4111	4002	3892	3783	3674	3565	3456	3347	3238	3129	58
42	3129	3021	2912	2804	2695	2587	2479	2371	2263	2155	2047	57
43	2047	1939	1832	1724	1617	1509	1402	1295	1188	1081	0974	56
44	26. 0974	0867	0760	0653	0547	0440	0334	0227	0121	0015	*9909	55
45	25. 9909	9803	9697	9591	9486	9380	9274	9169	9063	8958	8853	54
46	8853	8748	8643	8538	8433	8328	8223	8119	8014	7910	7805	53
47	7805	7701	7597	7493	7389	7285	7181	7077	6974	6870	6766	52
48	6766	6663	6560	6456	6353	6250	6147	6044	5941	5838	5736	51
49	5736	5633	5531	5428	5326	5224	5121	5019	4917	4815	4713	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	102	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**	**112**	**113**	**114**	**115**	**117**	**119**	**121**	**123**	
1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.7	11.9	12.1	12.3	1
2	20.4	20.6	20.8	21.0	21.2	21.4	21.6	21.8	22.0	22.2	22.4	22.6	22.8	23.0	23.4	23.8	24.2	24.6	2
3	30.6	30.9	31.2	31.5	31.8	32.1	32.4	32.7	33.0	33.3	33.6	33.9	34.2	34.5	35.1	35.7	36.3	36.9	3
4	40.8	41.2	41.6	42.0	42.4	42.8	43.2	43.6	44.0	44.4	44.8	45.2	45.6	46.0	46.8	47.6	48.4	49.2	4
5	51.0	51.5	52.0	52.5	53.0	53.5	54.0	54.5	55.0	55.5	56.0	56.5	57.0	57.5	58.5	59.5	60.5	61.5	5
6	61.2	61.8	62.4	63.0	63.6	64.2	64.8	65.4	66.0	66.6	67.2	67.8	68.4	69.0	70.2	71.4	72.6	73.8	6
7	71.4	72.1	72.8	73.5	74.2	74.9	75.6	76.3	77.0	77.7	78.4	79.1	79.8	80.5	81.9	83.3	84.7	86.1	7
8	81.6	82.4	83.2	84.0	84.8	85.6	86.4	87.2	88.0	88.8	89.6	90.4	91.2	92.0	93.6	95.2	96.8	98.4	8
9	91.8	92.7	93.6	94.5	95.4	96.3	97.2	98.1	99.0	99.9	100.8	101.7	102.6	103.5	105.3	107.1	108.9	110.7	9

sec 97^g

cotg 2^g

c	00cc	10cc	20cc	30cc	40cc	50cc	60cc	70cc	80cc	90cc	100cc	
00	31. 8205	8046	7887	7728	7570	7411	7253	7095	6937	6779	6621	99
01	6621	6463	6306	6149	5992	5835	5678	5521	5365	5209	5053	98
02	5053	4897	4741	4585	4429	4274	4119	3964	3809	3654	3500	97
03	3500	3345	3191	3037	2883	2729	2575	2421	2268	2115	1962	96
04	1962	1809	1656	1503	1351	1198	1046	0894	0742	0590	0439	95
05	31. 0439	0287	0136	*9985	*9834	*9683	*9532	*9382	*9231	*9081	*8931	94
06	30. 8931	8781	8631	8481	8332	8182	8033	7884	7735	7586	7437	93
07	7437	7289	7140	6992	6844	6696	6548	6401	6253	6106	5958	92
08	5958	5811	5664	5517	5371	5224	5078	4931	4785	4639	4493	91
09	4493	4348	4202	4057	3911	3766	3621	3476	3331	3187	3042	**90**
10	30. 3042	2898	2754	2610	2466	2322	2178	2035	1891	1748	1605	89
11	1605	1462	1319	1177	1034	0892	0749	0607	0465	0323	0181	88
12	30. 0181	0040	*9898	*9757	*9616	*9475	*9334	*9193	*9052	*8911	*8771	87
13	29. 8771	8631	8491	8350	8211	8071	7931	7792	7652	7513	7374	86
14	7374	7235	7096	6957	6819	6680	6542	6404	6265	6127	5990	85
15	29. 5990	5852	5714	5577	5440	5302	5165	5028	4892	4755	4618	84
16	4618	4482	4346	4209	4073	3937	3802	3666	3530	3395	3260	83
17	3260	3124	2989	2854	2720	2585	2450	2316	2182	2047	1913	82
18	1913	1779	1645	1512	1378	1245	1111	0978	0845	0712	0579	81
19	29. 0579	0447	0314	0181	0049	*9917	*9785	*9653	*9521	*9389	*9257	**80**
20	28. 9257	9126	8994	8863	8732	8601	8470	8339	8209	8078	7948	79
21	7948	7817	7687	7557	7427	7297	7167	7038	6908	6779	6649	78
22	6649	6520	6391	6262	6133	6005	5876	5748	5619	5491	5363	77
23	5363	5235	5107	4979	4852	4724	4597	4469	4342	4215	4088	76
24	4088	3961	3834	3708	3581	3455	3328	3202	3076	2950	2824	75
25	28. 2824	2699	2573	2447	2322	2197	2071	1946	1821	1697	1572	74
26	1572	1447	1323	1198	1074	0950	0826	0702	0578	0454	0330	73
27	28. 0330	0207	0083	*9960	*9837	*9714	*9591	*9468	*9345	*9222	*9100	72
28	27. 9100	8977	8855	8733	8611	8489	8367	8245	8123	8001	7880	71
29	7880	7759	7637	7516	7395	7274	7153	7032	6912	6791	6671	**70**
30	27. 6671	6550	6430	6310	6190	6070	5950	5831	5711	5591	5472	69
31	5472	5353	5234	5114	4995	4877	4758	4639	4520	4402	4284	68
32	4284	4165	4047	3929	3811	3693	3575	3458	3340	3223	3105	67
33	3105	2988	2871	2754	2637	2520	2403	2287	2170	2054	1937	66
34	1937	1821	1705	1589	1473	1357	1241	1125	1010	0894	0779	65
35	27. 0779	0664	0549	0433	0318	0204	0089	*9974	*9859	*9745	*9631	64
36	26. 9631	9516	9402	9288	9174	9060	8946	8832	8719	8605	8492	63
37	8492	8378	8265	8152	8039	7926	7813	7700	7588	7475	7363	62
38	7363	7250	7138	7026	6914	6802	6690	6578	6466	6355	6243	61
39	6243	6131	6020	5909	5798	5687	5576	5465	5354	5243	5133	**60**
40	26. 5133	5022	4912	4801	4691	4581	4471	4361	4251	4141	4031	59
41	4031	3922	3812	3703	3593	3484	3375	3266	3157	3048	2939	58
42	2939	2831	2722	2613	2505	2397	2288	2180	2072	1964	1856	57
43	1856	1748	1641	1533	1425	1318	1211	1103	0996	0889	0782	56
44	26. 0782	0675	0568	0461	0355	0248	0142	0035	*9929	*9823	*9717	55
45	25. 9717	9610	9504	9399	9293	9187	9081	8976	8870	8765	8660	54
46	8660	8554	8449	8344	8239	8135	8030	7925	7820	7716	7611	53
47	7611	7507	7403	7299	7195	7091	6987	6883	6779	6675	6572	52
48	6572	6468	6365	6261	6158	6055	5952	5849	5746	5643	5540	51
49	5540	5438	5335	5232	5130	5028	4925	4823	4721	4619	4517	**50**
	100cc	90cc	80cc	70cc	60cc	50cc	40cc	30cc	20cc	10cc	00cc	c

	125	**127**	**129**	**131**	**133**	**135**	**137**	**139**	**141**	**143**	**145**	**147**	**149**	**151**	**153**	**155**	**157**	**159**	
1	12.5	12.7	12.9	13.1	13.3	13.5	13.7	13.9	14.1	14.3	14.5	14.7	14.9	15.1	15.3	15.5	15.7	15.9	1
2	25.0	25.4	25.8	26.2	26.6	27.0	27.4	27.8	28.2	28.6	29.0	29.4	29.8	30.2	30.6	31.0	31.4	31.8	2
3	37.5	38.1	38.7	39.3	39.9	40.5	41.1	41.7	42.3	42.9	43.5	44.1	44.7	45.3	45.9	46.5	47.1	47.7	3
4	50.0	50.8	51.6	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	4
5	62.5	63.5	64.5	65.5	66.5	67.5	68.5	69.5	70.5	71.5	72.5	73.5	74.5	75.5	76.5	77.5	78.5	79.5	5
6	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0	88.2	89.4	90.6	91.8	93.0	94.2	95.4	6
7	87.5	88.9	90.3	91.7	93.1	94.5	95.9	97.3	98.7	100.1	101.5	102.9	104.3	105.7	107.1	108.5	109.9	111.3	7
8	100.0	101.6	103.2	104.8	106.4	108.0	109.6	111.2	112.8	114.4	116.0	117.6	119.2	120.8	122.4	124.0	125.6	127.2	8
9	112.5	114.3	116.1	117.9	119.7	121.5	123.3	125.1	126.9	128.7	130.5	132.3	134.1	135.9	137.7	139.5	141.3	143.1	9

tang 97^g

cosec 2^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	25. 4713	4612	4510	4408	4307	4205	4104	4003	3901	3800	3699	49
51	3699	3598	3497	3396	3296	3195	3094	2994	2893	2793	2693	48
52	2693	2593	2493	2393	2293	2193	2093	1993	1894	1794	1695	47
53	1695	1595	1496	1397	1298	1198	1099	1001	0902	0803	0704	46
54	25. 0704	0606	0507	0409	0310	0212	0114	0016	*9917	*9820	*9722	45
55	24. 9722	9624	9526	9428	9331	9233	9136	9038	8941	8844	8747	44
56	8747	8650	8553	8456	8359	8262	8165	8069	7972	7876	7779	43
57	7779	7683	7587	7491	7394	7298	7202	7107	7011	6915	6819	42
58	6819	6724	6628	6533	6438	6342	6247	6152	6057	5962	5867	41
59	5867	5772	5677	5583	5488	5393	5299	5205	5110	5016	4922	**40**
60	24. 4922	4828	4734	4640	4546	4452	4358	4265	4171	4077	3984	39
61	3984	3891	3797	3704	3611	3518	3425	3332	3239	3146	3053	38
62	3053	2961	2868	2775	2683	2591	2498	2406	2314	2222	2130	37
63	2130	2038	1946	1854	1762	1670	1579	1487	1396	1304	1213	36
64	1213	1122	1030	0939	0848	0757	0666	0575	0485	0394	0303	35
65	24. 0303	0213	0122	0032	*9941	*9851	*9761	*9671	*9580	*9490	*9400	34
66	23. 9400	9310	9221	9131	9041	8951	8862	8772	8683	8594	8504	33
67	8504	8415	8326	8237	8148	8059	7970	7881	7792	7704	7615	32
68	7615	7526	7438	7349	7261	7173	7084	6996	6908	6820	6732	31
69	6732	6644	6556	6469	6381	6293	6206	6118	6031	5943	5856	**30**
70	23. 5856	5769	5681	5594	5507	5420	5333	5246	5159	5073	4986	29
71	4986	4899	4813	4726	4640	4554	4467	4381	4295	4209	4123	28
72	4123	4037	3951	3865	3779	3693	3608	3522	3436	3351	3266	27
73	3266	3180	3095	3010	2924	2839	2754	2669	2584	2500	2415	26
74	2415	2330	2245	2161	2076	1992	1907	1823	1739	1654	1570	25
75	23. 1570	1486	1402	1318	1234	1150	1066	0983	0899	0815	0732	24
76	23. 0732	0648	0565	0481	0398	0315	0231	0148	0065	*9982	*9899	23
77	22. 9899	9816	9733	9651	9568	9485	9403	9320	9238	9155	9073	22
78	9073	8990	8908	8826	8744	8662	8580	8498	8416	8334	8252	21
79	8252	8170	8089	8007	7926	7844	7763	7681	7600	7519	7438	**20**
80	22. 7438	7356	7275	7194	7113	7032	6952	6871	6790	6709	6629	19
81	6629	6548	6468	6387	6307	6226	6146	6066	5986	5906	5826	18
82	5826	5746	5666	5586	5506	5426	5346	5267	5187	5108	5028	17
83	5028	4949	4869	4790	4711	4631	4552	4473	4394	4315	4236	16
84	4236	4157	4079	4000	3921	3842	3764	3685	3607	3528	3450	15
85	22. 3450	3372	3293	3215	3137	3059	2981	2903	2825	2747	2669	14
86	2669	2591	2514	2436	2358	2281	2203	2126	2049	1971	1894	13
87	1894	1817	1739	1662	1585	1508	1431	1354	1278	1201	1124	12
88	1124	1047	0971	0894	0817	0741	0665	0588	0512	0436	0359	11
89	22. 0359	0283	0207	0131	0055	*9979	*9903	*9827	*9751	*9676	*9600	**10**
90	21. 9600	9524	9449	9373	9298	9222	9147	9072	8996	8921	8846	09
91	8846	8771	8696	8621	8546	8471	8396	8321	8246	8172	8097	08
92	8097	8022	7948	7873	7799	7724	7650	7576	7501	7427	7353	07
93	7353	7279	7205	7131	7057	6983	6909	6835	6762	6688	6614	06
94	6614	6541	6467	6394	6320	6247	6173	6100	6027	5954	5881	05
95	21. 5881	5807	5734	5661	5588	5516	5443	5370	5297	5224	5152	04
96	5152	5079	5007	4934	4862	4789	4717	4645	4572	4500	4428	03
97	4428	4356	4284	4212	4140	4068	3996	3924	3852	3781	3709	02
98	3709	3637	3566	3494	3423	3351	3280	3208	3137	3066	2995	01
99	2995	2923	2852	2781	2710	2639	2568	2497	2427	2356	2285	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	70	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	
1	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	1
2	14.0	14.2	14.4	14.6	14.8	15.0	15.2	15.4	15.6	15.8	16.0	16.2	16.4	16.6	16.8	17.0	17.2	2
3	21.0	21.3	21.6	21.9	22.2	22.5	22.8	23.1	23.4	23.7	24.0	24.3	24.6	24.9	25.2	25.5	25.8	3
4	28.0	28.4	28.8	29.2	29.6	30.0	30.4	30.8	31.2	31.6	32.0	32.4	32.8	33.2	33.6	34.0	34.4	4
5	35.0	35.5	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	5
6	42.0	42.6	43.2	43.8	44.4	45.0	45.6	46.2	46.8	47.4	48.0	48.6	49.2	49.8	50.4	51.0	51.6	6
7	49.0	49.7	50.4	51.1	51.8	52.5	53.2	53.9	54.6	55.3	56.0	56.7	57.4	58.1	58.8	59.5	60.2	7
8	56.0	56.8	57.6	58.4	59.2	60.0	60.8	61.6	62.4	63.2	64.0	64.8	65.6	66.4	67.2	68.0	68.8	8
9	63.0	63.9	64.8	65.7	66.6	67.5	68.4	69.3	70.2	71.1	72.0	72.9	73.8	74.7	75.6	76.5	77.4	9

sec 97^g

cotg 2^g

c	00cc	10cc	20cc	30cc	40cc	50cc	60cc	70cc	80cc	90cc	100cc	
50	25. 4517	4415	4313	4212	4110	4008	3907	3806	3704	3603	3502	49
51	3502	3401	3300	3199	3098	2997	2897	2796	2696	2595	2495	48
52	2495	2395	2294	2194	2094	1994	1895	1795	1695	1595	1496	47
53	1496	1396	1297	1198	1098	0999	0900	0801	0702	0603	0505	46
54	25. 0505	0406	0307	0209	0110	0012	*9914	*9815	*9717	*9619	*9521	45
55	24. 9521	9423	9326	9228	9130	9032	8935	8837	8740	8643	8546	44
56	8546	8448	8351	8254	8157	8061	7964	7867	7770	7674	7577	43
57	7577	7481	7385	7288	7192	7096	7000	6904	6808	6712	6617	42
58	6617	6521	6426	6330	6235	6139	6044	5949	5854	5759	5664	41
59	5664	5569	5474	5379	5284	5190	5095	5001	4906	4812	4718	**40**
60	24. 4718	4623	4529	4435	4341	4247	4154	4060	3966	3872	3779	39
61	3779	3685	3592	3499	3405	3312	3219	3126	3033	2940	2847	38
62	2847	2755	2662	2569	2477	2384	2292	2200	2107	2015	1923	37
63	1923	1831	1739	1647	1555	1463	1372	1280	1189	1097	1006	36
64	1006	0914	0823	0732	0641	0549	0458	0368	0277	0186	0095	35
65	24. 0095	0004	*9914	*9823	*9733	*9642	*9552	*9462	*9372	*9282	*9191	34
66	23. 9191	9101	9012	8922	8832	8742	8653	8563	8473	8384	8295	33
67	8295	8205	8116	8027	7938	7849	7760	7671	7582	7493	7404	32
68	7404	7316	7227	7139	7050	6962	6873	6785	6697	6609	6521	31
69	6521	6433	6345	6257	6169	6081	5994	5906	5819	5731	5644	**30**
70	23. 5644	5556	5469	5382	5295	5208	5121	5034	4947	4860	4773	29
71	4773	4686	4600	4513	4427	4340	4254	4168	4081	3995	3909	28
72	3909	3823	3737	3651	3565	3479	3393	3308	3222	3137	3051	27
73	3051	2966	2880	2795	2710	2625	2539	2454	2369	2284	2199	26
74	2199	2115	2030	1945	1861	1776	1692	1607	1523	1438	1354	25
75	23. 1354	1270	1186	1102	1018	0934	0850	0766	0682	0598	0515	24
76	23. 0515	0431	0348	0264	0181	0097	0014	*9931	*9848	*9765	*9682	23
77	22. 9682	9599	9516	9433	9350	9267	9185	9102	9019	8937	8854	22
78	8854	8772	8690	8607	8525	8443	8361	8279	8197	8115	8033	21
79	8033	7951	7869	7788	7706	7625	7543	7462	7380	7299	7218	**20**
80	22. 7218	7136	7055	6974	6893	6812	6731	6650	6569	6489	6408	19
81	6408	6327	6247	6166	6086	6005	5925	5845	5764	5684	5604	18
82	5604	5524	5444	5364	5284	5204	5124	5045	4965	4885	4806	17
83	4806	4726	4647	4567	4488	4409	4330	4250	4171	4092	4013	16
84	4013	3934	3855	3776	3698	3619	3540	3462	3383	3305	3226	15
85	22. 3226	3148	3069	2991	2913	2835	2757	2678	2600	2522	2445	14
86	2445	2367	2289	2211	2133	2056	1978	1901	1823	1746	1668	13
87	1668	1591	1514	1437	1360	1282	1205	1128	1051	0975	0898	12
88	0898	0821	0744	0668	0591	0514	0438	0361	0285	0209	0132	11
89	22. 0132	0056	*9980	*9904	*9828	*9752	*9676	*9600	*9524	*9448	*9372	**10**
90	21. 9372	9296	9221	9145	9070	8994	8919	8843	8768	8693	8617	09
91	8617	8542	8467	8392	8317	8242	8167	8092	8017	7942	7868	08
92	7868	7793	7718	7644	7569	7495	7420	7346	7271	7197	7123	07
93	7123	7049	6975	6901	6827	6753	6679	6605	6531	6457	6383	06
94	6383	6310	6236	6162	6089	6015	5942	5869	5795	5722	5649	05
95	21. 5649	5576	5503	5429	5356	5283	5210	5138	5065	4992	4919	04
96	4919	4847	4774	4701	4629	4556	4484	4411	4339	4267	4195	03
97	4195	4122	4050	3978	3906	3834	3762	3690	3618	3547	3475	02
98	3475	3403	3331	3260	3188	3117	3045	2974	2902	2831	2760	01
99	2760	2688	2617	2546	2475	2404	2333	2262	2191	2120	2049	**00**
	100cc	90cc	80cc	70cc	60cc	50cc	40cc	30cc	20cc	10cc	00cc	c

	87	**88**	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**	**101**	**102**	
1	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1	10.2	1
2	17.4	17.6	17.8	18.0	18.2	18.4	18.6	18.8	19.0	19.2	19.4	19.6	19.8	20.0	20.2	20.4	2
3	26.1	26.4	26.7	27.0	27.3	27.6	27.9	28.2	28.5	28.8	29.1	29.4	29.7	30.0	30.3	30.6	3
4	34.8	35.2	35.6	36.0	36.4	36.8	37.2	37.6	38.0	38.4	38.8	39.2	39.6	40.0	40.4	40.8	4
5	43.5	44.0	44.5	45.0	45.5	46.0	46.5	47.0	47.5	48.0	48.5	49.0	49.5	50.0	50.5	51.0	5
6	52.2	52.8	53.4	54.0	54.6	55.2	55.8	56.4	57.0	57.6	58.2	58.8	59.4	60.0	60.6	61.2	6
7	60.9	61.6	62.3	63.0	63.7	64.4	65.1	65.8	66.5	67.2	67.9	68.6	69.3	70.0	70.7	71.4	7
8	69.6	70.4	71.2	72.0	72.8	73.6	74.4	75.2	76.0	76.8	77.6	78.4	79.2	80.0	80.8	81.6	8
9	78.3	79.2	80.1	81.0	81.9	82.8	83.7	84.6	85.5	86.4	87.3	88.2	89.1	90.0	90.9	91.8	9

tang 97^g

cosec 3^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	21. 2285	2214	2144	2073	2003	1932	1862	1791	1721	1651	1580	99
01	1580	1510	1440	1370	1300	1230	1160	1090	1020	0950	0880	98
02	0880	0811	0741	0671	0602	0532	0463	0393	0324	0254	0185	97
03	21. 0185	0116	0046	*9977	*9908	*9839	*9770	*9701	*9632	*9563	*9494	96
04	20. 9494	9425	9356	9288	9219	9150	9082	9013	8945	8876	8808	95
05	20. 8808	8739	8671	8603	8534	8466	8398	8330	8262	8194	8126	94
06	8126	8058	7990	7922	7854	7787	7719	7651	7584	7516	7448	93
07	7448	7381	7313	7246	7179	7111	7044	6977	6910	6842	6775	92
08	6775	6708	6641	6574	6507	6441	6374	6307	6240	6173	6107	91
09	6107	6040	5974	5907	5840	5774	5708	5641	5575	5509	5442	**90**
10	20. 5442	5376	5310	5244	5178	5112	5046	4980	4914	4848	4782	89
11	4782	4717	4651	4585	4519	4454	4388	4323	4257	4192	4127	88
12	4127	4061	3996	3931	3865	3800	3735	3670	3605	3540	3475	87
13	3475	3410	3345	3280	3215	3151	3086	3021	2957	2892	2827	86
14	2827	2763	2698	2634	2570	2505	2441	2377	2312	2248	2184	85
15	20. 2184	2120	2056	1992	1928	1864	1800	1736	1672	1608	1545	84
16	1545	1481	1417	1354	1290	1227	1163	1100	1036	0973	0909	83
17	0909	0846	0783	0720	0656	0593	0530	0467	0404	0341	0278	82
18	20. 0278	0215	0152	0090	0027	*9964	*9901	*9839	*9776	*9713	*9651	81
19	19. 9651	9588	9526	9463	9401	9339	9276	9214	9152	9090	9027	**80**
20	19. 9027	8965	8903	8841	8779	8717	8655	8593	8532	8470	8408	79
21	8408	8346	8285	8223	8161	8100	8038	7977	7915	7854	7792	78
22	7792	7731	7670	7608	7547	7486	7425	7364	7303	7242	7180	77
23	7180	7120	7059	6998	6937	6876	6815	6754	6694	6633	6572	76
24	6572	6512	6451	6391	6330	6270	6209	6149	6089	6028	5968	75
25	19. 5968	5908	5848	5788	5727	5667	5607	5547	5487	5427	5368	74
26	5368	5308	5248	5188	5128	5069	5009	4949	4890	4830	4771	73
27	4771	4711	4652	4592	4533	4473	4414	4355	4296	4236	4177	72
28	4177	4118	4059	4000	3941	3882	3823	3764	3705	3646	3588	71
29	3588	3529	3470	3411	3353	3294	3236	3177	3118	3060	3002	**70**
30	19. 3002	2943	2885	2826	2768	2710	2652	2593	2535	2477	2419	69
31	2419	2361	2303	2245	2187	2129	2071	2013	1955	1898	1840	68
32	1840	1782	1724	1667	1609	1552	1494	1437	1379	1322	1264	67
33	1264	1207	1150	1092	1035	0978	0921	0863	0806	0749	0692	66
34	0692	0635	0578	0521	0464	0407	0351	0294	0237	0180	0123	65
35	19. 0123	0067	0010	*9954	*9897	*9840	*9784	*9727	*9671	*9615	*9558	64
36	18. 9558	9502	9446	9389	9333	9277	9221	9164	9108	9052	8996	63
37	8996	8940	8884	8828	8772	8716	8661	8605	8549	8493	8438	62
38	8438	8382	8326	8271	8215	8159	8104	8048	7993	7938	7882	61
39	7882	7827	7772	7716	7661	7606	7551	7495	7440	7385	7330	**60**
40	18. 7330	7275	7220	7165	7110	7055	7000	6946	6891	6836	6781	59
41	6781	6727	6672	6617	6563	6508	6454	6399	6345	6290	6236	58
42	6236	6181	6127	6073	6018	5964	5910	5856	5801	5747	5693	57
43	5693	5639	5585	5531	5477	5423	5369	5315	5262	5208	5154	56
44	5154	5100	5046	4993	4939	4886	4832	4778	4725	4671	4618	55
45	18. 4618	4564	4511	4458	4404	4351	4298	4244	4191	4138	4085	54
46	4085	4032	3979	3925	3872	3819	3766	3713	3661	3608	3555	53
47	3555	3502	3449	3396	3344	3291	3238	3186	3133	3080	3028	52
48	3028	2975	2923	2870	2818	2766	2713	2661	2608	2556	2504	51
49	2504	2452	2400	2347	2295	2243	2191	2139	2087	2035	1983	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	52	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	
1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	1
2	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.2	2
3	15.6	15.9	16.2	16.5	16.8	17.1	17.4	17.7	18.0	18.3	3
4	20.8	21.2	21.6	22.0	22.4	22.8	23.2	23.6	24.0	24.4	4
5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	5
6	31.2	31.8	32.4	33.0	33.6	34.2	34.8	35.4	36.0	36.6	6
7	36.4	37.1	37.8	38.5	39.2	39.9	40.6	41.3	42.0	42.7	7
8	41.6	42.4	43.2	44.0	44.8	45.6	46.4	47.2	48.0	48.8	8
9	46.8	47.7	48.6	49.5	50.4	51.3	52.2	53.1	54.0	54.9	9

sec 96^g

cotg 3^{g}

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	21. 2049	1979	1908	1837	1767	1696	1626	1555	1485	1414	1344	99
01	1344	1274	1203	1133	1063	0993	0923	0853	0783	0713	0643	98
02	21. 0643	0573	0503	0434	0364	0294	0225	0155	0086	0016	*9947	97
03	20. 9947	9877	9808	9739	9670	9600	9531	9462	9393	9324	9255	96
04	9255	9186	9117	9049	8980	8911	8842	8774	8705	8637	8568	95
05	20. 8568	8500	8431	8363	8294	8226	8158	8090	8022	7953	7885	94
06	7885	7817	7749	7682	7614	7546	7478	7410	7343	7275	7207	93
07	7207	7140	7072	7005	6937	6870	6802	6735	6668	6601	6533	92
08	6533	6466	6399	6332	6265	6198	6131	6064	5998	5931	5864	91
09	5864	5797	5731	5664	5597	5531	5464	5398	5332	5265	5199	**90**
10	20. 5199	5133	5066	5000	4934	4868	4802	4736	4670	4604	4538	89
11	4538	4472	4406	4341	4275	4209	4144	4078	4012	3947	3881	88
12	3881	3816	3751	3685	3620	3555	3489	3424	3359	3294	3229	87
13	3229	3164	3099	3034	2969	2904	2840	2775	2710	2645	2581	86
14	2581	2516	2452	2387	2323	2258	2194	2129	2065	2001	1937	85
15	20. 1937	1872	1808	1744	1680	1616	1552	1488	1424	1360	1296	84
16	1296	1233	1169	1105	1042	0978	0914	0851	0787	0724	0660	83
17	0660	0597	0534	0470	0407	0344	0281	0218	0154	0091	0028	82
18	20. 0028	*9965	*9902	*9840	*9777	*9714	*9651	*9588	*9526	*9463	*9400	81
19	19. 9400	9338	9275	9213	9150	9088	9025	8963	8901	8838	8776	**80**
20	19. 8776	8714	8652	8590	8528	8465	8403	8341	8280	8218	8156	79
21	8156	8094	8032	7970	7909	7847	7785	7724	7662	7601	7539	78
22	7539	7478	7417	7355	7294	7233	7171	7110	7049	6988	6927	77
23	6927	6866	6805	6744	6683	6622	6561	6500	6439	6379	6318	76
24	6318	6257	6197	6136	6075	6015	5954	5894	5834	5773	5713	75
25	19. 5713	5653	5592	5532	5472	5412	5352	5291	5231	5171	5111	74
26	5111	5051	4992	4932	4872	4812	4752	4693	4633	4573	4514	73
27	4514	4454	4395	4335	4276	4216	4157	4097	4038	3979	3920	72
28	3920	3860	3801	3742	3683	3624	3565	3506	3447	3388	3329	71
29	3329	3270	3211	3153	3094	3035	2977	2918	2859	2801	2742	**70**
30	19. 2742	2684	2625	2567	2509	2450	2392	2334	2275	2217	2159	69
31	2159	2101	2043	1985	1927	1869	1811	1753	1695	1637	1579	68
32	1579	1521	1464	1406	1348	1290	1233	1175	1118	1060	1003	67
33	1003	0945	0888	0830	0773	0716	0659	0601	0544	0487	0430	66
34	19. 0430	0373	0316	0259	0202	0145	0088	0031	*9974	*9917	*9860	65
35	18. 9860	9804	9747	9690	9633	9577	9520	9464	9407	9351	9294	64
36	9294	9238	9181	9125	9069	9012	8956	8900	8844	8788	8731	63
37	8731	8675	8619	8563	8507	8451	8395	8340	8284	8228	8172	62
38	8172	8116	8061	8005	7949	7894	7838	7782	7727	7671	7616	61
39	7616	7560	7505	7450	7394	7339	7284	7229	7173	7118	7063	**60**
40	18. 7063	7008	6953	6898	6843	6788	6733	6678	6623	6568	6513	59
41	6513	6459	6404	6349	6294	6240	6185	6131	6076	6022	5967	58
42	5967	5913	5858	5804	5749	5695	5641	5586	5532	5478	5424	57
43	5424	5370	5316	5261	5207	5153	5099	5045	4991	4938	4884	56
44	4884	4830	4776	4722	4669	4615	4561	4508	4454	4400	4347	55
45	18. 4347	4293	4240	4186	4133	4079	4026	3973	3919	3866	3813	54
46	3813	3760	3707	3653	3600	3547	3494	3441	3388	3335	3282	53
47	3282	3229	3176	3124	3071	3018	2965	2912	2860	2807	2754	52
48	2754	2702	2649	2597	2544	2492	2439	2387	2334	2282	2230	51
49	2230	2177	2125	2073	2021	1969	1916	1864	1812	1760	1708	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	62	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**71**	
1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	1
2	12.4	12.6	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.2	2
3	18.6	18.9	19.2	19.5	19.8	20.1	20.4	20.7	21.0	21.3	3
4	24.8	25.2	25.6	26.0	26.4	26.8	27.2	27.6	28.0	28.4	4
5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	5
6	37.2	37.8	38.4	39.0	39.6	40.2	40.8	41.4	42.0	42.6	6
7	43.4	44.1	44.8	45.5	46.2	46.9	47.6	48.3	49.0	49.7	7
8	49.6	50.4	51.2	52.0	52.8	53.6	54.4	55.2	56.0	56.8	8
9	55.8	56.7	57.6	58.5	59.4	60.3	61.2	62.1	63.0	63.9	9

tang 96^{g}

cosec 3^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	18. 1983	1931	1879	1827	1775	1724	1672	1620	1568	1517	1465	49
51	1465	1413	1362	1310	1259	1207	1156	1104	1053	1001	0950	48
52	0950	0899	0847	0796	0745	0694	0642	0591	0540	0489	0438	47
53	18. 0438	0387	0336	0285	0234	0183	0132	0081	0030	*9980	*9929	46
54	17. 9929	9878	9827	9777	9726	9675	9625	9574	9524	9473	9422	45
55	17. 9422	9372	9322	9271	9221	9170	9120	9070	9019	8969	8919	44
56	8919	8869	8819	8769	8718	8668	8618	8568	8518	8468	8418	43
57	8418	8368	8319	8269	8219	8169	8119	8070	8020	7970	7921	42
58	7921	7871	7821	7772	7722	7673	7623	7574	7524	7475	7425	41
59	7425	7376	7327	7277	7228	7179	7130	7081	7031	6982	6933	**40**
60	17. 6933	6884	6835	6786	6737	6688	6639	6590	6541	6492	6444	39
61	6444	6395	6346	6297	6248	6200	6151	6102	6054	6005	5957	38
62	5957	5908	5860	5811	5763	5714	5666	5617	5569	5521	5472	37
63	5472	5424	5376	5328	5279	5231	5183	5135	5087	5039	4991	36
64	4991	4943	4895	4847	4799	4751	4703	4655	4608	4560	4512	35
65	17. 4512	4464	4417	4369	4321	4274	4226	4178	4131	4083	4036	34
66	4036	3988	3941	3893	3846	3799	3751	3704	3657	3609	3562	33
67	3562	3515	3468	3420	3373	3326	3279	3232	3185	3138	3091	32
68	3091	3044	2997	2950	2903	2856	2809	2763	2716	2669	2622	31
69	2622	2576	2529	2482	2436	2389	2342	2296	2249	2203	2156	**30**
70	17. 2156	2110	2063	2017	1971	1924	1878	1832	1785	1739	1693	29
71	1693	1647	1600	1554	1508	1462	1416	1370	1324	1278	1232	28
72	1232	1186	1140	1094	1048	1002	0956	0911	0865	0819	0773	27
73	0773	0728	0682	0636	0591	0545	0499	0454	0408	0363	0317	26
74	17. 0317	0272	0226	0181	0135	0090	0045	*9999	*9954	*9909	*9863	25
75	16. 9863	9818	9773	9728	9683	9638	9592	9547	9502	9457	9412	24
76	9412	9367	9322	9277	9232	9188	9143	9098	9053	9008	8963	23
77	8963	8919	8874	8829	8785	8740	8695	8651	8606	8561	8517	22
78	8517	8472	8428	8383	8339	8295	8250	8206	8161	8117	8073	21
79	8073	8029	7984	7940	7896	7852	7807	7763	7719	7675	7631	**20**
80	16. 7631	7587	7543	7499	7455	7411	7367	7323	7279	7235	7192	19
81	7192	7148	7104	7060	7016	6973	6929	6885	6842	6798	6754	18
82	6754	6711	6667	6624	6580	6537	6493	6450	6406	6363	6320	17
83	6320	6276	6233	6190	6146	6103	6060	6017	5973	5930	5887	16
84	5887	5844	5801	5758	5715	5672	5628	5585	5543	5500	5457	15
85	16. 5457	5414	5371	5328	5285	5242	5199	5157	5114	5071	5029	14
86	5029	4986	4943	4900	4858	4815	4773	4730	4688	4645	4603	13
87	4603	4560	4518	4475	4433	4390	4348	4306	4263	4221	4179	12
88	4179	4137	4094	4052	4010	3968	3926	3884	3841	3799	3757	11
89	3757	3715	3673	3631	3589	3547	3505	3464	3422	3380	3338	**10**
90	16. 3338	3296	3254	3213	3171	3129	3087	3046	3004	2962	2921	09
91	2921	2879	2838	2796	2754	2713	2671	2630	2589	2547	2506	08
92	2506	2464	2423	2382	2340	2299	2258	2216	2175	2134	2093	07
93	2093	2052	2010	1969	1928	1887	1846	1805	1764	1723	1682	06
94	1682	1641	1600	1559	1518	1477	1436	1395	1355	1314	1273	05
95	16. 1273	1232	1192	1151	1110	1069	1029	0988	0947	0907	0866	04
96	0866	0826	0785	0745	0704	0664	0623	0583	0542	0502	0462	03
97	0462	0421	0381	0341	0300	0260	0220	0180	0139	0099	0059	02
98	16. 0059	0019	*9979	*9939	*9898	*9858	*9818	*9778	*9738	*9698	*9658	01
99	15. 9658	9618	9578	9539	9499	9459	9419	9379	9339	9299	9260	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	39	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	
1	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	1
2	7.8	8.0	8.2	8.4	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.2	10.4	2
3	11.7	12.0	12.3	12.6	12.9	13.2	13.5	13.8	14.1	14.4	14.7	15.0	15.3	15.6	3
4	15.6	16.0	16.4	16.8	17.2	17.6	18.0	18.4	18.8	19.2	19.6	20.0	20.4	20.8	4
5	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	5
6	23.4	24.0	24.6	25.2	25.8	26.4	27.0	27.6	28.2	28.8	29.4	30.0	30.6	31.2	6
7	27.3	28.0	28.7	29.4	30.1	30.8	31.5	32.2	32.9	33.6	34.3	35.0	35.7	36.4	7
8	31.2	32.0	32.8	33.6	34.4	35.2	36.0	36.8	37.6	38.4	39.2	40.0	40.8	41.6	8
9	35.1	36.0	36.9	37.8	38.7	39.6	40.5	41.4	42.3	43.2	44.1	45.0	45.9	46.8	9

sec 96^g

cotg 3^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	18. 1708	1656	1604	1552	1500	1448	1396	1345	1293	1241	1189	49
51	1189	1138	1086	1034	0983	0931	0880	0828	0776	0725	0674	48
52	0674	0622	0571	0519	0468	0417	0365	0314	0263	0212	0161	47
53	18. 0161	0110	0058	0007	*9956	*9905	*9854	*9803	*9752	*9702	*9651	46
54	17. 9651	9600	9549	9498	9448	9397	9346	9295	9245	9194	9144	45
55	17. 9144	9093	9043	8992	8942	8891	8841	8790	8740	8690	8639	44
56	8639	8589	8539	8489	8438	8388	8338	8288	8238	8188	8138	43
57	8138	8088	8038	7988	7938	7888	7838	7789	7739	7689	7639	42
58	7639	7590	7540	7490	7441	7391	7341	7292	7242	7193	7143	41
59	7143	7094	7045	6995	6946	6897	6847	6798	6749	6699	6650	**40**
60	17. 6650	6601	6552	6503	6454	6405	6356	6307	6258	6209	6160	39
61	6160	6111	6062	6013	5965	5916	5867	5818	5770	5721	5672	38
62	5672	5624	5575	5526	5478	5429	5381	5332	5284	5236	5187	37
63	5187	5139	5091	5042	4994	4946	4898	4849	4801	4753	4705	36
64	4705	4657	4609	4561	4513	4465	4417	4369	4321	4273	4225	35
65	17. 4225	4177	4130	4082	4034	3986	3939	3891	3843	3796	3748	34
66	3748	3701	3653	3606	3558	3511	3463	3416	3368	3321	3274	33
67	3274	3226	3179	3132	3085	3037	2990	2943	2896	2849	2802	32
68	2802	2755	2708	2661	2614	2567	2520	2473	2426	2379	2332	31
69	2332	2286	2239	2192	2145	2099	2052	2005	1959	1912	1866	**30**
70	17. 1866	1819	1773	1726	1680	1633	1587	1540	1494	1448	1401	29
71	1401	1355	1309	1263	1216	1170	1124	1078	1032	0986	0940	28
72	0940	0893	0847	0801	0755	0710	0664	0618	0572	0526	0480	27
73	0480	0434	0389	0343	0297	0251	0206	0160	0114	0069	0023	26
74	17. 0023	*9978	*9932	*9887	*9841	*9796	*9750	*9705	*9660	*9614	*9569	25
75	16. 9569	9524	9478	9433	9388	9343	9297	9252	9207	9162	9117	24
76	9117	9072	9027	8982	8937	8892	8847	8802	8757	8712	8667	23
77	8667	8622	8578	8533	8488	8443	8399	8354	8309	8265	8220	22
78	8220	8175	8131	8086	8042	7997	7953	7908	7864	7819	7775	21
79	7775	7731	7686	7642	7598	7553	7509	7465	7421	7377	7333	**20**
80	16. 7333	7288	7244	7200	7156	7112	7068	7024	6980	6936	6892	19
81	6892	6848	6804	6761	6717	6673	6629	6585	6542	6498	6454	18
82	6454	6411	6367	6323	6280	6236	6193	6149	6106	6062	6019	17
83	6019	5975	5932	5888	5845	5802	5758	5715	5672	5629	5585	16
84	5585	5542	5499	5456	5413	5369	5326	5283	5240	5197	5154	15
85	16. 5154	5111	5068	5025	4982	4939	4897	4854	4811	4768	4725	14
86	4725	4682	4640	4597	4554	4512	4469	4426	4384	4341	4299	13
87	4299	4256	4213	4171	4128	4086	4044	4001	3959	3916	3874	12
88	3874	3832	3789	3747	3705	3663	3620	3578	3536	3494	3452	11
89	3452	3410	3368	3325	3283	3241	3199	3157	3115	3074	3032	**10**
90	16. 3032	2990	2948	2906	2864	2822	2781	2739	2697	2655	2614	09
91	2614	2572	2530	2489	2447	2405	2364	2322	2281	2239	2198	08
92	2198	2156	2115	2073	2032	1991	1949	1908	1867	1825	1784	07
93	1784	1743	1701	1660	1619	1578	1537	1496	1454	1413	1372	06
94	1372	1331	1290	1249	1208	1167	1126	1085	1044	1004	0963	05
95	16. 0963	0922	0881	0840	0799	0759	0718	0677	0637	0596	0555	04
96	0555	0515	0474	0433	0393	0352	0312	0271	0231	0190	0150	03
97	16. 0150	0109	0069	0028	*9988	*9948	*9907	*9867	*9827	*9787	*9746	02
98	15. 9746	9706	9666	9626	9585	9545	9505	9465	9425	9385	9345	01
99	9345	9305	9265	9225	9185	9145	9105	9065	9025	8985	8945	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	40	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	
1	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	1
2	8.0	8.2	8.4	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.2	10.4	2
3	12.0	12.3	12.6	12.9	13.2	13.5	13.8	14.1	14.4	14.7	15.0	15.3	15.6	3
4	16.0	16.4	16.8	17.2	17.6	18.0	18.4	18.8	19.2	19.6	20.0	20.4	20.8	4
5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	5
6	24.0	24.6	25.2	25.8	26.4	27.0	27.6	28.2	28.8	29.4	30.0	30.6	31.2	6
7	28.0	28.7	29.4	30.1	30.8	31.5	32.2	32.9	33.6	34.3	35.0	35.7	36.4	7
8	32.0	32.8	33.6	34.4	35.2	36.0	36.8	37.6	38.4	39.2	40.0	40.8	41.6	8
9	36.0	36.9	37.8	38.7	39.6	40.5	41.4	42.3	43.2	44.1	45.0	45.9	46.8	9

tang 96^g

cosec 4^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	15. 9260	9220	9180	9141	9101	9061	9021	8982	8942	8903	8863	99
01	8863	8824	8784	8744	8705	8666	8626	8587	8547	8508	8468	98
02	8468	8429	8390	8350	8311	8272	8233	8193	8154	8115	8076	97
03	8076	8037	7997	7958	7919	7880	7841	7802	7763	7724	7685	96
04	7685	7646	7607	7568	7529	7490	7451	7413	7374	7335	7296	95
05	15. 7296	7257	7219	7180	7141	7102	7064	7025	6986	6948	6909	94
06	6909	6871	6832	6794	6755	6717	6678	6640	6601	6563	6524	93
07	6524	6486	6447	6409	6371	6332	6294	6256	6218	6179	6141	92
08	6141	6103	6065	6027	5988	5950	5912	5874	5836	5798	5760	91
09	5760	5722	5684	5646	5608	5570	5532	5494	5456	5418	5381	**90**
10	15. 5381	5343	5305	5267	5229	5192	5154	5116	5078	5041	5003	89
11	5003	4965	4928	4890	4852	4815	4777	4740	4702	4665	4627	88
12	4627	4590	4552	4515	4478	4440	4403	4365	4328	4291	4253	87
13	4253	4216	4179	4142	4104	4067	4030	3993	3956	3918	3881	86
14	3881	3844	3807	3770	3733	3696	3659	3622	3585	3548	3511	85
15	15. 3511	3474	3437	3400	3363	3327	3290	3253	3216	3179	3143	84
16	3143	3106	3069	3032	2996	2959	2922	2886	2849	2812	2776	83
17	2776	2739	2703	2666	2630	2593	2557	2520	2484	2447	2411	82
18	2411	2374	2338	2302	2265	2229	2193	2156	2120	2084	2048	81
19	2048	2011	1975	1939	1903	1867	1831	1794	1758	1722	1686	**80**
20	15. 1686	1650	1614	1578	1542	1506	1470	1434	1398	1362	1326	79
21	1326	1290	1255	1219	1183	1147	1111	1076	1040	1004	0968	78
22	0968	0933	0897	0861	0826	0790	0754	0719	0683	0647	0612	77
23	0612	0576	0541	0505	0470	0434	0399	0363	0328	0293	0257	76
24	15. 0257	0222	0186	0151	0116	0081	0045	0010	*9975	*9939	*9904	75
25	14. 9904	9869	9834	9799	9763	9728	9693	9658	9623	9588	9553	74
26	9553	9518	9483	9448	9413	9378	9343	9308	9273	9238	9203	73
27	9203	9168	9133	9099	9064	9029	8994	8959	8925	8890	8855	72
28	8855	8820	8786	8751	8716	8682	8647	8612	8578	8543	8509	71
29	8509	8474	8439	8405	8370	8336	8301	8267	8233	8198	8164	**70**
30	14. 8164	8129	8095	8061	8026	7992	7958	7923	7889	7855	7820	69
31	7820	7786	7752	7718	7684	7649	7615	7581	7547	7513	7479	68
32	7479	7445	7411	7377	7343	7309	7275	7241	7207	7173	7139	67
33	7139	7105	7071	7037	7003	6969	6935	6902	6868	6834	6800	66
34	6800	6767	6733	6699	6665	6632	6598	6564	6531	6497	6463	65
35	14. 6463	6430	6396	6363	6329	6295	6262	6228	6195	6161	6128	64
36	6128	6094	6061	6028	5994	5961	5927	5894	5861	5827	5794	63
37	5794	5761	5727	5694	5661	5628	5594	5561	5528	5495	5462	62
38	5462	5429	5395	5362	5329	5296	5263	5230	5197	5164	5131	61
39	5131	5098	5065	5032	4999	4966	4933	4900	4867	4834	4802	**60**
40	14. 4802	4769	4736	4703	4670	4637	4605	4572	4539	4506	4474	59
41	4474	4441	4408	4376	4343	4310	4278	4245	4213	4180	4147	58
42	4147	4115	4082	4050	4017	3985	3952	3920	3887	3855	3823	57
43	3823	3790	3758	3725	3693	3661	3628	3596	3564	3531	3499	56
44	3499	3467	3435	3402	3370	3338	3306	3274	3241	3209	3177	55
45	14. 3177	3145	3113	3081	3049	3017	2985	2953	2921	2889	2857	54
46	2857	2825	2793	2761	2729	2697	2665	2633	2601	2569	2538	53
47	2538	2506	2474	2442	2410	2379	2347	2315	2283	2252	2220	52
48	2220	2188	2157	2125	2093	2062	2030	1998	1967	1935	1904	51
49	1904	1872	1841	1809	1778	1746	1715	1683	1652	1620	1589	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	31	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	
1	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	1
2	6.2	6.4	6.6	6.8	7.0	7.2	7.4	7.6	7.8	8.0	2
3	9.3	9.6	9.9	10.2	10.5	10.8	11.1	11.4	11.7	12.0	3
4	12.4	12.8	13.2	13.6	14.0	14.4	14.8	15.2	15.6	16.0	4
5	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	5
6	18.6	19.2	19.8	20.4	21.0	21.6	22.2	22.8	23.4	24.0	6
7	21.7	22.4	23.1	23.8	24.5	25.2	25.9	26.6	27.3	28.0	7
8	24.8	25.6	26.4	27.2	28.0	28.8	29.6	30.4	31.2	32.0	8
9	27.9	28.8	29.7	30.6	31.5	32.4	33.3	34.2	35.1	36.0	9

sec 95^g

cotg 4^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	15. 8945	8906	8866	8826	8786	8746	8707	8667	8627	8588	8548	99
01	8548	8508	8469	8429	8390	8350	8311	8271	8232	8192	8153	98
02	8153	8113	8074	8034	7995	7956	7916	7877	7838	7798	7759	97
03	7759	7720	7681	7641	7602	7563	7524	7485	7446	7407	7368	96
04	7368	7329	7289	7250	7211	7173	7134	7095	7056	7017	6978	95
05	15. 6978	6939	6900	6861	6823	6784	6745	6706	6668	6629	6590	94
06	6590	6552	6513	6474	6436	6397	6359	6320	6281	6243	6204	93
07	6204	6166	6128	6089	6051	6012	5974	5936	5897	5859	5821	92
08	5821	5782	5744	5706	5668	5629	5591	5553	5515	5477	5439	91
09	5439	5400	5362	5324	5286	5248	5210	5172	5134	5096	5058	**90**
10	15. 5058	5020	4983	4945	4907	4869	4831	4793	4756	4718	4680	89
11	4680	4642	4605	4567	4529	4492	4454	4416	4379	4341	4304	88
12	4304	4266	4229	4191	4153	4116	4079	4041	4004	3966	3929	87
13	3929	3892	3854	3817	3780	3742	3705	3668	3630	3593	3556	86
14	3556	3519	3482	3445	3407	3370	3333	3296	3259	3222	3185	85
15	15. 3185	3148	3111	3074	3037	3000	2963	2926	2889	2853	2816	84
16	2816	2779	2742	2705	2669	2632	2595	2558	2522	2485	2448	83
17	2448	2412	2375	2338	2302	2265	2229	2192	2155	2119	2082	82
18	2082	2046	2010	1973	1937	1900	1864	1827	1791	1755	1718	81
19	1718	1682	1646	1610	1573	1537	1501	1465	1428	1392	1356	**80**
20	15. 1356	1320	1284	1248	1212	1176	1140	1104	1068	1032	0996	79
21	0996	0960	0924	0888	0852	0816	0780	0744	0708	0673	0637	78
22	0637	0601	0565	0529	0494	0458	0422	0387	0351	0315	0280	77
23	15. 0280	0244	0208	0173	0137	0102	0066	0031	*9995	*9960	*9924	76
24	14. 9924	9889	9853	9818	9782	9747	9712	9676	9641	9606	9570	75
25	14. 9570	9535	9500	9464	9429	9394	9359	9324	9288	9253	9218	74
26	9218	9183	9148	9113	9078	9043	9008	8973	8938	8903	8868	73
27	8868	8833	8798	8763	8728	8693	8658	8623	8588	8554	8519	72
28	8519	8484	8449	8414	8380	8345	8310	8276	8241	8206	8172	71
29	8172	8137	8102	8068	8033	7999	7964	7929	7895	7860	7826	**70**
30	14. 7826	7791	7757	7723	7688	7654	7619	7585	7551	7516	7482	69
31	7482	7448	7413	7379	7345	7310	7276	7242	7208	7174	7139	68
32	7139	7105	7071	7037	7003	6969	6935	6901	6867	6833	6799	67
33	6799	6765	6731	6697	6663	6629	6595	6561	6527	6493	6459	66
34	6459	6425	6392	6358	6324	6290	6256	6223	6189	6155	6122	65
35	14. 6122	6088	6054	6021	5987	5953	5920	5886	5852	5819	5785	64
36	5785	5752	5718	5685	5651	5618	5584	5551	5518	5484	5451	63
37	5451	5417	5384	5351	5317	5284	5251	5217	5184	5151	5118	62
38	5118	5084	5051	5018	4985	4952	4918	4885	4852	4819	4786	61
39	4786	4753	4720	4687	4654	4621	4588	4555	4522	4489	4456	**60**
40	14. 4456	4423	4390	4357	4324	4291	4259	4226	4193	4160	4127	59
41	4127	4094	4062	4029	3996	3963	3931	3898	3865	3833	3800	58
42	3800	3767	3735	3702	3670	3637	3605	3572	3539	3507	3474	57
43	3474	3442	3410	3377	3345	3312	3280	3247	3215	3183	3150	56
44	3150	3118	3086	3053	3021	2989	2956	2924	2892	2860	2828	55
45	14. 2828	2795	2763	2731	2699	2667	2635	2602	2570	2538	2506	54
46	2506	2474	2442	2410	2378	2346	2314	2282	2250	2218	2186	53
47	2186	2154	2123	2091	2059	2027	1995	1963	1932	1900	1868	52
48	1868	1836	1804	1773	1741	1709	1678	1646	1614	1583	1551	51
49	1551	1519	1488	1456	1425	1393	1361	1330	1298	1267	1235	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	31	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	
1	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	1
2	6.2	6.4	6.6	6.8	7.0	7.2	7.4	7.6	7.8	8.0	2
3	9.3	9.6	9.9	10.2	10.5	10.8	11.1	11.4	11.7	12.0	3
4	12.4	12.8	13.2	13.6	14.0	14.4	14.8	15.2	15.6	16.0	4
5	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	5
6	18.6	19.2	19.8	20.4	21.0	21.6	22.2	22.8	23.4	24.0	6
7	21.7	22.4	23.1	23.8	24.5	25.2	25.9	26.6	27.3	28.0	7
8	24.8	25.6	26.4	27.2	28.0	28.8	29.6	30.4	31.2	32.0	8
9	27.9	28.8	29.7	30.6	31.5	32.4	33.3	34.2	35.1	36.0	9

tang 95^g

cosec 4^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	14. 1589	1558	1526	1495	1463	1432	1401	1369	1338	1307	1276	49
51	1276	1244	1213	1182	1151	1119	1088	1057	1026	0995	0963	48
52	0963	0932	0901	0870	0839	0808	0777	0746	0715	0684	0653	47
53	0653	0622	0591	0560	0529	0498	0467	0436	0405	0374	0344	46
54	0344	0313	0282	0251	0220	0189	0159	0128	0097	0066	0036	45
55	14. 0036	0005	*9974	*9944	*9913	*9882	*9852	*9821	*9790	*9760	*9729	44
56	13. 9729	9698	9668	9637	9607	9576	9546	9515	9485	9454	9424	43
57	9424	9393	9363	9333	9302	9272	9241	9211	9181	9150	9120	42
58	9120	9090	9059	9029	8999	8968	8938	8908	8878	8848	8817	41
59	8817	8787	8757	8727	8697	8667	8636	8606	8576	8546	8516	**40**
60	13. 8516	8486	8456	8426	8396	8366	8336	8306	8276	8246	8216	39
61	8216	8186	8156	8126	8097	8067	8037	8007	7977	7947	7918	38
62	7918	7888	7858	7828	7798	7769	7739	7709	7680	7650	7620	37
63	7620	7590	7561	7531	7502	7472	7442	7413	7383	7354	7324	36
64	7324	7295	7265	7236	7206	7177	7147	7118	7088	7059	7029	35
65	13. 7029	7000	6970	6941	6912	6882	6853	6824	6794	6765	6736	34
66	6736	6706	6677	6648	6619	6589	6560	6531	6502	6473	6443	33
67	6443	6414	6385	6356	6327	6298	6269	6240	6211	6182	6152	32
68	6152	6123	6094	6065	6036	6007	5978	5949	5921	5892	5863	31
69	5863	5834	5805	5776	5747	5718	5689	5661	5632	5603	5574	**30**
70	13. 5574	5545	5517	5488	5459	5430	5402	5373	5344	5315	5287	29
71	5287	5258	5230	5201	5172	5144	5115	5086	5058	5029	5001	28
72	5001	4972	4944	4915	4887	4858	4830	4801	4773	4744	4716	27
73	4716	4687	4659	4631	4602	4574	4545	4517	4489	4460	4432	26
74	4432	4404	4376	4347	4319	4291	4263	4234	4206	4178	4150	25
75	13. 4150	4121	4093	4065	4037	4009	3981	3953	3925	3896	3868	24
76	3868	3840	3812	3784	3756	3728	3700	3672	3644	3616	3588	23
77	3588	3560	3532	3504	3477	3449	3421	3393	3365	3337	3309	22
78	3309	3281	3254	3226	3198	3170	3142	3115	3087	3059	3031	21
79	3031	3004	2976	2948	2921	2893	2865	2838	2810	2782	2755	**20**
80	13. 2755	2727	2700	2672	2645	2617	2589	2562	2534	2507	2479	19
81	2479	2452	2424	2397	2370	2342	2315	2287	2260	2232	2205	18
82	2205	2178	2150	2123	2096	2068	2041	2014	1986	1959	1932	17
83	1932	1905	1877	1850	1823	1796	1768	1741	1714	1687	1660	16
84	1660	1633	1606	1578	1551	1524	1497	1470	1443	1416	1389	15
85	13. 1389	1362	1335	1308	1281	1254	1227	1200	1173	1146	1119	14
86	1119	1092	1065	1038	1011	0985	0958	0931	0904	0877	0850	13
87	0850	0824	0797	0770	0743	0716	0690	0663	0636	0609	0583	12
88	0583	0556	0529	0503	0476	0449	0423	0396	0369	0343	0316	11
89	0316	0290	0263	0236	0210	0183	0157	0130	0104	0077	0051	**10**
90	13. 0051	0024	*9998	*9971	*9945	*9918	*9892	*9866	*9839	*9813	*9786	09
91	12. 9786	9760	9734	9707	9681	9655	9628	9602	9576	9549	9523	08
92	9523	9497	9471	9444	9418	9392	9366	9340	9313	9287	9261	07
93	9261	9235	9209	9183	9156	9130	9104	9078	9052	9026	9000	06
94	9000	8974	8948	8922	8896	8870	8844	8818	8792	8766	8740	05
95	12. 8740	8714	8688	8662	8636	8610	8584	8558	8532	8507	8481	04
96	8481	8455	8429	8403	8377	8352	8326	8300	8274	8248	8223	03
97	8223	8197	8171	8146	8120	8094	8068	8043	8017	7991	7966	02
98	7966	7940	7914	7889	7863	7838	7812	7787	7761	7735	7710	01
99	7710	7684	7659	7633	7608	7582	7557	7531	7506	7480	7455	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	
1	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	1
2	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	2
3	7.5	7.8	8.1	8.4	8.7	9.0	9.3	9.6	3
4	10.0	10.4	10.8	11.2	11.6	12.0	12.4	12.8	4
5	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	5
6	15.0	15.6	16.2	16.8	17.4	18.0	18.6	19.2	6
7	17.5	18.2	18.9	19.6	20.3	21.0	21.7	22.4	7
8	20.0	20.8	21.6	22.4	23.2	24.0	24.8	25.6	8
9	22.5	23.4	24.3	25.2	26.1	27.0	27.9	28.8	9

sec 95^g

cotg 4^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	14. 1235	1204	1172	1141	1110	1078	1047	1015	0984	0953	0921	49
51	0921	0890	0858	0827	0796	0765	0733	0702	0671	0640	0608	48
52	0608	0577	0546	0515	0484	0452	0421	0390	0359	0328	0297	47
53	14. 0297	0266	0235	0204	0173	0142	0111	0080	0049	0018	*9987	46
54	13. 9987	9956	9925	9894	9863	9832	9801	9771	9740	9709	9678	45
55	13. 9678	9647	9617	9586	9555	9524	9494	9463	9432	9401	9371	44
56	9371	9340	9309	9279	9248	9218	9187	9156	9126	9095	9065	43
57	9065	9034	9004	8973	8943	8912	8882	8851	8821	8790	8760	42
58	8760	8730	8699	8669	8639	8608	8578	8548	8517	8487	8457	41
59	8457	8426	8396	8366	8336	8306	8275	8245	8215	8185	8155	**40**
60	13. 8155	8125	8094	8064	8034	8004	7974	7944	7914	7884	7854	39
61	7854	7824	7794	7764	7734	7704	7674	7644	7614	7584	7554	38
62	7554	7525	7495	7465	7435	7405	7375	7346	7316	7286	7256	37
63	7256	7227	7197	7167	7137	7108	7078	7048	7019	6989	6960	36
64	6960	6930	6900	6871	6841	6812	6782	6752	6723	6693	6664	35
65	13. 6664	6634	6605	6575	6546	6517	6487	6458	6428	6399	6370	34
66	6370	6340	6311	6282	6252	6223	6194	6164	6135	6106	6077	33
67	6077	6047	6018	5989	5960	5930	5901	5872	5843	5814	5785	32
68	5785	5756	5727	5697	5668	5639	5610	5581	5552	5523	5494	31
69	5494	5465	5436	5407	5378	5349	5320	5292	5263	5234	5205	**30**
70	13. 5205	5176	5147	5118	5089	5061	5032	5003	4974	4945	4917	29
71	4917	4888	4859	4831	4802	4773	4744	4716	4687	4658	4630	28
72	4630	4601	4573	4544	4515	4487	4458	4430	4401	4373	4344	27
73	4344	4316	4287	4259	4230	4202	4173	4145	4116	4088	4060	26
74	4060	4031	4003	3975	3946	3918	3890	3861	3833	3805	3776	25
75	13. 3776	3748	3720	3692	3663	3635	3607	3579	3551	3522	3494	24
76	3494	3466	3438	3410	3382	3354	3326	3298	3270	3241	3213	23
77	3213	3185	3157	3129	3101	3073	3045	3017	2990	2962	2934	22
78	2934	2906	2878	2850	2822	2794	2766	2739	2711	2683	2655	21
79	2655	2627	2600	2572	2544	2516	2489	2461	2433	2405	2378	**20**
80	13. 2378	2350	2322	2295	2267	2239	2212	2184	2157	2129	2101	19
81	2101	2074	2046	2019	1991	1964	1936	1909	1881	1854	1826	18
82	1826	1799	1771	1744	1717	1689	1662	1634	1607	1580	1552	17
83	1552	1525	1498	1470	1443	1416	1388	1361	1334	1307	1279	16
84	1279	1252	1225	1198	1171	1143	1116	1089	1062	1035	1008	15
85	13. 1008	0981	0954	0926	0899	0872	0845	0818	0791	0764	0737	14
86	0737	0710	0683	0656	0629	0602	0575	0548	0521	0495	0468	13
87	0468	0441	0414	0387	0360	0333	0306	0280	0253	0226	0199	12
88	13. 0199	0172	0146	0119	0092	0065	0039	0012	*9985	*9959	*9932	11
89	12. 9932	9905	9879	9852	9825	9799	9772	9745	9719	9692	9666	**10**
90	12. 9666	9639	9613	9586	9560	9533	9507	9480	9454	9427	9401	09
91	9401	9374	9348	9321	9295	9268	9242	9216	9189	9163	9137	08
92	9137	9110	9084	9058	9031	9005	8979	8952	8926	8900	8874	07
93	8874	8847	8821	8795	8769	8742	8716	8690	8664	8638	8612	06
94	8612	8586	8559	8533	8507	8481	8455	8429	8403	8377	8351	05
95	12. 8351	8325	8299	8273	8247	8221	8195	8169	8143	8117	8091	04
96	8091	8065	8039	8013	7987	7961	7936	7910	7884	7858	7832	03
97	7832	7806	7781	7755	7729	7703	7677	7652	7626	7600	7574	02
98	7574	7549	7523	7497	7472	7446	7420	7395	7369	7343	7318	01
99	7318	7292	7267	7241	7215	7190	7164	7139	7113	7088	7062	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	
1	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	1
2	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	2
3	7.5	7.8	8.1	8.4	8.7	9.0	9.3	9.6	3
4	10.0	10.4	10.8	11.2	11.6	12.0	12.4	12.8	4
5	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	5
6	15.0	15.6	16.2	16.8	17.4	18.0	18.6	19.2	6
7	17.5	18.2	18.9	19.6	20.3	21.0	21.7	22.4	7
8	20.0	20.8	21.6	22.4	23.2	24.0	24.8	25.6	8
9	22.5	23.4	24.3	25.2	26.1	27.0	27.9	28.8	9

tang 95^g

cosec 5^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	12. 7455	7430	7404	7379	7353	7328	7303	7277	7252	7226	7201	99
01	7201	7176	7150	7125	7100	7075	7049	7024	6999	6973	6948	98
02	6948	6923	6898	6873	6847	6822	6797	6772	6747	6721	6696	97
03	6696	6671	6646	6621	6596	6571	6546	6521	6496	6471	6445	96
04	6445	6420	6395	6370	6345	6320	6295	6270	6246	6221	6196	95
05	12. 6196	6171	6146	6121	6096	6071	6046	6021	5996	5972	5947	94
06	5947	5922	5897	5872	5847	5823	5798	5773	5748	5724	5699	93
07	5699	5674	5649	5625	5600	5575	5551	5526	5501	5477	5452	92
08	5452	5427	5403	5378	5353	5329	5304	5280	5255	5231	5206	91
09	5206	5181	5157	5132	5108	5083	5059	5034	5010	4985	4961	**90**
10	12. 4961	4937	4912	4888	4863	4839	4814	4790	4766	4741	4717	89
11	4717	4693	4668	4644	4620	4595	4571	4547	4522	4498	4474	88
12	4474	4450	4425	4401	4377	4353	4329	4304	4280	4256	4232	87
13	4232	4208	4184	4159	4135	4111	4087	4063	4039	4015	3991	86
14	3991	3967	3943	3918	3894	3870	3846	3822	3798	3774	3750	85
15	12. 3750	3726	3702	3679	3655	3631	3607	3583	3559	3535	3511	84
16	3511	3487	3463	3440	3416	3392	3368	3344	3320	3297	3273	83
17	3273	3249	3225	3201	3178	3154	3130	3106	3083	3059	3035	82
18	3035	3012	2988	2964	2941	2917	2893	2870	2846	2822	2799	81
19	2799	2775	2752	2728	2704	2681	2657	2634	2610	2587	2563	**80**
20	12. 2563	2540	2516	2493	2469	2446	2422	2399	2375	2352	2328	79
21	2328	2305	2282	2258	2235	2211	2188	2165	2141	2118	2095	78
22	2095	2071	2048	2025	2001	1978	1955	1931	1908	1885	1862	77
23	1862	1838	1815	1792	1769	1746	1722	1699	1676	1653	1630	76
24	1630	1606	1583	1560	1537	1514	1491	1468	1445	1422	1398	75
25	12. 1398	1375	1352	1329	1306	1283	1260	1237	1214	1191	1168	74
26	1168	1145	1122	1099	1076	1053	1030	1008	0985	0962	0939	73
27	0939	0916	0893	0870	0847	0824	0802	0779	0756	0733	0710	72
28	0710	0687	0665	0642	0619	0596	0574	0551	0528	0505	0483	71
29	0483	0460	0437	0414	0392	0369	0346	0324	0301	0278	0256	**70**
30	12. 0256	0233	0211	0188	0165	0143	0120	0098	0075	0052	0030	69
31	12. 0030	0007	*9985	*9962	*9940	*9917	*9895	*9872	*9850	*9827	*9805	68
32	11. 9805	9782	9760	9737	9715	9693	9670	9648	9625	9603	9581	67
33	9581	9558	9536	9513	9491	9469	9446	9424	9402	9379	9357	66
34	9357	9335	9313	9290	9268	9246	9223	9201	9179	9157	9135	65
35	11. 9135	9112	9090	9068	9046	9024	9001	8979	8957	8935	8913	64
36	8913	8891	8869	8846	8824	8802	8780	8758	8736	8714	8692	63
37	8692	8670	8648	8626	8604	8582	8560	8538	8516	8494	8472	62
38	8472	8450	8428	8406	8384	8362	8340	8318	8296	8274	8253	61
39	8253	8231	8209	8187	8165	8143	8121	8099	8078	8056	8034	**60**
40	11. 8034	8012	7990	7969	7947	7925	7903	7882	7860	7838	7816	59
41	7816	7795	7773	7751	7730	7708	7686	7665	7643	7621	7600	58
42	7600	7578	7556	7535	7513	7491	7470	7448	7427	7405	7383	57
43	7383	7362	7340	7319	7297	7276	7254	7233	7211	7190	7168	56
44	7168	7147	7125	7104	7082	7061	7039	7018	6997	6975	6954	55
45	11. 6954	6932	6911	6890	6868	6847	6825	6804	6783	6761	6740	54
46	6740	6719	6697	6676	6655	6634	6612	6591	6570	6548	6527	53
47	6527	6506	6485	6463	6442	6421	6400	6379	6357	6336	6315	52
48	6315	6294	6273	6252	6230	6209	6188	6167	6146	6125	6104	51
49	6104	6083	6062	6040	6019	5998	5977	5956	5935	5914	5893	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	21	**22**	**23**	**24**	**25**	**26**	
1	2.1	2.2	2.3	2.4	2.5	2.6	1
2	4.2	4.4	4.6	4.8	5.0	5.2	2
3	6.3	6.6	6.9	7.2	7.5	7.8	3
4	8.4	8.8	9.2	9.6	10.0	10.4	4
5	10.5	11.0	11.5	12.0	12.5	13.0	5
6	12.6	13.2	13.8	14.4	15.0	15.6	6
7	14.7	15.4	16.1	16.8	17.5	18.2	7
8	16.8	17.6	18.4	19.2	20.0	20.8	8
9	18.9	19.8	20.7	21.6	22.5	23.4	9

sec 94^g

cotg 5^{g}

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	12. 7062	7037	7011	6986	6960	6935	6909	6884	6858	6833	6807	99
01	6807	6782	6757	6731	6706	6680	6655	6630	6604	6579	6554	98
02	6554	6528	6503	6478	6453	6427	6402	6377	6352	6326	6301	97
03	6301	6276	6251	6225	6200	6175	6150	6125	6100	6075	6049	96
04	6049	6024	5999	5974	5949	5924	5899	5874	5849	5824	5799	95
05	12. 5799	5774	5749	5724	5699	5674	5649	5624	5599	5574	5549	94
06	5549	5524	5499	5474	5450	5425	5400	5375	5350	5325	5300	93
07	5300	5276	5251	5226	5201	5176	5152	5127	5102	5077	5053	92
08	5053	5028	5003	4979	4954	4929	4905	4880	4855	4831	4806	91
09	4806	4781	4757	4732	4708	4683	4658	4634	4609	4585	4560	**90**
10	12. 4560	4536	4511	4487	4462	4438	4413	4389	4364	4340	4315	89
11	4315	4291	4267	4242	4218	4193	4169	4145	4120	4096	4072	88
12	4072	4047	4023	3999	3974	3950	3926	3901	3877	3853	3829	87
13	3829	3804	3780	3756	3732	3708	3683	3659	3635	3611	3587	86
14	3587	3563	3538	3514	3490	3466	3442	3418	3394	3370	3346	85
15	12. 3346	3322	3298	3274	3250	3226	3202	3178	3154	3130	3106	84
16	3106	3082	3058	3034	3010	2986	2962	2938	2914	2890	2866	83
17	2866	2843	2819	2795	2771	2747	2723	2700	2676	2652	2628	82
18	2628	2604	2581	2557	2533	2509	2486	2462	2438	2415	2391	81
19	2391	2367	2344	2320	2296	2273	2249	2225	2202	2178	2154	**80**
20	12. 2154	2131	2107	2084	2060	2037	2013	1990	1966	1942	1919	79
21	1919	1895	1872	1849	1825	1802	1778	1755	1731	1708	1684	78
22	1684	1661	1638	1614	1591	1567	1544	1521	1497	1474	1451	77
23	1451	1427	1404	1381	1357	1334	1311	1288	1264	1241	1218	76
24	1218	1195	1171	1148	1125	1102	1079	1055	1032	1009	0986	75
25	12. 0986	0963	0940	0916	0893	0870	0847	0824	0801	0778	0755	74
26	0755	0732	0709	0686	0663	0640	0617	0594	0571	0548	0525	73
27	0525	0502	0479	0456	0433	0410	0387	0364	0341	0318	0295	72
28	0295	0272	0250	0227	0204	0181	0158	0135	0113	0090	0067	71
29	12. 0067	0044	0021	*9999	*9976	*9953	*9930	*9907	*9885	*9862	*9839	**70**
30	11. 9839	9817	9794	9771	9749	9726	9703	9680	9658	9635	9613	69
31	9613	9590	9567	9545	9522	9500	9477	9454	9432	9409	9387	68
32	9387	9364	9342	9319	9297	9274	9252	9229	9207	9184	9162	67
33	9162	9139	9117	9094	9072	9049	9027	9005	8982	8960	8937	66
34	8937	8915	8893	8870	8848	8826	8803	8781	8759	8736	8714	65
35	11. 8714	8692	8670	8647	8625	8603	8580	8558	8536	8514	8492	64
36	8492	8469	8447	8425	8403	8381	8358	8336	8314	8292	8270	63
37	8270	8248	8226	8204	8181	8159	8137	8115	8093	8071	8049	62
38	8049	8027	8005	7983	7961	7939	7917	7895	7873	7851	7829	61
39	7829	7807	7785	7763	7741	7719	7697	7675	7653	7632	7610	**60**
40	11. 7610	7588	7566	7544	7522	7500	7479	7457	7435	7413	7391	59
41	7391	7369	7348	7326	7304	7282	7261	7239	7217	7195	7174	58
42	7174	7152	7130	7108	7087	7065	7043	7022	7000	6978	6957	57
43	6957	6935	6913	6892	6870	6849	6827	6805	6784	6762	6741	56
44	6741	6719	6698	6676	6655	6633	6611	6590	6568	6547	6525	55
45	11. 6525	6504	6483	6461	6440	6418	6397	6375	6354	6332	6311	54
46	6311	6290	6268	6247	6225	6204	6183	6161	6140	6119	6097	53
47	6097	6076	6055	6033	6012	5991	5969	5948	5927	5906	5884	52
48	5884	5863	5842	5821	5799	5778	5757	5736	5715	5693	5672	51
49	5672	5651	5630	5609	5588	5567	5545	5524	5503	5482	5461	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	21	**22**	**23**	**24**	**25**	**26**	
1	2.1	2.2	2.3	2.4	2.5	2.6	1
2	4.2	4.4	4.6	4.8	5.0	5.2	2
3	6.3	6.6	6.9	7.2	7.5	7.8	3
4	8.4	8.8	9.2	9.6	10.0	10.4	4
5	10.5	11.0	11.5	12.0	12.5	13.0	5
6	12.6	13.2	13.8	14.4	15.0	15.6	6
7	14.7	15.4	16.1	16.8	17.5	18.2	7
8	16.8	17.6	18.4	19.2	20.0	20.8	8
9	18.9	19.8	20.7	21.6	22.5	23.4	9

tang 94^{g}

cosec 5^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	11. 5893	5872	5851	5830	5809	5788	5767	5746	5725	5704	5683	49
51	5683	5662	5641	5621	5600	5579	5558	5537	5516	5495	5474	48
52	5474	5453	5433	5412	5391	5370	5349	5328	5308	5287	5266	47
53	5266	5245	5224	5204	5183	5162	5141	5121	5100	5079	5058	46
54	5058	5038	5017	4996	4976	4955	4934	4914	4893	4872	4852	45
55	11. 4852	4831	4810	4790	4769	4749	4728	4707	4687	4666	4646	44
56	4646	4625	4605	4584	4563	4543	4522	4502	4481	4461	4440	43
57	4440	4420	4399	4379	4358	4338	4318	4297	4277	4256	4236	42
58	4236	4215	4195	4175	4154	4134	4113	4093	4073	4052	4032	41
59	4032	4012	3991	3971	3951	3930	3910	3890	3869	3849	3829	**40**
60	11. 3829	3809	3788	3768	3748	3728	3707	3687	3667	3647	3626	39
61	3626	3606	3586	3566	3546	3526	3505	3485	3465	3445	3425	38
62	3425	3405	3385	3364	3344	3324	3304	3284	3264	3244	3224	37
63	3224	3204	3184	3164	3144	3124	3104	3084	3064	3044	3024	36
64	3024	3004	2984	2964	2944	2924	2904	2884	2864	2844	2824	35
65	11. 2824	2804	2784	2764	2745	2725	2705	2685	2665	2645	2625	34
66	2625	2605	2586	2566	2546	2526	2506	2487	2467	2447	2427	33
67	2427	2407	2388	2368	2348	2328	2309	2289	2269	2249	2230	32
68	2230	2210	2190	2171	2151	2131	2112	2092	2072	2053	2033	31
69	2033	2013	1994	1974	1955	1935	1915	1896	1876	1857	1837	**30**
70	11. 1837	1817	1798	1778	1759	1739	1720	1700	1681	1661	1642	29
71	1642	1622	1603	1583	1564	1544	1525	1505	1486	1466	1447	28
72	1447	1428	1408	1389	1369	1350	1331	1311	1292	1272	1253	27
73	1253	1234	1214	1195	1176	1156	1137	1118	1098	1079	1060	26
74	1060	1040	1021	1002	0983	0963	0944	0925	0906	0886	0867	25
75	11. 0867	0848	0829	0810	0790	0771	0752	0733	0714	0694	0675	24
76	0675	0656	0637	0618	0599	0579	0560	0541	0522	0503	0484	23
77	0484	0465	0446	0427	0408	0389	0369	0350	0331	0312	0293	22
78	0293	0274	0255	0236	0217	0198	0179	0160	0141	0122	0103	21
79	11. 0103	0084	0065	0046	0028	0009	*9990	*9971	*9952	*9933	*9914	**20**
80	10. 9914	9895	9876	9857	9838	9820	9801	9782	9763	9744	9725	19
81	9725	9707	9688	9669	9650	9631	9612	9594	9575	9556	9537	18
82	9537	9519	9500	9481	9462	9444	9425	9406	9387	9369	9350	17
83	9350	9331	9313	9294	9275	9257	9238	9219	9201	9182	9163	16
84	9163	9145	9126	9107	9089	9070	9052	9033	9014	8996	8977	15
85	10. 8977	8959	8940	8921	8903	8884	8866	8847	8829	8810	8792	14
86	8792	8773	8755	8736	8718	8699	8681	8662	8644	8625	8607	13
87	8607	8588	8570	8552	8533	8515	8496	8478	8460	8441	8423	12
88	8423	8404	8386	8368	8349	8331	8313	8294	8276	8258	8239	11
89	8239	8221	8203	8184	8166	8148	8129	8111	8093	8075	8056	**10**
90	10. 8056	8038	8020	8002	7983	7965	7947	7929	7910	7892	7874	09
91	7874	7856	7838	7819	7801	7783	7765	7747	7729	7710	7692	08
92	7692	7674	7656	7638	7620	7602	7584	7565	7547	7529	7511	07
93	7511	7493	7475	7457	7439	7421	7403	7385	7367	7349	7331	06
94	7331	7313	7295	7277	7259	7241	7223	7205	7187	7169	7151	05
95	10. 7151	7133	7115	7097	7079	7061	7043	7025	7007	6989	6972	04
96	6972	6954	6936	6918	6900	6882	6864	6846	6829	6811	6793	03
97	6793	6775	6757	6739	6722	6704	6686	6668	6650	6633	6615	02
98	6615	6597	6579	6562	6544	6526	6508	6491	6473	6455	6437	01
99	6437	6420	6402	6384	6367	6349	6331	6314	6296	6278	6261	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	17	**18**	**19**	**20**	**21**	
1	1.7	1.8	1.9	2.0	2.1	1
2	3.4	3.6	3.8	4.0	4.2	2
3	5.1	5.4	5.7	6.0	6.3	3
4	6.8	7.2	7.6	8.0	8.4	4
5	8.5	9.0	9.5	10.0	10.5	5
6	10.2	10.8	11.4	12.0	12.6	6
7	11.9	12.6	13.3	14.0	14.7	7
8	13.6	14.4	15.2	16.0	16.8	8
9	15.3	16.2	17.1	18.0	18.9	9

sec 94^g

cotg 5^{g}

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	11. 5461	5440	5419	5398	5377	5356	5334	5313	5292	5271	5250	49
51	5250	5229	5208	5187	5166	5145	5124	5103	5082	5061	5040	48
52	5040	5020	4999	4978	4957	4936	4915	4894	4873	4852	4831	47
53	4831	4811	4790	4769	4748	4727	4706	4686	4665	4644	4623	46
54	4623	4602	4582	4561	4540	4519	4498	4478	4457	4436	4416	45
55	11. 4416	4395	4374	4353	4333	4312	4291	4271	4250	4229	4209	44
56	4209	4188	4167	4147	4126	4106	4085	4064	4044	4023	4003	43
57	4003	3982	3961	3941	3920	3900	3879	3859	3838	3818	3797	42
58	3797	3777	3756	3736	3715	3695	3674	3654	3633	3613	3593	41
59	3593	3572	3552	3531	3511	3491	3470	3450	3429	3409	3389	**40**
60	11. 3389	3368	3348	3328	3307	3287	3267	3246	3226	3206	3186	39
61	3186	3165	3145	3125	3105	3084	3064	3044	3024	3003	2983	38
62	2983	2963	2943	2923	2902	2882	2862	2842	2822	2802	2781	37
63	2781	2761	2741	2721	2701	2681	2661	2641	2621	2600	2580	36
64	2580	2560	2540	2520	2500	2480	2460	2440	2420	2400	2380	35
65	11. 2380	2360	2340	2320	2300	2280	2260	2240	2220	2200	2180	34
66	2180	2161	2141	2121	2101	2081	2061	2041	2021	2001	1982	33
67	1982	1962	1942	1922	1902	1882	1863	1843	1823	1803	1783	32
68	1783	1764	1744	1724	1704	1685	1665	1645	1625	1606	1586	31
69	1586	1566	1546	1527	1507	1487	1468	1448	1428	1409	1389	**30**
70	11. 1389	1369	1350	1330	1311	1291	1271	1252	1232	1213	1193	29
71	1193	1173	1154	1134	1115	1095	1076	1056	1037	1017	0998	28
72	0998	0978	0958	0939	0920	0900	0881	0861	0842	0822	0803	27
73	0803	0783	0764	0744	0725	0706	0686	0667	0647	0628	0609	26
74	0609	0589	0570	0551	0531	0512	0493	0473	0454	0435	0415	25
75	11. 0415	0396	0377	0357	0338	0319	0300	0280	0261	0242	0223	24
76	0223	0203	0184	0165	0146	0126	0107	0088	0069	0050	0030	23
77	11. 0030	0011	*9992	*9973	*9954	*9935	*9916	*9896	*9877	*9858	*9839	22
78	10. 9839	9820	9801	9782	9763	9744	9724	9705	9686	9667	9648	21
79	9648	9629	9610	9591	9572	9553	9534	9515	9496	9477	9458	**20**
80	10. 9458	9439	9420	9401	9382	9363	9344	9325	9307	9288	9269	19
81	9269	9250	9231	9212	9193	9174	9155	9137	9118	9099	9080	18
82	9080	9061	9042	9023	9005	8986	8967	8948	8929	8911	8892	17
83	8892	8873	8854	8835	8817	8798	8779	8760	8742	8723	8704	16
84	8704	8686	8667	8648	8629	8611	8592	8573	8555	8536	8517	15
85	10. 8517	8499	8480	8461	8443	8424	8406	8387	8368	8350	8331	14
86	8331	8313	8294	8275	8257	8238	8220	8201	8183	8164	8146	13
87	8146	8127	8109	8090	8072	8053	8035	8016	7998	7979	7961	12
88	7961	7942	7924	7905	7887	7868	7850	7832	7813	7795	7776	11
89	7776	7758	7739	7721	7703	7684	7666	7648	7629	7611	7593	**10**
90	10. 7593	7574	7556	7538	7519	7501	7483	7464	7446	7428	7409	09
91	7409	7391	7373	7355	7336	7318	7300	7282	7263	7245	7227	08
92	7227	7209	7191	7172	7154	7136	7118	7100	7081	7063	7045	07
93	7045	7027	7009	6991	6973	6954	6936	6918	6900	6882	6864	06
94	6864	6846	6828	6810	6792	6773	6755	6737	6719	6701	6683	05
95	10. 6683	6665	6647	6629	6611	6593	6575	6557	6539	6521	6503	04
96	6503	6485	6467	6449	6431	6413	6395	6377	6360	6342	6324	03
97	6324	6306	6288	6270	6252	6234	6216	6198	6181	6163	6145	02
98	6145	6127	6109	6091	6073	6056	6038	6020	6002	5984	5967	01
99	5967	5949	5931	5913	5895	5878	5860	5842	5824	5807	5789	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	17	**18**	**19**	**20**	**21**	**22**	
1	1.7	1.8	1.9	2.0	2.1	2.2	1
2	3.4	3.6	3.8	4.0	4.2	4.4	2
3	5.1	5.4	5.7	6.0	6.3	6.6	3
4	6.8	7.2	7.6	8.0	8.4	8.8	4
5	8.5	9.0	9.5	10.0	10.5	11.0	5
6	10.2	10.8	11.4	12.0	12.6	13.2	6
7	11.9	12.6	13.3	14.0	14.7	15.4	7
8	13.6	14.4	15.2	16.0	16.8	17.6	8
9	15.3	16.2	17.1	18.0	18.9	19.8	9

tang 94^{g}

cosec 6^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	10.6 2605	2429	2252	2076	1900	1723	1547	1371	1195	1019	0843	99
01	10.6 0843	0667	0491	0315	0139	*9963	*9788	*9612	*9437	*9261	*9086	98
02	10.5 9086	8910	8735	8560	8384	8209	8034	7859	7684	7509	7334	97
03	7334	7160	6985	6810	6636	6461	6287	6112	5938	5763	5589	96
04	5589	5415	5241	5067	4893	4719	4545	4371	4197	4023	3850	95
05	10.5 3850	3676	3502	3329	3155	2982	2809	2635	2462	2289	2116	94
06	2116	1943	1770	1597	1424	1251	1078	0906	0733	0560	0388	93
07	10.5 0388	0215	0043	*9870	*9698	*9526	*9354	*9182	*9009	*8837	*8665	92
08	10.4 8665	8494	8322	8150	7978	7806	7635	7463	7292	7120	6949	91
09	6949	6777	6606	6435	6264	6092	5921	5750	5579	5409	5238	**90**
10	10.4 5238	5067	4896	4725	4555	4384	4214	4043	3873	3702	3532	89
11	3532	3362	3192	3022	2852	2682	2512	2342	2172	2002	1832	88
12	1832	1663	1493	1323	1154	0984	0815	0646	0476	0307	0138	87
13	10.4 0138	*9969	*9800	*9631	*9462	*9293	*9124	*8955	*8787	*8618	*8449	86
14	10.3 8449	8281	8112	7944	7775	7607	7439	7270	7102	6934	6766	85
15	10.3 6766	6598	6430	6262	6094	5926	5759	5591	5423	5256	5088	84
16	5088	4921	4753	4586	4419	4251	4084	3917	3750	3583	3416	83
17	3416	3249	3082	2915	2748	2582	2415	2248	2082	1915	1749	82
18	1749	1582	1416	1250	1084	0917	0751	0585	0419	0253	0087	81
19	10.3 0087	*9921	*9756	*9590	*9424	*9258	*9093	*8927	*8762	*8596	*8431	**80**
20	10.2 8431	8266	8100	7935	7770	7605	7440	7275	7110	6945	6780	79
21	6780	6615	6451	6286	6121	5957	5792	5628	5463	5299	5135	78
22	5135	4970	4806	4642	4478	4314	4150	3986	3822	3658	3494	77
23	3494	3331	3167	3003	2840	2676	2513	2349	2186	2023	1859	76
24	1859	1696	1533	1370	1207	1044	0881	0718	0555	0392	0230	75
25	10.2 0230	0067	*9904	*9742	*9579	*9417	*9254	*9092	*8930	*8767	*8605	74
26	10.1 8605	8443	8281	8119	7957	7795	7633	7471	7309	7148	6986	73
27	6986	6824	6663	6501	6340	6178	6017	5855	5694	5533	5372	72
28	5372	5211	5050	4888	4727	4567	4406	4245	4084	3923	3763	71
29	3763	3602	3442	3281	3121	2960	2800	2639	2479	2319	2159	**70**
30	10.1 2159	1999	1839	1679	1519	1359	1199	1039	0879	0720	0560	69
31	10.1 0560	0400	0241	0081	*9922	*9762	*9603	*9444	*9285	*9125	*8966	68
32	10.0 8966	8807	8648	8489	8330	8171	8012	7854	7695	7536	7378	67
33	7378	7219	7060	6902	6743	6585	6427	6268	6110	5952	5794	66
34	5794	5636	5478	5320	5162	5004	4846	4688	4531	4373	4215	65
35	10.0 4215	4058	3900	3743	3585	3428	3270	3113	2956	2799	2641	64
36	2641	2484	2327	2170	2013	1856	1700	1543	1386	1229	1073	63
37	10.0 1073	0916	0760	0603	0447	0290	0134	*9978	*9821	*9665	*9509	62
38	9.9 9509	9353	9197	9041	8885	8729	8573	8417	8261	8106	7950	61
39	7950	7794	7639	7483	7328	7172	7017	6862	6706	6551	6396	**60**
40	9.9 6396	6241	6086	5931	5776	5621	5466	5311	5156	5001	4847	59
41	4847	4692	4537	4383	4228	4074	3919	3765	3611	3457	3302	58
42	3302	3148	2994	2840	2686	2532	2378	2224	2070	1917	1763	57
43	1763	1609	1455	1302	1148	0995	0841	0688	0535	0381	0228	56
44	9.9 0228	0075	*9922	*9769	*9615	*9462	*9309	*9157	*9004	*8851	*8698	55
45	9.8 8698	8545	8393	8240	8087	7935	7782	7630	7477	7325	7173	54
46	7173	7021	6868	6716	6564	6412	6260	6108	5956	5804	5652	53
47	5652	5500	5349	5197	5045	4894	4742	4591	4439	4288	4136	52
48	4136	3985	3834	3683	3531	3380	3229	3078	2927	2776	2625	51
49	2625	2474	2324	2173	2022	1871	1721	1570	1420	1269	1119	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	150	**151**	**152**	**153**	**154**	**155**	**156**	**157**	**158**	**159**	**160**	**161**	**162**	**163**	**164**	
1	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	16.0	16.1	16.2	16.3	16.4	1
2	30.0	30.2	30.4	30.6	30.8	31.0	31.2	31.4	31.6	31.8	32.0	32.2	32.4	32.6	32.8	2
3	45.0	45.3	45.6	45.9	46.2	46.5	46.8	47.1	47.4	47.7	48.0	48.3	48.6	48.9	49.2	3
4	60.0	60.4	60.8	61.2	61.6	62.0	62.4	62.8	63.2	63.6	64.0	64.4	64.8	65.2	65.6	4
5	75.0	75.5	76.0	76.5	77.0	77.5	78.0	78.5	79.0	79.5	80.0	80.5	81.0	81.5	82.0	5
6	90.0	90.6	91.2	91.8	92.4	93.0	93.6	94.2	94.8	95.4	96.0	96.6	97.2	97.8	98.4	6
7	105.0	105.7	106.4	107.1	107.8	108.5	109.2	109.9	110.6	111.3	112.0	112.7	113.4	114.1	114.8	7
8	120.0	120.8	121.6	122.4	123.2	124.0	124.8	125.6	126.4	127.2	128.0	128.8	129.6	130.4	131.2	8
9	135.0	135.9	136.8	137.7	138.6	139.5	140.4	141.3	142.2	143.1	144.0	144.9	145.8	146.7	147.6	9

sec 93^g

cotg 6^{g}

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	10.5 7889	7712	7535	7358	7181	7003	6826	6649	6472	6296	6119	99
01	6119	5942	5765	5589	5412	5236	5059	4883	4706	4530	4354	98
02	4354	4178	4002	3826	3650	3474	3298	3122	2946	2771	2595	97
03	2595	2419	2244	2068	1893	1718	1542	1367	1192	1017	0842	96
04	10.5 0842	0667	0492	0317	0142	*9967	*9793	*9618	*9443	*9269	*9094	95
05	10.4 9094	8920	8746	8571	8397	8223	8049	7875	7701	7527	7353	94
06	7353	7179	7005	6831	6658	6484	6311	6137	5964	5790	5617	93
07	5617	5444	5270	5097	4924	4751	4578	4405	4232	4059	3887	92
08	3887	3714	3541	3369	3196	3024	2851	2679	2506	2334	2162	91
09	2162	1990	1818	1646	1474	1302	1130	0958	0786	0615	0443	**90**
10	10.4 0443	0271	0100	*9928	*9757	*9586	*9414	*9243	*9072	*8901	*8730	89
11	10.3 8730	8559	8388	8217	8046	7875	7704	7534	7363	7193	7022	88
12	7022	6852	6681	6511	6340	6170	6000	5830	5660	5490	5320	87
13	5320	5150	4980	4810	4640	4471	4301	4132	3962	3793	3623	86
14	3623	3454	3284	3115	2946	2777	2608	2439	2270	2101	1932	85
15	10.3 1932	1763	1594	1426	1257	1088	0920	0751	0583	0415	0246	84
16	10.3 0246	0078	*9910	*9742	*9574	*9405	*9237	*9070	*8902	*8734	*8566	83
17	10.2 8566	8398	8231	8063	7895	7728	7560	7393	7226	7058	6891	82
18	6891	6724	6557	6390	6223	6056	5889	5722	5555	5388	5222	81
19	5222	5055	4889	4722	4556	4389	4223	4056	3890	3724	3558	**80**
20	10.2 3558	3392	3226	3060	2894	2728	2562	2396	2230	2065	1899	79
21	1899	1733	1568	1402	1237	1072	0906	0741	0576	0411	0246	78
22	10.2 0246	0081	*9916	*9751	*9586	*9421	*9256	*9091	*8927	*8762	*8597	77
23	10.1 8597	8433	8268	8104	7940	7775	7611	7447	7283	7119	6955	76
24	6955	6791	6627	6463	6299	6135	5971	5808	5644	5481	5317	75
25	10.1 5317	5154	4990	4827	4663	4500	4337	4174	4011	3848	3685	74
26	3685	3522	3359	3196	3033	2870	2708	2545	2382	2220	2057	73
27	2057	1895	1733	1570	1408	1246	1084	0921	0759	0597	0435	72
28	10.1 0435	0273	0112	*9950	*9788	*9626	*9465	*9303	*9141	*8980	*8819	71
29	10.0 8819	8657	8496	8334	8173	8012	7851	7690	7529	7368	7207	**70**
30	10.0 7207	7046	6885	6724	6563	6403	6242	6082	5921	5761	5600	69
31	5600	5440	5279	5119	4959	4799	4638	4478	4318	4158	3998	68
32	3998	3839	3679	3519	3359	3200	3040	2880	2721	2561	2402	67
33	2402	2242	2083	1924	1765	1605	1446	1287	1128	0969	0810	66
34	10.0 0810	0651	0493	0334	0175	0016	*9858	*9699	*9541	*9382	*9224	65
35	9.9 9224	9065	8907	8749	8591	8432	8274	8116	7958	7800	7642	64
36	7642	7484	7326	7169	7011	6853	6696	6538	6380	6223	6066	63
37	6066	5908	5751	5594	5436	5279	5122	4965	4808	4651	4494	62
38	4494	4337	4180	4023	3867	3710	3553	3397	3240	3083	2927	61
39	2927	2771	2614	2458	2302	2145	1989	1833	1677	1521	1365	**60**
40	9.9 1365	1209	1053	0897	0742	0586	0430	0275	0119	*9964	*9808	59
41	9.8 9808	9653	9497	9342	9187	9031	8876	8721	8566	8411	8256	58
42	8256	8101	7946	7791	7636	7481	7327	7172	7017	6863	6708	57
43	6708	6554	6399	6245	6091	5936	5782	5628	5474	5320	5166	56
44	5166	5012	4858	4704	4550	4396	4242	4089	3935	3781	3628	55
45	9.8 3628	3474	3321	3167	3014	2861	2707	2554	2401	2248	2095	54
46	2095	1942	1789	1636	1483	1330	1177	1024	0872	0719	0566	53
47	9.8 0566	0414	0261	0109	*9956	*9804	*9652	*9499	*9347	*9195	*9043	52
48	9.7 9043	8891	8738	8586	8434	8283	8131	7979	7827	7675	7524	51
49	7524	7372	7220	7069	6917	6766	6614	6463	6312	6161	6009	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	165	**166**	**167**	**168**	**169**	**170**	**171**	**172**	**173**	**174**	**175**	**176**	**177**	**178**	
1	16.5	16.6	16.7	16.8	16.9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	1
2	33.0	33.2	33.4	33.6	33.8	34.0	34.2	34.4	34.6	34.8	35.0	35.2	35.4	35.6	2
3	49.5	49.8	50.1	50.4	50.7	51.0	51.3	51.6	51.9	52.2	52.5	52.8	53.1	53.4	3
4	66.0	66.4	66.8	67.2	67.6	68.0	68.4	68.8	69.2	69.6	70.0	70.4	70.8	71.2	4
5	82.5	83.0	83.5	84.0	84.5	85.0	85.5	86.0	86.5	87.0	87.5	88.0	88.5	89.0	5
6	99.0	99.6	100.2	100.8	101.4	102.0	102.6	103.2	103.8	104.4	105.0	105.6	106.2	106.8	6
7	115.5	116.2	116.9	117.6	118.3	119.0	119.7	120.4	121.1	121.8	122.5	123.2	123.9	124.6	7
8	132.0	132.8	133.6	134.4	135.2	136.0	136.8	137.6	138.4	139.2	140.0	140.8	141.6	142.4	8
9	148.5	149.4	150.3	151.2	152.1	153.0	153.9	154.8	155.7	156.6	157.5	158.4	159.3	160.2	9

tang 93^{g}

cosec 6^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	9.8 1119	0968	0818	0668	0518	0367	0217	0067	*9917	*9767	*9617	49
51	9.7 9617	9467	9317	9167	9018	8868	8718	8568	8419	8269	8120	48
52	8120	7970	7821	7671	7522	7373	7224	7074	6925	6776	6627	47
53	6627	6478	6329	6180	6031	5882	5734	5585	5436	5288	5139	46
54	5139	4990	4842	4693	4545	4397	4248	4100	3952	3804	3655	45
55	9.7 3655	3507	3359	3211	3063	2915	2768	2620	2472	2324	2177	44
56	2177	2029	1881	1734	1586	1439	1291	1144	0997	0849	0702	43
57	9.7 0702	0555	0408	0261	0113	*9966	*9819	*9673	*9526	*9379	*9232	42
58	9.6 9232	9085	8939	8792	8645	8499	8352	8206	8059	7913	7767	41
59	7767	7620	7474	7328	7182	7035	6889	6743	6597	6451	6305	**40**
60	9.6 6305	6160	6014	5868	5722	5577	5431	5285	5140	4994	4849	39
61	4849	4703	4558	4413	4267	4122	3977	3832	3687	3542	3397	38
62	3397	3252	3107	2962	2817	2672	2527	2383	2238	2093	1949	37
63	1949	1804	1660	1515	1371	1226	1082	0938	0794	0649	0505	36
64	9.6 0505	0361	0217	0073	*9929	*9785	*9641	*9497	*9354	*9210	*9066	35
65	9.5 9066	8922	8779	8635	8492	8348	8205	8061	7918	7775	7631	34
66	7631	7488	7345	7202	7059	6916	6773	6630	6487	6344	6201	33
67	6201	6058	5915	5773	5630	5487	5345	5202	5060	4917	4775	32
68	4775	4632	4490	4348	4205	4063	3921	3779	3637	3495	3353	31
69	3353	3211	3069	2927	2785	2643	2502	2360	2218	2077	1935	**30**
70	9.5 1935	1794	1652	1511	1369	1228	1087	0945	0804	0663	0522	29
71	9.5 0522	0381	0239	0098	*9957	*9817	*9676	*9535	*9394	*9253	*9112	28
72	9.4 9112	8972	8831	8690	8550	8409	8269	8128	7988	7848	7707	27
73	7707	7567	7427	7287	7147	7006	6866	6726	6586	6446	6307	26
74	6307	6167	6027	5887	5747	5608	5468	5328	5189	5049	4910	25
75	9.4 4910	4770	4631	4492	4352	4213	4074	3935	3795	3656	3517	24
76	3517	3378	3239	3100	2961	2823	2684	2545	2406	2268	2129	23
77	2129	1990	1852	1713	1575	1436	1298	1159	1021	0883	0745	22
78	9.4 0745	0606	0468	0330	0192	0054	*9916	*9778	*9640	*9502	*9364	21
79	9.3 9364	9227	9089	8951	8813	8676	8538	8401	8263	8126	7988	**20**
80	9.3 7988	7851	7713	7576	7439	7302	7164	7027	6890	6753	6616	19
81	6616	6479	6342	6205	6068	5931	5795	5658	5521	5385	5248	18
82	5248	5111	4975	4838	4702	4565	4429	4293	4156	4020	3884	17
83	3884	3748	3612	3475	3339	3203	3067	2931	2795	2660	2524	16
84	2524	2388	2252	2117	1981	1845	1710	1574	1439	1303	1168	15
85	9.3 1168	1032	0897	0762	0626	0491	0356	0221	0086	*9951	*9816	14
86	9.2 9816	9681	9546	9411	9276	9141	9006	8871	8737	8602	8467	13
87	8467	8333	8198	8064	7929	7795	7660	7526	7392	7257	7123	12
88	7123	6989	6855	6721	6586	6452	6318	6184	6050	5917	5783	11
89	5783	5649	5515	5381	5248	5114	4980	4847	4713	4580	4446	**10**
90	9.2 4446	4313	4179	4046	3913	3779	3646	3513	3380	3247	3114	09
91	3114	2981	2848	2715	2582	2449	2316	2183	2050	1918	1785	08
92	1785	1652	1520	1387	1255	1122	0990	0857	0725	0592	0460	07
93	9.2 0460	0328	0196	0063	*9931	*9799	*9667	*9535	*9403	*9271	*9139	06
94	9.1 9139	9007	8875	8743	8612	8480	8348	8216	8085	7953	7822	05
95	9.1 7822	7690	7559	7427	7296	7165	7033	6902	6771	6639	6508	04
96	6508	6377	6246	6115	5984	5853	5722	5591	5460	5329	5199	03
97	5199	5068	4937	4806	4676	4545	4415	4284	4154	4023	3893	02
98	3893	3762	3632	3502	3371	3241	3111	2981	2851	2721	2590	01
99	2590	2460	2330	2201	2071	1941	1811	1681	1551	1422	1292	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	129	**130**	**131**	**132**	**133**	**134**	**135**	**136**	**137**	**138**	**139**	**140**	
1	12.9	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	14.0	1
2	25.8	26.0	26.2	26.4	26.6	26.8	27.0	27.2	27.4	27.6	27.8	28.0	2
3	38.7	39.0	39.3	39.6	39.9	40.2	40.5	40.8	41.1	41.4	41.7	42.0	3
4	51.6	52.0	52.4	52.8	53.2	53.6	54.0	54.4	54.8	55.2	55.6	56.0	4
5	64.5	65.0	65.5	66.0	66.5	67.0	67.5	68.0	68.5	69.0	69.5	70.0	5
6	77.4	78.0	78.6	79.2	79.8	80.4	81.0	81.6	82.2	82.8	83.4	84.0	6
7	90.3	91.0	91.7	92.4	93.1	93.8	94.5	95.2	95.9	96.6	97.3	98.0	7
8	103.2	104.0	104.8	105.6	106.4	107.2	108.0	108.8	109.6	110.4	111.2	112.0	8
9	116.1	117.0	117.9	118.8	119.7	120.6	121.5	122.4	123.3	124.2	125.1	126.0	9

sec 93^g

cotg 6^{g}

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	9.7 6009	5858	5707	5556	5405	5254	5103	4952	4801	4650	4500	49
51	4500	4349	4198	4048	3897	3746	3596	3445	3295	3145	2994	48
52	2994	2844	2694	2544	2394	2244	2094	1944	1794	1644	1494	47
53	9.7 1494	1344	1194	1045	0895	0745	0596	0446	0297	0147	*9998	46
54	9.6 9998	9849	9699	9550	9401	9252	9103	8954	8805	8656	8507	45
55	9.6 8507	8358	8209	8060	7911	7763	7614	7465	7317	7168	7020	44
56	7020	6871	6723	6575	6426	6278	6130	5982	5833	5685	5537	43
57	5537	5389	5241	5094	4946	4798	4650	4502	4355	4207	4060	42
58	4060	3912	3764	3617	3470	3322	3175	3028	2880	2733	2586	41
59	2586	2439	2292	2145	1998	1851	1704	1557	1411	1264	1117	**40**
60	9.6 1117	0971	0824	0677	0531	0384	0238	0092	*9945	*9799	*9653	39
61	9.5 9653	9506	9360	9214	9068	8922	8776	8630	8484	8338	8193	38
62	8193	8047	7901	7755	7610	7464	7319	7173	7028	6882	6737	37
63	6737	6592	6446	6301	6156	6011	5866	5720	5575	5430	5285	36
64	5285	5141	4996	4851	4706	4561	4417	4272	4128	3983	3838	35
65	9.5 3838	3694	3550	3405	3261	3117	2972	2828	2684	2540	2396	34
66	2396	2252	2108	1964	1820	1676	1532	1389	1245	1101	0957	33
67	9.5 0957	0814	0670	0527	0383	0240	0097	*9953	*9810	*9667	*9523	32
68	9.4 9523	9380	9237	9094	8951	8808	8665	8522	8379	8236	8094	31
69	8094	7951	7808	7665	7523	7380	7238	7095	6953	6810	6668	**30**
70	9.4 6668	6526	6383	6241	6099	5957	5815	5673	5531	5389	5247	29
71	5247	5105	4963	4821	4679	4538	4396	4254	4113	3971	3830	28
72	3830	3688	3547	3405	3264	3123	2981	2840	2699	2558	2417	27
73	2417	2276	2135	1994	1853	1712	1571	1430	1289	1149	1008	26
74	9.4 1008	0867	0727	0586	0446	0305	0165	0024	*9884	*9744	*9603	25
75	9.3 9603	9463	9323	9183	9043	8903	8763	8623	8483	8343	8203	24
76	8203	8063	7923	7784	7644	7504	7365	7225	7086	6946	6807	23
77	6807	6667	6528	6389	6249	6110	5971	5832	5693	5554	5415	22
78	5415	5276	5137	4998	4859	4720	4581	4442	4304	4165	4026	21
79	4026	3888	3749	3611	3472	3334	3195	3057	2919	2781	2642	**20**
80	9.3 2642	2504	2366	2228	2090	1952	1814	1676	1538	1400	1262	19
81	9.3 1262	1125	0987	0849	0711	0574	0436	0299	0161	0024	*9886	18
82	9.2 9886	9749	9612	9474	9337	9200	9063	8926	8789	8651	8514	17
83	8514	8377	8241	8104	7967	7830	7693	7556	7420	7283	7146	16
84	7146	7010	6873	6737	6600	6464	6328	6191	6055	5919	5783	15
85	9.2 5783	5646	5510	5374	5238	5102	4966	4830	4694	4558	4422	14
86	4422	4287	4151	4015	3880	3744	3608	3473	3337	3202	3066	13
87	3066	2931	2796	2660	2525	2390	2255	2120	1984	1849	1714	12
88	1714	1579	1444	1309	1175	1040	0905	0770	0635	0501	0366	11
89	9.2 0366	0231	0097	*9962	*9828	*9693	*9559	*9425	*9290	*9156	*9022	**10**
90	9.1 9022	8887	8753	8619	8485	8351	8217	8083	7949	7815	7681	09
91	7681	7547	7414	7280	7146	7012	6879	6745	6612	6478	6345	08
92	6345	6211	6078	5944	5811	5678	5544	5411	5278	5145	5012	07
93	5012	4879	4746	4613	4480	4347	4214	4081	3948	3816	3683	06
94	3683	3550	3418	3285	3152	3020	2887	2755	2622	2490	2358	05
95	9.1 2358	2225	2093	1961	1829	1697	1565	1432	1300	1168	1036	04
96	9.1 1036	0905	0773	0641	0509	0377	0245	0114	*9982	*9850	*9719	03
97	9.0 9719	9587	9456	9324	9193	9061	8930	8799	8668	8536	8405	02
98	8405	8274	8143	8012	7881	7750	7619	7488	7357	7226	7095	01
99	7095	6964	6833	6703	6572	6441	6311	6180	6050	5919	5789	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	141	**142**	**143**	**144**	**145**	**146**	**147**	**148**	**149**	**150**	**151**	
1	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	15.0	15.1	1
2	28.2	28.4	28.6	28.8	29.0	29.2	29.4	29.6	29.8	30.0	30.2	2
3	42.3	42.6	42.9	43.2	43.5	43.8	44.1	44.4	44.7	45.0	45.3	3
4	56.4	56.8	57.2	57.6	58.0	58.4	58.8	59.2	59.6	60.0	60.4	4
5	70.5	71.0	71.5	72.0	72.5	73.0	73.5	74.0	74.5	75.0	75.5	5
6	84.6	85.2	85.8	86.4	87.0	87.6	88.2	88.8	89.4	90.0	90.6	6
7	98.7	99.4	100.1	100.8	101.5	102.2	102.9	103.6	104.3	105.0	105.7	7
8	112.8	113.6	114.4	115.2	116.0	116.8	117.6	118.4	119.2	120.0	120.8	8
9	126.9	127.8	128.7	129.6	130.5	131.4	132.3	133.2	134.1	135.0	135.9	9

tang 93^{g}

cosec 7^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	9.1 1292	1162	1033	0903	0774	0644	0515	0385	0256	0127	*9997	99
01	9.0 9997	9868	9739	9610	9480	9351	9222	9093	8964	8835	8706	98
02	8706	8577	8448	8320	8191	8062	7933	7805	7676	7547	7419	97
03	7419	7290	7162	7033	6905	6777	6648	6520	6392	6263	6135	96
04	6135	6007	5879	5751	5623	5495	5367	5239	5111	4983	4855	95
05	9.0 4855	4727	4600	4472	4344	4216	4089	3961	3834	3706	3579	94
06	3579	3451	3324	3196	3069	2942	2815	2687	2560	2433	2306	93
07	2306	2179	2052	1925	1798	1671	1544	1417	1290	1163	1037	92
08	9.0 1037	0910	0783	0657	0530	0403	0277	0150	0024	*9897	*9771	91
09	8.9 9771	9645	9518	9392	9266	9140	9013	8887	8761	8635	8509	**90**
10	8.9 8509	8383	8257	8131	8005	7879	7754	7628	7502	7376	7251	89
11	7251	7125	6999	6874	6748	6623	6497	6372	6246	6121	5996	88
12	5996	5870	5745	5620	5495	5369	5244	5119	4994	4869	4744	87
13	4744	4619	4494	4369	4245	4120	3995	3870	3746	3621	3496	86
14	3496	3372	3247	3123	2998	2874	2749	2625	2501	2376	2252	85
15	8.9 2252	2128	2003	1879	1755	1631	1507	1383	1259	1135	1011	84
16	8.9 1011	0887	0763	0639	0516	0392	0268	0144	0021	*9897	*9774	83
17	8.8 9774	9650	9526	9403	9280	9156	9033	8909	8786	8663	8540	82
18	8540	8416	8293	8170	8047	7924	7801	7678	7555	7432	7309	81
19	7309	7186	7063	6941	6818	6695	6572	6450	6327	6204	6082	**80**
20	8.8 6082	5959	5837	5714	5592	5470	5347	5225	5103	4980	4858	79
21	4858	4736	4614	4492	4370	4248	4126	4004	3882	3760	3638	78
22	3638	3516	3394	3272	3151	3029	2907	2786	2664	2542	2421	77
23	2421	2299	2178	2057	1935	1814	1692	1571	1450	1329	1207	76
24	8.8 1207	1086	0965	0844	0723	0602	0481	0360	0239	0118	*9997	75
25	8.7 9997	9876	9756	9635	9514	9393	9273	9152	9031	8911	8790	74
26	8790	8670	8549	8429	8308	8188	8068	7947	7827	7707	7587	73
27	7587	7467	7346	7226	7106	6986	6866	6746	6626	6506	6387	72
28	6387	6267	6147	6027	5907	5788	5668	5548	5429	5309	5190	71
29	5190	5070	4951	4831	4712	4592	4473	4354	4234	4115	3996	**70**
30	8.7 3996	3877	3758	3638	3519	3400	3281	3162	3043	2924	2806	69
31	2806	2687	2568	2449	2330	2212	2093	1974	1856	1737	1618	68
32	1618	1500	1381	1263	1145	1026	0908	0789	0671	0553	0435	67
33	8.7 0435	0316	0198	0080	*9962	*9844	*9726	*9608	*9490	*9372	*9254	66
34	8.6 9254	9136	9018	8900	8783	8665	8547	8429	8312	8194	8077	65
35	8.6 8077	7959	7841	7724	7607	7489	7372	7254	7137	7020	6902	64
36	6902	6785	6668	6551	6434	6316	6199	6082	5965	5848	5731	63
37	5731	5614	5498	5381	5264	5147	5030	4914	4797	4680	4564	62
38	4564	4447	4330	4214	4097	3981	3864	3748	3632	3515	3399	61
39	3399	3283	3166	3050	2934	2818	2702	2585	2469	2353	2237	**60**
40	8.6 2237	2121	2005	1890	1774	1658	1542	1426	1310	1195	1079	59
41	8.6 1079	0963	0848	0732	0617	0501	0385	0270	0155	0039	*9924	58
42	8.5 9924	9808	9693	9578	9463	9347	9232	9117	9002	8887	8772	57
43	8772	8657	8542	8427	8312	8197	8082	7967	7852	7737	7623	56
44	7623	7508	7393	7279	7164	7049	6935	6820	6706	6591	6477	55
45	8.5 6477	6362	6248	6134	6019	5905	5791	5676	5562	5448	5334	54
46	5334	5220	5106	4992	4878	4764	4650	4536	4422	4308	4194	53
47	4194	4080	3967	3853	3739	3625	3512	3398	3284	3171	3057	52
48	3057	2944	2830	2717	2604	2490	2377	2263	2150	2037	1924	51
49	1924	1810	1697	1584	1471	1358	1245	1132	1019	0906	0793	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	113	**114**	**115**	**116**	**117**	**118**	**119**	**120**	**121**	**122**	
1	11.3	11.4	11.5	11.6	11.7	11.8	11.9	12.0	12.1	12.2	1
2	22.6	22.8	23.0	23.2	23.4	23.6	23.8	24.0	24.2	24.4	2
3	33.9	34.2	34.5	34.8	35.1	35.4	35.7	36.0	36.3	36.6	3
4	45.2	45.6	46.0	46.4	46.8	47.2	47.6	48.0	48.4	48.8	4
5	56.5	57.0	57.5	58.0	58.5	59.0	59.5	60.0	60.5	61.0	5
6	67.8	68.4	69.0	69.6	70.2	70.8	71.4	72.0	72.6	73.2	6
7	79.1	79.8	80.5	81.2	81.9	82.6	83.3	84.0	84.7	85.4	7
8	90.4	91.2	92.0	92.8	93.6	94.4	95.2	96.0	96.8	97.6	8
9	101.7	102.6	103.5	104.4	105.3	106.2	107.1	108.0	108.9	109.8	9

sec 92^g

cotg 7^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	9.0 5789	5658	5528	5397	5267	5137	5007	4876	4746	4616	4486	99
01	4486	4356	4226	4096	3966	3836	3706	3576	3447	3317	3187	98
02	3187	3057	2928	2798	2669	2539	2410	2280	2151	2021	1892	97
03	1892	1763	1633	1504	1375	1246	1116	0987	0858	0729	0600	96
04	9.0 0600	0471	0342	0214	0085	*9956	*9827	*9698	*9570	*9441	*9312	95
05	8.9 9312	9184	9055	8927	8798	8670	8541	8413	8285	8156	8028	94
06	8028	7900	7772	7643	7515	7387	7259	7131	7003	6875	6747	93
07	6747	6620	6492	6364	6236	6108	5981	5853	5725	5598	5470	92
08	5470	5343	5215	5088	4961	4833	4706	4579	4451	4324	4197	91
09	4197	4070	3943	3815	3688	3561	3434	3308	3181	3054	2927	**90**
10	8.9 2927	2800	2673	2547	2420	2293	2167	2040	1914	1787	1661	89
11	1661	1534	1408	1281	1155	1029	0902	0776	0650	0524	0398	88
12	8.9 0398	0272	0146	0020	*9894	*9768	*9642	*9516	*9390	*9264	*9138	87
13	8.8 9138	9013	8887	8761	8636	8510	8385	8259	8134	8008	7883	86
14	7883	7757	7632	7507	7381	7256	7131	7006	6881	6755	6630	85
15	8.8 6630	6505	6380	6255	6130	6006	5881	5756	5631	5506	5382	84
16	5382	5257	5132	5008	4883	4759	4634	4510	4385	4261	4136	83
17	4136	4012	3888	3763	3639	3515	3391	3267	3143	3018	2894	82
18	2894	2770	2646	2523	2399	2275	2151	2027	1903	1780	1656	81
19	1656	1532	1409	1285	1162	1038	0915	0791	0668	0544	0421	**80**
20	8.8 0421	0298	0174	0051	*9928	*9805	*9682	*9559	*9435	*9312	*9189	79
21	8.7 9189	9066	8943	8821	8698	8575	8452	8329	8207	8084	7961	78
22	7961	7839	7716	7593	7471	7348	7226	7103	6981	6859	6736	77
23	6736	6614	6492	6370	6247	6125	6003	5881	5759	5637	5515	76
24	5515	5393	5271	5149	5027	4905	4784	4662	4540	4419	4297	75
25	8.7 4297	4175	4054	3932	3811	3689	3568	3446	3325	3203	3082	74
26	3082	2961	2840	2718	2597	2476	2355	2234	2113	1992	1871	73
27	1871	1750	1629	1508	1387	1266	1145	1025	0904	0783	0663	72
28	8.7 0663	0542	0421	0301	0180	0060	*9939	*9819	*9698	*9578	*9458	71
29	8.6 9458	9337	9217	9097	8977	8857	8736	8616	8496	8376	8256	**70**
30	8.6 8256	8136	8016	7896	7777	7657	7537	7417	7297	7178	7058	69
31	7058	6938	6819	6699	6580	6460	6341	6221	6102	5982	5863	68
32	5863	5744	5624	5505	5386	5267	5148	5028	4909	4790	4671	67
33	4671	4552	4433	4314	4195	4077	3958	3839	3720	3601	3483	66
34	3483	3364	3245	3127	3008	2890	2771	2653	2534	2416	2297	65
35	8.6 2297	2179	2061	1943	1824	1706	1588	1470	1352	1233	1115	64
36	8.6 1115	0997	0879	0761	0643	0526	0408	0290	0172	0054	*9937	63
37	8.5 9937	9819	9701	9583	9466	9348	9231	9113	8996	8878	8761	62
38	8761	8643	8526	8409	8291	8174	8057	7940	7823	7705	7588	61
39	7588	7471	7354	7237	7120	7003	6886	6769	6652	6536	6419	**60**
40	8.5 6419	6302	6185	6069	5952	5835	5719	5602	5486	5369	5253	59
41	5253	5136	5020	4903	4787	4671	4554	4438	4322	4206	4090	58
42	4090	3973	3857	3741	3625	3509	3393	3277	3161	3045	2930	57
43	2930	2814	2698	2582	2466	2351	2235	2119	2004	1888	1773	56
44	1773	1657	1542	1426	1311	1195	1080	0965	0849	0734	0619	55
45	8.5 0619	0504	0388	0273	0158	0043	*9928	*9813	*9698	*9583	*9468	54
46	8.4 9468	9353	9238	9123	9009	8894	8779	8664	8550	8435	8320	53
47	8320	8206	8091	7977	7862	7748	7633	7519	7405	7290	7176	52
48	7176	7062	6947	6833	6719	6605	6491	6376	6262	6148	6034	51
49	6034	5920	5806	5692	5578	5465	5351	5237	5123	5009	4896	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	123	**124**	**125**	**126**	**127**	**128**	**129**	**130**	**131**	
1	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	1
2	24.6	24.8	25.0	25.2	25.4	25.6	25.8	26.0	26.2	2
3	36.9	37.2	37.5	37.8	38.1	38.4	38.7	39.0	39.3	3
4	49.2	49.6	50.0	50.4	50.8	51.2	51.6	52.0	52.4	4
5	61.5	62.0	62.5	63.0	63.5	64.0	64.5	65.0	65.5	5
6	73.8	74.4	75.0	75.6	76.2	76.8	77.4	78.0	78.6	6
7	86.1	86.8	87.5	88.2	88.9	89.6	90.3	91.0	91.7	7
8	98.4	99.2	100.0	100.8	101.6	102.4	103.2	104.0	104.8	8
9	110.7	111.6	112.5	113.4	114.3	115.2	116.1	117.0	117.9	9

tang 92^g

cosec 7^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	8.5 0793	0680	0567	0454	0342	0229	0116	0003	*9891	*9778	*9665	49
51	8.4 9665	9553	9440	9328	9215	9103	8990	8878	8765	8653	8541	48
52	8541	8428	8316	8204	8092	7980	7867	7755	7643	7531	7419	47
53	7419	7307	7195	7083	6971	6859	6748	6636	6524	6412	6301	46
54	6301	6189	6077	5965	5854	5742	5631	5519	5408	5296	5185	45
55	8.4 5185	5073	4962	4851	4739	4628	4517	4406	4294	4183	4072	44
56	4072	3961	3850	3739	3628	3517	3406	3295	3184	3073	2962	43
57	2962	2852	2741	2630	2519	2409	2298	2187	2077	1966	1856	42
58	1856	1745	1634	1524	1414	1303	1193	1082	0972	0862	0752	41
59	8.4 0752	0641	0531	0421	0311	0201	0091	*9981	*9871	*9761	*9651	**40**
60	8.3 9651	9541	9431	9321	9211	9101	8991	8882	8772	8662	8552	39
61	8552	8443	8333	8224	8114	8005	7895	7786	7676	7567	7457	38
62	7457	7348	7239	7129	7020	6911	6802	6692	6583	6474	6365	37
63	6365	6256	6147	6038	5929	5820	5711	5602	5493	5384	5275	36
64	5275	5167	5058	4949	4840	4732	4623	4515	4406	4297	4189	35
65	8.3 4189	4080	3972	3863	3755	3647	3538	3430	3322	3213	3105	34
66	3105	2997	2889	2781	2672	2564	2456	2348	2240	2132	2024	33
67	2024	1916	1808	1700	1593	1485	1377	1269	1161	1054	0946	32
68	8.3 0946	0838	0731	0623	0516	0408	0301	0193	0086	*9978	*9871	31
69	8.2 9871	9763	9656	9549	9441	9334	9227	9120	9013	8905	8798	**30**
70	8.2 8798	8691	8584	8477	8370	8263	8156	8049	7942	7835	7729	29
71	7729	7622	7515	7408	7301	7195	7088	6981	6875	6768	6662	28
72	6662	6555	6449	6342	6236	6129	6023	5916	5810	5704	5597	27
73	5597	5491	5385	5279	5173	5066	4960	4854	4748	4642	4536	26
74	4536	4430	4324	4218	4112	4006	3900	3795	3689	3583	3477	25
75	8.2 3477	3372	3266	3160	3055	2949	2843	2738	2632	2527	2421	24
76	2421	2316	2211	2105	2000	1894	1789	1684	1579	1473	1368	23
77	1368	1263	1158	1053	0948	0843	0738	0633	0528	0423	0318	22
78	8.2 0318	0213	0108	0003	*9898	*9793	*9689	*9584	*9479	*9375	*9270	21
79	8.1 9270	9165	9061	8956	8852	8747	8643	8538	8434	8329	8225	**20**
80	8.1 8225	8120	8016	7912	7808	7703	7599	7495	7391	7287	7182	19
81	7182	7078	6974	6870	6766	6662	6558	6454	6350	6247	6143	18
82	6143	6039	5935	5831	5728	5624	5520	5416	5313	5209	5106	17
83	5106	5002	4898	4795	4691	4588	4485	4381	4278	4174	4071	16
84	4071	3968	3865	3761	3658	3555	3452	3349	3246	3142	3039	15
85	8.1 3039	2936	2833	2730	2627	2524	2422	2319	2216	2113	2010	14
86	2010	1907	1805	1702	1599	1497	1394	1291	1189	1086	0984	13
87	8.1 0984	0881	0779	0676	0574	0471	0369	0267	0164	0062	*9960	12
88	8.0 9960	9858	9755	9653	9551	9449	9347	9245	9143	9040	8938	11
89	8938	8836	8735	8633	8531	8429	8327	8225	8123	8022	7920	**10**
90	8.0 7920	7818	7716	7615	7513	7411	7310	7208	7107	7005	6904	09
91	6904	6802	6701	6599	6498	6397	6295	6194	6093	5991	5890	08
92	5890	5789	5688	5586	5485	5384	5283	5182	5081	4980	4879	07
93	4879	4778	4677	4576	4475	4374	4274	4173	4072	3971	3871	06
94	3871	3770	3669	3569	3468	3367	3267	3166	3066	2965	2865	05
95	8.0 2865	2764	2664	2563	2463	2363	2262	2162	2062	1962	1861	04
96	1861	1761	1661	1561	1461	1361	1261	1160	1060	0960	0860	03
97	8.0 0860	0761	0661	0561	0461	0361	0261	0161	0062	*9962	*9862	02
98	7.9 9862	9762	9663	9563	9464	9364	9264	9165	9065	8966	8866	01
99	8866	8767	8667	8568	8469	8369	8270	8171	8071	7972	7873	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	99	**100**	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**	**112**	**113**	
1	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	1
2	19.8	20.0	20.2	20.4	20.6	20.8	21.0	21.2	21.4	21.6	21.8	22.0	22.2	22.4	22.6	2
3	29.7	30.0	30.3	30.6	30.9	31.2	31.5	31.8	32.1	32.4	32.7	33.0	33.3	33.6	33.9	3
4	39.6	40.0	40.4	40.8	41.2	41.6	42.0	42.4	42.8	43.2	43.6	44.0	44.4	44.8	45.2	4
5	49.5	50.0	50.5	51.0	51.5	52.0	52.5	53.0	53.5	54.0	54.5	55.0	55.5	56.0	56.5	5
6	59.4	60.0	60.6	61.2	61.8	62.4	63.0	63.6	64.2	64.8	65.4	66.0	66.6	67.2	67.8	6
7	69.3	70.0	70.7	71.4	72.1	72.8	73.5	74.2	74.9	75.6	76.3	77.0	77.7	78.4	79.1	7
8	79.2	80.0	80.8	81.6	82.4	83.2	84.0	84.8	85.6	86.4	87.2	88.0	88.8	89.6	90.4	8
9	89.1	90.0	90.9	91.8	92.7	93.6	94.5	95.4	96.3	97.2	98.1	99.0	99.9	100.8	101.7	9

sec 92^g

cotg 7^{g}

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	8.4 4896	4782	4668	4555	4441	4328	4214	4101	3987	3874	3760	49
51	3760	3647	3533	3420	3307	3194	3080	2967	2854	2741	2628	48
52	2628	2515	2402	2289	2176	2063	1950	1837	1724	1611	1498	47
53	1498	1385	1273	1160	1047	0935	0822	0709	0597	0484	0372	46
54	8.4 0372	0259	0147	0034	*9922	*9810	*9697	*9585	*9473	*9360	*9248	45
55	8.3 9248	9136	9024	8912	8800	8687	8575	8463	8351	8239	8128	44
56	8128	8016	7904	7792	7680	7568	7457	7345	7233	7121	7010	43
57	7010	6898	6787	6675	6564	6452	6341	6229	6118	6006	5895	42
58	5895	5784	5673	5561	5450	5339	5228	5117	5005	4894	4783	41
59	4783	4672	4561	4450	4339	4229	4118	4007	3896	3785	3674	**40**
60	8.3 3674	3564	3453	3342	3232	3121	3011	2900	2789	2679	2568	39
61	2568	2458	2348	2237	2127	2017	1906	1796	1686	1576	1465	38
62	1465	1355	1245	1135	1025	0915	0805	0695	0585	0475	0365	37
63	8.3 0365	0255	0145	0036	*9926	*9816	*9706	*9597	*9487	*9377	*9268	36
64	8.2 9268	9158	9049	8939	8830	8720	8611	8501	8392	8283	8173	35
65	8.2 8173	8064	7955	7846	7736	7627	7518	7409	7300	7191	7082	34
66	7082	6973	6864	6755	6646	6537	6428	6319	6210	6102	5993	33
67	5993	5884	5775	5667	5558	5449	5341	5232	5124	5015	4907	32
68	4907	4798	4690	4582	4473	4365	4257	4148	4040	3932	3824	31
69	3824	3715	3607	3499	3391	3283	3175	3067	2959	2851	2743	**30**
70	8.2 2743	2635	2528	2420	2312	2204	2096	1989	1881	1773	1666	29
71	1666	1558	1450	1343	1235	1128	1020	0913	0806	0698	0591	28
72	8.2 0591	0484	0376	0269	0162	0054	*9947	*9840	*9733	*9626	*9519	27
73	8.1 9519	9412	9305	9198	9091	8984	8877	8770	8663	8556	8450	26
74	8450	8343	8236	8129	8023	7916	7809	7703	7596	7489	7383	25
75	8.1 7383	7276	7170	7064	6957	6851	6744	6638	6532	6425	6319	24
76	6319	6213	6107	6001	5894	5788	5682	5576	5470	5364	5258	23
77	5258	5152	5046	4940	4834	4729	4623	4517	4411	4305	4200	22
78	4200	4094	3988	3883	3777	3672	3566	3460	3355	3249	3144	21
79	3144	3039	2933	2828	2722	2617	2512	2407	2301	2196	2091	**20**
80	8.1 2091	1986	1881	1776	1671	1566	1461	1356	1251	1146	1041	19
81	8.1 1041	0936	0831	0726	0621	0517	0412	0307	0202	0098	*9993	18
82	8.0 9993	9888	9784	9679	9575	9470	9366	9261	9157	9053	8948	17
83	8948	8844	8739	8635	8531	8427	8322	8218	8114	8010	7906	16
84	7906	7802	7698	7594	7490	7386	7282	7178	7074	6970	6866	15
85	8.0 6866	6762	6659	6555	6451	6347	6244	6140	6036	5933	5829	14
86	5829	5726	5622	5519	5415	5312	5208	5105	5001	4898	4795	13
87	4795	4691	4588	4485	4382	4279	4175	4072	3969	3866	3763	12
88	3763	3660	3557	3454	3351	3248	3145	3042	2939	2837	2734	11
89	2734	2631	2528	2425	2323	2220	2117	2015	1912	1810	1707	**10**
90	8.0 1707	1605	1502	1400	1297	1195	1092	0990	0888	0785	0683	09
91	8.0 0683	0581	0479	0376	0274	0172	0070	*9968	*9866	*9764	*9662	08
92	7.9 9662	9560	9458	9356	9254	9152	9050	8948	8846	8745	8643	07
93	8643	8541	8439	8338	8236	8134	8033	7931	7829	7728	7626	06
94	7626	7525	7423	7322	7221	7119	7018	6917	6815	6714	6613	05
95	7.9 6613	6511	6410	6309	6208	6107	6006	5904	5803	5702	5601	04
96	5601	5500	5399	5299	5198	5097	4996	4895	4794	4693	4593	03
97	4593	4492	4391	4291	4190	4089	3989	3888	3787	3687	3586	02
98	3586	3486	3385	3285	3185	3084	2984	2884	2783	2683	2583	01
99	2583	2482	2382	2282	2182	2082	1982	1882	1782	1682	1582	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	100	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**	**112**	**113**	**114**	
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	1
2	20.0	20.2	20.4	20.6	20.8	21.0	21.2	21.4	21.6	21.8	22.0	22.2	22.4	22.6	22.8	2
3	30.0	30.3	30.6	30.9	31.2	31.5	31.8	32.1	32.4	32.7	33.0	33.3	33.6	33.9	34.2	3
4	40.0	40.4	40.8	41.2	41.6	42.0	42.4	42.8	43.2	43.6	44.0	44.4	44.8	45.2	45.6	4
5	50.0	50.5	51.0	51.5	52.0	52.5	53.0	53.5	54.0	54.5	55.0	55.5	56.0	56.5	57.0	5
6	60.0	60.6	61.2	61.8	62.4	63.0	63.6	64.2	64.8	65.4	66.0	66.6	67.2	67.8	68.4	6
7	70.0	70.7	71.4	72.1	72.8	73.5	74.2	74.9	75.6	76.3	77.0	77.7	78.4	79.1	79.8	7
8	80.0	80.8	81.6	82.4	83.2	84.0	84.8	85.6	86.4	87.2	88.0	88.8	89.6	90.4	91.2	8
9	90.0	90.9	91.8	92.7	93.6	94.5	95.4	96.3	97.2	98.1	99.0	99.9	100.8	101.7	102.6	9

tang 92^{g}

cosec 8^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	7.9 7873	7774	7675	7575	7476	7377	7278	7179	7080	6981	6882	99
01	6882	6783	6684	6585	6486	6388	6289	6190	6091	5992	5894	98
02	5894	5795	5696	5598	5499	5401	5302	5203	5105	5006	4908	97
03	4908	4809	4711	4613	4514	4416	4318	4219	4121	4023	3924	96
04	3924	3826	3728	3630	3532	3434	3336	3237	3139	3041	2943	95
05	7.9 2943	2845	2748	2650	2552	2454	2356	2258	2160	2063	1965	94
06	1965	1867	1769	1672	1574	1477	1379	1281	1184	1086	0989	93
07	0989	0891	0794	0696	0599	0502	0404	0307	0210	0112	0015	92
08	7.9 0015	*9918	*9821	*9723	*9626	*9529	*9432	*9335	*9238	*9141	*9044	91
09	7.8 9044	8947	8850	8753	8656	8559	8462	8365	8269	8172	8075	**90**
10	7.8 8075	7978	7881	7785	7688	7591	7495	7398	7302	7205	7108	89
11	7108	7012	6915	6819	6723	6626	6530	6433	6337	6241	6144	88
12	6144	6048	5952	5856	5759	5663	5567	5471	5375	5279	5183	87
13	5183	5087	4991	4895	4799	4703	4607	4511	4415	4319	4223	86
14	4223	4127	4032	3936	3840	3745	3649	3553	3458	3362	3266	85
15	7.8 3266	3171	3075	2980	2884	2789	2693	2598	2502	2407	2312	84
16	2312	2216	2121	2026	1930	1835	1740	1645	1550	1455	1359	83
17	1359	1264	1169	1074	0979	0884	0789	0694	0599	0504	0409	82
18	7.8 0409	0315	0220	0125	0030	*9935	*9841	*9746	*9651	*9556	*9462	81
19	7.7 9462	9367	9273	9178	9083	8989	8894	8800	8705	8611	8516	**80**
20	7.7 8516	8422	8328	8233	8139	8045	7950	7856	7762	7668	7573	79
21	7573	7479	7385	7291	7197	7103	7009	6915	6821	6727	6633	78
22	6633	6539	6445	6351	6257	6163	6069	5976	5882	5788	5694	77
23	5694	5601	5507	5413	5320	5226	5132	5039	4945	4852	4758	76
24	4758	4665	4571	4478	4384	4291	4198	4104	4011	3918	3824	75
25	7.7 3824	3731	3638	3545	3452	3358	3265	3172	3079	2986	2893	74
26	2893	2800	2707	2614	2521	2428	2335	2242	2149	2056	1964	73
27	1964	1871	1778	1685	1592	1500	1407	1314	1222	1129	1036	72
28	1036	0944	0851	0759	0666	0574	0481	0389	0296	0204	0112	71
29	7.7 0112	0019	*9927	*9835	*9742	*9650	*9558	*9466	*9373	*9281	*9189	**70**
30	7.6 9189	9097	9005	8913	8821	8729	8637	8545	8453	8361	8269	69
31	8269	8177	8085	7993	7901	7809	7718	7626	7534	7442	7351	68
32	7351	7259	7167	7076	6984	6892	6801	6709	6618	6526	6435	67
33	6435	6343	6252	6160	6069	5977	5886	5795	5703	5612	5521	66
34	5521	5430	5338	5247	5156	5065	4974	4883	4791	4700	4609	65
35	7.6 4609	4518	4427	4336	4245	4154	4063	3973	3882	3791	3700	64
36	3700	3609	3518	3428	3337	3246	3155	3065	2974	2883	2793	63
37	2793	2702	2612	2521	2431	2340	2250	2159	2069	1978	1888	62
38	1888	1797	1707	1617	1526	1436	1346	1256	1165	1075	0985	61
39	0985	0895	0805	0715	0624	0534	0444	0354	0264	0174	0084	**60**
40	7.6 0084	*9994	*9904	*9814	*9725	*9635	*9545	*9455	*9365	*9275	*9186	59
41	7.5 9186	9096	9006	8917	8827	8737	8648	8558	8468	8379	8289	58
42	8289	8200	8110	8021	7931	7842	7753	7663	7574	7484	7395	57
43	7395	7306	7216	7127	7038	6949	6860	6770	6681	6592	6503	56
44	6503	6414	6325	6236	6147	6058	5969	5880	5791	5702	5613	55
45	7.5 5613	5524	5435	5346	5258	5169	5080	4991	4902	4814	4725	54
46	4725	4636	4548	4459	4370	4282	4193	4105	4016	3928	3839	53
47	3839	3751	3662	3574	3485	3397	3309	3220	3132	3044	2956	52
48	2956	2867	2779	2691	2603	2514	2426	2338	2250	2162	2074	51
49	2074	1986	1898	1810	1722	1634	1546	1458	1370	1282	1194	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	88	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**	
1	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	1
2	17.6	17.8	18.0	18.2	18.4	18.6	18.8	19.0	19.2	19.4	19.6	19.8	20.0	2
3	26.4	26.7	27.0	27.3	27.6	27.9	28.2	28.5	28.8	29.1	29.4	29.7	30.0	3
4	35.2	35.6	36.0	36.4	36.8	37.2	37.6	38.0	38.4	38.8	39.2	39.6	40.0	4
5	44.0	44.5	45.0	45.5	46.0	46.5	47.0	47.5	48.0	48.5	49.0	49.5	50.0	5
6	52.8	53.4	54.0	54.6	55.2	55.8	56.4	57.0	57.6	58.2	58.8	59.4	60.0	6
7	61.6	62.3	63.0	63.7	64.4	65.1	65.8	66.5	67.2	67.9	68.6	69.3	70.0	7
8	70.4	71.2	72.0	72.8	73.6	74.4	75.2	76.0	76.8	77.6	78.4	79.2	80.0	8
9	79.2	80.1	81.0	81.9	82.8	83.7	84.6	85.5	86.4	87.3	88.2	89.1	90.0	9

sec 91^g

cotg 8^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	7.9 1582	1482	1382	1282	1182	1082	0982	0882	0782	0683	0583	99
01	7.9 0583	0483	0383	0284	0184	0084	*9985	*9885	*9786	*9686	*9587	98
02	7.8 9587	9487	9388	9288	9189	9089	8990	8891	8791	8692	8593	97
03	8593	8494	8394	8295	8196	8097	7998	7899	7799	7700	7601	96
04	7601	7502	7403	7305	7206	7107	7008	6909	6810	6711	6613	95
05	7.8 6613	6514	6415	6316	6218	6119	6020	5922	5823	5725	5626	94
06	5626	5528	5429	5331	5232	5134	5035	4937	4839	4740	4642	93
07	4642	4544	4446	4347	4249	4151	4053	3955	3857	3759	3661	92
08	3661	3563	3465	3367	3269	3171	3073	2975	2877	2779	2681	91
09	2681	2584	2486	2388	2290	2193	2095	1997	1900	1802	1705	**90**
10	7.8 1705	1607	1510	1412	1315	1217	1120	1022	0925	0828	0730	89
11	7.8 0730	0633	0536	0438	0341	0244	0147	0050	*9952	*9855	*9758	88
12	7.7 9758	9661	9564	9467	9370	9273	9176	9079	8982	8886	8789	87
13	8789	8692	8595	8498	8401	8305	8208	8111	8015	7918	7821	86
14	7821	7725	7628	7532	7435	7339	7242	7146	7049	6953	6857	85
15	7.7 6857	6760	6664	6568	6471	6375	6279	6183	6086	5990	5894	84
16	5894	5798	5702	5606	5510	5414	5318	5222	5126	5030	4934	83
17	4934	4838	4742	4646	4550	4455	4359	4263	4167	4072	3976	82
18	3976	3880	3785	3689	3594	3498	3402	3307	3211	3116	3021	81
19	3021	2925	2830	2734	2639	2544	2448	2353	2258	2163	2067	**80**
20	7.7 2067	1972	1877	1782	1687	1592	1497	1401	1306	1211	1116	79
21	1116	1021	0927	0832	0737	0642	0547	0452	0357	0263	0168	78
22	7.7 0168	0073	*9978	*9884	*9789	*9694	*9600	*9505	*9411	*9316	*9222	77
23	7.6 9222	9127	9033	8938	8844	8749	8655	8560	8466	8372	8278	76
24	8278	8183	8089	7995	7901	7806	7712	7618	7524	7430	7336	75
25	7.6 7336	7242	7148	7054	6960	6866	6772	6678	6584	6490	6396	74
26	6396	6303	6209	6115	6021	5927	5834	5740	5646	5553	5459	73
27	5459	5366	5272	5178	5085	4991	4898	4804	4711	4618	4524	72
28	4524	4431	4337	4244	4151	4058	3964	3871	3778	3685	3591	71
29	3591	3498	3405	3312	3219	3126	3033	2940	2847	2754	2661	**70**
30	7.6 2661	2568	2475	2382	2289	2197	2104	2011	1918	1825	1733	69
31	1733	1640	1547	1455	1362	1269	1177	1084	0992	0899	0807	68
32	7.6 0807	0714	0622	0529	0437	0344	0252	0160	0067	*9975	*9883	67
33	7.5 9883	9791	9698	9606	9514	9422	9330	9237	9145	9053	8961	66
34	8961	8869	8777	8685	8593	8501	8409	8317	8226	8134	8042	65
35	7.5 8042	7950	7858	7766	7675	7583	7491	7400	7308	7216	7125	64
36	7125	7033	6941	6850	6758	6667	6575	6484	6392	6301	6210	63
37	6210	6118	6027	5935	5844	5753	5662	5570	5479	5388	5297	62
38	5297	5205	5114	5023	4932	4841	4750	4659	4568	4477	4386	61
39	4386	4295	4204	4113	4022	3931	3841	3750	3659	3568	3477	**60**
40	7.5 3477	3387	3296	3205	3115	3024	2933	2843	2752	2661	2571	59
41	2571	2480	2390	2299	2209	2119	2028	1938	1847	1757	1667	58
42	1667	1576	1486	1396	1306	1215	1125	1035	0945	0855	0764	57
43	7.5 0764	0674	0584	0494	0404	0314	0224	0134	0044	*9954	*9864	56
44	7.4 9864	9775	9685	9595	9505	9415	9325	9236	9146	9056	8967	55
45	7.4 8967	8877	8787	8698	8608	8518	8429	8339	8250	8160	8071	54
46	8071	7981	7892	7802	7713	7624	7534	7445	7356	7266	7177	53
47	7177	7088	6999	6909	6820	6731	6642	6553	6464	6375	6285	52
48	6285	6196	6107	6018	5929	5840	5752	5663	5574	5485	5396	51
49	5396	5307	5218	5130	5041	4952	4863	4775	4686	4597	4509	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	88	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**	
1	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	1
2	17.6	17.8	18.0	18.2	18.4	18.6	18.8	19.0	19.2	19.4	19.6	19.8	20.0	2
3	26.4	26.7	27.0	27.3	27.6	27.9	28.2	28.5	28.8	29.1	29.4	29.7	30.0	3
4	35.2	35.6	36.0	36.4	36.8	37.2	37.6	38.0	38.4	38.8	39.2	39.6	40.0	4
5	44.0	44.5	45.0	45.5	46.0	46.5	47.0	47.5	48.0	48.5	49.0	49.5	50.0	5
6	52.8	53.4	54.0	54.6	55.2	55.8	56.4	57.0	57.6	58.2	58.8	59.4	60.0	6
7	61.6	62.3	63.0	63.7	64.4	65.1	65.8	66.5	67.2	67.9	68.6	69.3	70.0	7
8	70.4	71.2	72.0	72.8	73.6	74.4	75.2	76.0	76.8	77.6	78.4	79.2	80.0	8
9	79.2	80.1	81.0	81.9	82.8	83.7	84.6	85.5	86.4	87.3	88.2	89.1	90.0	9

tang 91^g

cosec 8^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	7.5 1194	1107	1019	0931	0843	0755	0668	0580	0492	0405	0317	49
51	7.5 0317	0229	0142	0054	*9966	*9879	*9791	*9704	*9616	*9529	*9442	48
52	7.4 9442	9354	9267	9179	9092	9005	8917	8830	8743	8655	8568	47
53	8568	8481	8394	8307	8219	8132	8045	7958	7871	7784	7697	46
54	7697	7610	7523	7436	7349	7262	7175	7088	7001	6914	6828	45
55	7.4 6828	6741	6654	6567	6481	6394	6307	6220	6134	6047	5960	44
56	5960	5874	5787	5701	5614	5528	5441	5355	5268	5182	5095	43
57	5095	5009	4922	4836	4750	4663	4577	4491	4405	4318	4232	42
58	4232	4146	4060	3974	3887	3801	3715	3629	3543	3457	3371	41
59	3371	3285	3199	3113	3027	2941	2855	2769	2683	2598	2512	**40**
60	7.4 2512	2426	2340	2254	2169	2083	1997	1912	1826	1740	1655	39
61	1655	1569	1484	1398	1312	1227	1141	1056	0970	0885	0800	38
62	7.4 0800	0714	0629	0543	0458	0373	0287	0202	0117	0032	*9946	37
63	7.3 9946	9861	9776	9691	9606	9521	9435	9350	9265	9180	9095	36
64	9095	9010	8925	8840	8755	8670	8586	8501	8416	8331	8246	35
65	7.3 8246	8161	8076	7992	7907	7822	7737	7653	7568	7483	7399	34
66	7399	7314	7230	7145	7061	6976	6891	6807	6722	6638	6554	33
67	6554	6469	6385	6300	6216	6132	6047	5963	5879	5795	5710	32
68	5710	5626	5542	5458	5373	5289	5205	5121	5037	4953	4869	31
69	4869	4785	4701	4617	4533	4449	4365	4281	4197	4113	4029	**30**
70	7.3 4029	3946	3862	3778	3694	3611	3527	3443	3359	3276	3192	29
71	3192	3108	3025	2941	2858	2774	2690	2607	2523	2440	2356	28
72	2356	2273	2190	2106	2023	1939	1856	1773	1689	1606	1523	27
73	1523	1440	1356	1273	1190	1107	1024	0940	0857	0774	0691	26
74	7.3 0691	0608	0525	0442	0359	0276	0193	0110	0027	*9944	*9861	25
75	7.2 9861	9778	9696	9613	9530	9447	9364	9282	9199	9116	9033	24
76	9033	8951	8868	8785	8703	8620	8537	8455	8372	8290	8207	23
77	8207	8125	8042	7960	7877	7795	7713	7630	7548	7466	7383	22
78	7383	7301	7219	7136	7054	6972	6890	6807	6725	6643	6561	21
79	6561	6479	6397	6315	6233	6150	6068	5986	5904	5822	5741	**20**
80	7.2 5741	5659	5577	5495	5413	5331	5249	5167	5086	5004	4922	19
81	4922	4840	4759	4677	4595	4513	4432	4350	4269	4187	4105	18
82	4105	4024	3942	3861	3779	3698	3616	3535	3453	3372	3291	17
83	3291	3209	3128	3047	2965	2884	2803	2721	2640	2559	2478	16
84	2478	2396	2315	2234	2153	2072	1991	1910	1829	1748	1667	15
85	7.2 1667	1586	1505	1424	1343	1262	1181	1100	1019	0938	0857	14
86	0857	0776	0696	0615	0534	0453	0373	0292	0211	0130	0050	13
87	7.2 0050	*9969	*9889	*9808	*9727	*9647	*9566	*9486	*9405	*9325	*9244	12
88	7.1 9244	9164	9083	9003	8922	8842	8762	8681	8601	8521	8440	11
89	8440	8360	8280	8200	8119	8039	7959	7879	7799	7719	7638	**10**
90	7.1 7638	7558	7478	7398	7318	7238	7158	7078	6998	6918	6838	09
91	6838	6758	6678	6599	6519	6439	6359	6279	6199	6120	6040	08
92	6040	5960	5880	5801	5721	5641	5562	5482	5403	5323	5243	07
93	5243	5164	5084	5005	4925	4846	4766	4687	4607	4528	4449	06
94	4449	4369	4290	4210	4131	4052	3973	3893	3814	3735	3656	05
95	7.1 3656	3576	3497	3418	3339	3260	3181	3101	3022	2943	2864	04
96	2864	2785	2706	2627	2548	2469	2390	2311	2233	2154	2075	03
97	2075	1996	1917	1838	1760	1681	1602	1523	1445	1366	1287	02
98	1287	1208	1130	1051	0973	0894	0815	0737	0658	0580	0501	01
99	7.1 0501	0423	0344	0266	0187	0109	0030	*9952	*9874	*9795	*9717	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	78	**79**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	
1	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	1
2	15.6	15.8	16.0	16.2	16.4	16.6	16.8	17.0	17.2	17.4	17.6	2
3	23.4	23.7	24.0	24.3	24.6	24.9	25.2	25.5	25.8	26.1	26.4	3
4	31.2	31.6	32.0	32.4	32.8	33.2	33.6	34.0	34.4	34.8	35.2	4
5	39.0	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0	5
6	46.8	47.4	48.0	48.6	49.2	49.8	50.4	51.0	51.6	52.2	52.8	6
7	54.6	55.3	56.0	56.7	57.4	58.1	58.8	59.5	60.2	60.9	61.6	7
8	62.4	63.2	64.0	64.8	65.6	66.4	67.2	68.0	68.8	69.6	70.4	8
9	70.2	71.1	72.0	72.9	73.8	74.7	75.6	76.5	77.4	78.3	79.2	9

sec 91^g

cotg 8^{g}

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	7.4 4509	4420	4331	4243	4154	4066	3977	3889	3800	3712	3623	49
51	3623	3535	3446	3358	3270	3181	3093	3005	2916	2828	2740	48
52	2740	2652	2563	2475	2387	2299	2211	2123	2035	1947	1859	47
53	1859	1771	1683	1595	1507	1419	1331	1243	1155	1067	0980	46
54	0980	0892	0804	0716	0628	0541	0453	0365	0278	0190	0102	45
55	7.4 0102	0015	*9927	*9840	*9752	*9665	*9577	*9490	*9402	*9315	*9227	44
56	7.3 9227	9140	9052	8965	8878	8790	8703	8616	8529	8441	8354	43
57	8354	8267	8180	8093	8006	7918	7831	7744	7657	7570	7483	42
58	7483	7396	7309	7222	7135	7048	6962	6875	6788	6701	6614	41
59	6614	6527	6441	6354	6267	6180	6094	6007	5920	5834	5747	**40**
60	7.3 5747	5661	5574	5487	5401	5314	5228	5141	5055	4969	4882	39
61	4882	4796	4709	4623	4537	4450	4364	4278	4192	4105	4019	38
62	4019	3933	3847	3761	3674	3588	3502	3416	3330	3244	3158	37
63	3158	3072	2986	2900	2814	2728	2642	2556	2471	2385	2299	36
64	2299	2213	2127	2042	1956	1870	1784	1699	1613	1528	1442	35
65	7.3 1442	1356	1271	1185	1100	1014	0929	0843	0758	0672	0587	34
66	7.3 0587	0501	0416	0331	0245	0160	0075	*9989	*9904	*9819	*9734	33
67	7.2 9734	9648	9563	9478	9393	9308	9223	9138	9053	8967	8882	32
68	8882	8797	8712	8627	8543	8458	8373	8288	8203	8118	8033	31
69	8033	7948	7864	7779	7694	7609	7525	7440	7355	7271	7186	**30**
70	7.2 7186	7101	7017	6932	6847	6763	6678	6594	6509	6425	6340	29
71	6340	6256	6172	6087	6003	5919	5834	5750	5666	5581	5497	28
72	5497	5413	5329	5244	5160	5076	4992	4908	4824	4740	4656	27
73	4656	4571	4487	4403	4319	4235	4152	4068	3984	3900	3816	26
74	3816	3732	3648	3564	3481	3397	3313	3229	3146	3062	2978	25
75	7.2 2978	2895	2811	2727	2644	2560	2476	2393	2309	2226	2142	24
76	2142	2059	1975	1892	1809	1725	1642	1558	1475	1392	1308	23
77	1308	1225	1142	1059	0975	0892	0809	0726	0643	0560	0476	22
78	7.2 0476	0393	0310	0227	0144	0061	*9978	*9895	*9812	*9729	*9646	21
79	7.1 9646	9563	9480	9398	9315	9232	9149	9066	8984	8901	8818	**20**
80	7.1 8818	8735	8653	8570	8487	8405	8322	8239	8157	8074	7992	19
81	7992	7909	7827	7744	7662	7579	7497	7414	7332	7249	7167	18
82	7167	7085	7002	6920	6838	6755	6673	6591	6509	6427	6344	17
83	6344	6262	6180	6098	6016	5934	5852	5770	5688	5606	5524	16
84	5524	5442	5360	5278	5196	5114	5032	4950	4868	4786	4705	15
85	7.1 4705	4623	4541	4459	4377	4296	4214	4132	4051	3969	3887	14
86	3887	3806	3724	3643	3561	3479	3398	3316	3235	3154	3072	13
87	3072	2991	2909	2828	2746	2665	2584	2502	2421	2340	2259	12
88	2259	2177	2096	2015	1934	1852	1771	1690	1609	1528	1447	11
89	1447	1366	1285	1204	1123	1042	0961	0880	0799	0718	0637	**10**
90	7.1 0637	0556	0475	0394	0314	0233	0152	0071	*9990	*9910	*9829	09
91	7.0 9829	9748	9668	9587	9506	9426	9345	9264	9184	9103	9023	08
92	9023	8942	8862	8781	8701	8620	8540	8459	8379	8299	8218	07
93	8218	8138	8058	7977	7897	7817	7736	7656	7576	7496	7416	06
94	7416	7335	7255	7175	7095	7015	6935	6855	6775	6695	6615	05
95	7.0 6615	6535	6455	6375	6295	6215	6135	6055	5975	5895	5815	04
96	5815	5736	5656	5576	5496	5417	5337	5257	5177	5098	5018	03
97	5018	4938	4859	4779	4700	4620	4541	4461	4382	4302	4223	02
98	4223	4143	4064	3984	3905	3825	3746	3667	3587	3508	3429	01
99	3429	3349	3270	3191	3112	3032	2953	2874	2795	2716	2637	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	79	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	
1	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	1
2	15.8	16.0	16.2	16.4	16.6	16.8	17.0	17.2	17.4	17.6	17.8	2
3	23.7	24.0	24.3	24.6	24.9	25.2	25.5	25.8	26.1	26.4	26.7	3
4	31.6	32.0	32.4	32.8	33.2	33.6	34.0	34.4	34.8	35.2	35.6	4
5	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0	44.5	5
6	47.4	48.0	48.6	49.2	49.8	50.4	51.0	51.6	52.2	52.8	53.4	6
7	55.3	56.0	56.7	57.4	58.1	58.8	59.5	60.2	60.9	61.6	62.3	7
8	63.2	64.0	64.8	65.6	66.4	67.2	68.0	68.8	69.6	70.4	71.2	8
9	71.1	72.0	72.9	73.8	74.7	75.6	76.5	77.4	78.3	79.2	80.1	9

tang 91^{g}

cosec 9^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	7.0 9717	9639	9560	9482	9404	9326	9247	9169	9091	9013	8935	99
01	8935	8856	8778	8700	8622	8544	8466	8388	8310	8232	8154	98
02	8154	8076	7998	7920	7842	7764	7686	7608	7531	7453	7375	97
03	7375	7297	7219	7142	7064	6986	6908	6831	6753	6675	6598	96
04	6598	6520	6442	6365	6287	6210	6132	6055	5977	5900	5822	95
05	7.0 5822	5745	5667	5590	5512	5435	5358	5280	5203	5126	5048	94
06	5048	4971	4894	4817	4739	4662	4585	4508	4431	4353	4276	93
07	4276	4199	4122	4045	3968	3891	3814	3737	3660	3583	3506	92
08	3506	3429	3352	3275	3198	3121	3044	2968	2891	2814	2737	91
09	2737	2660	2584	2507	2430	2354	2277	2200	2123	2047	1970	**90**
10	7.0 1970	1894	1817	1740	1664	1587	1511	1434	1358	1281	1205	89
11	1205	1129	1052	0976	0899	0823	0747	0670	0594	0518	0441	88
12	7.0 0441	0365	0289	0213	0136	0060	*9984	*9908	*9832	*9756	*9679	87
13	6.9 9679	9603	9527	9451	9375	9299	9223	9147	9071	8995	8919	86
14	8919	8843	8767	8691	8616	8540	8464	8388	8312	8236	8161	85
15	6.9 8161	8085	8009	7933	7858	7782	7706	7631	7555	7479	7404	84
16	7404	7328	7252	7177	7101	7026	6950	6875	6799	6724	6648	83
17	6648	6573	6498	6422	6347	6271	6196	6121	6045	5970	5895	82
18	5895	5819	5744	5669	5594	5519	5443	5368	5293	5218	5143	81
19	5143	5068	4993	4918	4842	4767	4692	4617	4542	4467	4392	**80**
20	6.9 4392	4318	4243	4168	4093	4018	3943	3868	3793	3719	3644	79
21	3644	3569	3494	3419	3345	3270	3195	3121	3046	2971	2897	78
22	2897	2822	2747	2673	2598	2524	2449	2375	2300	2226	2151	77
23	2151	2077	2002	1928	1854	1779	1705	1630	1556	1482	1407	76
24	1407	1333	1259	1185	1110	1036	0962	0888	0814	0739	0665	75
25	6.9 0665	0591	0517	0443	0369	0295	0221	0147	0073	*9999	*9925	74
26	6.8 9925	9851	9777	9703	9629	9555	9481	9407	9333	9259	9186	73
27	9186	9112	9038	8964	8890	8817	8743	8669	8596	8522	8448	72
28	8448	8375	8301	8227	8154	8080	8007	7933	7859	7786	7712	71
29	7712	7639	7565	7492	7419	7345	7272	7198	7125	7052	6978	**70**
30	6.8 6978	6905	6832	6758	6685	6612	6538	6465	6392	6319	6246	69
31	6246	6172	6099	6026	5953	5880	5807	5734	5661	5588	5515	68
32	5515	5441	5368	5296	5223	5150	5077	5004	4931	4858	4785	67
33	4785	4712	4639	4566	4494	4421	4348	4275	4203	4130	4057	66
34	4057	3984	3912	3839	3766	3694	3621	3549	3476	3403	3331	65
35	6.8 3331	3258	3186	3113	3041	2968	2896	2823	2751	2678	2606	64
36	2606	2534	2461	2389	2316	2244	2172	2100	2027	1955	1883	63
37	1883	1810	1738	1666	1594	1522	1450	1377	1305	1233	1161	62
38	1161	1089	1017	0945	0873	0801	0729	0657	0585	0513	0441	61
39	6.8 0441	0369	0297	0225	0153	0081	0010	*9938	*9866	*9794	*9722	**60**
40	6.7 9722	9650	9579	9507	9435	9364	9292	9220	9148	9077	9005	59
41	9005	8934	8862	8790	8719	8647	8576	8504	8433	8361	8290	58
42	8290	8218	8147	8075	8004	7932	7861	7790	7718	7647	7576	57
43	7576	7504	7433	7362	7290	7219	7148	7077	7005	6934	6863	56
44	6863	6792	6721	6650	6579	6507	6436	6365	6294	6223	6152	55
45	6.7 6152	6081	6010	5939	5868	5797	5726	5655	5584	5513	5443	54
46	5443	5372	5301	5230	5159	5088	5018	4947	4876	4805	4735	53
47	4735	4664	4593	4523	4452	4381	4311	4240	4169	4099	4028	52
48	4028	3958	3887	3816	3746	3675	3605	3534	3464	3394	3323	51
49	3323	3253	3182	3112	3042	2971	2901	2831	2760	2690	2620	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	70	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	
1	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	1
2	14.0	14.2	14.4	14.6	14.8	15.0	15.2	15.4	15.6	15.8	2
3	21.0	21.3	21.6	21.9	22.2	22.5	22.8	23.1	23.4	23.7	3
4	28.0	28.4	28.8	29.2	29.6	30.0	30.4	30.8	31.2	31.6	4
5	35.0	35.5	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	5
6	42.0	42.6	43.2	43.8	44.4	45.0	45.6	46.2	46.8	47.4	6
7	49.0	49.7	50.4	51.1	51.8	52.5	53.2	53.9	54.6	55.3	7
8	56.0	56.8	57.6	58.4	59.2	60.0	60.8	61.6	62.4	63.2	8
9	63.0	63.9	64.8	65.7	66.6	67.5	68.4	69.3	70.2	71.1	9

sec 90^g

cotg 9^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
00	7.0 2637	2558	2478	2399	2320	2241	2162	2083	2004	1925	1846	99
01	1846	1767	1688	1610	1531	1452	1373	1294	1215	1136	1058	98
02	1058	0979	0900	0821	0743	0664	0585	0507	0428	0349	0271	97
03	7.0 0271	0192	0114	0035	*9957	*9878	*9800	*9721	*9643	*9564	*9486	96
04	6.9 9486	9407	9329	9251	9172	9094	9015	8937	8859	8781	8702	95
05	6.9 8702	8624	8546	8468	8389	8311	8233	8155	8077	7999	7921	94
06	7921	7843	7764	7686	7608	7530	7452	7374	7296	7219	7141	93
07	7141	7063	6985	6907	6829	6751	6673	6596	6518	6440	6362	92
08	6362	6285	6207	6129	6052	5974	5896	5819	5741	5663	5586	91
09	5586	5508	5431	5353	5276	5198	5121	5043	4966	4888	4811	**90**
10	6.9 4811	4734	4656	4579	4501	4424	4347	4270	4192	4115	4038	89
11	4038	3961	3883	3806	3729	3652	3575	3498	3420	3343	3266	88
12	3266	3189	3112	3035	2958	2881	2804	2727	2650	2573	2496	87
13	2496	2420	2343	2266	2189	2112	2035	1959	1882	1805	1728	86
14	1728	1652	1575	1498	1421	1345	1268	1192	1115	1038	0962	85
15	6.9 0962	0885	0809	0732	0656	0579	0503	0426	0350	0273	0197	84
16	6.9 0197	0121	0044	*9968	*9891	*9815	*9739	*9663	*9586	*9510	*9434	83
17	6.8 9434	9358	9281	9205	9129	9053	8977	8901	8824	8748	8672	82
18	8672	8596	8520	8444	8368	8292	8216	8140	8064	7988	7912	81
19	7912	7837	7761	7685	7609	7533	7457	7381	7306	7230	7154	**80**
20	6.8 7154	7078	7003	6927	6851	6776	6700	6624	6549	6473	6398	79
21	6398	6322	6246	6171	6095	6020	5944	5869	5793	5718	5643	78
22	5643	5567	5492	5416	5341	5266	5190	5115	5040	4965	4889	77
23	4889	4814	4739	4664	4588	4513	4438	4363	4288	4213	4138	76
24	4138	4062	3987	3912	3837	3762	3687	3612	3537	3462	3387	75
25	6.8 3387	3313	3238	3163	3088	3013	2938	2863	2789	2714	2639	74
26	2639	2564	2489	2415	2340	2265	2191	2116	2041	1967	1892	73
27	1892	1817	1743	1668	1594	1519	1445	1370	1296	1221	1147	72
28	1147	1072	0998	0924	0849	0775	0700	0626	0552	0477	0403	71
29	6.8 0403	0329	0255	0180	0106	0032	*9958	*9883	*9809	*9735	*9661	**70**
30	6.7 9661	9587	9513	9439	9365	9291	9216	9142	9068	8994	8920	69
31	8920	8846	8773	8699	8625	8551	8477	8403	8329	8255	8181	68
32	8181	8108	8034	7960	7886	7813	7739	7665	7591	7518	7444	67
33	7444	7370	7297	7223	7150	7076	7002	6929	6855	6782	6708	66
34	6708	6635	6561	6488	6414	6341	6268	6194	6121	6047	5974	65
35	6.7 5974	5901	5827	5754	5681	5608	5534	5461	5388	5315	5241	64
36	5241	5168	5095	5022	4949	4876	4802	4729	4656	4583	4510	63
37	4510	4437	4364	4291	4218	4145	4072	3999	3926	3854	3781	62
38	3781	3708	3635	3562	3489	3416	3344	3271	3198	3125	3053	61
39	3053	2980	2907	2834	2762	2689	2616	2544	2471	2399	2326	**60**
40	6.7 2326	2254	2181	2108	2036	1963	1891	1818	1746	1674	1601	59
41	1601	1529	1456	1384	1312	1239	1167	1095	1022	0950	0878	58
42	0878	0805	0733	0661	0589	0516	0444	0372	0300	0228	0156	57
43	6.7 0156	0084	0012	*9939	*9867	*9795	*9723	*9651	*9579	*9507	*9435	56
44	6.6 9435	9363	9291	9219	9148	9076	9004	8932	8860	8788	8716	55
45	6.6 8716	8645	8573	8501	8429	8358	8286	8214	8142	8071	7999	54
46	7999	7927	7856	7784	7713	7641	7569	7498	7426	7355	7283	53
47	7283	7212	7140	7069	6997	6926	6854	6783	6712	6640	6569	52
48	6569	6497	6426	6355	6283	6212	6141	6070	5998	5927	5856	51
49	5856	5785	5713	5642	5571	5500	5429	5358	5287	5216	5144	**50**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	71	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**	
1	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	1
2	14.2	14.4	14.6	14.8	15.0	15.2	15.4	15.6	15.8	16.0	2
3	21.3	21.6	21.9	22.2	22.5	22.8	23.1	23.4	23.7	24.0	3
4	28.4	28.8	29.2	29.6	30.0	30.4	30.8	31.2	31.6	32.0	4
5	35.5	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	40.0	5
6	42.6	43.2	43.8	44.4	45.0	45.6	46.2	46.8	47.4	48.0	6
7	49.7	50.4	51.1	51.8	52.5	53.2	53.9	54.6	55.3	56.0	7
8	56.8	57.6	58.4	59.2	60.0	60.8	61.6	62.4	63.2	64.0	8
9	63.9	64.8	65.7	66.6	67.5	68.4	69.3	70.2	71.1	72.0	9

tang 90^g

cosec 9^g

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	6.7 2620	2549	2479	2409	2339	2268	2198	2128	2058	1988	1918	49
51	1918	1848	1777	1707	1637	1567	1497	1427	1357	1287	1217	48
52	1217	1147	1077	1007	0937	0867	0797	0728	0658	0588	0518	47
53	6.7 0518	0448	0378	0309	0239	0169	0099	0030	*9960	*9890	*9820	46
54	6.6 9820	9751	9681	9611	9542	9472	9403	9333	9263	9194	9124	45
55	6.6 9124	9055	8985	8916	8846	8777	8707	8638	8568	8499	8430	44
56	8430	8360	8291	8222	8152	8083	8014	7944	7875	7806	7736	43
57	7736	7667	7598	7529	7460	7390	7321	7252	7183	7114	7045	42
58	7045	6976	6907	6837	6768	6699	6630	6561	6492	6423	6354	41
59	6354	6285	6217	6148	6079	6010	5941	5872	5803	5734	5666	**40**
60	6.6 5666	5597	5528	5459	5390	5322	5253	5184	5116	5047	4978	39
61	4978	4909	4841	4772	4704	4635	4566	4498	4429	4361	4292	38
62	4292	4224	4155	4087	4018	3950	3881	3813	3744	3676	3608	37
63	3608	3539	3471	3403	3334	3266	3198	3129	3061	2993	2924	36
64	2924	2856	2788	2720	2652	2583	2515	2447	2379	2311	2243	35
65	6.6 2243	2175	2107	2039	1970	1902	1834	1766	1698	1630	1562	34
66	1562	1495	1427	1359	1291	1223	1155	1087	1019	0951	0884	33
67	0884	0816	0748	0680	0612	0545	0477	0409	0342	0274	0206	32
68	6.6 0206	0138	0071	0003	*9936	*9868	*9800	*9733	*9665	*9598	*9530	31
69	6.5 9530	9463	9395	9328	9260	9193	9125	9058	8990	8923	8855	**30**
70	6.5 8855	8788	8721	8653	8586	8519	8451	8384	8317	8249	8182	29
71	8182	8115	8048	7980	7913	7846	7779	7712	7645	7577	7510	28
72	7510	7443	7376	7309	7242	7175	7108	7041	6974	6907	6840	27
73	6840	6773	6706	6639	6572	6505	6438	6371	6304	6237	6171	26
74	6171	6104	6037	5970	5903	5837	5770	5703	5636	5570	5503	25
75	6.5 5503	5436	5370	5303	5236	5170	5103	5036	4970	4903	4837	24
76	4837	4770	4703	4637	4570	4504	4437	4371	4304	4238	4172	23
77	4172	4105	4039	3972	3906	3840	3773	3707	3641	3574	3508	22
78	3508	3442	3375	3309	3243	3177	3110	3044	2978	2912	2846	21
79	2846	2780	2713	2647	2581	2515	2449	2383	2317	2251	2185	**20**
80	6.5 2185	2119	2053	1987	1921	1855	1789	1723	1657	1591	1525	19
81	1525	1459	1393	1328	1262	1196	1130	1064	0999	0933	0867	18
82	0867	0801	0736	0670	0604	0538	0473	0407	0341	0276	0210	17
83	6.5 0210	0145	0079	0013	*9948	*9882	*9817	*9751	*9686	*9620	*9555	16
84	6.4 9555	9489	9424	9358	9293	9227	9162	9097	9031	8966	8900	15
85	6.4 8900	8835	8770	8704	8639	8574	8509	8443	8378	8313	8248	14
86	8248	8182	8117	8052	7987	7922	7857	7791	7726	7661	7596	13
87	7596	7531	7466	7401	7336	7271	7206	7141	7076	7011	6946	12
88	6946	6881	6816	6751	6686	6621	6556	6492	6427	6362	6297	11
89	6297	6232	6167	6103	6038	5973	5908	5844	5779	5714	5649	**10**
90	6.4 5649	5585	5520	5455	5391	5326	5262	5197	5132	5068	5003	09
91	5003	4939	4874	4810	4745	4681	4616	4552	4487	4423	4358	08
92	4358	4294	4229	4165	4101	4036	3972	3908	3843	3779	3715	07
93	3715	3650	3586	3522	3458	3393	3329	3265	3201	3136	3072	06
94	3072	3008	2944	2880	2816	2752	2687	2623	2559	2495	2431	05
95	6.4 2431	2367	2303	2239	2175	2111	2047	1983	1919	1855	1791	04
96	1791	1728	1664	1600	1536	1472	1408	1344	1281	1217	1153	03
97	1153	1089	1025	0962	0898	0834	0771	0707	0643	0579	0516	02
98	6.4 0516	0452	0389	0325	0261	0198	0134	0071	0007	*9943	*9880	01
99	6.3 9880	9816	9753	9689	9626	9562	9499	9436	9372	9309	9245	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	63	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**71**	
1	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	1
2	12.6	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.2	2
3	18.9	19.2	19.5	19.8	20.1	20.4	20.7	21.0	21.3	3
4	25.2	25.6	26.0	26.4	26.8	27.2	27.6	28.0	28.4	4
5	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	5
6	37.8	38.4	39.0	39.6	40.2	40.8	41.4	42.0	42.6	6
7	44.1	44.8	45.5	46.2	46.9	47.6	48.3	49.0	49.7	7
8	50.4	51.2	52.0	52.8	53.6	54.4	55.2	56.0	56.8	8
9	56.7	57.6	58.5	59.4	60.3	61.2	62.1	63.0	63.9	9

sec 90^g

cotg 9^{g}

c	00^{cc}	10^{cc}	20^{cc}	30^{cc}	40^{cc}	50^{cc}	60^{cc}	70^{cc}	80^{cc}	90^{cc}	100^{cc}	
50	6.6 5144	5073	5002	4931	4860	4789	4718	4647	4576	4505	4435	49
51	4435	4364	4293	4222	4151	4080	4009	3939	3868	3797	3726	48
52	3726	3655	3585	3514	3443	3372	3302	3231	3160	3090	3019	47
53	3019	2949	2878	2807	2737	2666	2596	2525	2455	2384	2314	46
54	2314	2243	2173	2102	2032	1962	1891	1821	1750	1680	1610	45
55	6.6 1610	1539	1469	1399	1328	1258	1188	1118	1048	0977	0907	44
56	0907	0837	0767	0697	0627	0556	0486	0416	0346	0276	0206	43
57	6.6 0206	0136	0066	*9996	*9926	*9856	*9786	*9716	*9646	*9576	*9506	42
58	6.5 9506	9436	9367	9297	9227	9157	9087	9017	8948	8878	8808	41
59	8808	8738	8669	8599	8529	8460	8390	8320	8251	8181	8111	**40**
60	6.5 8111	8042	7972	7903	7833	7764	7694	7625	7555	7486	7416	39
61	7416	7347	7277	7208	7138	7069	7000	6930	6861	6792	6722	38
62	6722	6653	6584	6514	6445	6376	6307	6237	6168	6099	6030	37
63	6030	5961	5891	5822	5753	5684	5615	5546	5477	5408	5339	36
64	5339	5270	5201	5132	5063	4994	4925	4856	4787	4718	4649	35
65	6.5 4649	4580	4511	4443	4374	4305	4236	4167	4098	4030	3961	34
66	3961	3892	3823	3755	3686	3617	3549	3480	3411	3343	3274	33
67	3274	3206	3137	3068	3000	2931	2863	2794	2726	2657	2589	32
68	2589	2520	2452	2383	2315	2247	2178	2110	2042	1973	1905	31
69	1905	1837	1768	1700	1632	1563	1495	1427	1359	1290	1222	**30**
70	6.5 1222	1154	1086	1018	0950	0881	0813	0745	0677	0609	0541	29
71	6.5 0541	0473	0405	0337	0269	0201	0133	0065	*9997	*9929	*9861	28
72	6.4 9861	9793	9726	9658	9590	9522	9454	9386	9318	9251	9183	27
73	9183	9115	9047	8980	8912	8844	8777	8709	8641	8574	8506	26
74	8506	8438	8371	8303	8235	8168	8100	8033	7965	7898	7830	25
75	6.4 7830	7763	7695	7628	7560	7493	7426	7358	7291	7223	7156	24
76	7156	7089	7021	6954	6887	6819	6752	6685	6618	6550	6483	23
77	6483	6416	6349	6282	6214	6147	6080	6013	5946	5879	5812	22
78	5812	5745	5677	5610	5543	5476	5409	5342	5275	5208	5141	21
79	5141	5074	5008	4941	4874	4807	4740	4673	4606	4539	4473	**20**
80	6.4 4473	4406	4339	4272	4205	4139	4072	4005	3939	3872	3805	19
81	3805	3738	3672	3605	3539	3472	3405	3339	3272	3206	3139	18
82	3139	3073	3006	2939	2873	2807	2740	2674	2607	2541	2474	17
83	2474	2408	2342	2275	2209	2142	2076	2010	1943	1877	1811	16
84	1811	1745	1678	1612	1546	1480	1413	1347	1281	1215	1149	15
85	6.4 1149	1083	1017	0950	0884	0818	0752	0686	0620	0554	0488	14
86	6.4 0488	0422	0356	0290	0224	0158	0092	0026	*9960	*9894	*9829	13
87	6.3 9829	9763	9697	9631	9565	9499	9434	9368	9302	9236	9171	12
88	9171	9105	9039	8973	8908	8842	8776	8711	8645	8579	8514	11
89	8514	8448	8383	8317	8251	8186	8120	8055	7989	7924	7858	**10**
90	6.3 7858	7793	7727	7662	7596	7531	7466	7400	7335	7269	7204	09
91	7204	7139	7073	7008	6943	6878	6812	6747	6682	6617	6551	08
92	6551	6486	6421	6356	6291	6225	6160	6095	6030	5965	5900	07
93	5900	5835	5770	5705	5639	5574	5509	5444	5379	5314	5249	06
94	5249	5185	5120	5055	4990	4925	4860	4795	4730	4665	4601	05
95	6.3 4601	4536	4471	4406	4341	4277	4212	4147	4082	4018	3953	04
96	3953	3888	3824	3759	3694	3630	3565	3500	3436	3371	3307	03
97	3307	3242	3177	3113	3048	2984	2919	2855	2790	2726	2661	02
98	2661	2597	2533	2468	2404	2339	2275	2211	2146	2082	2018	01
99	2018	1953	1889	1825	1761	1696	1632	1568	1504	1439	1375	**00**
	100^{cc}	90^{cc}	80^{cc}	70^{cc}	60^{cc}	50^{cc}	40^{cc}	30^{cc}	20^{cc}	10^{cc}	00^{cc}	c

	64	**65**	**66**	**67**	**68**	**69**	**70**	**71**	
1	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	1
2	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.2	2
3	19.2	19.5	19.8	20.1	20.4	20.7	21.0	21.3	3
4	25.6	26.0	26.4	26.8	27.2	27.6	28.0	28.4	4
5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	5
6	38.4	39.0	39.6	40.2	40.8	41.4	42.0	42.6	6
7	44.8	45.5	46.2	46.9	47.6	48.3	49.0	49.7	7
8	51.2	52.0	52.8	53.6	54.4	55.2	56.0	56.8	8
9	57.6	58.5	59.4	60.3	61.2	62.1	63.0	63.9	9

tang 90^{g}

0g

c	sin		tang		sec		cosec		cotg		cos		
00	0.000000	157	0.000000	157	1.000000	0	∞		∞		1.000000	0	**100**
01	0157	157	0157	157	0000	0	6366.198		6366.198		0000	0	99
02	0314	157	0314	157	0000	0	3183.099		3183.099		0000	0	98
03	0471	157	0471	157	0000	0	2122.066		2122.066		0000	0	97
04	0628	157	0628	157	0000	0	1591.550		1591.549		0000	0	96
05	0785	157	0785	157	0000	0	1273.240		1273.239		0000	0	95
06	0942	157	0942	157	0000	0	1061.033		1061.033		1.000000	0	94
07	1100	158	1100	158	0001	1	909.457		909.456		0.999999	1	93
08	1257	157	1257	157	0001	0	795.775		795.774		9999	0	92
09	1414	157	1414	157	0001	0	707.356		707.355		9999	0	91
10	0.001571	157	0.001571	157	1.000001	0	636.620		636.619		0.999999	0	**90**
11	1728	157	1728	157	0001	0	578.746		578.745		9999	0	89
12	1885	157	1885	157	0002	1	530.517		530.516		9998	1	88
13	2042	157	2042	157	0002	0	489.708		489.707		9998	0	87
14	2199	157	2199	157	0002	0	454.729		454.728		9998	0	86
15	2356	157	2356	157	0003	1	424.414		424.412		9997	1	85
16	2513	157	2513	157	0003	0	397.888		397.887		9997	0	84
17	2670	157	2670	157	0004	1	374.483		374.481		9996	1	83
18	2827	157	2827	157	0004	0	353.678		353.677		9996	0	82
19	2985	158	2985	158	0004	0	335.064		335.062		9996	0	81
20	0.003142	157	0.003142	157	1.000005	1	318.310		318.309		0.999995	1	**80**
21	3299	157	3299	157	0005	0	303.153		303.151		9995	0	79
22	3456	157	3456	157	0006	1	289.373		289.371		9994	1	78
23	3613	157	3613	157	0007	1	276.792		276.790		9993	1	77
24	3770	157	3770	157	0007	0	265.259		265.257		9993	0	76
25	3927	157	3927	157	0008	1	254.649		254.647		9992	1	75
26	4084	157	4084	157	0008	0	244.854		244.852		9992	0	74
27	4241	157	4241	157	0009	1	235.786		235.784		9991	1	73
28	4398	157	4398	157	0010	1	227.365		227.363		9990	1	72
29	4555	157	4555	157	0010	0	219.525		219.523		9990	0	71
30	0.004712	157	0.004712	157	1.000011	1	212.207		212.205		0.999989	1	**70**
31	4869	157	4870	158	0012	1	205.362		205.360		9988	1	69
32	5027	158	5027	157	0013	1	198.945		198.942		9987	1	68
33	5184	157	5184	157	0013	0	192.916		192.913		9987	0	67
34	5341	157	5341	157	0014	1	187.242		187.239		9986	1	66
35	5498	157	5498	157	0015	1	181.892		181.890		9985	1	65
36	5655	157	5655	157	0016	1	176.840		176.837		9984	1	64
37	5812	157	5812	157	0017	1	172.060		172.057		9983	1	63
38	5969	157	5969	157	0018	1	167.533		167.530		9982	1	62
39	6126	157	6126	157	0019	1	163.237		163.234		9981	1	61
40	0.006283	157	0.006283	157	1.000020	1	159.156		159.153		0.999980	1	**60**
41	6440	157	6440	157	0021	1	155.274		155.271		9979	1	59
42	6597	157	6597	157	0022	1	151.577		151.574		9978	1	58
43	6754	157	6755	158	0023	1	148.052		148.049		9977	1	57
44	6911	157	6912	157	0024	1	144.687		144.684		9976	1	56
45	7069	158	7069	157	0025	1	141.472		141.469		9975	1	55
46	7226	157	7226	157	0026	1	138.397		138.393		9974	1	54
47	7383	157	7383	157	0027	1	135.452		135.449		9973	1	53
48	7540	157	7540	157	0028	1	132.630		132.627		9972	1	52
49	7697	157	7697	157	0030	2	129.924		129.920		9970	2	51
50	0.007854	157	0.007854	157	1.000031	1	127.325		127.321		0.999969	1	**50**
	cos		cotg		cosec		sec		tang		sin		c

	157	**158**	
1	15.7	15.8	1
2	31.4	31.6	2
3	47.1	47.4	3
4	62.8	63.2	4
5	78.5	79.0	5
6	94.2	94.8	6
7	109.9	110.6	7
8	125.6	126.4	8
9	141.3	142.2	9

99g

0g

c	sin		tang		sec		cosec		cotg		cos		
50	0.007854	157	0.007854	157	1.000031	1	127.3253		127.3213		0.999969	1	**50**
51	8011	157	8011	157	0032	1	124.8287		124.8247		9968	1	49
52	8168	157	8168	157	0033	2	122.4282		122.4242		9967	2	48
53	8325	157	8325	158	0035	1	120.1183		120.1142		9965	1	47
54	8482	157	8483	157	0036	1	117.8940		117.8897		9964	1	46
55	8639	157	8640	157	0037	2	115.7505		115.7462		9963	2	45
56	8796	157	8797	157	0039	1	113.6836		113.6792		9961	1	44
57	8953	157	8954	157	0040	2	111.6892		111.6847		9960	2	43
58	9110	157	9111	157	0042	1	109.7635		109.7590		9958	1	42
59	9268	158	9268	157	0043	1	107.9032		107.8986		9957	1	41
60	0.009425	157	0.009425	157	1.000044	2	106.1049		106.1002		0.999956	2	**40**
61	9582	157	9582	157	0046	1	104.3655		104.3607		9954	1	39
62	9739	157	9739	157	0047	2	102.6822		102.6774		9953	2	38
63	0.009896	157	0.009896	157	0049	2	101.0524		101.0475		9951	2	37
64	0.010053	157	0.010053	158	0051	1	99.4735		99.4685		9949	1	36
65	0210	157	0211	157	0052	2	97.9432		97.9381		9948	2	35
66	0367	157	0368	157	0054	1	96.4593		96.4541		9946	1	34
67	0524	157	0525	157	0055	2	95.0196		95.0144		9945	2	33
68	0681	157	0682	157	0057	2	93.6223		93.6170		9943	2	32
69	0838	157	0839	157	0059	1	92.2655		92.2601		9941	1	31
70	0.010995	157	0.010996	157	1.000060	2	90.9475		90.9420		0.999940	2	**30**
71	1152	157	1153	157	0062	2	89.6666		89.6610		9938	2	29
72	1309	158	1310	157	0064	2	88.4213		88.4156		9936	2	28
73	1467	157	1467	157	0066	2	87.2101		87.2044		9934	2	27
74	1624	157	1624	158	0068	1	86.0316		86.0258		9932	1	26
75	1781	157	1782	157	0069	2	84.8846		84.8787		9931	2	25
76	1938	157	1939	157	0071	2	83.7677		83.7618		9929	2	24
77	2095	157	2096	157	0073	2	82.6799		82.6739		9927	2	23
78	2252	157	2253	157	0075	2	81.6200		81.6138		9925	2	22
79	2409	157	2410	157	0077	2	80.5868		80.5806		9923	2	21
80	0.012566	157	0.012567	157	1.000079	2	79.5796		79.5733		0.999921	2	**20**
81	2723	157	2724	157	0081	2	78.5972		78.5908		9919	2	19
82	2880	157	2881	157	0083	2	77.6387		77.6323		9917	2	18
83	3037	157	3038	157	0085	2	76.7034		76.6968		9915	2	17
84	3194	157	3195	158	0087	2	75.7903		75.7837		9913	2	16
85	3351	157	3353	157	0089	2	74.8987		74.8920		9911	2	15
86	3508	158	3510	157	0091	2	74.0278		74.0211		9909	2	14
87	3666	157	3667	157	0093	3	73.1770		73.1701		9907	3	13
88	3823	157	3824	157	0096	2	72.3455		72.3385		9904	2	12
89	3980	157	3981	157	0098	2	71.5326		71.5257		9902	2	11
90	0.014137	157	0.014138	157	1.000100	2	70.7379		70.7308		0.999900	2	**10**
91	4294	157	4295	157	0102	2	69.9606		69.9535		9898	2	09
92	4451	157	4452	157	0104	3	69.2002		69.1930		9896	3	08
93	4608	157	4609	158	0107	2	68.4562		68.4489		9893	2	07
94	4765	157	4767	157	0109	2	67.7280		67.7206		9891	2	06
95	4922	157	4924	157	0111	3	67.0151		67.0076		9889	3	05
96	5079	157	5081	157	0114	2	66.3171		66.3095		9886	2	04
97	5236	157	5238	157	0116	2	65.6334		65.6258		9884	2	03
98	5393	157	5395	157	0118	3	64.9638		64.9561		9882	3	02
99	5550	157	5552	157	0121	2	64.3076		64.2998		9879	2	01
100	0.015707	157	0.015709	157	1.000123		63.6646		63.6567		0.999877		**00**
	cos		cotg		cosec		sec		tang		sin		c

	157	**158**	
1	15.7	15.8	1
2	31.4	31.6	2
3	47.1	47.4	3
4	62.8	63.2	4
5	78.5	79.0	5
6	94.2	94.8	6
7	109.9	110.6	7
8	125.6	126.4	8
9	141.3	142.2	9

99g

1g

c	sin		tang		sec		cosec		cotg		cos		
00	0.015707	157	0.015709	157	1.000123	3	63.6646		63.6567		0.999877	3	**100**
01	5864	157	5866	157	0126	2	63.0343		63.0264		9874	2	99
02	6021	157	6023	158	0128	3	62.4164		62.4084		9872	3	98
03	6178	158	6181	157	0131	2	61.8104		61.8024		9869	2	97
04	6336	157	6338	157	0133	3	61.2162		61.2080		9867	3	96
05	6493	157	6495	157	0136	3	60.6332		60.6250		9864	3	95
06	6650	157	6652	157	0139	2	60.0612		60.0529		9861	2	94
07	6807	157	6809	157	0141	3	59.5000		59.4916		9859	3	93
08	6964	157	6966	157	0144	3	58.9491		58.9406		9856	3	92
09	7121	157	7123	157	0147	2	58.4083		58.3998		9853	2	91
10	0.017278	157	0.017280	158	1.000149	3	57.8774		57.8688		0.999851	3	**90**
11	7435	157	7438	157	0152	3	57.3560		57.3473		9848	3	89
12	7592	157	7595	157	0155	3	56.8440		56.8352		9845	3	88
13	7749	157	7752	157	0158	2	56.3410		56.3321		9842	2	87
14	7906	157	7909	157	0160	3	55.8468		55.8379		9840	3	86
15	8063	157	8066	157	0163	3	55.3613		55.3522		9837	3	85
16	8220	157	8223	157	0166	3	54.8841		54.8749		9834	3	84
17	8377	157	8380	158	0169	3	54.4150		54.4058		9831	3	83
18	8534	157	8538	157	0172	3	53.9539		53.9446		9828	3	82
19	8691	157	8695	157	0175	3	53.5006		53.4912		9825	3	81
20	0.018848	157	0.018852	157	1.000178	3	53.0548		53.0454		0.999822	3	**80**
21	9005	157	9009	158	0181	3	52.6164		52.6069		9819	3	79
22	9163	158	9166	157	0184	3	52.1851		52.1756		9816	3	78
23	9320	157	9323	157	0187	3	51.7609		51.7513		9813	3	77
24	9477	157	9480	157	0190	3	51.3436		51.3338		9810	3	76
25	9634	157	9637	157	0193	3	50.9329		50.9230		9807	3	75
26	9791	157	9795	158	0196	3	50.5287		50.5188		9804	3	74
27	0.019948	157	0.019952	157	0199	3	50.1309		50.1209		9801	3	73
28	0.020105	157	0.020109	157	0202	3	49.7393		49.7292		9798	3	72
29	0262	157	0266	157	0205	3	49.3537		49.3436		9795	3	71
30	0.020419	157	0.020423	157	1.000209	4	48.9742		48.9639		0.999792	3	**70**
31	0576	157	0580	157	0212	3	48.6004		48.5901		9788	4	69
32	0733	157	0737	157	0215	3	48.2322		48.2219		9785	3	68
33	0890	157	0895	158	0218	3	47.8696		47.8592		9782	3	67
34	1047	157	1052	157	0222	4	47.5124		47.5019		9778	4	66
35	1204	157	1209	157	0225	3	47.1606		47.1500		9775	3	65
36	1361	157	1366	157	0228	3	46.8138		46.8032		9772	3	64
37	1518	157	1523	157	0232	4	46.4722		46.4614		9768	4	63
38	1675	157	1680	157	0235	3	46.1355		46.1246		9765	3	62
39	1832	157	1838	158	0238	3	45.8036		45.7927		9762	3	61
40	0.021989	157	0.021995	157	1.000242	4	45.4765		45.4655		0.999758	4	**60**
41	2146	157	2152	157	0245	3	45.1540		45.1430		9755	3	59
42	2303	157	2309	157	0249	4	44.8361		44.8249		9751	4	58
43	2460	158	2466	157	0252	3	44.5226		44.5114		9748	3	57
44	2618	157	2623	157	0256	4	44.2135		44.2022		9744	4	56
45	2775	157	2780	157	0259	3	43.9086		43.8972		9741	3	55
46	2932	157	2938	158	0263	4	43.6079		43.5964		9737	4	54
47	3089	157	3095	157	0267	4	43.3113		43.2998		9733	4	53
48	3246	157	3252	157	0270	3	43.0187		43.0071		9730	3	52
49	3403	157	3409	157	0274	4	42.7301		42.7184		9726	4	51
50	0.023560	157	0.023566	157	1.000278	4	42.4452		42.4335		0.999722	4	**50**
	cos		cotg		cosec		sec		tang		sin		c

	157	**158**	
1	15.7	15.8	1
2	31.4	31.6	2
3	47.1	47.4	3
4	62.8	63.2	4
5	78.5	79.0	5
6	94.2	94.8	6
7	109.9	110.6	7
8	125.6	126.4	8
9	141.3	142.2	9

98g

1g

c	sin		tang		sec		cosec		cotg		cos		
50	0.023560	157	0.023566	157	1.000278	3	42.4452		42.4335		0.999722	3	**50**
51	3717	157	3723	158	0281	4	42.1642		42.1523		9719	4	49
52	3874	157	3881	157	0285	4	41.8869		41.8749		9715	4	48
53	4031	157	4038	157	0289	4	41.6131		41.6011		9711	4	47
54	4188	157	4195	157	0293	3	41.3430		41.3309		9707	3	46
55	4345	157	4352	157	0296	4	41.0763		41.0641		9704	4	45
56	4502	157	4509	158	0300	4	40.8130		40.8008		9700	4	44
57	4659	157	4667	157	0304	4	40.5531		40.5408		9696	4	43
58	4816	157	4824	157	0308	4	40.2965		40.2841		9692	4	42
59	4973	157	4981	157	0312	4	40.0431		40.0307		9688	4	41
60	0.025130	157	0.025138	157	1.000316	4	39.7929		39.7804		0.999684	4	**40**
61	5287	157	5295	157	0320	4	39.5458		39.5332		9680	4	39
62	5444	157	5452	158	0324	4	39.3018		39.2890		9676	4	38
63	5601	157	5610	157	0328	4	39.0607		39.0479		9672	4	37
64	5758	157	5767	157	0332	4	38.8226		38.8097		9668	4	36
65	5915	157	5924	157	0336	4	38.5873		38.5744		9664	4	35
66	6072	157	6081	157	0340	4	38.3549		38.3419		9660	4	34
67	6229	157	6238	157	0344	4	38.1253		38.1122		9656	4	33
68	6386	157	6396	158	0348	4	37.8984		37.8852		9652	4	32
69	6543	157	6553	157	0352	4	37.6742		37.6610		9648	4	31
70	0.026700	157	0.026710	157	1.000357	5	37.4527		37.4393		0.999643	5	**30**
71	6857	157	6867	157	0361	4	37.2337		37.2203		9639	4	29
72	7014	157	7024	157	0365	4	37.0173		37.0038		9635	4	28
73	7171	157	7181	157	0369	4	36.8034		36.7898		9631	4	27
74	7328	157	7339	158	0374	5	36.5919		36.5782		9627	4	26
75	7485	157	7496	157	0378	4	36.3829		36.3691		9622	5	25
76	7642	157	7653	157	0382	4	36.1762		36.1624		9618	4	24
77	7800	158	7810	157	0387	5	35.9719		35.9580		9614	4	23
78	7957	157	7967	157	0391	4	35.7698		35.7558		9609	5	22
79	8114	157	8125	158	0395	4	35.5700		35.5560		9605	4	21
80	0.028271	157	0.028282	157	1.000400	5	35.3725		35.3583		0.999600	5	**20**
81	8428	157	8439	157	0404	4	35.1771		35.1629		9596	4	19
82	8585	157	8596	157	0409	5	34.9839		34.9696		9591	5	18
83	8742	157	8753	158	0413	4	34.7928		34.7784		9587	4	17
84	8899	157	8911	157	0418	5	34.6037		34.5893		9582	5	16
85	9056	157	9068	157	0422	4	34.4167		34.4022		9578	4	15
86	9213	157	9225	157	0427	5	34.2317		34.2171		9573	5	14
87	9370	157	9382	157	0432	5	34.0487		34.0340		9569	4	13
88	9527	157	9540	158	0436	4	33.8677		33.8529		9564	5	12
89	9684	157	9697	157	0441	5	33.6885		33.6737		9559	5	11
90	0.029841	157	0.029854	157	1.000446	5	33.5113		33.4964		0.999555	4	**10**
91	0.029998	157	0.030011	157	0450	4	33.3359		33.3209		9550	5	09
92	0.030155	157	0168	157	0455	5	33.1623		33.1472		9545	5	08
93	0312	157	0326	158	0460	5	32.9905		32.9754		9540	5	07
94	0469	157	0483	157	0464	4	32.8205		32.8053		9536	4	06
95	0626	157	0640	157	0469	5	32.6523		32.6370		9531	5	05
96	0783	157	0797	157	0474	5	32.4857		32.4703		9526	5	04
97	0940	157	0955	158	0479	5	32.3209		32.3054		9521	5	03
98	1097	157	1112	157	0484	5	32.1577		32.1421		9516	5	02
99	1254	157	1269	157	0489	5	31.9962		31.9805		9511	5	01
100	0.031411	157	0.031426	157	1.000494	5	31.8362		31.8205		0.999507	4	**00**
	cos		cotg		cosec		sec		tang		sin		c

	157	**158**	
1	15.7	15.8	1
2	31.4	31.6	2
3	47.1	47.4	3
4	62.8	63.2	4
5	78.5	79.0	5
6	94.2	94.8	6
7	109.9	110.6	7
8	125.6	126.4	8
9	141.3	142.2	9

98g

2^g

c	sin		tang		sec		cosec		cotg		cos		
00	0.031411	157	0.031426	158	1.000494	5	31.8362		31.8205		0.999507	5	**100**
01	1568	157	1584	157	0499	5	31.6779		31.6621		9502	5	99
02	1725	157	1741	157	0504	5	31.5211		31.5053		9497	5	98
03	1882	157	1898	157	0509	5	31.3659		31.3500		9492	5	97
04	2039	157	2055	157	0514	5	31.2122		31.1962		9487	5	96
05	2196	157	2212	157	0519	5	31.0600		31.0439		9482	5	95
06	2353	157	2370	158	0524	5	30.9093		30.8931		9477	5	94
07	2510	157	2527	157	0529	5	30.7600		30.7437		9471	6	93
08	2667	157	2684	157	0534	5	30.6122		30.5958		9466	5	92
09	2824	157	2841	157	0539	5	30.4657		30.4493		9461	5	91
10	0.032981	157	0.032999	158	1.000544	5	30.3207		30.3042		0.999456	5	**90**
11	3138	157	3156	157	0550	6	30.1771		30.1605		9451	5	89
12	3295	157	3313	157	0555	5	30.0348		30.0181		9446	5	88
13	3452	157	3470	157	0560	5	29.8938		29.8771		9440	6	87
14	3609	157	3628	158	0565	5	29.7542		29.7374		9435	5	86
15	3766	157	3785	157	0571	6	29.6159		29.5990		9430	5	85
16	3923	157	3942	157	0576	5	29.4788		29.4618		9424	6	84
17	4080	157	4099	157	0581	5	29.3430		29.3260		9419	5	83
18	4237	157	4257	158	0587	6	29.2084		29.1913		9414	5	82
19	4394	157	4414	157	0592	5	29.0751		29.0579		9408	6	81
20	0.034551	157	0.034571	157	1.000597	5	28.9430		28.9257		0.999403	5	**80**
21	4708	157	4729	158	0603	6	28.8121		28.7948		9398	5	79
22	4865	157	4886	157	0608	5	28.6824		28.6649		9392	6	78
23	5022	157	5043	157	0614	6	28.5538		28.5363		9387	5	77
24	5179	157	5200	157	0619	5	28.4264		28.4088		9381	6	76
25	5336	157	5358	158	0625	6	28.3001		28.2824		9376	5	75
26	5493	157	5515	157	0630	5	28.1749		28.1572		9370	6	74
27	5650	157	5672	157	0636	6	28.0509		28.0330		9364	6	73
28	5807	157	5829	157	0642	6	27.9279		27.9100		9359	5	72
29	5963	156	5987	158	0647	5	27.8060		27.7880		9353	6	71
30	0.036120	157	0.036144	157	1.000653	6	27.6851		27.6671		0.999347	6	**70**
31	6277	157	6301	157	0659	6	27.5653		27.5472		9342	5	69
32	6434	157	6459	158	0664	5	27.4466		27.4284		9336	6	68
33	6591	157	6616	157	0670	6	27.3288		27.3105		9330	6	67
34	6748	157	6773	157	0676	6	27.2121		27.1937		9325	5	66
35	6905	157	6930	157	0682	6	27.0964		27.0779		9319	6	65
36	7062	157	7088	158	0688	6	26.9816		26.9631		9313	6	64
37	7219	157	7245	157	0693	5	26.8678		26.8492		9307	6	63
38	7376	157	7402	157	0699	6	26.7550		26.7363		9301	6	62
39	7533	157	7560	158	0705	6	26.6431		26.6243		9295	6	61
40	0.037690	157	0.037717	157	1.000711	6	26.5321		26.5133		0.999289	6	**60**
41	7847	157	7874	157	0717	6	26.4221		26.4031		9284	5	59
42	8004	157	8032	158	0723	6	26.3129		26.2939		9278	6	58
43	8161	157	8189	157	0729	6	26.2047		26.1856		9272	6	57
44	8318	157	8346	157	0735	6	26.0974		26.0782		9266	6	56
45	8475	157	8504	158	0741	6	25.9909		25.9717		9260	6	55
46	8632	157	8661	157	0747	6	25.8853		25.8660		9254	6	54
47	8789	157	8818	157	0753	6	25.7805		25.7611		9247	7	53
48	8946	157	8975	157	0759	6	25.6766		25.6572		9241	6	52
49	9103	157	9133	158	0765	6	25.5736		25.5540		9235	6	51
50	0.039260	157	0.039290	157	1.000772	7	25.4713		25.4517		0.999229	6	**50**
	cos		cotg		cosec		sec		tang		sin		c

	156	**157**	**158**	
1	15.6	15.7	15.8	1
2	31.2	31.4	31.6	2
3	46.8	47.1	47.4	3
4	62.4	62.8	63.2	4
5	78.0	78.5	79.0	5
6	93.6	94.2	94.8	6
7	109.2	109.9	110.6	7
8	124.8	125.6	126.4	8
9	140.4	141.3	142.2	9

97^g

2^g

c	sin		tang		sec		cosec		cotg		cos		
50	0.039260	157	0.039290	157	1.000772	6	25.4713		25.4517		0.999229	6	**50**
51	9417	157	9447	158	0778	6	3699		3502		9223	6	49
52	9574	157	9605	157	0784	6	2693		2495		9217	7	48
53	9731	157	9762	157	0790	6	1695		1496		9210	6	47
54	0.039888	157	0.039919	158	0796	7	25.0704		25.0505		9204	6	46
55	0.040045	157	0.040077	157	0803	6	24.9722		24.9521		9198	6	45
56	0202	157	0234	157	0809	6	8747		8546		9192	7	44
57	0359	156	0391	158	0815	7	7779		7577		9185	6	43
58	0515	157	0549	157	0822	6	6819		6617		9179	6	42
59	0672	157	0706	157	0828	7	5867		5664		9173	7	41
60	0.040829	157	0.040863	158	1.000835	6	24.4922		24.4718		0.999166	6	**40**
61	0986	157	1021	157	0841	6	3984		3779		9160	7	39
62	1143	157	1178	157	0847	7	3053		2847		9153	6	38
63	1300	157	1335	158	0854	6	2130		1923		9147	7	37
64	1457	157	1493	157	0860	7	1213		1006		9140	6	36
65	1614	157	1650	158	0867	7	24.0303		24.0095		9134	7	35
66	1771	157	1808	157	0874	6	23.9400		23.9191		9127	6	34
67	1928	157	1965	157	0880	7	8504		8295		9121	7	33
68	2085	157	2122	158	0887	6	7615		7404		9114	7	32
69	2242	157	2280	157	0893	7	6732		6521		9107	6	31
70	0.042399	157	0.042437	157	1.000900	7	23.5856		23.5644		0.999101	7	**30**
71	2556	157	2594	158	0907	6	4986		4773		9094	7	29
72	2713	157	2752	157	0913	7	4123		3909		9087	6	28
73	2870	157	2909	157	0920	7	3266		3051		9081	7	27
74	3027	156	3066	158	0927	7	2415		2199		9074	7	26
75	3183	157	3224	157	0934	7	1570		1354		9067	7	25
76	3340	157	3381	158	0941	6	23.0732		23.0515		9060	6	24
77	3497	157	3539	157	0947	7	22.9899		22.9682		9054	7	23
78	3654	157	3696	157	0954	7	9073		8854		9047	7	22
79	3811	157	3853	158	0961	7	8252		8033		9040	7	21
80	0.043968	157	0.044011	157	1.000968	7	22.7438		22.7218		0.999033	7	**20**
81	4125	157	4168	157	0975	7	6629		6408		9026	7	19
82	4282	157	4325	158	0982	7	5826		5604		9019	7	18
83	4439	157	4483	157	0989	7	5028		4806		9012	7	17
84	4596	157	4640	158	0996	7	4236		4013		9005	7	16
85	4753	157	4798	157	1003	7	3450		3226		8998	7	15
86	4910	157	4955	157	1010	7	2669		2445		8991	7	14
87	5067	157	5112	158	1017	7	1894		1668		8984	7	13
88	5224	156	5270	157	1024	7	1124		0898		8977	7	12
89	5380	157	5427	158	1031	7	22.0359		22.0132		8970	7	11
90	0.045537	157	0.045585	157	1.001038	8	21.9600		21.9372		0.998963	8	**10**
91	5694	157	5742	157	1046	7	8846		8617		8955	7	09
92	5851	157	5899	158	1053	7	8097		7868		8948	7	08
93	6008	157	6057	157	1060	7	7353		7123		8941	7	07
94	6165	157	6214	158	1067	8	6614		6383		8934	7	06
95	6322	157	6372	157	1075	7	5881		5649		8927	8	05
96	6479	157	6529	158	1082	7	5152		4919		8919	7	04
97	6636	157	6687	157	1089	8	4428		4195		8912	7	03
98	6793	157	6844	157	1097	7	3709		3475		8905	8	02
99	6950	156	7001	158	1104	7	2995		2760		8897	7	01
100	0.047106		0.047159		1.001111		21.2285		21.2049		0.998890		**00**
	cos		cotg		cosec		sec		tang		sin		c

	156	**157**	**158**	
1	15.6	15.7	15.8	1
2	31.2	31.4	31.6	2
3	46.8	47.1	47.4	3
4	62.4	62.8	63.2	4
5	78.0	78.5	79.0	5
6	93.6	94.2	94.8	6
7	109.2	109.9	110.6	7
8	124.8	125.6	126.4	8
9	140.4	141.3	142.2	9

97^g

3g

c	sin		tang		sec		cosec		cotg		cos		
00	0.047106	157	0.047159	157	1.001111	8	21.2285	705	21.2049	705	0.998890	8	**100**
01	7263	157	7316	158	1119	7	1580	700	1344	701	8882	7	99
02	7420	157	7474	157	1126	8	0880	695	21.0643	696	8875	7	98
03	7577	157	7631	158	1134	7	21.0185	691	20.9947	692	8868	8	97
04	7734	157	7789	157	1141	8	20.9494	686	9255	687	8860	7	96
05	7891	157	7946	157	1149	7	8808	682	8568	683	8853	8	95
06	8048	157	8103	158	1156	8	8126	678	7885	678	8845	8	94
07	8205	157	8261	157	1164	7	7448	673	7207	674	8837	7	93
08	8362	157	8418	158	1171	8	6775	668	6533	669	8830	8	92
09	8519	156	8576	157	1179	8	6107	665	5864	665	8822	7	91
10	0.048675	157	0.048733	158	1.001187	7	20.5442	660	20.5199	661	0.998815	8	**90**
11	8832	157	8891	157	1194	8	4782	655	4538	657	8807	8	89
12	8989	157	9048	158	1202	8	4127	652	3881	652	8799	7	88
13	9146	157	9206	157	1210	8	3475	648	3229	648	8792	8	87
14	9303	157	9363	158	1218	7	2827	643	2581	644	8784	8	86
15	9460	157	9521	157	1225	8	2184	639	1937	641	8776	8	85
16	9617	157	9678	157	1233	8	1545	636	1296	636	8768	7	84
17	9774	157	9835	158	1241	8	0909	631	0660	632	8761	8	83
18	0.049931	156	0.049993	157	1249	8	20.0278	627	20.0028	628	8753	8	82
19	0.050087	157	0.050150	158	1257	8	19.9651	624	19.9400	624	8745	8	81
20	0.050244	157	0.050308	157	1.001265	8	19.9027	619	19.8776	620	0.998737	8	**80**
21	0401	157	0465	158	1273	8	8408	616	8156	617	8729	8	79
22	0558	157	0623	157	1281	7	7792	612	7539	612	8721	8	78
23	0715	157	0780	158	1288	8	7180	608	6927	609	8713	8	77
24	0872	157	0938	157	1296	9	6572	604	6318	605	8705	8	76
25	1029	157	1095	158	1305	8	5968	600	5713	602	8697	8	75
26	1186	156	1253	157	1313	8	5368	597	5111	597	8689	8	74
27	1342	157	1410	158	1321	8	4771	594	4514	594	8681	8	73
28	1499	157	1568	157	1329	8	4177	589	3920	591	8673	8	72
29	1656	157	1725	158	1337	8	3588	586	3329	587	8665	8	71
30	0.051813	157	0.051883	157	1.001345	8	19.3002	583	19.2742	583	0.998657	8	**70**
31	1970	157	2040	158	1353	8	2419	579	2159	580	8649	9	69
32	2127	157	2198	157	1361	9	1840	576	1579	576	8640	8	68
33	2284	157	2355	158	1370	8	1264	572	1003	573	8632	8	67
34	2441	156	2513	157	1378	8	0692	569	19.0430	570	8624	8	66
35	2597	157	2670	158	1386	8	19.0123	565	18.9860	566	8616	8	65
36	2754	157	2828	157	1394	9	18.9558	562	9294	563	8608	9	64
37	2911	157	2985	158	1403	8	8996	558	8731	559	8599	8	63
38	3068	157	3143	157	1411	8	8438	556	8172	556	8591	8	62
39	3225	157	3300	158	1419	9	7882	552	7616	553	8583	9	61
40	0.053382	157	0.053458	157	1.001428	8	18.7330	549	18.7063	550	0.998574	8	**60**
41	3539	156	3615	158	1436	9	6781	545	6513	546	8566	9	59
42	3695	157	3773	158	1445	8	6236	543	5967	543	8557	8	58
43	3852	157	3931	157	1453	9	5693	539	5424	540	8549	9	57
44	4009	157	4088	158	1462	8	5154	536	4884	537	8540	8	56
45	4166	157	4246	157	1470	9	4618	533	4347	534	8532	9	55
46	4323	157	4403	158	1479	8	4085	530	3813	531	8523	8	54
47	4480	156	4561	157	1487	9	3555	527	3282	528	8515	9	53
48	4636	157	4718	158	1496	9	3028	524	2754	524	8506	8	52
49	4793	157	4876	157	1505	8	2504	521	2230	522	8498	9	51
50	0.054950		0.055033		1.001513		18.1983		18.1708		0.998489		**50**
	cos		cotg		cosec		sec		tang		sin		c

	156	**157**	**158**	**398**	**400**	**410**	**420**	**430**	**440**	**450**	**460**	**470**	**480**	**490**	**500**	**510**	**520**	**530**	
1	15.6	15.7	15.8	39.8	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	1
2	31.2	31.4	31.6	79.6	80.0	82.0	84.0	86.0	88.0	90.0	92.0	94.0	96.0	98.0	100.0	102.0	104.0	106.0	2
3	46.8	47.1	47.4	119.4	120.0	123.0	126.0	129.0	132.0	135.0	138.0	141.0	144.0	147.0	150.0	153.0	156.0	159.0	3
4	62.4	62.8	63.2	159.2	160.0	164.0	168.0	172.0	176.0	180.0	184.0	188.0	192.0	196.0	200.0	204.0	208.0	212.0	4
5	78.0	78.5	79.0	199.0	200.0	205.0	210.0	215.0	220.0	225.0	230.0	235.0	240.0	245.0	250.0	255.0	260.0	265.0	5
6	93.6	94.2	94.8	238.8	240.0	246.0	252.0	258.0	264.0	270.0	276.0	282.0	288.0	294.0	300.0	306.0	312.0	318.0	6
7	109.2	109.9	110.6	278.6	280.0	287.0	294.0	301.0	308.0	315.0	322.0	329.0	336.0	343.0	350.0	357.0	364.0	371.0	7
8	124.8	125.6	126.4	318.4	320.0	328.0	336.0	344.0	352.0	360.0	368.0	376.0	384.0	392.0	400.0	408.0	416.0	424.0	8
9	140.4	141.3	142.2	358.2	360.0	369.0	378.0	387.0	396.0	405.0	414.0	423.0	432.0	441.0	450.0	459.0	468.0	477.0	9

96g

3g

c	sin		tang		sec		cosec		cotg		cos		
50	0.054950	157	0.055033	158	1.001513	9	18.1983	518	18.1708	519	0.998489	9	**50**
51	5107	157	5191	157	1522	9	1465	515	1189	515	8480	8	49
52	5264	157	5348	158	1531	8	0950	512	0674	513	8472	9	48
53	5421	157	5506	158	1539	9	18.0438	509	18.0161	510	8463	9	47
54	5578	156	5664	157	1548	9	17.9929	507	17.9651	507	8454	8	46
55	5734	157	5821	158	1557	9	9422	503	9144	505	8446	9	45
56	5891	157	5979	157	1566	8	8919	501	8639	501	8437	9	44
57	6048	157	6136	158	1574	9	8418	497	8138	499	8428	9	43
58	6205	157	6294	157	1583	9	7921	496	7639	496	8419	9	42
59	6362	157	6451	158	1592	9	7425	492	7143	493	8410	8	41
60	0.056519	156	0.056609	158	1.001601	9	17.6933	489	17.6650	490	0.998402	9	**40**
61	6675	157	6767	157	1610	9	6444	487	6160	488	8393	9	39
62	6832	157	6924	158	1619	9	5957	485	5672	485	8384	9	38
63	6989	157	7082	157	1628	9	5472	481	5187	482	8375	9	37
64	7146	157	7239	158	1637	9	4991	479	4705	480	8366	9	36
65	7303	156	7397	158	1646	9	4512	476	4225	477	8357	9	35
66	7459	157	7555	157	1655	9	4036	474	3748	474	8348	9	34
67	7616	157	7712	158	1664	9	3562	471	3274	472	8339	9	33
68	7773	157	7870	157	1673	9	3091	469	2802	470	8330	9	32
69	7930	157	8027	158	1682	9	2622	466	2332	466	8321	9	31
70	0.058087	157	0.058185	158	1.001691	9	17.2156	463	17.1866	465	0.998312	10	**30**
71	8244	156	8343	157	1700	10	1693	461	1401	461	8302	9	29
72	8400	157	8500	158	1710	9	1232	459	0940	460	8293	9	28
73	8557	157	8658	157	1719	9	0773	456	0480	457	8284	9	27
74	8714	157	8815	158	1728	9	17.0317	454	17.0023	454	8275	9	26
75	8871	157	8973	158	1737	10	16.9863	451	16.9569	452	8266	10	25
76	9028	156	9131	157	1747	9	9412	449	9117	450	8256	9	24
77	9184	157	9288	158	1756	9	8963	446	8667	447	8247	9	23
78	9341	157	9446	158	1765	10	8517	444	8220	445	8238	10	22
79	9498	157	9604	157	1775	9	8073	442	7775	442	8228	9	21
80	0.059655	157	0.059761	158	1.001784	10	16.7631	439	16.7333	441	0.998219	9	**20**
81	9812	156	0.059919	158	1794	9	7192	438	6892	438	8210	10	19
82	0.059968	157	0.060077	157	1803	9	6754	434	6454	435	8200	9	18
83	0.060125	157	0234	158	1812	10	6320	433	6019	434	8191	10	17
84	0282	157	0392	157	1822	9	5887	430	5585	431	8181	9	16
85	0439	157	0549	158	1831	10	5457	428	5154	429	8172	10	15
86	0596	156	0707	158	1841	10	5029	426	4725	426	8162	9	14
87	0752	157	0865	157	1851	9	4603	424	4299	425	8153	10	13
88	0909	157	1022	158	1860	10	4179	422	3874	422	8143	9	12
89	1066	157	1180	158	1870	9	3757	419	3452	420	8134	10	11
90	0.061223	157	0.061338	157	1.001879	10	16.3338	417	16.3032	418	0.998124	10	**10**
91	1380	156	1495	158	1889	10	2921	415	2614	416	8114	9	09
92	1536	157	1653	158	1899	9	2506	413	2198	414	8105	10	08
93	1693	157	1811	158	1908	10	2093	411	1784	412	8095	10	07
94	1850	157	1969	157	1918	10	1682	409	1372	409	8085	9	06
95	2007	156	2126	158	1928	10	1273	407	0963	408	8076	10	05
96	2163	157	2284	158	1938	10	0866	404	0555	405	8066	10	04
97	2320	157	2442	157	1948	9	0462	403	16.0150	404	8056	10	03
98	2477	157	2599	158	1957	10	16.0059	401	15.9746	401	8046	9	02
99	2634	157	2757	158	1967	10	15.9658	398	9345	400	8037	10	01
100	0.062791		0.062915		1.001977		15.9260		15.8945		0.998027		**00**
	cos		cotg		cosec		sec		tang		sin		c

	540	**550**	**560**	**570**	**580**	**590**	**600**	**610**	**620**	**630**	**640**	**650**	**660**	**670**	**680**	**690**	**700**	**705**	
1	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	70.5	1
2	108.0	110.0	112.0	114.0	116.0	118.0	120.0	122.0	124.0	126.0	128.0	130.0	132.0	134.0	136.0	138.0	140.0	141.0	2
3	162.0	165.0	168.0	171.0	174.0	177.0	180.0	183.0	186.0	189.0	192.0	195.0	198.0	201.0	204.0	207.0	210.0	211.5	3
4	216.0	220.0	224.0	228.0	232.0	236.0	240.0	244.0	248.0	252.0	256.0	260.0	264.0	268.0	272.0	276.0	280.0	282.0	4
5	270.0	275.0	280.0	285.0	290.0	295.0	300.0	305.0	310.0	315.0	320.0	325.0	330.0	335.0	340.0	345.0	350.0	352.5	5
6	324.0	330.0	336.0	342.0	348.0	354.0	360.0	366.0	372.0	378.0	384.0	390.0	396.0	402.0	408.0	414.0	420.0	423.0	6
7	378.0	385.0	392.0	399.0	406.0	413.0	420.0	427.0	434.0	441.0	448.0	455.0	462.0	469.0	476.0	483.0	490.0	493.5	7
8	432.0	440.0	448.0	456.0	464.0	472.0	480.0	488.0	496.0	504.0	512.0	520.0	528.0	536.0	544.0	552.0	560.0	564.0	8
9	486.0	495.0	504.0	513.0	522.0	531.0	540.0	549.0	558.0	567.0	576.0	585.0	594.0	603.0	612.0	621.0	630.0	634.5	9

96g

4g

c	sin		tang		sec		cosec		cotg		cos		
00	0.062791	156	0.062915	157	1.001977	10	15.9260	397	15.8945	397	0.998027	10	**100**
01	2947	157	3072	158	1987	10	8863	395	8548	395	8017	10	99
02	3104	157	3230	158	1997	10	8468	392	8153	394	8007	10	98
03	3261	157	3388	157	2007	10	8076	391	7759	391	7997	10	97
04	3418	156	3545	158	2017	10	7685	389	7368	390	7987	10	96
05	3574	157	3703	158	2027	10	7296	387	6978	388	7977	10	95
06	3731	157	3861	158	2037	10	6909	385	6590	386	7967	10	94
07	3888	157	4019	157	2047	10	6524	383	6204	383	7957	10	93
08	4045	156	4176	158	2057	10	6141	381	5821	382	7947	10	92
09	4201	157	4334	158	2067	10	5760	379	5439	381	7937	10	91
10	0.064358	157	0.064492	158	1.002077	11	15.5381	378	15.5058	378	0.997927	10	**90**
11	4515	157	4650	157	2088	10	5003	376	4680	376	7917	10	89
12	4672	156	4807	158	2098	10	4627	374	4304	375	7907	11	88
13	4828	157	4965	158	2108	10	4253	372	3929	373	7896	10	87
14	4985	157	5123	158	2118	11	3881	370	3556	371	7886	10	86
15	5142	157	5281	157	2129	10	3511	368	3185	369	7876	10	85
16	5299	156	5438	158	2139	10	3143	367	2816	368	7866	11	84
17	5455	157	5596	158	2149	10	2776	365	2448	366	7855	10	83
18	5612	157	5754	158	2159	11	2411	363	2082	364	7845	10	82
19	5769	157	5912	157	2170	10	2048	362	1718	362	7835	10	81
20	0.065926	156	0.066069	158	1.002180	11	15.1686	360	15.1356	360	0.997825	11	**80**
21	6082	157	6227	158	2191	10	1326	358	0996	359	7814	10	79
22	6239	157	6385	158	2201	11	0968	356	0637	357	7804	11	78
23	6396	157	6543	157	2212	10	0612	355	15.0280	356	7793	10	77
24	6553	156	6700	158	2222	11	15.0257	353	14.9924	354	7783	11	76
25	6709	157	6858	158	2233	10	14.9904	351	9570	352	7772	10	75
26	6866	157	7016	158	2243	11	9553	350	9218	350	7762	11	74
27	7023	156	7174	158	2254	10	9203	348	8868	349	7751	10	73
28	7179	157	7332	157	2264	11	8855	346	8519	347	7741	11	72
29	7336	157	7489	158	2275	10	8509	345	8172	346	7730	10	71
30	0.067493	157	0.067647	158	1.002285	11	14.8164	344	14.7826	344	0.997720	11	**70**
31	7650	156	7805	158	2296	11	7820	341	7482	343	7709	10	69
32	7806	157	7963	158	2307	11	7479	340	7139	340	7699	11	68
33	7963	157	8121	157	2318	10	7139	339	6799	340	7688	11	67
34	8120	156	8278	158	2328	11	6800	337	6459	337	7677	11	66
35	8276	157	8436	158	2339	11	6463	335	6122	337	7666	10	65
36	8433	157	8594	158	2350	11	6128	334	5785	334	7656	11	64
37	8590	157	8752	158	2361	10	5794	332	5451	333	7645	11	63
38	8747	156	8910	157	2371	11	5462	331	5118	332	7634	11	62
39	8903	157	9067	158	2382	11	5131	329	4786	330	7623	10	61
40	0.069060	157	0.069225	158	1.002393	11	14.4802	328	14.4456	329	0.997613	11	**60**
41	9217	156	9383	158	2404	11	4474	327	4127	327	7602	11	59
42	9373	157	9541	158	2415	11	4147	324	3800	326	7591	11	58
43	9530	157	9699	158	2426	11	3823	324	3474	324	7580	11	57
44	9687	157	0.069857	158	2437	11	3499	322	3150	322	7569	11	56
45	0.069844	156	0.070015	157	2448	11	3177	320	2828	322	7558	11	55
46	0.070000	157	0172	158	2459	11	2857	319	2506	320	7547	11	54
47	0157	157	0330	158	2470	11	2538	318	2186	318	7536	11	53
48	0314	156	0488	158	2481	11	2220	316	1868	317	7525	11	52
49	0470	157	0646	158	2492	11	1904	315	1551	316	7514	11	51
50	0.070627		0.070804		1.002503		14.1589		14.1235		0.997503		**50**
	cos		cotg		cosec		sec		tang		sin		c

	11	**12**	**13**	**156**	**157**	**158**	**159**	**255**	**260**	**265**	**270**	**275**	**280**	**285**	**290**	**295**	**300**	**305**	
1	1.1	1.2	1.3	15.6	15.7	15.8	15.9	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	1
2	2.2	2.4	2.6	31.2	31.4	31.6	31.8	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	2
3	3.3	3.6	3.9	46.8	47.1	47.4	47.7	76.5	78.0	79.5	81.0	82.5	84.0	85.5	87.0	88.5	90.0	91.5	3
4	4.4	4.8	5.2	62.4	62.8	63.2	63.6	102.0	104.0	106.0	108.0	110.0	112.0	114.0	116.0	118.0	120.0	122.0	4
5	5.5	6.0	6.5	78.0	78.5	79.0	79.5	127.5	130.0	132.5	135.0	137.5	140.0	142.5	145.0	147.5	150.0	152.5	5
6	6.6	7.2	7.8	93.6	94.2	94.8	95.4	153.0	156.0	159.0	162.0	165.0	168.0	171.0	174.0	177.0	180.0	183.0	6
7	7.7	8.4	9.1	109.2	109.9	110.6	111.3	178.5	182.0	185.5	189.0	192.5	196.0	199.5	203.0	206.5	210.0	213.5	7
8	8.8	9.6	10.4	124.8	125.6	126.4	127.2	204.0	208.0	212.0	216.0	220.0	224.0	228.0	232.0	236.0	240.0	244.0	8
9	9.9	10.8	11.7	140.4	141.3	142.2	143.1	229.5	234.0	238.5	243.0	247.5	252.0	256.5	261.0	265.5	270.0	274.5	9

95g

c	sin		tang		sec		cosec		cotg		cos		
50	0.070627	157	0.070804	158	1.002503	12	14.1589	313	14.1235	314	0.997503	11	**50**
51	0784	156	0962	158	2515	11	1276	313	0921	313	7492	11	49
52	0940	157	1120	157	2526	11	0963	310	0608	311	7481	12	48
53	1097	157	1277	158	2537	11	0653	309	14.0297	310	7469	11	47
54	1254	156	1435	158	2548	12	0344	308	13.9987	309	7458	11	46
55	1410	157	1593	158	2560	11	14.0036	307	9678	307	7447	11	45
56	1567	157	1751	158	2571	11	13.9729	305	9371	306	7436	11	44
57	1724	156	1909	158	2582	11	9424	304	9065	305	7425	12	43
58	1880	157	2067	158	2593	12	9120	303	8760	303	7413	11	42
59	2037	157	2225	158	2605	11	8817	301	8457	302	7402	11	41
60	0.072194	156	0.072383	158	1.002616	12	13.8516	300	13.8155	301	0.997391	12	**40**
61	2350	157	2541	157	2628	11	8216	298	7854	300	7379	11	39
62	2507	157	2698	158	2639	12	7918	298	7554	298	7368	12	38
63	2664	156	2856	158	2651	11	7620	296	7256	296	7356	11	37
64	2820	157	3014	158	2662	12	7324	295	6960	296	7345	11	36
65	2977	157	3172	158	2674	11	7029	293	6664	294	7334	12	35
66	3134	156	3330	158	2685	12	6736	293	6370	293	7322	11	34
67	3290	157	3488	158	2697	11	6443	291	6077	292	7311	12	33
68	3447	157	3646	158	2708	12	6152	289	5785	291	7299	11	32
69	3604	156	3804	158	2720	11	5863	289	5494	289	7288	12	31
70	0.073760	157	0.073962	158	1.002731	12	13.5574	287	13.5205	288	0.997276	12	**30**
71	3917	157	4120	158	2743	12	5287	286	4917	287	7264	11	29
72	4074	156	4278	158	2755	12	5001	285	4630	286	7253	12	28
73	4230	157	4436	158	2767	11	4716	284	4344	284	7241	12	27
74	4387	157	4594	158	2778	12	4432	282	4060	284	7229	11	26
75	4544	156	4752	158	2790	12	4150	282	3776	282	7218	12	25
76	4700	157	4910	158	2802	12	3868	280	3494	281	7206	12	24
77	4857	157	5068	157	2814	11	3588	279	3213	279	7194	11	23
78	5014	156	5225	158	2825	12	3309	278	2934	279	7183	12	22
79	5170	157	5383	158	2837	12	3031	276	2655	277	7171	12	21
80	0.075327	156	0.075541	158	1.002849	12	13.2755	276	13.2378	277	0.997159	12	**20**
81	5483	157	5699	158	2861	12	2479	274	2101	275	7147	12	19
82	5640	157	5857	158	2873	12	2205	273	1826	274	7135	12	18
83	5797	156	6015	158	2885	12	1932	272	1552	273	7123	12	17
84	5953	157	6173	158	2897	12	1660	271	1279	271	7111	12	16
85	6110	157	6331	158	2909	12	1389	270	1008	271	7099	12	15
86	6267	156	6489	158	2921	12	1119	269	0737	269	7087	12	14
87	6423	157	6647	158	2933	12	0850	267	0468	269	7075	12	13
88	6580	156	6805	158	2945	12	0583	267	13.0199	267	7063	12	12
89	6736	157	6963	158	2957	12	0316	265	12.9932	266	7051	12	11
90	0.076893	157	0.077121	158	1.002969	13	13.0051	265	12.9666	265	0.997039	12	**10**
91	7050	156	7279	158	2982	12	12.9786	263	9401	264	7027	12	09
92	7206	157	7437	158	2994	12	9523	262	9137	263	7015	12	08
93	7363	156	7595	158	3006	12	9261	261	8874	262	7003	12	07
94	7519	157	7753	158	3018	13	9000	260	8612	261	6991	12	06
95	7676	157	7911	159	3031	12	8740	259	8351	260	6979	13	05
96	7833	156	8070	158	3043	12	8481	258	8091	259	6966	12	04
97	7989	157	8228	158	3055	12	8223	257	7832	258	6954	12	03
98	8146	156	8386	158	3067	13	7966	256	7574	256	6942	12	02
99	8302	157	8544	158	3080	12	7710	255	7318	256	6930	13	01
100	0.078459		0.078702		1.003092		12.7455		12.7062		0.996917		**00**
	cos		cotg		cosec		sec		tang		sin		c

	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	
1	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	1
2	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	2
3	93.0	94.5	96.0	97.5	99.0	100.5	102.0	103.5	105.0	106.5	108.0	109.5	111.0	112.5	114.0	115.5	117.0	118.5	3
4	124.0	126.0	128.0	130.0	132.0	134.0	136.0	138.0	140.0	142.0	144.0	146.0	148.0	150.0	152.0	154.0	156.0	158.0	4
5	155.0	157.5	160.0	162.5	165.0	167.5	170.0	172.5	175.0	177.5	180.0	182.5	185.0	187.5	190.0	192.5	195.0	197.5	5
6	186.0	189.0	192.0	195.0	198.0	201.0	204.0	207.0	210.0	213.0	216.0	219.0	222.0	225.0	228.0	231.0	234.0	237.0	6
7	217.0	220.5	224.0	227.5	231.0	234.5	238.0	241.5	245.0	248.5	252.0	255.5	259.0	262.5	266.0	269.5	273.0	276.5	7
8	248.0	252.0	256.0	260.0	264.0	268.0	272.0	276.0	280.0	284.0	288.0	292.0	296.0	300.0	304.0	308.0	312.0	316.0	8
9	279.0	283.5	288.0	292.5	297.0	301.5	306.0	310.5	315.0	319.5	324.0	328.5	333.0	337.5	342.0	346.5	351.0	355.5	9

5g

c	sin		tang		sec		cosec		cotg		cos		
00	0.078459	157	0.078702	158	1.003092	13	12.7455	254	12.7062	255	0.996917	12	**100**
01	8616	156	8860	158	3105	12	7201	253	6807	253	6905	12	99
02	8772	157	9018	158	3117	13	6948	252	6554	253	6893	13	98
03	8929	156	9176	158	3130	12	6696	251	6301	252	6880	12	97
04	9085	157	9334	158	3142	13	6445	249	6049	250	6868	13	96
05	9242	157	9492	158	3155	12	6196	249	5799	250	6855	12	95
06	9399	156	9650	158	3167	13	5947	248	5549	249	6843	13	94
07	9555	157	9808	158	3180	12	5699	247	5300	247	6830	12	93
08	9712	156	0.079966	158	3192	13	5452	246	5053	247	6818	13	92
09	0.079868	157	0.080124	158	3205	12	5206	245	4806	246	6805	12	91
10	0.080025	157	0.080282	159	1.003217	13	12.4961	244	12.4560	245	0.996793	13	**90**
11	0182	156	0441	158	3230	13	4717	243	4315	243	6780	12	89
12	0338	157	0599	158	3243	13	4474	242	4072	243	6768	13	88
13	0495	156	0757	158	3256	12	4232	241	3829	242	6755	13	87
14	0651	157	0915	158	3268	13	3991	241	3587	241	6742	12	86
15	0808	156	1073	158	3281	13	3750	239	3346	240	6730	13	85
16	0964	157	1231	158	3294	13	3511	238	3106	240	6717	13	84
17	1121	156	1389	158	3307	12	3273	238	2866	238	6704	12	83
18	1277	157	1547	158	3319	13	3035	236	2628	237	6692	13	82
19	1434	157	1705	159	3332	13	2799	236	2391	237	6679	13	81
20	0.081591	156	0.081864	158	1.003345	13	12.2563	235	12.2154	235	0.996666	13	**80**
21	1747	157	2022	158	3358	13	2328	233	1919	235	6653	13	79
22	1904	156	2180	158	3371	13	2095	233	1684	233	6640	13	78
23	2060	157	2338	158	3384	13	1862	232	1451	233	6627	13	77
24	2217	156	2496	158	3397	13	1630	232	1218	232	6614	12	76
25	2373	157	2654	158	3410	13	1398	230	0986	231	6602	13	75
26	2530	156	2812	159	3423	13	1168	229	0755	230	6589	13	74
27	2686	157	2971	158	3436	13	0939	229	0525	230	6576	13	73
28	2843	157	3129	158	3449	13	0710	227	0295	228	6563	13	72
29	3000	156	3287	158	3462	14	0483	227	12.0067	228	6550	13	71
30	0.083156	157	0.083445	158	1.003476	13	12.0256	226	11.9839	226	0.996537	14	**70**
31	3313	156	3603	158	3489	13	12.0030	225	9613	226	6523	13	69
32	3469	157	3761	159	3502	13	11.9805	224	9387	225	6510	13	68
33	3626	156	3920	158	3515	13	9581	224	9162	225	6497	13	67
34	3782	157	4078	158	3528	14	9357	222	8937	223	6484	13	66
35	3939	156	4236	158	3542	13	9135	222	8714	222	6471	13	65
36	4095	157	4394	158	3555	13	8913	221	8492	222	6458	14	64
37	4252	156	4552	159	3568	14	8692	220	8270	221	6444	13	63
38	4408	157	4711	158	3582	13	8472	219	8049	220	6431	13	62
39	4565	156	4869	158	3595	13	8253	219	7829	219	6418	13	61
40	0.084721	157	0.085027	158	1.003608	14	11.8034	218	11.7610	219	0.996405	14	**60**
41	4878	156	5185	158	3622	13	7816	216	7391	217	6391	13	59
42	5034	157	5343	159	3635	14	7600	217	7174	217	6378	13	58
43	5191	156	5502	158	3649	13	7383	215	6957	216	6365	14	57
44	5347	157	5660	158	3662	14	7168	214	6741	216	6351	13	56
45	5504	156	5818	158	3676	13	6954	214	6525	214	6338	14	55
46	5660	157	5976	159	3689	14	6740	213	6311	214	6324	13	54
47	5817	156	6135	158	3703	13	6527	212	6097	213	6311	14	53
48	5973	157	6293	158	3716	14	6315	211	5884	212	6297	13	52
49	6130	156	6451	158	3730	14	6104	211	5672	211	6284	14	51
50	0.086286		0.086609		1.003744		11.5893		11.5461		0.996270		**50**
	cos		cotg		cosec		sec		tang		sin		c

	12	**13**	**14**	**15**	**156**	**157**	**158**	**159**	**176**	**178**	**180**	**183**	**186**	**189**	**192**	**195**	**198**	**201**	
1	1.2	1.3	1.4	1.5	15.6	15.7	15.8	15.9	17.6	17.8	18.0	18.3	18.6	18.9	19.2	19.5	19.8	20.1	1
2	2.4	2.6	2.8	3.0	31.2	31.4	31.6	31.8	35.2	35.6	36.0	36.6	37.2	37.8	38.4	39.0	39.6	40.2	2
3	3.6	3.9	4.2	4.5	46.8	47.1	47.4	47.7	52.8	53.4	54.0	54.9	55.8	56.7	57.6	58.5	59.4	60.3	3
4	4.8	5.2	5.6	6.0	62.4	62.8	63.2	63.6	70.4	71.2	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	4
5	6.0	6.5	7.0	7.5	78.0	78.5	79.0	79.5	88.0	89.0	90.0	91.5	93.0	94.5	96.0	97.5	99.0	100.5	5
6	7.2	7.8	8.4	9.0	93.6	94.2	94.8	95.4	105.6	106.8	108.0	109.8	111.6	113.4	115.2	117.0	118.8	120.6	6
7	8.4	9.1	9.8	10.5	109.2	109.9	110.6	111.3	123.2	124.6	126.0	128.1	130.2	132.3	134.4	136.5	138.6	140.7	7
8	9.6	10.4	11.2	12.0	124.8	125.6	126.4	127.2	140.8	142.4	144.0	146.4	148.8	151.2	153.6	156.0	158.4	160.8	8
9	10.8	11.7	12.6	13.5	140.4	141.3	142.2	143.1	158.4	160.2	162.0	164.7	167.4	170.1	172.8	175.5	178.2	180.9	9

94g

5g

c	sin		tang		sec		cosec		cotg		cos		
50	0.086286	157	0.086609	159	1.003744	13	11.5893	210	11.5461	211	0.996270	13	**50**
51	6443	156	6768	158	3757	14	5683	209	5250	210	6257	14	49
52	6599	157	6926	158	3771	14	5474	208	5040	209	6243	13	48
53	6756	156	7084	158	3785	13	5266	208	4831	208	6230	14	47
54	6912	157	7242	159	3798	14	5058	206	4623	207	6216	14	46
55	7069	156	7401	158	3812	14	4852	206	4416	207	6202	13	45
56	7225	157	7559	158	3826	14	4646	206	4209	206	6189	14	44
57	7382	156	7717	159	3840	14	4440	204	4003	206	6175	14	43
58	7538	157	7876	158	3854	14	4236	204	3797	204	6161	14	42
59	7695	156	8034	158	3868	13	4032	203	3593	204	6147	13	41
60	0.087851	157	0.088192	158	1.003881	14	11.3829	203	11.3389	203	0.996134	14	**40**
61	8008	156	8350	159	3895	14	3626	201	3186	203	6120	14	39
62	8164	157	8509	158	3909	14	3425	201	2983	202	6106	14	38
63	8321	156	8667	158	3923	14	3224	200	2781	201	6092	14	37
64	8477	157	8825	159	3937	14	3024	200	2580	200	6078	14	36
65	8634	156	8984	158	3951	14	2824	199	2380	200	6064	14	35
66	8790	156	9142	158	3965	14	2625	198	2180	198	6050	14	34
67	8946	157	9300	159	3979	14	2427	197	1982	199	6036	14	33
68	9103	156	9459	158	3993	15	2230	197	1783	197	6022	14	32
69	9259	157	9617	158	4008	14	2033	196	1586	197	6008	14	31
70	0.089416	156	0.089775	159	1.004022	14	11.1837	195	11.1389	196	0.995994	14	**30**
71	9572	157	0.089934	158	4036	14	1642	195	1193	195	5980	14	29
72	9729	156	0.090092	158	4050	14	1447	194	0998	195	5966	14	28
73	0.089885	157	0250	159	4064	15	1253	193	0803	194	5952	14	27
74	0.090042	156	0409	158	4079	14	1060	193	0609	194	5938	14	26
75	0198	156	0567	159	4093	14	0867	192	0415	192	5924	14	25
76	0354	157	0726	158	4107	14	0675	191	0223	193	5910	15	24
77	0511	156	0884	158	4121	15	0484	191	11.0030	191	5895	14	23
78	0667	157	1042	159	4136	14	0293	190	10.9839	191	5881	14	22
79	0824	156	1201	158	4150	15	11.0103	189	9648	190	5867	14	21
80	0.090980	157	0.091359	158	1.004165	14	10.9914	189	10.9458	189	0.995853	15	**20**
81	1137	156	1517	159	4179	14	9725	188	9269	189	5838	14	19
82	1293	156	1676	158	4193	15	9537	187	9080	188	5824	14	18
83	1449	157	1834	159	4208	14	9350	187	8892	188	5810	15	17
84	1606	156	1993	158	4222	15	9163	186	8704	187	5795	14	16
85	1762	157	2151	159	4237	14	8977	185	8517	186	5781	14	15
86	1919	156	2310	158	4251	15	8792	185	8331	185	5767	15	14
87	2075	157	2468	158	4266	15	8607	184	8146	185	5752	14	13
88	2232	156	2626	159	4281	14	8423	184	7961	185	5738	15	12
89	2388	156	2785	158	4295	15	8239	183	7776	183	5723	14	11
90	0.092544	157	0.092943	159	1.004310	15	10.8056	182	10.7593	184	0.995709	15	**10**
91	2701	156	3102	158	4325	14	7874	182	7409	182	5694	15	09
92	2857	157	3260	159	4339	15	7692	181	7227	182	5679	14	08
93	3014	156	3419	158	4354	15	7511	180	7045	181	5665	15	07
94	3170	156	3577	158	4369	15	7331	180	6864	181	5650	14	06
95	3326	157	3735	159	4384	14	7151	179	6683	180	5636	15	05
96	3483	156	3894	158	4398	15	6972	179	6503	179	5621	15	04
97	3639	157	4052	159	4413	15	6793	178	6324	179	5606	15	03
98	3796	156	4211	158	4428	15	6615	178	6145	178	5591	14	02
99	3952	156	4369	159	4443	15	6437	176	5967	178	5577	15	01
100	0.094108		0.094528		1.004458		10.6261		10.5789		0.995562		**00**
	cos		cotg		cosec		sec		tang		sin		c

	204	**207**	**210**	**213**	**216**	**219**	**222**	**225**	**228**	**231**	**234**	**237**	**240**	**243**	**246**	**249**	**252**	**255**	
1	20.4	20.7	21.0	21.3	21.6	21.9	22.2	22.5	22.8	23.1	23.4	23.7	24.0	24.3	24.6	24.9	25.2	25.5	1
2	40.8	41.4	42.0	42.6	43.2	43.8	44.4	45.0	45.6	46.2	46.8	47.4	48.0	48.6	49.2	49.8	50.4	51.0	2
3	61.2	62.1	63.0	63.9	64.8	65.7	66.6	67.5	68.4	69.3	70.2	71.1	72.0	72.9	73.8	74.7	75.6	76.5	3
4	81.6	82.8	84.0	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	4
5	102.0	103.5	105.0	106.5	108.0	109.5	111.0	112.5	114.0	115.5	117.0	118.5	120.0	121.5	123.0	124.5	126.0	127.5	5
6	122.4	124.2	126.0	127.8	129.6	131.4	133.2	135.0	136.8	138.6	140.4	142.2	144.0	145.8	147.6	149.4	151.2	153.0	6
7	142.8	144.9	147.0	149.1	151.2	153.3	155.4	157.5	159.6	161.7	163.8	165.9	168.0	170.1	172.2	174.3	176.4	178.5	7
8	163.2	165.6	168.0	170.4	172.8	175.2	177.6	180.0	182.4	184.8	187.2	189.6	192.0	194.4	196.8	199.2	201.6	204.0	8
9	183.6	186.3	189.0	191.7	194.4	197.1	199.8	202.5	205.2	207.9	210.6	213.3	216.0	218.7	221.4	224.1	226.8	229.5	9

94g

6g

c	sin		tang		sec		cosec		cotg		cos		
00	0.094108	157	0.094528	158	1.004458	15	10.62605	1762	10.57889	1770	0.995562	15	**100**
01	4265	156	4686	159	4473	15	60843	1757	56119	1765	5547	15	99
02	4421	156	4845	158	4488	15	59086	1752	54354	1759	5532	14	98
03	4577	157	5003	159	4503	15	57334	1745	52595	1753	5518	15	97
04	4734	156	5162	158	4518	15	55589	1739	50842	1748	5503	15	96
05	4890	157	5320	159	4533	15	53850	1734	49094	1741	5488	15	95
06	5047	156	5479	158	4548	15	52116	1728	47353	1736	5473	15	94
07	5203	156	5637	159	4563	15	50388	1723	45617	1730	5458	15	93
08	5359	157	5796	158	4578	15	48665	1716	43887	1725	5443	15	92
09	5516	156	5954	159	4593	15	46949	1711	42162	1719	5428	15	91
10	0.095672	156	0.096113	158	1.004608	15	10.45238	1706	10.40443	1713	0.995413	15	**90**
11	5828	157	6271	159	4623	16	43532	1700	38730	1708	5398	15	89
12	5985	156	6430	159	4639	15	41832	1694	37022	1702	5383	15	88
13	6141	156	6589	158	4654	15	40138	1689	35320	1697	5368	15	87
14	6297	157	6747	159	4669	15	38449	1683	33623	1691	5353	16	86
15	6454	156	6906	158	4684	16	36766	1678	31932	1686	5337	15	85
16	6610	156	7064	159	4700	15	35088	1672	30246	1680	5322	15	84
17	6766	157	7223	158	4715	15	33416	1667	28566	1675	5307	15	83
18	6923	156	7381	159	4730	16	31749	1662	26891	1669	5292	15	82
19	7079	156	7540	158	4746	15	30087	1656	25222	1664	5277	16	81
20	0.097235	157	0.097698	159	1.004761	16	10.28431	1651	10.23558	1659	0.995261	15	**80**
21	7392	156	7857	159	4777	15	26780	1645	21899	1653	5246	15	79
22	7548	156	8016	158	4792	16	25135	1641	20246	1649	5231	16	78
23	7704	157	8174	159	4808	15	23494	1635	18597	1642	5215	15	77
24	7861	156	8333	158	4823	16	21859	1629	16955	1638	5200	15	76
25	8017	156	8491	159	4839	15	20230	1625	15317	1632	5185	16	75
26	8173	157	8650	159	4854	16	18605	1619	13685	1628	5169	15	74
27	8330	156	8809	158	4870	15	16986	1614	12057	1622	5154	16	73
28	8486	156	8967	159	4885	16	15372	1609	10435	1616	5138	15	72
29	8642	157	9126	158	4901	16	13763	1604	08819	1612	5123	16	71
30	0.098799	156	0.099284	159	1.004917	15	10.12159	1599	10.07207	1607	0.995107	15	**70**
31	8955	156	9443	159	4932	16	10560	1594	05600	1602	5092	16	69
32	9111	157	9602	158	4948	16	08966	1588	03998	1596	5076	15	68
33	9268	156	9760	159	4964	16	07378	1584	02402	1592	5061	16	67
34	9424	156	0.099919	159	4980	15	05794	1579	10.00810	1586	5045	15	66
35	9580	157	0.100078	158	4995	16	04215	1574	9.99224	1582	5030	16	65
36	9737	156	0236	159	5011	16	02641	1568	97642	1576	5014	16	64
37	0.099893	156	0395	159	5027	16	10.01073	1564	96066	1572	4998	16	63
38	0.100049	156	0554	158	5043	16	9.99509	1559	94494	1567	4982	15	62
39	0205	157	0712	159	5059	16	97950	1554	92927	1562	4967	16	61
40	0.100362	156	0.100871	159	1.005075	16	9.96396	1549	9.91365	1557	0.994951	16	**60**
41	0518	156	1030	158	5091	16	94847	1545	89808	1552	4935	16	59
42	0674	157	1188	159	5107	15	93302	1539	88256	1548	4919	15	58
43	0831	156	1347	159	5122	17	91763	1535	86708	1542	4904	16	57
44	0987	156	1506	158	5139	16	90228	1530	85166	1538	4888	16	56
45	1143	156	1664	159	5155	16	88698	1525	83628	1533	4872	16	55
46	1299	157	1823	159	5171	16	87173	1521	82095	1529	4856	16	54
47	1456	156	1982	159	5187	16	85652	1516	80566	1523	4840	16	53
48	1612	156	2141	158	5203	16	84136	1511	79043	1519	4824	16	52
49	1768	156	2299	159	5219	16	82625	1506	77524	1515	4808	16	51
50	0.101924		0.102458		1.005235		9.81119		9.76009		0.994792		**50**
	cos		cotg		cosec		sec		tang		sin		c

	14	**15**	**16**	**17**	**156**	**157**	**158**	**159**	
1	1.4	1.5	1.6	1.7	15.6	15.7	15.8	15.9	1
2	2.8	3.0	3.2	3.4	31.2	31.4	31.6	31.8	2
3	4.2	4.5	4.8	5.1	46.8	47.1	47.4	47.7	3
4	5.6	6.0	6.4	6.8	62.4	62.8	63.2	63.6	4
5	7.0	7.5	8.0	8.5	78.0	78.5	79.0	79.5	5
6	8.4	9.0	9.6	10.2	93.6	94.2	94.8	95.4	6
7	9.8	10.5	11.2	11.9	109.2	109.9	110.6	111.3	7
8	11.2	12.0	12.8	13.6	124.8	125.6	126.4	127.2	8
9	12.6	13.5	14.4	15.3	140.4	141.3	142.2	143.1	9

6g

c	sin		tang		sec		cosec		cotg		cos		
50	0.101924	157	0.102458	159	1.005235	16	9.81119	1502	9.76009	1509	0.994792	16	**50**
51	2081	156	2617	159	5251	17	79617	1497	74500	1506	4776	16	49
52	2237	156	2776	158	5268	16	78120	1493	72994	1500	4760	16	48
53	2393	156	2934	159	5284	16	76627	1488	71494	1496	4744	16	47
54	2549	157	3093	159	5300	16	75139	1484	69998	1491	4728	16	46
55	2706	156	3252	159	5316	17	73655	1478	68507	1487	4712	16	45
56	2862	156	3411	158	5333	16	72177	1475	67020	1483	4696	17	44
57	3018	156	3569	159	5349	16	70702	1470	65537	1477	4679	16	43
58	3174	157	3728	159	5365	17	69232	1465	64060	1474	4663	16	42
59	3331	156	3887	159	5382	16	67767	1462	62586	1469	4647	16	41
60	0.103487	156	0.104046	158	1.005398	17	9.66305	1456	9.61117	1464	0.994631	16	**40**
61	3643	156	4204	159	5415	16	64849	1452	59653	1460	4615	17	39
62	3799	157	4363	159	5431	17	63397	1448	58193	1456	4598	16	38
63	3956	156	4522	159	5448	16	61949	1444	56737	1452	4582	16	37
64	4112	156	4681	159	5464	17	60505	1439	55285	1447	4566	17	36
65	4268	156	4840	158	5481	16	59066	1435	53838	1442	4549	16	35
66	4424	157	4998	159	5497	17	57631	1430	52396	1439	4533	17	34
67	4581	156	5157	159	5514	16	56201	1426	50957	1434	4516	16	33
68	4737	156	5316	159	5530	17	54775	1422	49523	1429	4500	16	32
69	4893	156	5475	159	5547	17	53353	1418	48094	1426	4484	17	31
70	0.105049	156	0.105634	158	1.005564	16	9.51935	1413	9.46668	1421	0.994467	16	**30**
71	5205	157	5792	159	5580	17	50522	1410	45247	1417	4451	17	29
72	5362	156	5951	159	5597	17	49112	1405	43830	1413	4434	17	28
73	5518	156	6110	159	5614	17	47707	1400	42417	1409	4417	16	27
74	5674	156	6269	159	5631	16	46307	1397	41008	1405	4401	17	26
75	5830	156	6428	159	5647	17	44910	1393	39603	1400	4384	16	25
76	5986	157	6587	159	5664	17	43517	1388	38203	1396	4368	17	24
77	6143	156	6746	158	5681	17	42129	1384	36807	1392	4351	17	23
78	6299	156	6904	159	5698	17	40745	1381	35415	1389	4334	16	22
79	6455	156	7063	159	5715	17	39364	1376	34026	1384	4318	17	21
80	0.106611	156	0.107222	159	1.005732	17	9.37988	1372	9.32642	1380	0.994301	17	**20**
81	6767	157	7381	159	5749	17	36616	1368	31262	1376	4284	17	19
82	6924	156	7540	159	5766	17	35248	1364	29886	1372	4267	17	18
83	7080	156	7699	159	5783	17	33884	1360	28514	1368	4250	16	17
84	7236	156	7858	159	5800	17	32524	1356	27146	1363	4234	17	16
85	7392	156	8017	159	5817	17	31168	1352	25783	1361	4217	17	15
86	7548	156	8176	159	5834	17	29816	1349	24422	1356	4200	17	14
87	7704	157	8335	158	5851	17	28467	1344	23066	1352	4183	17	13
88	7861	156	8493	159	5868	17	27123	1340	21714	1348	4166	17	12
89	8017	156	8652	159	5885	18	25783	1337	20366	1344	4149	17	11
90	0.108173	156	0.108811	159	1.005903	17	9.24446	1332	9.19022	1341	0.994132	17	**10**
91	8329	156	8970	159	5920	17	23114	1329	17681	1336	4115	17	09
92	8485	156	9129	159	5937	17	21785	1325	16345	1333	4098	17	08
93	8641	156	9288	159	5954	18	20460	1321	15012	1329	4081	17	07
94	8797	157	9447	159	5972	17	19139	1317	13683	1325	4064	17	06
95	8954	156	9606	159	5989	17	17822	1314	12358	1322	4047	17	05
96	9110	156	9765	159	6006	18	16508	1309	11036	1317	4030	17	04
97	9266	156	0.109924	159	6024	17	15199	1306	09719	1314	4013	18	03
98	9422	156	0.110083	159	6041	17	13893	1303	08405	1310	3995	17	02
99	9578	156	0242	159	6058	18	12590	1298	07095	1306	3978	17	01
100	0.109734		0.110401		1.006076		9.11292		9.05789		0.993961		**00**
	cos		cotg		cosec		sec		tang		sin		c

	16	**17**	**18**	**156**	**157**	**158**	**159**	
1	1.6	1.7	1.8	15.6	15.7	15.8	15.9	1
2	3.2	3.4	3.6	31.2	31.4	31.6	31.8	2
3	4.8	5.1	5.4	46.8	47.1	47.4	47.7	3
4	6.4	6.8	7.2	62.4	62.8	63.2	63.6	4
5	8.0	8.5	9.0	78.0	78.5	79.0	79.5	5
6	9.6	10.2	10.8	93.6	94.2	94.8	95.4	6
7	11.2	11.9	12.6	109.2	109.9	110.6	111.3	7
8	12.8	13.6	14.4	124.8	125.6	126.4	127.2	8
9	14.4	15.3	16.2	140.4	141.3	142.2	143.1	9

93g

7g

c	sin		tang		sec		cosec		cotg		cos		
00	0.109734	156	0.110401	159	1.006076	17	9.11292	1295	9.05789	1303	0.993961	17	**100**
01	0.109890	157	0560	159	6093	18	09997	1291	04486	1299	3944	18	99
02	0.110047	156	0719	159	6111	17	08706	1287	03187	1295	3926	17	98
03	0203	156	0878	159	6128	18	07419	1284	01892	1292	3909	17	97
04	0359	156	1037	159	6146	17	06135	1280	9.00600	1288	3892	18	96
05	0515	156	1196	159	6163	18	04855	1276	8.99312	1284	3874	17	95
06	0671	156	1355	159	6181	17	03579	1273	98028	1281	3857	17	94
07	0827	156	1514	159	6198	18	02306	1269	96747	1277	3840	18	93
08	0983	156	1673	159	6216	18	9.01037	1266	95470	1273	3822	17	92
09	1139	156	1832	159	6234	17	8.99771	1262	94197	1270	3805	18	91
10	0.111295	157	0.111991	159	1.006251	18	8.98509	1258	8.92927	1266	0.993787	17	**90**
11	1452	156	2150	159	6269	18	97251	1255	91661	1263	3770	18	89
12	1608	156	2309	159	6287	18	95996	1252	90398	1260	3752	17	88
13	1764	156	2468	159	6305	17	94744	1248	89138	1255	3735	18	87
14	1920	156	2627	160	6322	18	93496	1244	87883	1253	3717	17	86
15	2076	156	2787	159	6340	18	92252	1241	86630	1248	3700	18	85
16	2232	156	2946	159	6358	18	91011	1237	85382	1246	3682	18	84
17	2388	156	3105	159	6376	18	89774	1234	84136	1242	3664	17	83
18	2544	156	3264	159	6394	18	88540	1231	82894	1238	3647	18	82
19	2700	156	3423	159	6412	18	87309	1227	81656	1235	3629	18	81
20	0.112856	156	0.113582	159	1.006430	18	8.86082	1224	8.80421	1232	0.993611	17	**80**
21	3012	157	3741	159	6448	18	84858	1220	79189	1228	3594	18	79
22	3169	156	3900	159	6466	18	83638	1217	77961	1225	3576	18	78
23	3325	156	4059	159	6484	18	82421	1214	76736	1221	3558	18	77
24	3481	156	4218	160	6502	18	81207	1210	75515	1218	3540	18	76
25	3637	156	4378	159	6520	18	79997	1207	74297	1215	3522	17	75
26	3793	156	4537	159	6538	18	78790	1203	73082	1211	3505	18	74
27	3949	156	4696	159	6556	18	77587	1200	71871	1208	3487	18	73
28	4105	156	4855	159	6574	18	76387	1197	70663	1205	3469	18	72
29	4261	156	5014	159	6592	19	75190	1194	69458	1202	3451	18	71
30	0.114417	156	0.115173	160	1.006611	18	8.73996	1190	8.68256	1198	0.993433	18	**70**
31	4573	156	5333	159	6629	18	72806	1188	67058	1195	3415	18	69
32	4729	156	5492	159	6647	18	71618	1183	65863	1192	3397	18	68
33	4885	156	5651	159	6665	19	70435	1181	64671	1188	3379	18	67
34	5041	156	5810	159	6684	18	69254	1177	63483	1186	3361	18	66
35	5197	156	5969	159	6702	18	68077	1175	62297	1182	3343	18	65
36	5353	156	6128	160	6720	19	66902	1171	61115	1178	3325	19	64
37	5509	156	6288	159	6739	18	65731	1167	59937	1176	3306	18	63
38	5665	156	6447	159	6757	19	64564	1165	58761	1173	3288	18	62
39	5821	156	6606	159	6776	18	63399	1162	57588	1169	3270	18	61
40	0.115977	156	0.116765	160	1.006794	18	8.62237	1158	8.56419	1166	0.993252	18	**60**
41	6133	156	6925	159	6812	19	61079	1155	55253	1163	3234	19	59
42	6289	156	7084	159	6831	19	59924	1152	54090	1160	3215	18	58
43	6445	156	7243	159	6850	18	58772	1149	52930	1157	3197	18	57
44	6601	156	7402	159	6868	19	57623	1146	51773	1154	3179	19	56
45	6757	156	7561	160	6887	18	56477	1143	50619	1151	3160	18	55
46	6913	156	7721	159	6905	19	55334	1140	49468	1148	3142	18	54
47	7069	156	7880	159	6924	19	54194	1137	48320	1144	3124	19	53
48	7225	156	8039	160	6943	18	53057	1133	47176	1142	3105	18	52
49	7381	156	8199	159	6961	19	51924	1131	46034	1138	3087	19	51
50	0.117537		0.118358		1.006980		8.50793		8.44896		0.993068		**50**
	cos		cotg		cosec		sec		tang		sin		c

	17	**18**	**19**	**156**	**157**	**159**	**160**	
1	1.7	1.8	1.9	15.6	15.7	15.9	16.0	1
2	3.4	3.6	3.8	31.2	31.4	31.8	32.0	2
3	5.1	5.4	5.7	46.8	47.1	47.7	48.0	3
4	6.8	7.2	7.6	62.4	62.8	63.6	64.0	4
5	8.5	9.0	9.5	78.0	78.5	79.5	80.0	5
6	10.2	10.8	11.4	93.6	94.2	95.4	96.0	6
7	11.9	12.6	13.3	109.2	109.9	111.3	112.0	7
8	13.6	14.4	15.2	124.8	125.6	127.2	128.0	8
9	15.3	16.2	17.1	140.4	141.3	143.1	144.0	9

92g

7g

c	sin		tang		sec		cosec		cotg		cos		
50	0.117537	156	0.118358	159	1.006980	19	8.50793	1128	8.44896	1136	0.993068	18	**50**
51	7693	156	8517	159	6999	18	49665	1124	43760	1132	3050	19	49
52	7849	156	8676	160	7017	19	48541	1122	42628	1130	3031	18	48
53	8005	156	8836	159	7036	19	47419	1118	41498	1126	3013	19	47
54	8161	156	8995	159	7055	19	46301	1116	40372	1124	2994	18	46
55	8317	156	9154	160	7074	19	45185	1113	39248	1120	2976	19	45
56	8473	156	9314	159	7093	19	44072	1110	38128	1118	2957	18	44
57	8629	156	9473	159	7112	19	42962	1106	37010	1115	2939	19	43
58	8785	156	9632	160	7131	18	41856	1104	35895	1112	2920	19	42
59	8941	156	9792	159	7149	19	40752	1101	34783	1109	2901	18	41
60	0.119097	156	0.119951	159	1.007168	19	8.39651	1099	8.33674	1106	0.992883	19	**40**
61	9253	156	0.120110	160	7187	19	38552	1095	32568	1103	2864	19	39
62	9409	156	0270	159	7206	19	37457	1092	31465	1100	2845	19	38
63	9565	156	0429	159	7225	20	36365	1090	30365	1097	2826	18	37
64	9721	156	0588	160	7245	19	35275	1086	29268	1095	2808	19	36
65	0.119877	156	0748	159	7264	19	34189	1084	28173	1091	2789	19	35
66	0.120033	156	0907	159	7283	19	33105	1081	27082	1089	2770	19	34
67	0189	156	1066	160	7302	19	32024	1078	25993	1086	2751	19	33
68	0345	156	1226	159	7321	19	30946	1075	24907	1083	2732	19	32
69	0501	156	1385	160	7340	19	29871	1073	23824	1081	2713	19	31
70	0.120657	156	0.121545	159	1.007359	20	8.28798	1069	8.22743	1077	0.992694	19	**30**
71	0813	155	1704	159	7379	19	27729	1067	21666	1075	2675	19	29
72	0968	156	1863	160	7398	19	26662	1065	20591	1072	2656	19	28
73	1124	156	2023	159	7417	20	25597	1061	19519	1069	2637	19	27
74	1280	156	2182	160	7437	19	24536	1059	18450	1067	2618	19	26
75	1436	156	2342	159	7456	19	23477	1056	17383	1064	2599	19	25
76	1592	156	2501	160	7475	20	22421	1053	16319	1061	2580	19	24
77	1748	156	2661	159	7495	19	21368	1050	15258	1058	2561	19	23
78	1904	156	2820	159	7514	20	20318	1048	14200	1056	2542	19	22
79	2060	156	2979	160	7534	19	19270	1045	13144	1053	2523	19	21
80	0.122216	156	0.123139	159	1.007553	20	8.18225	1043	8.12091	1050	0.992504	20	**20**
81	2372	156	3298	160	7573	19	17182	1039	11041	1048	2484	19	19
82	2528	155	3458	159	7592	20	16143	1037	09993	1045	2465	19	18
83	2683	156	3617	160	7612	19	15106	1035	08948	1042	2446	19	17
84	2839	156	3777	159	7631	20	14071	1032	07906	1040	2427	20	16
85	2995	156	3936	160	7651	19	13039	1029	06866	1037	2407	19	15
86	3151	156	4096	159	7670	20	12010	1026	05829	1034	2388	19	14
87	3307	156	4255	160	7690	20	10984	1024	04795	1032	2369	20	13
88	3463	156	4415	159	7710	20	09960	1022	03763	1029	2349	19	12
89	3619	156	4574	160	7730	19	08938	1018	02734	1027	2330	20	11
90	0.123775	156	0.124734	159	1.007749	20	8.07920	1016	8.01707	1024	0.992310	19	**10**
91	3931	155	4893	160	7769	20	06904	1014	8.00683	1021	2291	20	09
92	4086	156	5053	159	7789	20	05890	1011	7.99662	1019	2271	19	08
93	4242	156	5212	160	7809	19	04879	1008	98643	1017	2252	20	07
94	4398	156	5372	160	7828	20	03871	1006	97626	1013	2232	19	06
95	4554	156	5532	159	7848	20	02865	1004	96613	1012	2213	20	05
96	4710	156	5691	160	7868	20	01861	1001	95601	1008	2193	19	04
97	4866	156	5851	159	7888	20	8.00860	998	94593	1007	2174	20	03
98	5022	155	6010	160	7908	20	7.99862	996	93586	1003	2154	20	02
99	5177	156	6170	159	7928	20	98866	993	92583	1001	2134	19	01
100	0.125333		0.126329		1.007948		7.97873		7.91582		0.992115		**00**
	cos		cotg		cosec		sec		tang		sin		c

	18	**19**	**20**	**155**	**156**	**159**	**160**	
1	1.8	1.9	2.0	15.5	15.6	15.9	16.0	1
2	3.6	3.8	4.0	31.0	31.2	31.8	32.0	2
3	5.4	5.7	6.0	46.5	46.8	47.7	48.0	3
4	7.2	7.6	8.0	62.0	62.4	63.6	64.0	4
5	9.0	9.5	10.0	77.5	78.0	79.5	80.0	5
6	10.8	11.4	12.0	93.0	93.6	95.4	96.0	6
7	12.6	13.3	14.0	108.5	109.2	111.3	112.0	7
8	14.4	15.2	16.0	124.0	124.8	127.2	128.0	8
9	16.2	17.1	18.0	139.5	140.4	143.1	144.0	9

92g

8g

c	sin		tang		sec		cosec		cotg		cos		
00	0.125333	156	0.126329	160	1.007948	20	7.97873	991	7.91582	999	0.992115	20	**100**
01	5489	156	6489	160	7968	20	6882	988	7.90583	996	2095	20	99
02	5645	156	6649	159	7988	20	5894	986	7.89587	994	2075	19	98
03	5801	156	6808	160	8008	20	4908	984	8593	992	2056	20	97
04	5957	155	6968	159	8028	20	3924	981	7601	988	2036	20	96
05	6112	156	7127	160	8048	20	2943	978	6613	987	2016	20	95
06	6268	156	7287	160	8068	21	1965	976	5626	984	1996	20	94
07	6424	156	7447	159	8089	20	0989	974	4642	981	1976	20	93
08	6580	156	7606	160	8109	20	7.90015	971	3661	980	1956	19	92
09	6736	155	7766	160	8129	20	7.89044	969	2681	976	1937	20	91
10	0.126891	156	0.127926	159	1.008149	21	7.88075	967	7.81705	975	0.991917	20	**90**
11	7047	156	8085	160	8170	20	7108	964	7.80730	972	1897	20	89
12	7203	156	8245	160	8190	20	6144	961	7.79758	969	1877	20	88
13	7359	156	8405	159	8210	21	5183	960	8789	968	1857	20	87
14	7515	155	8564	160	8231	20	4223	957	7821	964	1837	20	86
15	7670	156	8724	160	8251	20	3266	954	6857	963	1817	20	85
16	7826	156	8884	159	8271	21	2312	953	5894	960	1797	21	84
17	7982	156	9043	160	8292	20	1359	950	4934	958	1776	20	83
18	8138	156	9203	160	8312	21	7.80409	947	3976	955	1756	20	82
19	8294	155	9363	159	8333	20	7.79462	946	3021	954	1736	20	81
20	0.128449	156	0.129522	160	1.008353	21	7.78516	943	7.72067	951	0.991716	20	**80**
21	8605	156	9682	160	8374	20	7573	940	1116	948	1696	20	79
22	8761	156	0.129842	160	8394	21	6633	939	7.70168	946	1676	21	78
23	8917	156	0.130002	159	8415	20	5694	936	7.69222	944	1655	20	77
24	9073	155	0161	160	8435	21	4758	934	8278	942	1635	20	76
25	9228	156	0321	160	8456	21	3824	931	7336	940	1615	20	75
26	9384	156	0481	160	8477	20	2893	929	6396	937	1595	21	74
27	9540	156	0641	159	8497	21	1964	928	5459	935	1574	20	73
28	9696	155	0800	160	8518	21	1036	924	4524	933	1554	21	72
29	0.129851	156	0960	160	8539	21	7.70112	923	3591	930	1533	20	71
30	0.130007	156	0.131120	160	1.008560	20	7.69189	920	7.62661	928	0.991513	20	**70**
31	0163	156	1280	159	8580	21	8269	918	1733	926	1493	21	69
32	0319	155	1439	160	8601	21	7351	916	7.60807	924	1472	20	68
33	0474	156	1599	160	8622	21	6435	914	7.59883	922	1452	21	67
34	0630	156	1759	160	8643	21	5521	912	8961	919	1431	20	66
35	0786	155	1919	160	8664	21	4609	909	8042	917	1411	21	65
36	0941	156	2079	159	8685	21	3700	907	7125	915	1390	20	64
37	1097	156	2238	160	8706	21	2793	905	6210	913	1370	21	63
38	1253	156	2398	160	8727	21	1888	903	5297	911	1349	21	62
39	1409	155	2558	160	8748	21	0985	901	4386	909	1328	20	61
40	0.131564	156	0.132718	160	1.008769	21	7.60084	898	7.53477	906	0.991308	21	**60**
41	1720	156	2878	160	8790	21	7.59186	897	2571	904	1287	21	59
42	1876	155	3038	160	8811	21	8289	894	1667	903	1266	20	58
43	2031	156	3198	159	8832	21	7395	892	7.50764	900	1246	21	57
44	2187	156	3357	160	8853	21	6503	890	7.49864	897	1225	21	56
45	2343	156	3517	160	8874	21	5613	888	8967	896	1204	21	55
46	2499	155	3677	160	8895	21	4725	886	8071	894	1183	21	54
47	2654	156	3837	160	8916	22	3839	883	7177	892	1162	20	53
48	2810	156	3997	160	8938	21	2956	882	6285	889	1142	21	52
49	2966	155	4157	160	8959	21	2074	880	5396	887	1121	21	51
50	0.133121		0.134317		1.008980		7.51194		7.44509		0.991100		**50**
	cos		cotg		cosec		sec		tang		sin		c

	19	**20**	**21**	**22**	**23**	**155**	**156**	**159**	**160**	**161**	**784**	**787**	**790**	**795**	**800**	**810**	**820**	**830**	
1	1.9	2.0	2.1	2.2	2.3	15.5	15.6	15.9	16.0	16.1	78.4	78.7	79.0	79.5	80.0	81.0	82.0	83.0	1
2	3.8	4.0	4.2	4.4	4.6	31.0	31.2	31.8	32.0	32.2	156.8	157.4	158.0	159.0	160.0	162.0	164.0	166.0	2
3	5.7	6.0	6.3	6.6	6.9	46.5	46.8	47.7	48.0	48.3	235.2	236.1	237.0	238.5	240.0	243.0	246.0	249.0	3
4	7.6	8.0	8.4	8.8	9.2	62.0	62.4	63.6	64.0	64.4	313.6	314.8	316.0	318.0	320.0	324.0	328.0	332.0	4
5	9.5	10.0	10.5	11.0	11.5	77.5	78.0	79.5	80.0	80.5	392.0	393.5	395.0	397.5	400.0	405.0	410.0	415.0	5
6	11.4	12.0	12.6	13.2	13.8	93.0	93.6	95.4	96.0	96.6	470.4	472.2	474.0	477.0	480.0	486.0	492.0	498.0	6
7	13.3	14.0	14.7	15.4	16.1	108.5	109.2	111.3	112.0	112.7	548.8	550.9	553.0	556.5	560.0	567.0	574.0	581.0	7
8	15.2	16.0	16.8	17.6	18.4	124.0	124.8	127.2	128.0	128.8	627.2	629.6	632.0	636.0	640.0	648.0	656.0	664.0	8
9	17.1	18.0	18.9	19.8	20.7	139.5	140.4	143.1	144.0	144.9	705.6	708.3	711.0	715.5	720.0	729.0	738.0	747.0	9

91g

8g

c	sin		tang		sec		cosec		cotg		cos		
50	0.133121	156	0.134317	160	1.008980	21	7.51194	877	7.44509	886	0.991100	21	**50**
51	3277	156	4477	160	9001	22	7.50317	875	3623	883	1079	21	49
52	3433	155	4637	160	9023	21	7.49442	874	2740	881	1058	21	48
53	3588	156	4797	160	9044	22	8568	871	1859	879	1037	21	47
54	3744	156	4957	159	9066	21	7697	869	0980	878	1016	21	46
55	3900	155	5116	160	9087	21	6828	868	7.40102	875	0995	21	45
56	4055	156	5276	160	9108	22	5960	865	7.39227	873	0974	21	44
57	4211	156	5436	160	9130	21	5095	863	8354	871	0953	21	43
58	4367	155	5596	160	9151	22	4232	861	7483	869	0932	21	42
59	4522	156	5756	160	9173	21	3371	859	6614	867	0911	22	41
60	0.134678	156	0.135916	160	1.009194	22	7.42512	857	7.35747	865	0.990889	21	**40**
61	4834	155	6076	160	9216	21	1655	855	4882	863	0868	21	39
62	4989	156	6236	160	9237	22	7.40800	854	4019	861	0847	21	38
63	5145	156	6396	160	9259	22	7.39946	851	3158	859	0826	21	37
64	5301	155	6556	160	9281	21	9095	849	2299	857	0805	22	36
65	5456	156	6716	160	9302	22	8246	847	1442	855	0783	21	35
66	5612	155	6876	160	9324	22	7399	845	7.30587	853	0762	21	34
67	5767	156	7036	160	9346	22	6554	844	7.29734	852	0741	22	33
68	5923	156	7196	160	9368	21	5710	841	8882	849	0719	21	32
69	6079	155	7356	160	9389	22	4869	840	8033	847	0698	21	31
70	0.136234	156	0.137516	160	1.009411	22	7.34029	837	7.27186	846	0.990677	22	**30**
71	6390	156	7676	161	9433	22	3192	836	6340	843	0655	21	29
72	6546	155	7837	160	9455	22	2356	833	5497	841	0634	22	28
73	6701	156	7997	160	9477	22	1523	832	4656	840	0612	21	27
74	6857	155	8157	160	9499	21	7.30691	830	3816	838	0591	22	26
75	7012	156	8317	160	9520	22	7.29861	828	2978	836	0569	21	25
76	7168	156	8477	160	9542	22	9033	826	2142	834	0548	22	24
77	7324	155	8637	160	9564	22	8207	824	1308	832	0526	21	23
78	7479	156	8797	160	9586	22	7383	822	7.20476	830	0505	22	22
79	7635	155	8957	160	9608	22	6561	820	7.19646	828	0483	22	21
80	0.137790	156	0.139117	160	1.009630	23	7.25741	819	7.18818	826	0.990461	21	**20**
81	7946	155	9277	161	9653	22	4922	817	7992	825	0440	22	19
82	8101	156	9438	160	9675	22	4105	814	7167	823	0418	22	18
83	8257	156	9598	160	9697	22	3291	813	6344	820	0396	21	17
84	8413	155	9758	160	9719	22	2478	811	5524	819	0375	22	16
85	8568	156	0.139918	160	9741	22	1667	810	4705	818	0353	22	15
86	8724	155	0.140078	160	9763	23	0857	807	3887	815	0331	22	14
87	8879	156	0238	160	9786	22	7.20050	806	3072	813	0309	22	13
88	9035	155	0398	161	9808	22	7.19244	804	2259	812	0287	21	12
89	9190	156	0559	160	9830	22	8440	802	1447	810	0266	22	11
90	0.139346	155	0.140719	160	1.009852	23	7.17638	800	7.10637	808	0.990244	22	**10**
91	9501	156	0879	160	9875	22	6838	798	7.09829	806	0222	22	09
92	9657	156	1039	160	9897	22	6040	797	9023	805	0200	22	08
93	9813	155	1199	161	9919	23	5243	794	8218	802	0178	22	07
94	0.139968	156	1360	160	9942	22	4449	793	7416	801	0156	22	06
95	0.140124	155	1520	160	9964	23	3656	792	6615	800	0134	22	05
96	0279	156	1680	160	1.009987	22	2864	789	5815	797	0112	22	04
97	0435	155	1840	161	1.010009	23	2075	788	5018	795	0090	22	03
98	0590	156	2001	160	0032	22	1287	786	4223	794	0068	22	02
99	0746	155	2161	160	0054	23	7.10501	784	3429	792	0046	22	01
100	0.140901		0.142321		1.010077		7.09717		7.02637		0.990024		**00**
	cos		cotg		cosec		sec		tang		sin		c

	840	**850**	**860**	**870**	**880**	**890**	**900**	**910**	**920**	**930**	**940**	**950**	**960**	**970**	**980**	**990**	**995**	**999**	
1	84.0	85.0	86.0	87.0	88.0	89.0	90.0	91.0	92.0	93.0	94.0	95.0	96.0	97.0	98.0	99.0	99.5	99.9	1
2	168.0	170.0	172.0	174.0	176.0	178.0	180.0	182.0	184.0	186.0	188.0	190.0	192.0	194.0	196.0	198.0	199.0	199.8	2
3	252.0	255.0	258.0	261.0	264.0	267.0	270.0	273.0	276.0	279.0	282.0	285.0	288.0	291.0	294.0	297.0	298.5	299.7	3
4	336.0	340.0	344.0	348.0	352.0	356.0	360.0	364.0	368.0	372.0	376.0	380.0	384.0	388.0	392.0	396.0	398.0	399.6	4
5	420.0	425.0	430.0	435.0	440.0	445.0	450.0	455.0	460.0	465.0	470.0	475.0	480.0	485.0	490.0	495.0	497.5	499.5	5
6	504.0	510.0	516.0	522.0	528.0	534.0	540.0	546.0	552.0	558.0	564.0	570.0	576.0	582.0	588.0	594.0	597.0	599.4	6
7	588.0	595.0	602.0	609.0	616.0	623.0	630.0	637.0	644.0	651.0	658.0	665.0	672.0	679.0	686.0	693.0	696.5	699.3	7
8	672.0	680.0	688.0	696.0	704.0	712.0	720.0	728.0	736.0	744.0	752.0	760.0	768.0	776.0	784.0	792.0	796.0	799.2	8
9	756.0	765.0	774.0	783.0	792.0	801.0	810.0	819.0	828.0	837.0	846.0	855.0	864.0	873.0	882.0	891.0	895.5	899.1	9

91g

9g

c	sin		tang		sec		cosec		cotg		cos		
00	0.140901	156	0.142321	160	1.010077	22	7.09717	782	7.02637	791	0.990024	22	**100**
01	1057	155	2481	161	0099	23	8935	781	1846	788	0.990002	23	99
02	1212	156	2642	160	0122	23	8154	779	1058	787	0.989979	22	98
03	1368	155	2802	160	0145	22	7375	777	7.00271	785	9957	22	97
04	1523	156	2962	160	0167	23	6598	776	6.99486	784	9935	22	96
05	1679	155	3122	161	0190	23	5822	774	8702	781	9913	23	95
06	1834	156	3283	160	0213	23	5048	772	7921	780	9890	22	94
07	1990	155	3443	160	0236	22	4276	770	7141	779	9868	22	93
08	2145	156	3603	161	0258	23	3506	769	6362	776	9846	23	92
09	2301	155	3764	160	0281	23	2737	767	5586	775	9823	22	91
10	0.142456	156	0.143924	160	1.010304	23	7.01970	765	6.94811	773	0.989801	22	**90**
11	2612	155	4084	161	0327	23	1205	764	4038	772	9779	23	89
12	2767	156	4245	160	0350	23	7.00441	762	3266	770	9756	22	88
13	2923	155	4405	160	0373	23	6.99679	760	2496	768	9734	23	87
14	3078	156	4565	161	0396	23	8919	758	1728	766	9711	22	86
15	3234	155	4726	160	0419	22	8161	757	0962	765	9689	23	85
16	3389	155	4886	161	0441	23	7404	756	6.90197	763	9666	22	84
17	3544	156	5047	160	0464	24	6648	753	6.89434	762	9644	23	83
18	3700	155	5207	160	0488	23	5895	752	8672	760	9621	22	82
19	3855	156	5367	161	0511	23	5143	751	7912	758	9599	23	81
20	0.144011	155	0.145528	160	1.010534	23	6.94392	748	6.87154	756	0.989576	23	**80**
21	4166	156	5688	161	0557	23	3644	747	6398	755	9553	22	79
22	4322	155	5849	160	0580	23	2897	746	5643	754	9531	23	78
23	4477	156	6009	160	0603	23	2151	744	4889	751	9508	23	77
24	4633	155	6169	161	0626	24	1407	742	4138	751	9485	22	76
25	4788	155	6330	160	0650	23	6.90665	740	3387	748	9463	23	75
26	4943	156	6490	161	0673	23	6.89925	739	2639	747	9440	23	74
27	5099	155	6651	160	0696	23	9186	738	1892	745	9417	23	73
28	5254	156	6811	161	0719	24	8448	736	1147	744	9394	22	72
29	5410	155	6972	160	0743	23	7712	734	6.80403	742	9372	23	71
30	0.145565	155	0.147132	161	1.010766	23	6.86978	732	6.79661	741	0.989349	23	**70**
31	5720	156	7293	160	0789	24	6246	731	8920	739	9326	23	69
32	5876	155	7453	161	0813	23	5515	730	8181	737	9303	23	68
33	6031	156	7614	160	0836	24	4785	728	7444	736	9280	23	67
34	6187	155	7774	161	0860	23	4057	726	6708	734	9257	23	66
35	6342	155	7935	160	0883	24	3331	725	5974	733	9234	23	65
36	6497	156	8095	161	0907	23	2606	723	5241	731	9211	23	64
37	6653	155	8256	160	0930	24	1883	722	4510	729	9188	23	63
38	6808	156	8416	161	0954	23	1161	720	3781	728	9165	23	62
39	6964	155	8577	160	0977	24	6.80441	719	3053	727	9142	23	61
40	0.147119	155	0.148737	161	1.011001	24	6.79722	717	6.72326	725	0.989119	23	**60**
41	7274	156	8898	160	1025	23	9005	715	1601	723	9096	23	59
42	7430	155	9058	161	1048	24	8290	714	0878	722	9073	24	58
43	7585	155	9219	161	1072	24	7576	713	6.70156	721	9049	23	57
44	7740	156	9380	160	1096	23	6863	711	6.69435	719	9026	23	56
45	7896	155	9540	161	1119	24	6152	709	8716	717	9003	23	55
46	8051	155	9701	160	1143	24	5443	708	7999	716	8980	24	54
47	8206	156	0.149861	161	1167	24	4735	707	7283	714	8956	23	53
48	8362	155	0.150022	161	1191	24	4028	705	6569	713	8933	23	52
49	8517	155	0183	160	1215	23	3323	703	5856	712	8910	24	51
50	0.148672		0.150343		1.011238		6.72620		6.65144		0.988886		**50**
	cos		cotg		cosec		sec		tang		sin		c

	22	**23**	**24**	**25**	**26**	**155**	**156**	**160**	**161**	**635**	**640**	**645**	**650**	**655**	**660**	**665**	**670**	**675**	
1	2.2	2.3	2.4	2.5	2.6	15.5	15.6	16.0	16.1	63.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0	67.5	1
2	4.4	4.6	4.8	5.0	5.2	31.0	31.2	32.0	32.2	127.0	128.0	129.0	130.0	131.0	132.0	133.0	134.0	135.0	2
3	6.6	6.9	7.2	7.5	7.8	46.5	46.8	48.0	48.3	190.5	192.0	193.5	195.0	196.5	198.0	199.5	201.0	202.5	3
4	8.8	9.2	9.6	10.0	10.4	62.0	62.4	64.0	64.4	254.0	256.0	258.0	260.0	262.0	264.0	266.0	268.0	270.0	4
5	11.0	11.5	12.0	12.5	13.0	77.5	78.0	80.0	80.5	317.5	320.0	322.5	325.0	327.5	330.0	332.5	335.0	337.5	5
6	13.2	13.8	14.4	15.0	15.6	93.0	93.6	96.0	96.6	381.0	384.0	387.0	390.0	393.0	396.0	399.0	402.0	405.0	6
7	15.4	16.1	16.8	17.5	18.2	108.5	109.2	112.0	112.7	444.5	448.0	451.5	455.0	458.5	462.0	465.5	469.0	472.5	7
8	17.6	18.4	19.2	20.0	20.8	124.0	124.8	128.0	128.8	508.0	512.0	516.0	520.0	524.0	528.0	532.0	536.0	540.0	8
9	19.8	20.7	21.6	22.5	23.4	139.5	140.4	144.0	144.9	571.5	576.0	580.5	585.0	589.5	594.0	598.5	603.0	607.5	9

90g

9g

c	sin		tang		sec		cosec		cotg		cos		
50	0.148672	156	0.150343	161	1.011238	24	6.72620	702	6.65144	709	0.988886	23	**50**
51	8828	155	0504	161	1262	24	1918	701	4435	709	8863	23	49
52	8983	155	0665	160	1286	24	1217	699	3726	707	8840	24	48
53	9138	156	0825	161	1310	24	6.70518	698	3019	705	8816	23	47
54	9294	155	0986	161	1334	24	6.69820	696	2314	704	8793	24	46
55	9449	155	1147	160	1358	24	9124	694	1610	703	8769	23	45
56	9604	156	1307	161	1382	24	8430	694	0907	701	8746	24	44
57	9760	155	1468	161	1406	24	7736	691	6.60206	700	8722	23	43
58	0.149915	155	1629	160	1430	24	7045	691	6.59506	698	8699	24	42
59	0.150070	156	1789	161	1454	25	6354	688	8808	697	8675	23	41
60	0.150226	155	0.151950	161	1.011479	24	6.65666	688	6.58111	695	0.988652	24	**40**
61	0381	155	2111	160	1503	24	4978	686	7416	694	8628	23	39
62	0536	155	2271	161	1527	24	4292	684	6722	692	8605	24	38
63	0691	156	2432	161	1551	24	3608	684	6030	691	8581	24	37
64	0847	155	2593	161	1575	25	2924	681	5339	690	8557	24	36
65	1002	155	2754	160	1600	24	2243	681	4649	688	8533	23	35
66	1157	156	2914	161	1624	24	1562	678	3961	687	8510	24	34
67	1313	155	3075	161	1648	24	0884	678	3274	685	8486	24	33
68	1468	155	3236	161	1672	25	6.60206	676	2589	684	8462	24	32
69	1623	155	3397	160	1697	24	6.59530	675	1905	683	8438	23	31
70	0.151778	156	0.153557	161	1.011721	25	6.58855	673	6.51222	681	0.988415	24	**30**
71	1934	155	3718	161	1746	24	8182	672	6.50541	680	8391	24	29
72	2089	155	3879	161	1770	25	7510	670	6.49861	678	8367	24	28
73	2244	155	4040	161	1795	24	6840	669	9183	677	8343	24	27
74	2399	156	4201	160	1819	25	6171	668	8506	676	8319	24	26
75	2555	155	4361	161	1844	24	5503	666	7830	674	8295	24	25
76	2710	155	4522	161	1868	25	4837	665	7156	673	8271	24	24
77	2865	155	4683	161	1893	24	4172	664	6483	671	8247	24	23
78	3020	156	4844	161	1917	25	3508	662	5812	671	8223	24	22
79	3176	155	5005	161	1942	25	2846	661	5141	668	8199	24	21
80	0.153331	155	0.155166	160	1.011967	24	6.52185	660	6.44473	668	0.988175	24	**20**
81	3486	155	5326	161	1991	25	1525	658	3805	666	8151	24	19
82	3641	155	5487	161	2016	25	0867	657	3139	665	8127	24	18
83	3796	156	5648	161	2041	24	6.50210	655	2474	663	8103	25	17
84	3952	155	5809	161	2065	25	6.49555	655	1811	662	8078	24	16
85	4107	155	5970	161	2090	25	8900	652	1149	661	8054	24	15
86	4262	155	6131	161	2115	25	8248	652	6.40488	659	8030	24	14
87	4417	155	6292	161	2140	25	7596	650	6.39829	658	8006	25	13
88	4572	156	6453	161	2165	25	6946	649	9171	657	7981	24	12
89	4728	155	6614	161	2190	25	6297	648	8514	656	7957	24	11
90	0.154883	155	0.156775	161	1.012215	24	6.45649	646	6.37858	654	0.987933	24	**10**
91	5038	155	6936	161	2239	25	5003	645	7204	653	7909	25	09
92	5193	155	7097	160	2264	25	4358	643	6551	651	7884	24	08
93	5348	156	7257	161	2289	25	3715	643	5900	651	7860	25	07
94	5504	155	7418	161	2314	26	3072	641	5249	648	7835	24	06
95	5659	155	7579	161	2340	25	2431	640	4601	648	7811	25	05
96	5814	155	7740	161	2365	25	1791	638	3953	646	7786	24	04
97	5969	155	7901	161	2390	25	1153	637	3307	646	7762	25	03
98	6124	155	8062	161	2415	25	6.40516	636	2661	643	7737	24	02
99	6279	155	8223	161	2440	25	6.39880	635	2018	643	7713	25	01
100	0.156434		0.158384		1.012465		6.39245		6.31375		0.987688		**00**
	cos		cotg		cosec		sec		tang		sin		c

	680	**685**	**690**	**695**	**700**	**705**	**710**	**715**	**720**	**730**	**740**	**750**	**760**	**770**	**780**	**785**	**788**	**791**	
1	68.0	68.5	69.0	69.5	70.0	70.5	71.0	71.5	72.0	73.0	74.0	75.0	76.0	77.0	78.0	78.5	78.8	79.1	1
2	136.0	137.0	138.0	139.0	140.0	141.0	142.0	143.0	144.0	146.0	148.0	150.0	152.0	154.0	156.0	157.0	157.6	158.2	2
3	204.0	205.5	207.0	208.5	210.0	211.5	213.0	214.5	216.0	219.0	222.0	225.0	228.0	231.0	234.0	235.5	236.4	237.3	3
4	272.0	274.0	276.0	278.0	280.0	282.0	284.0	286.0	288.0	292.0	296.0	300.0	304.0	308.0	312.0	314.0	315.2	316.4	4
5	340.0	342.5	345.0	347.5	350.0	352.5	355.0	357.5	360.0	365.0	370.0	375.0	380.0	385.0	390.0	392.5	394.0	395.5	5
6	408.0	411.0	414.0	417.0	420.0	423.0	426.0	429.0	432.0	438.0	444.0	450.0	456.0	462.0	468.0	471.0	472.8	474.6	6
7	476.0	479.5	483.0	486.5	490.0	493.5	497.0	500.5	504.0	511.0	518.0	525.0	532.0	539.0	546.0	549.5	551.6	553.7	7
8	544.0	548.0	552.0	556.0	560.0	564.0	568.0	572.0	576.0	584.0	592.0	600.0	608.0	616.0	624.0	628.0	630.4	632.8	8
9	612.0	616.5	621.0	625.5	630.0	634.5	639.0	643.5	648.0	657.0	666.0	675.0	684.0	693.0	702.0	706.5	709.2	711.9	9

90g

10g

c	sin		tang		sec		cosec		cotg		cos		
00	0.156434	156	0.158384	161	1.012465	25	6.39245	633	6.31375	641	0.987688	24	**100**
01	6590	155	8545	161	2490	26	8612	632	0734	640	7664	25	99
02	6745	155	8706	162	2516	25	7980	631	6.30094	639	7639	24	98
03	6900	155	8868	161	2541	25	7349	629	6.29455	637	7615	25	97
04	7055	155	9029	161	2566	25	6720	629	8818	636	7590	25	96
05	7210	155	9190	161	2591	26	6091	627	8182	635	7565	25	95
06	7365	155	9351	161	2617	25	5464	626	7547	634	7540	24	94
07	7520	156	9512	161	2642	25	4838	624	6913	632	7516	25	93
08	7676	155	9673	161	2667	26	4214	623	6281	632	7491	25	92
09	7831	155	9834	161	2693	25	3591	622	5649	630	7466	25	91
10	0.157986	155	0.159995	161	1.012718	26	6.32969	621	6.25019	628	0.987441	24	**90**
11	8141	155	0.160156	161	2744	25	2348	620	4391	628	7417	25	89
12	8296	155	0317	161	2769	26	1728	618	3763	626	7392	25	88
13	8451	155	0478	162	2795	25	1110	617	3137	625	7367	25	87
14	8606	155	0640	161	2820	26	6.30493	616	2512	624	7342	25	86
15	8761	155	0801	161	2846	26	6.29877	615	1888	623	7317	25	85
16	8916	155	0962	161	2872	25	9262	613	1265	621	7292	25	84
17	9071	155	1123	161	2897	26	8649	613	0644	620	7267	25	83
18	9226	156	1284	161	2923	25	8036	611	6.20024	619	7242	25	82
19	9382	155	1445	161	2948	26	7425	610	6.19405	618	7217	25	81
20	0.159537	155	0.161606	162	1.012974	26	6.26815	608	6.18787	616	0.987192	25	**80**
21	9692	155	1768	161	3000	26	6207	608	8171	616	7167	25	79
22	0.159847	155	1929	161	3026	25	5599	606	7555	614	7142	25	78
23	0.160002	155	2090	161	3051	26	4993	605	6941	613	7117	25	77
24	0157	155	2251	161	3077	26	4388	604	6328	612	7092	26	76
25	0312	155	2412	162	3103	26	3784	603	5716	610	7066	25	75
26	0467	155	2574	161	3129	26	3181	601	5106	610	7041	25	74
27	0622	155	2735	161	3155	26	2580	601	4496	608	7016	25	73
28	0777	155	2896	161	3181	26	1979	599	3888	607	6991	26	72
29	0932	155	3057	162	3207	26	1380	598	3281	606	6965	25	71
30	0.161087	155	0.163219	161	1.013233	26	6.20782	597	6.12675	605	0.986940	25	**70**
31	1242	155	3380	161	3259	26	6.20185	595	2070	603	6915	25	69
32	1397	155	3541	162	3285	26	6.19590	595	1467	603	6890	26	68
33	1552	155	3703	161	3311	26	8995	593	0864	601	6864	25	67
34	1707	155	3864	161	3337	26	8402	592	6.10263	600	6839	26	66
35	1862	155	4025	161	3363	26	7810	592	6.09663	599	6813	25	65
36	2017	155	4186	162	3389	26	7218	589	9064	598	6788	26	64
37	2172	155	4348	161	3415	26	6629	589	8466	597	6762	25	63
38	2327	155	4509	161	3441	26	6040	588	7869	595	6737	26	62
39	2482	155	4670	162	3467	27	5452	586	7274	595	6711	25	61
40	0.162637	155	0.164832	161	1.013494	26	6.14866	586	6.06679	593	0.986686	26	**60**
41	2792	155	4993	161	3520	26	4280	584	6086	592	6660	25	59
42	2947	155	5154	162	3546	27	3696	583	5494	591	6635	26	58
43	3102	155	5316	161	3573	26	3113	582	4903	590	6609	25	57
44	3257	155	5477	162	3599	26	2531	581	4313	589	6584	26	56
45	3412	155	5639	161	3625	27	1950	580	3724	588	6558	26	55
46	3567	155	5800	161	3652	26	1370	578	3136	586	6532	25	54
47	3722	155	5961	162	3678	26	0792	578	2550	586	6507	26	53
48	3877	155	6123	161	3704	27	6.10214	576	1964	584	6481	26	52
49	4032	155	6284	162	3731	26	6.09638	576	1380	583	6455	26	51
50	0.164187		0.166446		1.013757		6.09062		6.00797		0.986429		**50**
	cos		cotg		cosec		sec		tang		sin		c

	24	**25**	**26**	**27**	**28**	**154**	**155**	**156**	**161**	**162**	**524**	**527**	**530**	**535**	**540**	**545**	**550**	**555**	
1	2.4	2.5	2.6	2.7	2.8	15.4	15.5	15.6	16.1	16.2	52.4	52.7	53.0	53.5	54.0	54.5	55.0	55.5	1
2	4.8	5.0	5.2	5.4	5.6	30.8	31.0	31.2	32.2	32.4	104.8	105.4	106.0	107.0	108.0	109.0	110.0	111.0	2
3	7.2	7.5	7.8	8.1	8.4	46.2	46.5	46.8	48.3	48.6	157.2	158.1	159.0	160.5	162.0	163.5	165.0	166.5	3
4	9.6	10.0	10.4	10.8	11.2	61.6	62.0	62.4	64.4	64.8	209.6	210.8	212.0	214.0	216.0	218.0	220.0	222.0	4
5	12.0	12.5	13.0	13.5	14.0	77.0	77.5	78.0	80.5	81.0	262.0	263.5	265.0	267.5	270.0	272.5	275.0	277.5	5
6	14.4	15.0	15.6	16.2	16.8	92.4	93.0	93.6	96.6	97.2	314.4	316.2	318.0	321.0	324.0	327.0	330.0	333.0	6
7	16.8	17.5	18.2	18.9	19.6	107.8	108.5	109.2	112.7	113.4	366.8	368.9	371.0	374.5	378.0	381.5	385.0	388.5	7
8	19.2	20.0	20.8	21.6	22.4	123.2	124.0	124.8	128.8	129.6	419.2	421.6	424.0	428.0	432.0	436.0	440.0	444.0	8
9	21.6	22.5	23.4	24.3	25.2	138.6	139.5	140.4	144.9	145.8	471.6	474.3	477.0	481.5	486.0	490.5	495.0	499.5	9

10g

c	sin		tang		sec		cosec		cotg		cos		
50	0.164187	155	0.166446	161	1.013757	27	6.09062	574	6.00797	582	0.986429	26	**50**
51	4342	155	6607	162	3784	27	8488	573	6.00215	581	6403	25	49
52	4497	155	6769	161	3811	26	7915	572	5.99634	580	6378	26	48
53	4652	155	6930	161	3837	27	7343	571	9054	579	6352	26	47
54	4807	155	7091	162	3864	26	6772	570	8475	578	6326	26	46
55	4962	154	7253	161	3890	27	6202	569	7897	577	6300	26	45
56	5116	155	7414	162	3917	27	5633	568	7320	575	6274	26	44
57	5271	155	7576	161	3944	26	5065	566	6745	575	6248	26	43
58	5426	155	7737	162	3970	27	4499	566	6170	573	6222	26	42
59	5581	155	7899	161	3997	27	3933	564	5597	573	6196	26	41
60	0.165736	155	0.168060	162	1.014024	27	6.03369	564	5.95024	571	0.986170	26	**40**
61	5891	155	8222	161	4051	26	2805	562	4453	570	6144	26	39
62	6046	155	8383	162	4077	27	2243	561	3883	570	6118	26	38
63	6201	155	8545	162	4104	27	1682	560	3313	568	6092	26	37
64	6356	155	8707	161	4131	27	1122	560	2745	567	6066	26	36
65	6511	154	8868	162	4158	27	0562	558	2178	566	6040	27	35
66	6665	155	9030	161	4185	27	6.00004	557	1612	565	6013	26	34
67	6820	155	9191	162	4212	27	5.99447	556	1047	564	5987	26	33
68	6975	155	9353	161	4239	27	8891	555	5.90483	563	5961	26	32
69	7130	155	9514	162	4266	27	8336	554	5.89920	561	5935	26	31
70	0.167285	155	0.169676	162	1.014293	27	5.97782	553	5.89359	561	0.985909	27	**30**
71	7440	155	9838	161	4320	27	7229	551	8798	560	5882	26	29
72	7595	155	0.169999	162	4347	27	6678	551	8238	559	5856	26	28
73	7750	154	0.170161	161	4374	27	6127	550	7679	557	5830	27	27
74	7904	155	0322	162	4401	27	5577	549	7122	557	5803	26	26
75	8059	155	0484	162	4428	28	5028	548	6565	556	5777	27	25
76	8214	155	0646	161	4456	27	4480	546	6009	554	5750	26	24
77	8369	155	0807	162	4483	27	3934	546	5455	554	5724	26	23
78	8524	155	0969	162	4510	27	3388	545	4901	552	5698	27	22
79	8679	154	1131	161	4537	27	2843	543	4349	552	5671	26	21
80	0.168833	155	0.171292	162	1.014564	28	5.92300	543	5.83797	551	0.985645	27	**20**
81	8988	155	1454	162	4592	27	1757	542	3246	549	5618	26	19
82	9143	155	1616	162	4619	27	1215	540	2697	549	5592	27	18
83	9298	155	1778	161	4646	28	0675	540	2148	547	5565	27	17
84	9453	155	1939	162	4674	27	5.90135	538	1601	547	5538	26	16
85	9608	154	2101	162	4701	28	5.89597	538	1054	545	5512	27	15
86	9762	155	2263	161	4729	27	9059	537	5.80509	545	5485	27	14
87	0.169917	155	2424	162	4756	28	8522	535	5.79964	543	5458	26	13
88	0.170072	155	2586	162	4784	27	7987	535	9421	543	5432	27	12
89	0227	154	2748	162	4811	28	7452	534	8878	542	5405	27	11
90	0.170381	155	0.172910	162	1.014839	27	5.86918	532	5.78336	540	0.985378	27	**10**
91	0536	155	3072	161	4866	28	6386	532	7796	540	5351	26	09
92	0691	155	3233	162	4894	28	5854	531	7256	538	5325	27	08
93	0846	155	3395	162	4922	27	5323	530	6718	538	5298	27	07
94	1001	154	3557	162	4949	28	4793	528	6180	537	5271	27	06
95	1155	155	3719	162	4977	28	4265	528	5643	536	5244	27	05
96	1310	155	3881	161	5005	27	3737	527	5107	534	5217	27	04
97	1465	155	4042	162	5032	28	3210	526	4573	534	5190	27	03
98	1620	154	4204	162	5060	28	2684	525	4039	533	5163	27	02
99	1774	155	4366	162	5088	28	2159	524	3506	532	5136	27	01
100	0.171929		0.174528		1.015116		5.81635		5.72974		0.985109		**00**
	cos		cotg		cosec		sec		tang		sin		c

	560	**565**	**570**	**575**	**580**	**585**	**590**	**595**	**600**	**605**	**610**	**615**	**620**	**625**	**630**	**635**	**638**	**641**	
1	56.0	56.5	57.0	57.5	58.0	58.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	62.5	63.0	63.5	63.8	64.1	1
2	112.0	113.0	114.0	115.0	116.0	117.0	118.0	119.0	120.0	121.0	122.0	123.0	124.0	125.0	126.0	127.0	127.6	128.2	2
3	168.0	169.5	171.0	172.5	174.0	175.5	177.0	178.5	180.0	181.5	183.0	184.5	186.0	187.5	189.0	190.5	191.4	192.3	3
4	224.0	226.0	228.0	230.0	232.0	234.0	236.0	238.0	240.0	242.0	244.0	246.0	248.0	250.0	252.0	254.0	255.2	256.4	4
5	280.0	282.5	285.0	287.5	290.0	292.5	295.0	297.5	300.0	302.5	305.0	307.5	310.0	312.5	315.0	317.5	319.0	320.5	5
6	336.0	339.0	342.0	345.0	348.0	351.0	354.0	357.0	360.0	363.0	366.0	369.0	372.0	375.0	378.0	381.0	382.8	384.6	6
7	392.0	395.5	399.0	402.5	406.0	409.5	413.0	416.5	420.0	423.5	427.0	430.5	434.0	437.5	441.0	444.5	446.6	448.7	7
8	448.0	452.0	456.0	460.0	464.0	468.0	472.0	476.0	480.0	484.0	488.0	492.0	496.0	500.0	504.0	508.0	510.4	512.8	8
9	504.0	508.5	513.0	517.5	522.0	526.5	531.0	535.5	540.0	544.5	549.0	553.5	558.0	562.5	567.0	571.5	574.2	576.9	9

89g

11g

c	sin		tang		sec		cosec		cotg		cos		
00	0.171929	155	0.174528	162	1.015116	28	5.81635	523	5.72974	531	0.985109	27	**100**
01	2084	155	4690	162	5144	27	1112	522	2443	530	5082	27	99
02	2239	154	4852	162	5171	28	0590	521	1913	529	5055	27	98
03	2393	155	5014	161	5199	28	5.80069	520	1384	528	5028	27	97
04	2548	155	5175	162	5227	28	5.79549	519	0856	527	5001	27	96
05	2703	154	5337	162	5255	28	9030	519	5.70329	526	4974	27	95
06	2857	155	5499	162	5283	28	8511	517	5.69803	525	4947	27	94
07	3012	155	5661	162	5311	28	7994	516	9278	525	4920	28	93
08	3167	155	5823	162	5339	28	7478	516	8753	523	4892	27	92
09	3322	154	5985	162	5367	28	6962	514	8230	522	4865	27	91
10	0.173476	155	0.176147	162	1.015395	28	5.76448	514	5.67708	522	0.984838	27	**90**
11	3631	155	6309	162	5423	29	5934	513	7186	521	4811	28	89
12	3786	154	6471	162	5452	28	5421	511	6665	519	4783	27	88
13	3940	155	6633	162	5480	28	4910	511	6146	519	4756	27	87
14	4095	155	6795	162	5508	28	4399	510	5627	518	4729	28	86
15	4250	154	6957	162	5536	28	3889	509	5109	517	4701	27	85
16	4404	155	7119	162	5564	29	3380	508	4592	516	4674	27	84
17	4559	155	7281	162	5593	28	2872	507	4076	515	4647	28	83
18	4714	154	7443	162	5621	28	2365	506	3561	514	4619	27	82
19	4868	155	7605	162	5649	29	1859	506	3047	513	4592	28	81
20	0.175023	155	0.177767	162	1.015678	28	5.71353	504	5.62534	512	0.984564	27	**80**
21	5178	154	7929	162	5706	28	0849	504	2022	512	4537	28	79
22	5332	155	8091	162	5734	29	5.70345	502	1510	510	4509	27	78
23	5487	155	8253	162	5763	28	5.69843	502	1000	510	4482	28	77
24	5642	154	8415	162	5791	29	9341	501	5.60490	509	4454	27	76
25	5796	155	8577	162	5820	28	8840	500	5.59981	507	4427	28	75
26	5951	155	8739	163	5848	29	8340	499	9474	507	4399	28	74
27	6106	154	8902	162	5877	28	7841	498	8967	506	4371	27	73
28	6260	155	9064	162	5905	29	7343	497	8461	506	4344	28	72
29	6415	154	9226	162	5934	29	6846	496	7955	504	4316	28	71
30	0.176569	155	0.179388	162	1.015963	28	5.66350	496	5.57451	503	0.984288	28	**70**
31	6724	155	9550	162	5991	29	5854	495	6948	503	4260	27	69
32	6879	154	9712	162	6020	29	5359	493	6445	501	4233	28	68
33	7033	155	0.179874	163	6049	28	4866	493	5944	501	4205	28	67
34	7188	154	0.180037	162	6077	29	4373	492	5443	500	4177	28	66
35	7342	155	0199	162	6106	29	3881	491	4943	499	4149	28	65
36	7497	155	0361	162	6135	29	3390	490	4444	498	4121	28	64
37	7652	154	0523	162	6164	28	2900	490	3946	497	4093	27	63
38	7806	155	0685	162	6192	29	2410	488	3449	497	4066	28	62
39	7961	154	0847	163	6221	29	1922	488	2952	495	4038	28	61
40	0.178115	155	0.181010	162	1.016250	29	5.61434	487	5.52457	495	0.984010	28	**60**
41	8270	154	1172	162	6279	29	0947	486	1962	494	3982	28	59
42	8424	155	1334	162	6308	29	5.60461	485	1468	493	3954	28	58
43	8579	155	1496	163	6337	29	5.59976	484	0975	492	3926	28	57
44	8734	154	1659	162	6366	29	9492	483	5.50483	491	3898	29	56
45	8888	155	1821	162	6395	29	9009	483	5.49992	491	3869	28	55
46	9043	154	1983	163	6424	29	8526	481	9501	489	3841	28	54
47	9197	155	2146	162	6453	29	8045	481	9012	489	3813	28	53
48	9352	154	2308	162	6482	29	7564	480	8523	488	3785	28	52
49	9506	155	2470	162	6511	30	7084	479	8035	487	3757	28	51
50	0.179661		0.182632		1.016541		5.56605		5.47548		0.983729		**50**
	cos		cotg		cosec		sec		tang		sin		c

	27	**28**	**29**	**30**	**31**	**154**	**155**	**161**	**162**	**163**	**440**	**443**	**446**	**449**	**452**	**455**	**458**	**461**	
1	2.7	2.8	2.9	3.0	3.1	15.4	15.5	16.1	16.2	16.3	44.0	44.3	44.6	44.9	45.2	45.5	45.8	46.1	1
2	5.4	5.6	5.8	6.0	6.2	30.8	31.0	32.2	32.4	32.6	88.0	88.6	89.2	89.8	90.4	91.0	91.6	92.2	2
3	8.1	8.4	8.7	9.0	9.3	46.2	46.5	48.3	48.6	48.9	132.0	132.9	133.8	134.7	135.6	136.5	137.4	138.3	3
4	10.8	11.2	11.6	12.0	12.4	61.6	62.0	64.4	64.8	65.2	176.0	177.2	178.4	179.6	180.8	182.0	183.2	184.4	4
5	13.5	14.0	14.5	15.0	15.5	77.0	77.5	80.5	81.0	81.5	220.0	221.5	223.0	224.5	226.0	227.5	229.0	230.5	5
6	16.2	16.8	17.4	18.0	18.6	92.4	93.0	96.6	97.2	97.8	264.0	265.8	267.6	269.4	271.2	273.0	274.8	276.6	6
7	18.9	19.6	20.3	21.0	21.7	107.8	108.5	112.7	113.4	114.1	308.0	310.1	312.2	314.3	316.4	318.5	320.6	322.7	7
8	21.6	22.4	23.2	24.0	24.8	123.2	124.0	128.8	129.6	130.4	352.0	354.4	356.8	359.2	361.6	364.0	366.4	368.8	8
9	24.3	25.2	26.1	27.0	27.9	138.6	139.5	144.9	145.8	146.7	396.0	398.7	401.4	404.1	406.8	409.5	412.2	414.9	9

11g

c	sin		tang		sec		cosec		cotg		cos		
50	0.179661	154	0.182632	163	1.016541	29	5.56605	479	5.47548	486	0.983729	29	**50**
51	9815	155	2795	162	6570	29	6126	477	7062	486	3700	28	49
52	0.179970	154	2957	162	6599	29	5649	477	6576	484	3672	28	48
53	0.180124	155	3119	163	6628	29	5172	476	6092	484	3644	28	47
54	0279	154	3282	162	6657	30	4696	475	5608	483	3616	29	46
55	0433	155	3444	163	6687	29	4221	474	5125	482	3587	28	45
56	0588	154	3607	162	6716	29	3747	473	4643	481	3559	29	44
57	0742	155	3769	162	6745	30	3274	473	4162	481	3530	28	43
58	0897	154	3931	163	6775	29	2801	471	3681	479	3502	28	42
59	1051	155	4094	162	6804	29	2330	471	3202	479	3474	29	41
60	0.181206	154	0.184256	163	1.016833	30	5.51859	470	5.42723	478	0.983445	28	**40**
61	1360	155	4419	162	6863	29	1389	469	2245	477	3417	29	39
62	1515	154	4581	162	6892	30	0920	469	1768	477	3388	28	38
63	1669	155	4743	163	6922	29	5.50451	468	1291	475	3360	29	37
64	1824	154	4906	162	6951	30	5.49983	466	0816	475	3331	28	36
65	1978	155	5068	163	6981	30	9517	466	5.40341	474	3303	29	35
66	2133	154	5231	162	7011	29	9051	466	5.39867	473	3274	29	34
67	2287	154	5393	163	7040	30	8585	464	9394	472	3245	28	33
68	2441	155	5556	162	7070	29	8121	464	8922	472	3217	29	32
69	2596	154	5718	163	7099	30	7657	462	8450	470	3188	29	31
70	0.182750	155	0.185881	162	1.017129	30	5.47195	462	5.37980	470	0.983159	28	**30**
71	2905	154	6043	163	7159	30	6733	462	7510	470	3131	29	29
72	3059	155	6206	162	7189	29	6271	460	7040	468	3102	29	28
73	3214	154	6368	163	7218	30	5811	460	6572	467	3073	29	27
74	3368	154	6531	162	7248	30	5351	459	6105	467	3044	28	26
75	3522	155	6693	163	7278	30	4892	458	5638	466	3016	29	25
76	3677	154	6856	162	7308	30	4434	457	5172	465	2987	29	24
77	3831	155	7018	163	7338	30	3977	456	4707	465	2958	29	23
78	3986	154	7181	163	7368	29	3521	456	4242	464	2929	29	22
79	4140	154	7344	162	7397	30	3065	455	3778	462	2900	29	21
80	0.184294	155	0.187506	163	1.017427	30	5.42610	454	5.33316	462	0.982871	29	**20**
81	4449	154	7669	162	7457	30	2156	454	2854	462	2842	29	19
82	4603	155	7831	163	7487	30	1702	452	2392	460	2813	29	18
83	4758	154	7994	163	7517	31	1250	452	1932	460	2784	29	17
84	4912	154	8157	162	7548	30	0798	451	1472	459	2755	29	16
85	5066	155	8319	163	7578	30	5.40347	451	1013	458	2726	29	15
86	5221	154	8482	163	7608	30	5.39896	449	0555	458	2697	29	14
87	5375	154	8645	162	7638	30	9447	449	5.30097	457	2668	29	13
88	5529	155	8807	163	7668	30	8998	448	5.29640	456	2639	29	12
89	5684	154	8970	163	7698	30	8550	447	9184	455	2610	30	11
90	0.185838	154	0.189133	162	1.017728	31	5.38103	447	5.28729	454	0.982580	29	**10**
91	5992	155	9295	163	7759	30	7656	446	8275	454	2551	29	09
92	6147	154	9458	163	7789	30	7210	445	7821	453	2522	29	08
93	6301	154	9621	163	7819	31	6765	444	7368	452	2493	30	07
94	6455	155	9784	162	7850	30	6321	443	6916	452	2463	29	06
95	6610	154	0.189946	163	7880	30	5878	443	6464	450	2434	29	05
96	6764	154	0.190109	163	7910	31	5435	442	6014	450	2405	30	04
97	6918	155	0272	163	7941	30	4993	441	5564	449	2375	29	03
98	7073	154	0435	162	7971	31	4552	441	5115	449	2346	29	02
99	7227	154	0597	163	8002	30	4111	440	4666	448	2317	30	01
100	0.187381		0.190760		1.018032		5.33671		5.24218		0.982287		**00**
	cos		cotg		cosec		sec		tang		sin		c

	464	**467**	**470**	**473**	**476**	**479**	**482**	**485**	**490**	**495**	**500**	**505**	**510**	**515**	**520**	**525**	**528**	**531**	
1	46.4	46.7	47.0	47.3	47.6	47.9	48.2	48.5	49.0	49.5	50.0	50.5	51.0	51.5	52.0	52.5	52.8	53.1	1
2	92.8	93.4	94.0	94.6	95.2	95.8	96.4	97.0	98.0	99.0	100.0	101.0	102.0	103.0	104.0	105.0	105.6	106.2	2
3	139.2	140.1	141.0	141.9	142.8	143.7	144.6	145.5	147.0	148.5	150.0	151.5	153.0	154.5	156.0	157.5	158.4	159.3	3
4	185.6	186.8	188.0	189.2	190.4	191.6	192.8	194.0	196.0	198.0	200.0	202.0	204.0	206.0	208.0	210.0	211.2	212.4	4
5	232.0	233.5	235.0	236.5	238.0	239.5	241.0	242.5	245.0	247.5	250.0	252.5	255.0	257.5	260.0	262.5	264.0	265.5	5
6	278.4	280.2	282.0	283.8	285.6	287.4	289.2	291.0	294.0	297.0	300.0	303.0	306.0	309.0	312.0	315.0	316.8	318.6	6
7	324.8	326.9	329.0	331.1	333.2	335.3	337.4	339.5	343.0	346.5	350.0	353.5	357.0	360.5	364.0	367.5	369.6	371.7	7
8	371.2	373.6	376.0	378.4	380.8	383.2	385.6	388.0	392.0	396.0	400.0	404.0	408.0	412.0	416.0	420.0	422.4	424.8	8
9	417.6	420.3	423.0	425.7	428.4	431.1	433.8	436.5	441.0	445.5	450.0	454.5	459.0	463.5	468.0	472.5	475.2	477.9	9

88g

12g

c	sin		tang		sec		cosec		cotg		cos		
00	0.187381	155	0.190760	163	1.018032	31	5.33671	439	5.24218	447	0.982287	29	**100**
01	7536	154	0923	163	8063	30	3232	438	3771	446	2258	30	99
02	7690	154	1086	163	8093	31	2794	438	3325	445	2228	29	98
03	7844	154	1249	162	8124	30	2356	437	2880	445	2199	30	97
04	7998	155	1411	163	8154	31	1919	436	2435	444	2169	29	96
05	8153	154	1574	163	8185	31	1483	435	1991	444	2140	30	95
06	8307	154	1737	163	8216	30	1048	435	1547	442	2110	29	94
07	8461	155	1900	163	8246	31	0613	434	1105	442	2081	30	93
08	8616	154	2063	163	8277	31	5.30179	433	0663	441	2051	30	92
09	8770	154	2226	163	8308	31	5.29746	433	5.20222	441	2021	29	91
10	0.188924	154	0.192389	163	1.018339	30	5.29313	432	5.19781	440	0.981992	30	**90**
11	9078	155	2552	162	8369	31	8881	431	9341	439	1962	30	89
12	9233	154	2714	163	8400	31	8450	430	8902	438	1932	29	88
13	9387	154	2877	163	8431	31	8020	430	8464	437	1903	30	87
14	9541	154	3040	163	8462	31	7590	429	8027	437	1873	30	86
15	9695	154	3203	163	8493	31	7161	428	7590	437	1843	30	85
16	0.189849	155	3366	163	8524	31	6733	427	7153	435	1813	30	84
17	0.190004	154	3529	163	8555	31	6306	427	6718	435	1783	29	83
18	0158	154	3692	163	8586	31	5879	426	6283	434	1754	30	82
19	0312	154	3855	163	8617	31	5453	426	5849	433	1724	30	81
20	0.190466	155	0.194018	163	1.018648	31	5.25027	425	5.15416	433	0.981694	30	**80**
21	0621	154	4181	163	8679	31	4602	424	4983	432	1664	30	79
22	0775	154	4344	163	8710	31	4178	423	4551	431	1634	30	78
23	0929	154	4507	163	8741	31	3755	423	4120	431	1604	30	77
24	1083	154	4670	163	8772	31	3332	421	3689	429	1574	30	76
25	1237	154	4833	163	8803	31	2911	422	3260	430	1544	30	75
26	1391	155	4996	163	8834	32	2489	420	2830	428	1514	30	74
27	1546	154	5159	163	8866	31	2069	420	2402	428	1484	30	73
28	1700	154	5322	163	8897	31	1649	419	1974	427	1454	31	72
29	1854	154	5485	164	8928	31	1230	419	1547	426	1423	30	71
30	0.192008	154	0.195649	163	1.018959	32	5.20811	418	5.11121	426	0.981393	30	**70**
31	2162	154	5812	163	8991	31	5.20393	417	0695	425	1363	30	69
32	2316	155	5975	163	9022	32	5.19976	416	5.10270	424	1333	30	68
33	2471	154	6138	163	9054	31	9560	416	5.09846	424	1303	31	67
34	2625	154	6301	163	9085	31	9144	415	9422	423	1272	30	66
35	2779	154	6464	163	9116	32	8729	414	8999	422	1242	30	65
36	2933	154	6627	163	9148	31	8315	414	8577	422	1212	30	64
37	3087	154	6790	164	9179	32	7901	413	8155	421	1182	31	63
38	3241	154	6954	163	9211	31	7488	413	7734	420	1151	30	62
39	3395	154	7117	163	9242	32	7075	411	7314	420	1121	30	61
40	0.193549	155	0.197280	163	1.019274	32	5.16664	411	5.06894	419	0.981091	31	**60**
41	3704	154	7443	163	9306	31	6253	411	6475	418	1060	30	59
42	3858	154	7606	164	9337	32	5842	409	6057	418	1030	31	58
43	4012	154	7770	163	9369	32	5433	409	5639	417	0999	30	57
44	4166	154	7933	163	9401	31	5024	409	5222	416	0969	31	56
45	4320	154	8096	163	9432	32	4615	408	4806	416	0938	30	55
46	4474	154	8259	164	9464	32	4207	407	4390	415	0908	31	54
47	4628	154	8423	163	9496	31	3800	406	3975	414	0877	30	53
48	4782	154	8586	163	9527	32	3394	406	3561	414	0847	31	52
49	4936	154	8749	163	9559	32	2988	405	3147	413	0816	31	51
50	0.195090		0.198912		1.019591		5.12583		5.02734		0.980785		**50**
	cos		cotg		cosec		sec		tang		sin		c

	29	**30**	**31**	**32**	**33**	**34**	**153**	**154**	**155**	**162**	**163**	**164**	**374**	**377**	**380**	**383**	**386**	**389**	
1	2.9	3.0	3.1	3.2	3.3	3.4	15.3	15.4	15.5	16.2	16.3	16.4	37.4	37.7	38.0	38.3	38.6	38.9	1
2	5.8	6.0	6.2	6.4	6.6	6.8	30.6	30.8	31.0	32.4	32.6	32.8	74.8	75.4	76.0	76.6	77.2	77.8	2
3	8.7	9.0	9.3	9.6	9.9	10.2	45.9	46.2	46.5	48.6	48.9	49.2	112.2	113.1	114.0	114.9	115.8	116.7	3
4	11.6	12.0	12.4	12.8	13.2	13.6	61.2	61.6	62.0	64.8	65.2	65.6	149.6	150.8	152.0	153.2	154.4	155.6	4
5	14.5	15.0	15.5	16.0	16.5	17.0	76.5	77.0	77.5	81.0	81.5	82.0	187.0	188.5	190.0	191.5	193.0	194.5	5
6	17.4	18.0	18.6	19.2	19.8	20.4	91.8	92.4	93.0	97.2	97.8	98.4	224.4	226.2	228.0	229.8	231.6	233.4	6
7	20.3	21.0	21.7	22.4	23.1	23.8	107.1	107.8	108.5	113.4	114.1	114.8	261.8	263.9	266.0	268.1	270.2	272.3	7
8	23.2	24.0	24.8	25.6	26.4	27.2	122.4	123.2	124.0	129.6	130.4	131.2	299.2	301.6	304.0	306.4	308.8	311.2	8
9	26.1	27.0	27.9	28.8	29.7	30.6	137.7	138.6	139.5	145.8	146.7	147.6	336.6	339.3	342.0	344.7	347.4	350.1	9

87g

12g

c	sin		tang		sec		cosec		cotg		cos		
50	0.195090	154	0.198912	164	1.019591	32	5.12583	404	5.02734	412	0.980785	30	**50**
51	5244	154	9076	163	9623	32	2179	404	2322	412	0755	31	49
52	5398	154	9239	163	9655	32	1775	403	1910	411	0724	31	48
53	5552	155	9402	164	9687	32	1372	403	1499	411	0693	30	47
54	5707	154	9566	163	9719	32	0969	402	1088	410	0663	31	46
55	5861	154	9729	163	9751	32	0567	401	0678	409	0632	31	45
56	6015	154	0.199892	164	9783	32	5.10166	401	5.00269	408	0601	31	44
57	6169	154	0.200056	163	9815	32	5.09765	399	4.99861	408	0570	31	43
58	6323	154	0219	163	9847	32	9366	400	9453	407	0539	31	42
59	6477	154	0382	164	9879	32	8966	398	9046	407	0508	30	41
60	0.196631	154	0.200546	163	1.019911	32	5.08568	398	4.98639	406	0.980478	31	**40**
61	6785	154	0709	164	9943	32	8170	398	8233	405	0447	31	39
62	6939	154	0873	163	1.019975	33	7772	397	7828	405	0416	31	38
63	7093	154	1036	163	1.020008	32	7375	396	7423	404	0385	31	37
64	7247	154	1199	164	0040	32	6979	395	7019	403	0354	31	36
65	7401	154	1363	163	0072	32	6584	395	6616	403	0323	31	35
66	7555	154	1526	164	0104	33	6189	394	6213	402	0292	31	34
67	7709	154	1690	163	0137	32	5795	394	5811	402	0261	31	33
68	7863	154	1853	164	0169	32	5401	393	5409	401	0230	31	32
69	8017	154	2017	163	0201	33	5008	392	5008	400	0199	31	31
70	0.198171	154	0.202180	164	1.020234	32	5.04616	392	4.94608	400	0.980168	32	**30**
71	8325	154	2344	163	0266	33	4224	391	4208	399	0136	31	29
72	8479	153	2507	164	0299	32	3833	391	3809	398	0105	31	28
73	8632	154	2671	163	0331	33	3442	389	3411	398	0074	31	27
74	8786	154	2834	164	0364	32	3053	390	3013	397	0043	31	26
75	8940	154	2998	164	0396	33	2663	388	2616	397	0.980012	32	25
76	9094	154	3162	163	0429	32	2275	388	2219	396	0.979980	31	24
77	9248	154	3325	164	0461	33	1887	388	1823	395	9949	31	23
78	9402	154	3489	163	0494	32	1499	387	1428	395	9918	32	22
79	9556	154	3652	164	0526	33	1112	386	1033	394	9886	31	21
80	0.199710	154	0.203816	163	1.020559	33	5.00726	386	4.90639	394	0.979855	31	**20**
81	0.199864	154	3979	164	0592	33	5.00340	384	4.90245	392	9824	32	19
82	0.200018	154	4143	164	0625	32	4.99956	385	4.89853	393	9792	31	18
83	0172	154	4307	163	0657	33	9571	384	9460	392	9761	32	17
84	0326	153	4470	164	0690	33	9187	383	9068	391	9729	31	16
85	0479	154	4634	164	0723	33	8804	382	8677	390	9698	32	15
86	0633	154	4798	163	0756	32	8422	382	8287	390	9666	31	14
87	0787	154	4961	164	0788	33	8040	382	7897	389	9635	32	13
88	0941	154	5125	164	0821	33	7658	381	7508	389	9603	31	12
89	1095	154	5289	163	0854	33	7277	380	7119	388	9572	32	11
90	0.201249	154	0.205452	164	1.020887	33	4.96897	379	4.86731	388	0.979540	31	**10**
91	1403	154	5616	164	0920	33	6518	379	6343	387	9509	32	09
92	1557	153	5780	164	0953	33	6139	379	5956	386	9477	32	08
93	1710	154	5944	163	0986	33	5760	378	5570	386	9445	32	07
94	1864	154	6107	164	1019	33	5382	377	5184	385	9413	31	06
95	2018	154	6271	164	1052	33	5005	377	4799	385	9382	32	05
96	2172	154	6435	164	1085	34	4628	376	4414	384	9350	32	04
97	2326	154	6599	163	1119	33	4252	375	4030	383	9318	32	03
98	2480	153	6762	164	1152	33	3877	375	3647	383	9286	31	02
99	2633	154	6926	164	1185	33	3502	374	3264	382	9255	32	01
100	0.202787		0.207090		1.021218		4.93128		4.82882		0.979223		**00**
	cos		cotg		cosec		sec		tang		sin		c

	392	**395**	**398**	**401**	**404**	**407**	**410**	**413**	**416**	**419**	**422**	**425**	**430**	**435**	**438**	**441**	**444**	**447**	
1	39.2	39.5	39.8	40.1	40.4	40.7	41.0	41.3	41.6	41.9	42.2	42.5	43.0	43.5	43.8	44.1	44.4	44.7	1
2	78.4	79.0	79.6	80.2	80.8	81.4	82.0	82.6	83.2	83.8	84.4	85.0	86.0	87.0	87.6	88.2	88.8	89.4	2
3	117.6	118.5	119.4	120.3	121.2	122.1	123.0	123.9	124.8	125.7	126.6	127.5	129.0	130.5	131.4	132.3	133.2	134.1	3
4	156.8	158.0	159.2	160.4	161.6	162.8	164.0	165.2	166.4	167.6	168.8	170.0	172.0	174.0	175.2	176.4	177.6	178.8	4
5	196.0	197.5	199.0	200.5	202.0	203.5	205.0	206.5	208.0	209.5	211.0	212.5	215.0	217.5	219.0	220.5	222.0	223.5	5
6	235.2	237.0	238.8	240.6	242.4	244.2	246.0	247.8	249.6	251.4	253.2	255.0	258.0	261.0	262.8	264.6	266.4	268.2	6
7	274.4	276.5	278.6	280.7	282.8	284.9	287.0	289.1	291.2	293.3	295.4	297.5	301.0	304.5	306.6	308.7	310.8	312.9	7
8	313.6	316.0	318.4	320.8	323.2	325.6	328.0	330.4	332.8	335.2	337.6	340.0	344.0	348.0	350.4	352.8	355.2	357.6	8
9	352.8	355.5	358.2	360.9	363.6	366.3	369.0	371.7	374.4	377.1	379.8	382.5	387.0	391.5	394.2	396.9	399.6	402.3	9

87g

13g

c	sin		tang		sec		cosec		cotg		cos		
00	0.202787	154	0.207090	164	1.021218	33	4.93128	374	4.82882	382	0.979223	32	**100**
01	2941	154	7254	164	1251	34	2754	373	2500	381	9191	32	99
02	3095	154	7418	164	1285	33	2381	373	2119	381	9159	32	98
03	3249	154	7582	163	1318	33	2008	372	1738	380	9127	32	97
04	3403	153	7745	164	1351	33	1636	371	1358	379	9095	32	96
05	3556	154	7909	164	1384	34	1265	371	0979	379	9063	32	95
06	3710	154	8073	164	1418	33	0894	371	0600	378	9031	32	94
07	3864	154	8237	164	1451	34	0523	369	4.80222	378	8999	32	93
08	4018	153	8401	164	1485	33	4.90154	370	4.79844	377	8967	32	92
09	4171	154	8565	164	1518	34	4.89784	368	9467	376	8935	32	91
10	0.204325	154	0.208729	164	1.021552	33	4.89416	368	4.79091	376	0.978903	32	**90**
11	4479	154	8893	164	1585	34	9048	368	8715	376	8871	32	89
12	4633	153	9057	164	1619	33	8680	367	8339	374	8839	32	88
13	4786	154	9221	164	1652	34	8313	366	7965	375	8807	33	87
14	4940	154	9385	163	1686	33	7947	366	7590	373	8774	32	86
15	5094	154	9548	164	1719	34	7581	365	7217	374	8742	32	85
16	5248	153	9712	164	1753	34	7216	364	6843	372	8710	32	84
17	5401	154	0.209876	164	1787	33	6852	365	6471	372	8678	32	83
18	5555	154	0.210040	164	1820	34	6487	363	6099	372	8646	33	82
19	5709	154	0204	165	1854	34	6124	363	5727	371	8613	32	81
20	0.205863	153	0.210369	164	1.021888	34	4.85761	363	4.75356	370	0.978581	32	**80**
21	6016	154	0533	164	1922	34	5398	361	4986	370	8549	33	79
22	6170	154	0697	164	1956	33	5037	362	4616	369	8516	32	78
23	6324	153	0861	164	1989	34	4675	361	4247	369	8484	33	77
24	6477	154	1025	164	2023	34	4314	360	3878	368	8451	32	76
25	6631	154	1189	164	2057	34	3954	359	3510	368	8419	33	75
26	6785	153	1353	164	2091	34	3595	360	3142	367	8386	32	74
27	6938	154	1517	164	2125	34	3235	358	2775	366	8354	33	73
28	7092	154	1681	164	2159	34	2877	358	2409	366	8321	32	72
29	7246	154	1845	164	2193	34	2519	358	2043	366	8289	33	71
30	0.207400	153	0.212009	165	1.022227	34	4.82161	357	4.71677	365	0.978256	32	**70**
31	7553	154	2174	164	2261	34	1804	356	1312	364	8224	33	69
32	7707	153	2338	164	2295	34	1448	356	0948	364	8191	33	68
33	7860	154	2502	164	2329	34	1092	355	0584	363	8158	32	67
34	8014	154	2666	164	2363	35	0737	355	4.70221	363	8126	33	66
35	8168	153	2830	164	2398	34	0382	354	4.69858	362	8093	33	65
36	8321	154	2994	165	2432	34	4.80028	354	9496	362	8060	32	64
37	8475	154	3159	164	2466	34	4.79674	353	9134	361	8028	33	63
38	8629	153	3323	164	2500	34	9321	353	8773	361	7995	33	62
39	8782	154	3487	164	2534	35	8968	352	8412	360	7962	33	61
40	0.208936	154	0.213651	165	1.022569	34	4.78616	352	4.68052	359	0.977929	32	**60**
41	9090	153	3816	164	2603	34	8264	351	7693	359	7897	33	59
42	9243	154	3980	164	2637	35	7913	351	7334	359	7864	33	58
43	9397	153	4144	164	2672	34	7562	350	6975	358	7831	33	57
44	9550	154	4308	165	2706	35	7212	349	6617	357	7798	33	56
45	9704	153	4473	164	2741	34	6863	349	6260	357	7765	33	55
46	0.209857	154	4637	164	2775	35	6514	349	5903	357	7732	33	54
47	0.210011	154	4801	165	2810	34	6165	348	5546	355	7699	33	53
48	0165	153	4966	164	2844	35	5817	347	5191	356	7666	33	52
49	0318	154	5130	164	2879	34	5470	347	4835	355	7633	33	51
50	0.210472		0.215294		1.022913		4.75123		4.64480		0.977600		**50**
	cos		cotg		cosec		sec		tang		sin		c

	32	**33**	**34**	**35**	**36**	**153**	**154**	**163**	**164**	**165**	**323**	**325**	**327**	**329**	**331**	**333**	**335**	**337**	
1	3.2	3.3	3.4	3.5	3.6	15.3	15.4	16.3	16.4	16.5	32.3	32.5	32.7	32.9	33.1	33.3	33.5	33.7	1
2	6.4	6.6	6.8	7.0	7.2	30.6	30.8	32.6	32.8	33.0	64.6	65.0	65.4	65.8	66.2	66.6	67.0	67.4	2
3	9.6	9.9	10.2	10.5	10.8	45.9	46.2	48.9	49.2	49.5	96.9	97.5	98.1	98.7	99.3	99.9	100.5	101.1	3
4	12.8	13.2	13.6	14.0	14.4	61.2	61.6	65.2	65.6	66.0	129.2	130.0	130.8	131.6	132.4	133.2	134.0	134.8	4
5	16.0	16.5	17.0	17.5	18.0	76.5	77.0	81.5	82.0	82.5	161.5	162.5	163.5	164.5	165.5	166.5	167.5	168.5	5
6	19.2	19.8	20.4	21.0	21.6	91.8	92.4	97.8	98.4	99.0	193.8	195.0	196.2	197.4	198.6	199.8	201.0	202.2	6
7	22.4	23.1	23.8	24.5	25.2	107.1	107.8	114.1	114.8	115.5	226.1	227.5	228.9	230.3	231.7	233.1	234.5	235.9	7
8	25.6	26.4	27.2	28.0	28.8	122.4	123.2	130.4	131.2	132.0	258.4	260.0	261.6	263.2	264.8	266.4	268.0	269.6	8
9	28.8	29.7	30.6	31.5	32.4	137.7	138.6	146.7	147.6	148.5	290.7	292.5	294.3	296.1	297.9	299.7	301.5	303.3	9

86g

13g

c	sin		tang		sec		cosec		cotg		cos		
50	0.210472	153	0.215294	165	1.022913	35	4.75123	346	4.64480	354	0.977600	33	**50**
51	0625	154	5459	164	2948	35	4777	346	4126	354	7567	33	49
52	0779	153	5623	164	2983	34	4431	346	3772	353	7534	33	48
53	0932	154	5787	165	3017	35	4085	344	3419	353	7501	33	47
54	1086	154	5952	164	3052	35	3741	345	3066	352	7468	34	46
55	1240	153	6116	165	3087	34	3396	344	2714	352	7434	33	45
56	1393	154	6281	164	3121	35	3052	343	2362	351	7401	33	44
57	1547	153	6445	165	3156	35	2709	343	2011	351	7368	33	43
58	1700	154	6610	164	3191	35	2366	342	1660	350	7335	34	42
59	1854	153	6774	165	3226	35	2024	342	1310	350	7301	33	41
60	0.212007	154	0.216939	164	1.023261	35	4.71682	341	4.60960	349	0.977268	33	**40**
61	2161	153	7103	164	3296	34	1341	341	0611	349	7235	34	39
62	2314	154	7267	165	3330	35	1000	340	4.60262	348	7201	33	38
63	2468	153	7432	165	3365	35	0660	340	4.59914	348	7168	33	37
64	2621	154	7597	164	3400	35	4.70320	339	9566	347	7135	34	36
65	2775	153	7761	165	3435	35	4.69981	339	9219	347	7101	33	35
66	2928	154	7926	164	3470	35	9642	338	8872	346	7068	34	34
67	3082	153	8090	165	3505	35	9304	338	8526	346	7034	33	33
68	3235	153	8255	164	3540	36	8966	337	8180	345	7001	34	32
69	3388	154	8419	165	3576	35	8629	337	7835	345	6967	33	31
70	0.213542	153	0.218584	164	1.023611	35	4.68292	336	4.57490	344	0.976934	34	**30**
71	3695	154	8748	165	3646	35	7956	336	7146	344	6900	33	29
72	3849	153	8913	165	3681	35	7620	335	6802	343	6867	34	28
73	4002	154	9078	164	3716	36	7285	335	6459	343	6833	33	27
74	4156	153	9242	165	3752	35	6950	334	6116	342	6800	34	26
75	4309	154	9407	165	3787	35	6616	334	5774	342	6766	34	25
76	4463	153	9572	164	3822	35	6282	334	5432	341	6732	33	24
77	4616	153	9736	165	3857	36	5948	332	5091	341	6699	34	23
78	4769	154	0.219901	165	3893	35	5616	333	4750	340	6665	34	22
79	4923	153	0.220066	164	3928	36	5283	332	4410	340	6631	34	21
80	0.215076	154	0.220230	165	1.023964	35	4.64951	331	4.54070	339	0.976597	34	**20**
81	5230	153	0395	165	3999	35	4620	331	3731	339	6563	33	19
82	5383	153	0560	164	4034	36	4289	330	3392	338	6530	34	18
83	5536	154	0724	165	4070	35	3959	330	3054	338	6496	34	17
84	5690	153	0889	165	4105	36	3629	330	2716	338	6462	34	16
85	5843	154	1054	165	4141	36	3299	329	2378	336	6428	34	15
86	5997	153	1219	164	4177	35	2970	328	2042	337	6394	34	14
87	6150	153	1383	165	4212	36	2642	328	1705	336	6360	34	13
88	6303	154	1548	165	4248	35	2314	328	1369	335	6326	34	12
89	6457	153	1713	165	4283	36	1986	327	1034	335	6292	34	11
90	0.216610	153	0.221878	165	1.024319	36	4.61659	326	4.50699	335	0.976258	34	**10**
91	6763	154	2043	164	4355	36	1333	327	0364	334	6224	34	09
92	6917	153	2207	165	4391	35	1006	325	4.50030	334	6190	34	08
93	7070	153	2372	165	4426	36	0681	325	4.49696	333	6156	34	07
94	7223	154	2537	165	4462	36	0356	325	9363	332	6122	34	06
95	7377	153	2702	165	4498	36	4.60031	324	9031	333	6088	34	05
96	7530	153	2867	165	4534	36	4.59707	324	8698	331	6054	35	04
97	7683	154	3032	165	4570	36	9383	323	8367	332	6019	34	03
98	7837	153	3197	165	4606	36	9060	323	8035	330	5985	34	02
99	7990	153	3362	164	4642	36	8737	323	7705	331	5951	34	01
100	0.218143		0.223526		1.024678		4.58414		4.47374		0.975917		**00**
	cos		cotg		cosec		sec		tang		sin		c

	339	**341**	**343**	**345**	**347**	**349**	**351**	**353**	**355**	**358**	**361**	**364**	**367**	**370**	**373**	**376**	**379**	**382**	
1	33.9	34.1	34.3	34.5	34.7	34.9	35.1	35.3	35.5	35.8	36.1	36.4	36.7	37.0	37.3	37.6	37.9	38.2	1
2	67.8	68.2	68.6	69.0	69.4	69.8	70.2	70.6	71.0	71.6	72.2	72.8	73.4	74.0	74.6	75.2	75.8	76.4	2
3	101.7	102.3	102.9	103.5	104.1	104.7	105.3	105.9	106.5	107.4	108.3	109.2	110.1	111.0	111.9	112.8	113.7	114.6	3
4	135.6	136.4	137.2	138.0	138.8	139.6	140.4	141.2	142.0	143.2	144.4	145.6	146.8	148.0	149.2	150.4	151.6	152.8	4
5	169.5	170.5	171.5	172.5	173.5	174.5	175.5	176.5	177.5	179.0	180.5	182.0	183.5	185.0	186.5	188.0	189.5	191.0	5
6	203.4	204.6	205.8	207.0	208.2	209.4	210.6	211.8	213.0	214.8	216.6	218.4	220.2	222.0	223.8	225.6	227.4	229.2	6
7	237.3	238.7	240.1	241.5	242.9	244.3	245.7	247.1	248.5	250.6	252.7	254.8	256.9	259.0	261.1	263.2	265.3	267.4	7
8	271.2	272.8	274.4	276.0	277.6	279.2	280.8	282.4	284.0	286.4	288.8	291.2	293.6	296.0	298.4	300.8	303.2	305.6	8
9	305.1	306.9	308.7	310.5	312.3	314.1	315.9	317.7	319.5	322.2	324.9	327.6	330.3	333.0	335.7	338.4	341.1	343.8	9

86g

14g

c	sin		tang		sec		cosec		cotg		cos		
00	0.218143	154	0.223526	165	1.024678	36	4.58414	322	4.47374	330	0.975917	35	**100**
01	8297	153	3691	165	4714	36	8092	321	7044	329	5882	34	99
02	8450	153	3856	165	4750	36	7771	321	6715	329	5848	34	98
03	8603	153	4021	165	4786	36	7450	320	6386	328	5814	34	97
04	8756	154	4186	165	4822	36	7130	321	6058	328	5780	35	96
05	8910	153	4351	165	4858	36	6809	319	5730	328	5745	34	95
06	9063	153	4516	165	4894	36	6490	319	5402	327	5711	35	94
07	9216	153	4681	165	4930	36	6171	319	5075	327	5676	34	93
08	9369	154	4846	165	4966	36	5852	318	4748	326	5642	35	92
09	9523	153	5011	165	5002	37	5534	318	4422	326	5607	34	91
10	0.219676	153	0.225176	165	1.025039	36	4.55216	317	4.44096	325	0.975573	35	**90**
11	9829	153	5341	165	5075	36	4899	317	3771	325	5538	34	89
12	0.219982	154	5506	166	5111	37	4582	317	3446	324	5504	35	88
13	0.220136	153	5672	165	5148	36	4265	316	3122	324	5469	34	87
14	0289	153	5837	165	5184	36	3949	315	2798	323	5435	35	86
15	0442	153	6002	165	5220	37	3634	315	2475	323	5400	35	85
16	0595	154	6167	165	5257	36	3319	315	2152	323	5365	34	84
17	0749	153	6332	165	5293	37	3004	314	1829	322	5331	35	83
18	0902	153	6497	165	5330	36	2690	314	1507	322	5296	35	82
19	1055	153	6662	165	5366	37	2376	313	1185	321	5261	34	81
20	0.221208	153	0.226827	166	1.025403	36	4.52063	313	4.40864	321	0.975227	35	**80**
21	1361	153	6993	165	5439	37	1750	312	0543	320	5192	35	79
22	1514	154	7158	165	5476	36	1438	312	4.40223	320	5157	35	78
23	1668	153	7323	165	5512	37	1126	312	4.39903	320	5122	35	77
24	1821	153	7488	165	5549	37	0814	311	9583	319	5087	34	76
25	1974	153	7653	166	5586	36	0503	310	9264	318	5053	35	75
26	2127	153	7819	165	5622	37	4.50193	311	8946	318	5018	35	74
27	2280	153	7984	165	5659	37	4.49882	309	8628	318	4983	35	73
28	2433	154	8149	165	5696	37	9573	310	8310	317	4948	35	72
29	2587	153	8314	166	5733	36	9263	308	7993	317	4913	35	71
30	0.222740	153	0.228480	165	1.025769	37	4.48955	309	4.37676	317	0.974878	35	**70**
31	2893	153	8645	165	5806	37	8646	308	7359	315	4843	35	69
32	3046	153	8810	165	5843	37	8338	307	7044	316	4808	35	68
33	3199	153	8975	166	5880	37	8031	308	6728	315	4773	35	67
34	3352	153	9141	165	5917	37	7723	306	6413	315	4738	35	66
35	3505	153	9306	165	5954	37	7417	307	6098	314	4703	35	65
36	3658	154	9471	166	5991	37	7110	305	5784	314	4668	36	64
37	3812	153	9637	165	6028	37	6805	306	5470	313	4632	35	63
38	3965	153	9802	166	6065	37	6499	305	5157	313	4597	35	62
39	4118	153	0.229968	165	6102	37	6194	304	4844	313	4562	35	61
40	0.224271	153	0.230133	165	1.026139	37	4.45890	305	4.34531	312	0.974527	35	**60**
41	4424	153	0298	166	6176	37	5585	303	4219	311	4492	36	59
42	4577	153	0464	165	6213	37	5282	304	3908	312	4456	35	58
43	4730	153	0629	166	6250	38	4978	302	3596	310	4421	35	57
44	4883	153	0795	165	6288	37	4676	303	3286	311	4386	36	56
45	5036	153	0960	166	6325	37	4373	302	2975	310	4350	35	55
46	5189	153	1126	165	6362	37	4071	301	2665	309	4315	35	54
47	5342	153	1291	166	6399	38	3770	302	2356	309	4280	36	53
48	5495	153	1457	165	6437	37	3468	300	2047	309	4244	35	52
49	5648	153	1622	166	6474	37	3168	301	1738	308	4209	36	51
50	0.225801		0.231788		1.026511		4.42867		4.31430		0.974173		**50**
	cos		cotg		cosec		sec		tang		sin		c

	34	**35**	**36**	**37**	**38**	**39**	**152**	**153**	**154**	**165**	**166**	**167**	**280**	**282**	**284**	**286**	**288**	**290**	
1	3.4	3.5	3.6	3.7	3.8	3.9	15.2	15.3	15.4	16.5	16.6	16.7	28.0	28.2	28.4	28.6	28.8	29.0	1
2	6.8	7.0	7.2	7.4	7.6	7.8	30.4	30.6	30.8	33.0	33.2	33.4	56.0	56.4	56.8	57.2	57.6	58.0	2
3	10.2	10.5	10.8	11.1	11.4	11.7	45.6	45.9	46.2	49.5	49.8	50.1	84.0	84.6	85.2	85.8	86.4	87.0	3
4	13.6	14.0	14.4	14.8	15.2	15.6	60.8	61.2	61.6	66.0	66.4	66.8	112.0	112.8	113.6	114.4	115.2	116.0	4
5	17.0	17.5	18.0	18.5	19.0	19.5	76.0	76.5	77.0	82.5	83.0	83.5	140.0	141.0	142.0	143.0	144.0	145.0	5
6	20.4	21.0	21.6	22.2	22.8	23.4	91.2	91.8	92.4	99.0	99.6	100.2	168.0	169.2	170.4	171.6	172.8	174.0	6
7	23.8	24.5	25.2	25.9	26.6	27.3	106.4	107.1	107.8	115.5	116.2	116.9	196.0	197.4	198.8	200.2	201.6	203.0	7
8	27.2	28.0	28.8	29.6	30.4	31.2	121.6	122.4	123.2	132.0	132.8	133.6	224.0	225.6	227.2	228.8	230.4	232.0	8
9	30.6	31.5	32.4	33.3	34.2	35.1	136.8	137.7	138.6	148.5	149.4	150.3	252.0	253.8	255.6	257.4	259.2	261.0	9

85g

14g

c	sin		tang		sec		cosec		cotg		cos		
50	0.225801	153	0.231788	165	1.026511	38	4.42867	300	4.31430	308	0.974173	35	**50**
51	5954	153	1953	166	6549	37	2567	299	1122	308	4138	36	49
52	6107	153	2119	165	6586	38	2268	299	0814	307	4102	35	48
53	6260	153	2284	166	6624	37	1969	299	0507	306	4067	36	47
54	6413	153	2450	165	6661	38	1670	298	4.30201	307	4031	35	46
55	6566	153	2615	166	6699	37	1372	298	4.29894	305	3996	36	45
56	6719	153	2781	165	6736	38	1074	297	9589	306	3960	35	44
57	6872	153	2946	166	6774	37	0777	297	9283	305	3925	36	43
58	7025	153	3112	166	6811	38	0480	297	8978	304	3889	36	42
59	7178	153	3278	165	6849	37	4.40183	296	8674	305	3853	36	41
60	0.227331	153	0.233443	166	1.026886	38	4.39887	296	4.28369	303	0.973817	35	**40**
61	7484	153	3609	166	6924	38	9591	295	8066	304	3782	36	39
62	7637	153	3775	165	6962	38	9296	295	7762	303	3746	36	38
63	7790	153	3940	166	7000	37	9001	295	7459	302	3710	36	37
64	7943	153	4106	166	7037	38	8706	294	7157	302	3674	35	36
65	8096	153	4272	165	7075	38	8412	294	6855	302	3639	36	35
66	8249	153	4437	166	7113	38	8118	293	6553	301	3603	36	34
67	8402	153	4603	166	7151	38	7825	293	6252	301	3567	36	33
68	8555	153	4769	166	7189	37	7532	293	5951	301	3531	36	32
69	8708	153	4935	165	7226	38	7239	292	5650	300	3495	36	31
70	0.228861	153	0.235100	166	1.027264	38	4.36947	292	4.25350	299	0.973459	36	**30**
71	9014	152	5266	166	7302	38	6655	291	5051	300	3423	36	29
72	9166	153	5432	166	7340	38	6364	291	4751	299	3387	36	28
73	9319	153	5598	165	7378	38	6073	290	4452	298	3351	36	27
74	9472	153	5763	166	7416	38	5783	291	4154	298	3315	36	26
75	9625	153	5929	166	7454	39	5492	289	3856	298	3279	36	25
76	9778	153	6095	166	7493	38	5203	290	3558	297	3243	36	24
77	0.229931	153	6261	166	7531	38	4913	289	3261	297	3207	36	23
78	0.230084	153	6427	166	7569	38	4624	288	2964	297	3171	36	22
79	0237	152	6593	166	7607	38	4336	288	2667	296	3135	36	21
80	0.230389	153	0.236759	165	1.027645	38	4.34048	288	4.22371	296	0.973099	37	**20**
81	0542	153	6924	166	7683	39	3760	287	2075	295	3062	36	19
82	0695	153	7090	166	7722	38	3473	287	1780	295	3026	36	18
83	0848	153	7256	166	7760	38	3186	287	1485	294	2990	36	17
84	1001	153	7422	166	7798	39	2899	286	1191	295	2954	37	16
85	1154	152	7588	166	7837	38	2613	286	0896	293	2917	36	15
86	1306	153	7754	166	7875	38	2327	286	0603	294	2881	36	14
87	1459	153	7920	166	7913	39	2041	285	0309	293	2845	37	13
88	1612	153	8086	166	7952	38	1756	284	4.20016	292	2808	36	12
89	1765	153	8252	166	7990	39	1472	285	4.19724	293	2772	37	11
90	0.231918	152	0.238418	166	1.028029	38	4.31187	283	4.19431	292	0.972735	36	**10**
91	2070	153	8584	166	8067	39	0904	284	9139	291	2699	36	09
92	2223	153	8750	166	8106	38	0620	283	8848	291	2663	37	08
93	2376	153	8916	166	8144	39	0337	283	8557	291	2626	36	07
94	2529	153	9082	166	8183	39	4.30054	282	8266	290	2590	37	06
95	2682	152	9248	166	8222	38	4.29772	282	7976	290	2553	37	05
96	2834	153	9414	166	8260	39	9490	282	7686	290	2516	36	04
97	2987	153	9580	167	8299	39	9208	281	7396	289	2480	37	03
98	3140	153	9747	166	8338	38	8927	281	7107	289	2443	36	02
99	3293	152	0.239913	166	8376	39	8646	280	6818	288	2407	37	01
100	0.233445		0.240079		1.028415		4.28366		4.16530		0.972370		**00**
	cos		cotg		cosec		sec		tang		sin		c

	292	**294**	**296**	**298**	**300**	**302**	**304**	**306**	**308**	**310**	**312**	**314**	**316**	**318**	**321**	**324**	**327**	**330**	
1	29.2	29.4	29.6	29.8	30.0	30.2	30.4	30.6	30.8	31.0	31.2	31.4	31.6	31.8	32.1	32.4	32.7	33.0	1
2	58.4	58.8	59.2	59.6	60.0	60.4	60.8	61.2	61.6	62.0	62.4	62.8	63.2	63.6	64.2	64.8	65.4	66.0	2
3	87.6	88.2	88.8	89.4	90.0	90.6	91.2	91.8	92.4	93.0	93.6	94.2	94.8	95.4	96.3	97.2	98.1	99.0	3
4	116.8	117.6	118.4	119.2	120.0	120.8	121.6	122.4	123.2	124.0	124.8	125.6	126.4	127.2	128.4	129.6	130.8	132.0	4
5	146.0	147.0	148.0	149.0	150.0	151.0	152.0	153.0	154.0	155.0	156.0	157.0	158.0	159.0	160.5	162.0	163.5	165.0	5
6	175.2	176.4	177.6	178.8	180.0	181.2	182.4	183.6	184.8	186.0	187.2	188.4	189.6	190.8	192.6	194.4	196.2	198.0	6
7	204.4	205.8	207.2	208.6	210.0	211.4	212.8	214.2	215.6	217.0	218.4	219.8	221.2	222.6	224.7	226.8	228.9	231.0	7
8	233.6	235.2	236.8	238.4	240.0	241.6	243.2	244.8	246.4	248.0	249.6	251.2	252.8	254.4	256.8	259.2	261.6	264.0	8
9	262.8	264.6	266.4	268.2	270.0	271.8	273.6	275.4	277.2	279.0	280.8	282.6	284.4	286.2	288.9	291.6	294.3	297.0	9

85g

15g

c	sin		tang		sec		cosec		cotg		cos		
00	0.233445	153	0.240079	166	1.028415	39	4.28366	280	4.16530	288	0.972370	37	**100**
01	3598	153	0245	166	8454	39	8086	280	6242	288	2333	36	99
02	3751	153	0411	166	8493	39	7806	279	5954	287	2297	37	98
03	3904	152	0577	166	8532	39	7527	279	5667	287	2260	37	97
04	4056	153	0743	167	8571	38	7248	279	5380	287	2223	37	96
05	4209	153	0910	166	8609	39	6969	278	5093	286	2186	37	95
06	4362	152	1076	166	8648	39	6691	278	4807	285	2149	36	94
07	4514	153	1242	166	8687	39	6413	277	4522	286	2113	37	93
08	4667	153	1408	166	8726	39	6136	278	4236	285	2076	37	92
09	4820	152	1574	167	8765	39	5858	276	3951	285	2039	37	91
10	0.234972	153	0.241741	166	1.028804	40	4.25582	277	4.13666	284	0.972002	37	**90**
11	5125	153	1907	166	8844	39	5305	276	3382	284	1965	37	89
12	5278	152	2073	167	8883	39	5029	275	3098	284	1928	37	88
13	5430	153	2240	166	8922	39	4754	275	2814	283	1891	37	87
14	5583	153	2406	166	8961	39	4479	275	2531	283	1854	37	86
15	5736	152	2572	167	9000	39	4204	275	2248	282	1817	37	85
16	5888	153	2739	166	9039	40	3929	274	1966	282	1780	37	84
17	6041	153	2905	166	9079	39	3655	274	1684	282	1743	37	83
18	6194	152	3071	167	9118	39	3381	273	1402	281	1706	37	82
19	6346	153	3238	166	9157	40	3108	273	1121	281	1669	37	81
20	0.236499	153	0.243404	166	1.029197	39	4.22835	273	4.10840	281	0.971632	37	**80**
21	6652	152	3570	167	9236	39	2562	272	0559	280	1595	38	79
22	6804	153	3737	166	9275	40	2290	272	4.10279	280	1557	37	78
23	6957	152	3903	167	9315	39	2018	272	4.09999	280	1520	37	77
24	7109	153	4070	166	9354	40	1746	271	9719	279	1483	37	76
25	7262	153	4236	166	9394	39	1475	271	9440	279	1446	38	75
26	7415	152	4402	167	9433	40	1204	271	9161	278	1408	37	74
27	7567	153	4569	166	9473	39	0933	270	8883	279	1371	37	73
28	7720	152	4735	167	9512	40	0663	269	8604	277	1334	38	72
29	7872	153	4902	166	9552	39	0394	270	8327	278	1296	37	71
30	0.238025	153	0.245068	167	1.029591	40	4.20124	269	4.08049	277	0.971259	37	**70**
31	8178	152	5235	166	9631	40	4.19855	269	7772	277	1222	38	69
32	8330	153	5401	167	9671	39	9586	268	7495	276	1184	37	68
33	8483	152	5568	167	9710	40	9318	268	7219	276	1147	38	67
34	8635	153	5735	166	9750	40	9050	268	6943	276	1109	37	66
35	8788	152	5901	167	9790	40	8782	267	6667	275	1072	38	65
36	8940	153	6068	166	9830	40	8515	267	6392	275	1034	37	64
37	9093	152	6234	167	9870	39	8248	267	6117	274	0997	38	63
38	9245	153	6401	167	9909	40	7981	266	5843	275	0959	37	62
39	9398	152	6568	166	9949	40	7715	266	5568	274	0922	38	61
40	0.239550	153	0.246734	167	1.029989	40	4.17449	266	4.05294	273	0.970884	38	**60**
41	9703	152	6901	167	1.030029	40	7183	265	5021	273	0846	37	59
42	0.239855	153	7068	166	0069	40	6918	265	4748	273	0809	38	58
43	0.240008	152	7234	167	0109	40	6653	264	4475	273	0771	38	57
44	0160	153	7401	167	0149	40	6389	265	4202	272	0733	37	56
45	0313	152	7568	166	0189	40	6124	263	3930	272	0696	38	55
46	0465	153	7734	167	0229	40	5861	264	3658	271	0658	38	54
47	0618	152	7901	167	0269	40	5597	263	3387	271	0620	38	53
48	0770	153	8068	167	0309	41	5334	263	3116	271	0582	38	52
49	0923	152	8235	166	0350	40	5071	262	2845	271	0544	38	51
50	0.241075		0.248401		1.030390		4.14809		4.02574		0.970506		**50**
	cos		cotg		cosec		sec		tang		sin		c

	36	**37**	**38**	**39**	**40**	**41**	**42**	**152**	**153**	**166**	**167**	**168**	**246**	**247**	**248**	**249**	**250**	**252**	
1	3.6	3.7	3.8	3.9	4.0	4.1	4.2	15.2	15.3	16.6	16.7	16.8	24.6	24.7	24.8	24.9	25.0	25.2	1
2	7.2	7.4	7.6	7.8	8.0	8.2	8.4	30.4	30.6	33.2	33.4	33.6	49.2	49.4	49.6	49.8	50.0	50.4	2
3	10.8	11.1	11.4	11.7	12.0	12.3	12.6	45.6	45.9	49.8	50.1	50.4	73.8	74.1	74.4	74.7	75.0	75.6	3
4	14.4	14.8	15.2	15.6	16.0	16.4	16.8	60.8	61.2	66.4	66.8	67.2	98.4	98.8	99.2	99.6	100.0	100.8	4
5	18.0	18.5	19.0	19.5	20.0	20.5	21.0	76.0	76.5	83.0	83.5	84.0	123.0	123.5	124.0	124.5	125.0	126.0	5
6	21.6	22.2	22.8	23.4	24.0	24.6	25.2	91.2	91.8	99.6	100.2	100.8	147.6	148.2	148.8	149.4	150.0	151.2	6
7	25.2	25.9	26.6	27.3	28.0	28.7	29.4	106.4	107.1	116.2	116.9	117.6	172.2	172.9	173.6	174.3	175.0	176.4	7
8	28.8	29.6	30.4	31.2	32.0	32.8	33.6	121.6	122.4	132.8	133.6	134.4	196.8	197.6	198.4	199.2	200.0	201.6	8
9	32.4	33.3	34.2	35.1	36.0	36.9	37.8	136.8	137.7	149.4	150.3	151.2	221.4	222.3	223.2	224.1	225.0	226.8	9

84g

15g

c	sin		tang		sec		cosec		cotg		cos		
50	0.241075	153	0.248401	167	1.030390	40	4.14809	263	4.02574	270	0.970506	37	**50**
51	1228	152	8568	167	0430	40	4546	261	2304	269	0469	38	49
52	1380	152	8735	167	0470	41	4285	262	2035	270	0431	38	48
53	1532	153	8902	166	0511	40	4023	261	1765	269	0393	38	47
54	1685	152	9068	167	0551	40	3762	261	1496	269	0355	38	46
55	1837	153	9235	167	0591	41	3501	260	1227	268	0317	38	45
56	1990	152	9402	167	0632	40	3241	260	0959	268	0279	38	44
57	2142	152	9569	167	0672	40	2981	260	0691	268	0241	38	43
58	2294	153	9736	167	0712	41	2721	259	0423	267	0203	38	42
59	2447	152	0.249903	167	0753	40	2462	260	4.00156	267	0165	38	41
60	0.242599	153	0.250070	167	1.030793	41	4.12202	258	3.99889	267	0.970127	39	**40**
61	2752	152	0237	166	0834	40	1944	259	9622	267	0088	38	39
62	2904	152	0403	167	0874	41	1685	258	9355	266	0050	38	38
63	3056	153	0570	167	0915	40	1427	258	9089	265	0.970012	38	37
64	3209	152	0737	167	0955	41	1169	257	8824	266	0.969974	38	36
65	3361	152	0904	167	0996	41	0912	257	8558	265	9936	38	35
66	3513	153	1071	167	1037	40	0655	257	8293	265	9898	39	34
67	3666	152	1238	167	1077	41	0398	256	8028	264	9859	38	33
68	3818	152	1405	167	1118	41	4.10142	256	7764	264	9821	38	32
69	3970	153	1572	167	1159	41	4.09886	256	7500	264	9783	39	31
70	0.244123	152	0.251739	167	1.031200	40	4.09630	256	3.97236	263	0.969744	38	**30**
71	4275	152	1906	167	1240	41	9374	255	6973	263	9706	38	29
72	4427	153	2073	168	1281	41	9119	254	6710	263	9668	39	28
73	4580	152	2241	167	1322	41	8865	255	6447	262	9629	38	27
74	4732	152	2408	167	1363	41	8610	254	6185	262	9591	39	26
75	4884	153	2575	167	1404	41	8356	254	5923	262	9552	38	25
76	5037	152	2742	167	1445	41	8102	253	5661	262	9514	39	24
77	5189	152	2909	167	1486	41	7849	253	5399	261	9475	38	23
78	5341	153	3076	167	1527	41	7596	253	5138	261	9437	39	22
79	5494	152	3243	167	1568	41	7343	253	4877	260	9398	38	21
80	0.245646	152	0.253410	168	1.031609	41	4.07090	252	3.94617	260	0.969360	39	**20**
81	5798	152	3578	167	1650	41	6838	252	4357	260	9321	39	19
82	5950	153	3745	167	1691	41	6586	251	4097	260	9282	38	18
83	6103	152	3912	167	1732	41	6335	252	3837	259	9244	39	17
84	6255	152	4079	167	1773	42	6083	250	3578	259	9205	39	16
85	6407	152	4246	168	1815	41	5833	251	3319	258	9166	38	15
86	6559	152	4414	167	1856	41	5582	250	3061	258	9128	39	14
87	6711	153	4581	167	1897	41	5332	250	2803	258	9089	39	13
88	6864	152	4748	167	1938	42	5082	250	2545	258	9050	39	12
89	7016	152	4915	168	1980	41	4832	249	2287	257	9011	38	11
90	0.247168	152	0.255083	167	1.032021	41	4.04583	249	3.92030	257	0.968973	39	**10**
91	7320	153	5250	167	2062	42	4334	249	1773	257	8934	39	09
92	7473	152	5417	168	2104	41	4085	248	1516	256	8895	39	08
93	7625	152	5585	167	2145	42	3837	248	1260	256	8856	39	07
94	7777	152	5752	167	2187	41	3589	248	1004	256	8817	39	06
95	7929	152	5919	168	2228	42	3341	247	0748	255	8778	39	05
96	8081	152	6087	167	2270	41	3094	247	0493	255	8739	39	04
97	8233	153	6254	168	2311	42	2847	247	3.90238	255	8700	39	03
98	8386	152	6422	167	2353	41	2600	247	3.89983	255	8661	39	02
99	8538	152	6589	167	2394	42	2353	246	9728	254	8622	39	01
100	0.248690		0.256756		1.032436		4.02107		3.89474		0.968583		**00**
	cos		cotg		cosec		sec		tang		sin		c

	254	**256**	**258**	**260**	**262**	**264**	**266**	**268**	**270**	**272**	**274**	**276**	**278**	**280**	**282**	**284**	**286**	**288**	
1	25.4	25.6	25.8	26.0	26.2	26.4	26.6	26.8	27.0	27.2	27.4	27.6	27.8	28.0	28.2	28.4	28.6	28.8	1
2	50.8	51.2	51.6	52.0	52.4	52.8	53.2	53.6	54.0	54.4	54.8	55.2	55.6	56.0	56.4	56.8	57.2	57.6	2
3	76.2	76.8	77.4	78.0	78.6	79.2	79.8	80.4	81.0	81.6	82.2	82.8	83.4	84.0	84.6	85.2	85.8	86.4	3
4	101.6	102.4	103.2	104.0	104.8	105.6	106.4	107.2	108.0	108.8	109.6	110.4	111.2	112.0	112.8	113.6	114.4	115.2	4
5	127.0	128.0	129.0	130.0	131.0	132.0	133.0	134.0	135.0	136.0	137.0	138.0	139.0	140.0	141.0	142.0	143.0	144.0	5
6	152.4	153.6	154.8	156.0	157.2	158.4	159.6	160.8	162.0	163.2	164.4	165.6	166.8	168.0	169.2	170.4	171.6	172.8	6
7	177.8	179.2	180.6	182.0	183.4	184.8	186.2	187.6	189.0	190.4	191.8	193.2	194.6	196.0	197.4	198.8	200.2	201.6	7
8	203.2	204.8	206.4	208.0	209.6	211.2	212.8	214.4	216.0	217.6	219.2	220.8	222.4	224.0	225.6	227.2	228.8	230.4	8
9	228.6	230.4	232.2	234.0	235.8	237.6	239.4	241.2	243.0	244.8	246.6	248.4	250.2	252.0	253.8	255.6	257.4	259.2	9

16g

c	sin		tang		sec		cosec		cotg		cos		
00	0.248690	152	0.256756	168	1.032436	42	4.02107	246	3.89474	254	0.968583	39	**100**
01	8842	152	6924	167	2478	41	1861	245	9220	253	8544	39	99
02	8994	152	7091	168	2519	42	1616	245	8967	253	8505	39	98
03	9146	152	7259	167	2561	42	1371	245	8714	253	8466	39	97
04	9298	153	7426	168	2603	41	1126	245	8461	253	8427	39	96
05	9451	152	7594	167	2644	42	0881	244	8208	252	8388	40	95
06	9603	152	7761	168	2686	42	0637	244	7956	252	8348	39	94
07	9755	152	7929	167	2728	42	0393	244	7704	252	8309	39	93
08	0.249907	152	8096	168	2770	42	4.00149	243	7452	251	8270	39	92
09	0.250059	152	8264	167	2812	42	3.99906	243	7201	251	8231	40	91
10	0.250211	152	0.258431	168	1.032854	42	3.99663	243	3.86950	251	0.968191	39	**90**
11	0363	152	8599	168	2896	42	9420	243	6699	250	8152	39	89
12	0515	152	8767	167	2938	42	9177	242	6449	250	8113	40	88
13	0667	152	8934	168	2980	42	8935	242	6199	250	8073	39	87
14	0819	152	9102	167	3022	42	8693	241	5949	250	8034	39	86
15	0971	152	9269	168	3064	42	8452	241	5699	249	7995	40	85
16	1123	152	9437	168	3106	42	8211	241	5450	249	7955	39	84
17	1275	152	9605	167	3148	42	7970	241	5201	249	7916	40	83
18	1427	153	9772	168	3190	42	7729	240	4952	248	7876	39	82
19	1580	152	0.259940	168	3232	42	7489	240	4704	248	7837	40	81
20	0.251732	152	0.260108	167	1.033274	43	3.97249	240	3.84456	248	0.967797	39	**80**
21	1884	152	0275	168	3317	42	7009	240	4208	247	7758	40	79
22	2036	152	0443	168	3359	42	6769	239	3961	247	7718	40	78
23	2188	152	0611	168	3401	43	6530	239	3714	247	7678	39	77
24	2340	152	0779	167	3444	42	6291	238	3467	247	7639	40	76
25	2492	152	0946	168	3486	42	6053	238	3220	246	7599	40	75
26	2644	152	1114	168	3528	43	5815	238	2974	246	7559	39	74
27	2796	152	1282	168	3571	42	5577	238	2728	245	7520	40	73
28	2948	151	1450	168	3613	43	5339	237	2483	246	7480	40	72
29	3099	152	1618	168	3656	42	5102	238	2237	245	7440	40	71
30	0.253251	152	0.261786	167	1.033698	43	3.94864	236	3.81992	245	0.967400	39	**70**
31	3403	152	1953	168	3741	42	4628	237	1747	244	7361	40	69
32	3555	152	2121	168	3783	43	4391	236	1503	244	7321	40	68
33	3707	152	2289	168	3826	42	4155	236	1259	244	7281	40	67
34	3859	152	2457	168	3868	43	3919	236	1015	244	7241	40	66
35	4011	152	2625	168	3911	43	3683	235	0771	243	7201	40	65
36	4163	152	2793	168	3954	42	3448	235	0528	243	7161	40	64
37	4315	152	2961	168	3996	43	3213	235	0285	243	7121	40	63
38	4467	152	3129	168	4039	43	2978	234	3.80042	242	7081	40	62
39	4619	152	3297	168	4082	43	2744	234	3.79800	242	7041	40	61
40	0.254771	152	0.263465	168	1.034125	42	3.92510	234	3.79558	242	0.967001	40	**60**
41	4923	152	3633	168	4167	43	2276	234	9316	242	6961	40	59
42	5075	151	3801	168	4210	43	2042	233	9074	241	6921	40	58
43	5226	152	3969	168	4253	43	1809	233	8833	241	6881	40	57
44	5378	152	4137	168	4296	43	1576	233	8592	241	6841	40	56
45	5530	152	4305	168	4339	43	1343	232	8351	240	6801	40	55
46	5682	152	4473	168	4382	43	1111	232	8111	240	6761	40	54
47	5834	152	4641	168	4425	43	0879	232	7871	240	6721	40	53
48	5986	152	4809	168	4468	43	0647	232	7631	240	6681	41	52
49	6138	151	4977	168	4511	43	0415	231	7391	239	6640	40	51
50	0.256289		0.265145		1.034554		3.90184		3.77152		0.966600		**50**
	cos		cotg		cosec		sec		tang		sin		c

	39	**40**	**41**	**42**	**43**	**44**	**45**	**151**	**152**	**153**	**167**	**168**	**169**	**218**	**219**	**220**	**221**	**222**	
1	3.9	4.0	4.1	4.2	4.3	4.4	4.5	15.1	15.2	15.3	16.7	16.8	16.9	21.8	21.9	22.0	22.1	22.2	1
2	7.8	8.0	8.2	8.4	8.6	8.8	9.0	30.2	30.4	30.6	33.4	33.6	33.8	43.6	43.8	44.0	44.2	44.4	2
3	11.7	12.0	12.3	12.6	12.9	13.2	13.5	45.3	45.6	45.9	50.1	50.4	50.7	65.4	65.7	66.0	66.3	66.6	3
4	15.6	16.0	16.4	16.8	17.2	17.6	18.0	60.4	60.8	61.2	66.8	67.2	67.6	87.2	87.6	88.0	88.4	88.8	4
5	19.5	20.0	20.5	21.0	21.5	22.0	22.5	75.5	76.0	76.5	83.5	84.0	84.5	109.0	109.5	110.0	110.5	111.0	5
6	23.4	24.0	24.6	25.2	25.8	26.4	27.0	90.6	91.2	91.8	100.2	100.8	101.4	130.8	131.4	132.0	132.6	133.2	6
7	27.3	28.0	28.7	29.4	30.1	30.8	31.5	105.7	106.4	107.1	116.9	117.6	118.3	152.6	153.3	154.0	154.7	155.4	7
8	31.2	32.0	32.8	33.6	34.4	35.2	36.0	120.8	121.6	122.4	133.6	134.4	135.2	174.4	175.2	176.0	176.8	177.6	8
9	35.1	36.0	36.9	37.8	38.7	39.6	40.5	135.9	136.8	137.7	150.3	151.2	152.1	196.2	197.1	198.0	198.9	199.8	9

83g

16g

c	sin		tang		sec		cosec		cotg		cos		
50	0.256289	152	0.265145	168	1.034554	43	3.90184	231	3.77152	239	0.966600	40	**50**
51	6441	152	5313	168	4597	43	3.89953	231	6913	239	6560	40	49
52	6593	152	5481	169	4640	43	9722	230	6674	238	6520	41	48
53	6745	152	5650	168	4683	44	9492	230	6436	238	6479	40	47
54	6897	151	5818	168	4727	43	9262	230	6198	238	6439	40	46
55	7048	152	5986	168	4770	43	9032	230	5960	238	6399	41	45
56	7200	152	6154	168	4813	43	8802	229	5722	237	6358	40	44
57	7352	152	6322	169	4856	44	8573	229	5485	237	6318	41	43
58	7504	152	6491	168	4900	43	8344	229	5248	237	6277	40	42
59	7656	151	6659	168	4943	43	8115	229	5011	237	6237	41	41
60	0.257807	152	0.266827	168	1.034986	44	3.87886	228	3.74774	236	0.966196	40	**40**
61	7959	152	6995	169	5030	43	7658	228	4538	236	6156	41	39
62	8111	152	7164	168	5073	44	7430	227	4302	235	6115	40	38
63	8263	151	7332	168	5117	43	7203	228	4067	236	6075	41	37
64	8414	152	7500	169	5160	44	6975	227	3831	235	6034	40	36
65	8566	152	7669	168	5204	43	6748	227	3596	235	5994	41	35
66	8718	152	7837	168	5247	44	6521	226	3361	234	5953	41	34
67	8870	151	8005	169	5291	43	6295	226	3127	234	5912	40	33
68	9021	152	8174	168	5334	44	6069	226	2893	234	5872	41	32
69	9173	152	8342	168	5378	44	5843	226	2659	234	5831	41	31
70	0.259325	151	0.268510	169	1.035422	43	3.85617	226	3.72425	233	0.965790	41	**30**
71	9476	152	8679	168	5465	44	5391	225	2192	234	5749	40	29
72	9628	152	8847	169	5509	44	5166	225	1958	233	5709	41	28
73	9780	152	9016	168	5553	44	4941	224	1725	232	5668	41	27
74	0.259932	151	9184	169	5597	43	4717	225	1493	233	5627	41	26
75	0.260083	152	9353	168	5640	44	4492	224	1260	232	5586	41	25
76	0235	152	9521	169	5684	44	4268	224	1028	231	5545	41	24
77	0387	151	9690	168	5728	44	4044	223	0797	232	5504	40	23
78	0538	152	0.269858	169	5772	44	3821	223	0565	231	5464	41	22
79	0690	152	0.270027	168	5816	44	3598	223	0334	231	5423	41	21
80	0.260842	151	0.270195	169	1.035860	44	3.83375	223	3.70103	231	0.965382	41	**20**
81	0993	152	0364	168	5904	44	3152	223	3.69872	230	5341	41	19
82	1145	151	0532	169	5948	44	2929	222	9642	231	5300	41	18
83	1296	152	0701	169	5992	44	2707	222	9411	230	5259	41	17
84	1448	152	0870	168	6036	44	2485	221	9181	229	5218	42	16
85	1600	151	1038	169	6080	44	2264	222	8952	230	5176	41	15
86	1751	152	1207	168	6124	44	2042	221	8722	229	5135	41	14
87	1903	151	1375	169	6168	44	1821	221	8493	229	5094	41	13
88	2054	152	1544	169	6212	45	1600	221	8264	228	5053	41	12
89	2206	152	1713	168	6257	44	1379	220	8036	229	5012	41	11
90	0.262358	151	0.271881	169	1.036301	44	3.81159	220	3.67807	228	0.964971	42	**10**
91	2509	152	2050	169	6345	44	0939	220	7579	227	4929	41	09
92	2661	151	2219	169	6389	45	0719	219	7352	228	4888	41	08
93	2812	152	2388	168	6434	44	0500	220	7124	227	4847	41	07
94	2964	151	2556	169	6478	45	0280	219	6897	227	4806	42	06
95	3115	152	2725	169	6523	44	3.80061	218	6670	227	4764	41	05
96	3267	151	2894	169	6567	44	3.79843	219	6443	227	4723	41	04
97	3418	152	3063	168	6611	45	9624	218	6216	226	4682	42	03
98	3570	152	3231	169	6656	44	9406	218	5990	226	4640	41	02
99	3722	151	3400	169	6700	45	9188	218	5764	226	4599	42	01
100	0.263873		0.273569		1.036745		3.78970		3.65538		0.964557		**00**
	cos		cotg		cosec		sec		tang		sin		c

	223	**224**	**225**	**226**	**228**	**230**	**232**	**234**	**236**	**238**	**240**	**242**	**244**	**246**	**248**	**250**	**252**	**254**	
1	22.3	22.4	22.5	22.6	22.8	23.0	23.2	23.4	23.6	23.8	24.0	24.2	24.4	24.6	24.8	25.0	25.2	25.4	1
2	44.6	44.8	45.0	45.2	45.6	46.0	46.4	46.8	47.2	47.6	48.0	48.4	48.8	49.2	49.6	50.0	50.4	50.8	2
3	66.9	67.2	67.5	67.8	68.4	69.0	69.6	70.2	70.8	71.4	72.0	72.6	73.2	73.8	74.4	75.0	75.6	76.2	3
4	89.2	89.6	90.0	90.4	91.2	92.0	92.8	93.6	94.4	95.2	96.0	96.8	97.6	98.4	99.2	100.0	100.8	101.6	4
5	111.5	112.0	112.5	113.0	114.0	115.0	116.0	117.0	118.0	119.0	120.0	121.0	122.0	123.0	124.0	125.0	126.0	127.0	5
6	133.8	134.4	135.0	135.6	136.8	138.0	139.2	140.4	141.6	142.8	144.0	145.2	146.4	147.6	148.8	150.0	151.2	152.4	6
7	156.1	156.8	157.5	158.2	159.6	161.0	162.4	163.8	165.2	166.6	168.0	169.4	170.8	172.2	173.6	175.0	176.4	177.8	7
8	178.4	179.2	180.0	180.8	182.4	184.0	185.6	187.2	188.8	190.4	192.0	193.6	195.2	196.8	198.4	200.0	201.6	203.2	8
9	200.7	201.6	202.5	203.4	205.2	207.0	208.8	210.6	212.4	214.2	216.0	217.8	219.6	221.4	223.2	225.0	226.8	228.6	9

83g

17g

c	sin		tang		sec		cosec		cotg		cos		
00	0.263873	152	0.273569	169	1.036745	44	3.78970	217	3.65538	225	0.964557	41	**100**
01	4025	151	3738	169	6789	45	8753	218	5313	225	4516	42	99
02	4176	152	3907	169	6834	45	8535	217	5088	225	4474	41	98
03	4328	151	4076	169	6879	44	8318	216	4863	225	4433	42	97
04	4479	152	4245	168	6923	45	8102	217	4638	224	4391	41	96
05	4631	151	4413	169	6968	45	7885	216	4414	224	4350	42	95
06	4782	151	4582	169	7013	44	7669	216	4190	224	4308	41	94
07	4933	152	4751	169	7057	45	7453	215	3966	224	4267	42	93
08	5085	151	4920	169	7102	45	7238	216	3742	223	4225	42	92
09	5236	152	5089	169	7147	45	7022	215	3519	224	4183	41	91
10	0.265388	151	0.275258	169	1.037192	45	3.76807	215	3.63295	223	0.964142	42	**90**
11	5539	152	5427	169	7237	45	6592	215	3072	222	4100	42	89
12	5691	151	5596	169	7282	45	6377	214	2850	223	4058	41	88
13	5842	152	5765	169	7327	45	6163	214	2627	222	4017	42	87
14	5994	151	5934	169	7372	44	5949	214	2405	222	3975	42	86
15	6145	151	6103	169	7416	46	5735	214	2183	221	3933	42	85
16	6296	152	6272	169	7462	45	5521	213	1962	222	3891	42	84
17	6448	151	6441	169	7507	45	5308	213	1740	221	3849	42	83
18	6599	152	6610	170	7552	45	5095	213	1519	221	3807	41	82
19	6751	151	6780	169	7597	45	4882	213	1298	220	3766	42	81
20	0.266902	151	0.276949	169	1.037642	45	3.74669	212	3.61078	221	0.963724	42	**80**
21	7053	152	7118	169	7687	45	4457	212	0857	220	3682	42	79
22	7205	151	7287	169	7732	45	4245	212	0637	220	3640	42	78
23	7356	151	7456	169	7777	46	4033	212	0417	219	3598	42	77
24	7507	152	7625	169	7823	45	3821	211	3.60198	220	3556	42	76
25	7659	151	7794	170	7868	45	3610	211	3.59978	219	3514	42	75
26	7810	151	7964	169	7913	46	3399	211	9759	219	3472	42	74
27	7961	152	8133	169	7959	45	3188	211	9540	218	3430	42	73
28	8113	151	8302	169	8004	45	2977	210	9322	219	3388	43	72
29	8264	151	8471	170	8049	46	2767	210	9103	218	3345	42	71
30	0.268415	152	0.278641	169	1.038095	45	3.72557	210	3.58885	218	0.963303	42	**70**
31	8567	151	8810	169	8140	46	2347	210	8667	217	3261	42	69
32	8718	151	8979	170	8186	45	2137	209	8450	218	3219	42	68
33	8869	152	9149	169	8231	46	1928	209	8232	217	3177	43	67
34	9021	151	9318	169	8277	45	1719	209	8015	217	3134	42	66
35	9172	151	9487	170	8322	46	1510	209	7798	217	3092	42	65
36	9323	152	9657	169	8368	45	1301	208	7581	216	3050	42	64
37	9475	151	9826	169	8413	46	1093	209	7365	216	3008	43	63
38	9626	151	0.279995	170	8459	46	0884	208	7149	216	2965	42	62
39	9777	151	0.280165	169	8505	46	0676	207	6933	216	2923	43	61
40	0.269928	152	0.280334	170	1.038551	45	3.70469	208	3.56717	215	0.962880	42	**60**
41	0.270080	151	0504	169	8596	46	0261	207	6502	216	2838	42	59
42	0231	151	0673	170	8642	46	3.70054	207	6286	215	2796	43	58
43	0382	151	0843	169	8688	46	3.69847	207	6071	214	2753	42	57
44	0533	151	1012	169	8734	46	9640	206	5857	215	2711	43	56
45	0684	152	1181	170	8780	45	9434	206	5642	214	2668	42	55
46	0836	151	1351	170	8825	46	9228	206	5428	214	2626	43	54
47	0987	151	1521	169	8871	46	9022	206	5214	214	2583	43	53
48	1138	151	1690	170	8917	46	8816	206	5000	213	2540	42	52
49	1289	151	1860	169	8963	46	8610	205	4787	214	2498	43	51
50	0.271440		0.282029		1.039009		3.68405		3.54573		0.962455		**50**
	cos		cotg		cosec		sec		tang		sin		c

	41	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**150**	**151**	**152**	**168**	**169**	**170**	**171**	**194**	**195**	**196**	
1	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	15.0	15.1	15.2	16.8	16.9	17.0	17.1	19.4	19.5	19.6	1
2	8.2	8.4	8.6	8.8	9.0	9.2	9.4	9.6	30.0	30.2	30.4	33.6	33.8	34.0	34.2	38.8	39.0	39.2	2
3	12.3	12.6	12.9	13.2	13.5	13.8	14.1	14.4	45.0	45.3	45.6	50.4	50.7	51.0	51.3	58.2	58.5	58.8	3
4	16.4	16.8	17.2	17.6	18.0	18.4	18.8	19.2	60.0	60.4	60.8	67.2	67.6	68.0	68.4	77.6	78.0	78.4	4
5	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	75.0	75.5	76.0	84.0	84.5	85.0	85.5	97.0	97.5	98.0	5
6	24.6	25.2	25.8	26.4	27.0	27.6	28.2	28.8	90.0	90.6	91.2	100.8	101.4	102.0	102.6	116.4	117.0	117.6	6
7	28.7	29.4	30.1	30.8	31.5	32.2	32.9	33.6	105.0	105.7	106.4	117.6	118.3	119.0	119.7	135.8	136.5	137.2	7
8	32.8	33.6	34.4	35.2	36.0	36.8	37.6	38.4	120.0	120.8	121.6	134.4	135.2	136.0	136.8	155.2	156.0	156.8	8
9	36.9	37.8	38.7	39.6	40.5	41.4	42.3	43.2	135.0	135.9	136.8	151.2	152.1	153.0	153.9	174.6	175.5	176.4	9

82g

17g

c	sin		tang		sec		cosec		cotg		cos		
50	0.271440	152	0.282029	170	1.039009	46	3.68405	205	3.54573	213	0.962455	42	**50**
51	1592	151	2199	169	9055	46	8200	205	4360	213	2413	43	49
52	1743	151	2368	170	9101	47	7995	205	4147	212	2370	43	48
53	1894	151	2538	170	9148	46	7790	204	3935	213	2327	43	47
54	2045	151	2708	169	9194	46	7586	204	3722	212	2284	42	46
55	2196	151	2877	170	9240	46	7382	204	3510	212	2242	43	45
56	2347	152	3047	170	9286	46	7178	204	3298	211	2199	43	44
57	2499	151	3217	169	9332	47	6974	203	3087	212	2156	43	43
58	2650	151	3386	170	9379	46	6771	203	2875	211	2113	42	42
59	2801	151	3556	170	9425	46	6568	203	2664	211	2071	43	41
60	0.272952	151	0.283726	169	1.039471	46	3.66365	203	3.52453	211	0.962028	43	**40**
61	3103	151	3895	170	9517	47	6162	202	2242	210	1985	43	39
62	3254	151	4065	170	9564	46	5960	203	2032	210	1942	43	38
63	3405	151	4235	170	9610	47	5757	202	1822	210	1899	43	37
64	3556	151	4405	169	9657	46	5555	201	1612	210	1856	43	36
65	3707	152	4574	170	9703	47	5354	202	1402	210	1813	43	35
66	3859	151	4744	170	9750	46	5152	201	1192	209	1770	43	34
67	4010	151	4914	170	9796	47	4951	201	0983	209	1727	43	33
68	4161	151	5084	170	9843	46	4750	201	0774	209	1684	43	32
69	4312	151	5254	170	9889	47	4549	201	0565	209	1641	43	31
70	0.274463	151	0.285424	170	1.039936	47	3.64348	200	3.50356	208	0.961598	43	**30**
71	4614	151	5594	169	1.039983	46	4148	200	3.50148	208	1555	44	29
72	4765	151	5763	170	1.040029	47	3948	200	3.49940	208	1511	43	28
73	4916	151	5933	170	0076	47	3748	200	9732	208	1468	43	27
74	5067	151	6103	170	0123	46	3548	200	9524	207	1425	43	26
75	5218	151	6273	170	0169	47	3348	199	9317	208	1382	43	25
76	5369	151	6443	170	0216	47	3149	199	9109	207	1339	44	24
77	5520	151	6613	170	0263	47	2950	199	8902	206	1295	43	23
78	5671	151	6783	170	0310	47	2751	198	8696	207	1252	43	22
79	5822	151	6953	170	0357	47	2553	199	8489	206	1209	44	21
80	0.275973	151	0.287123	170	1.040404	47	3.62354	198	3.48283	207	0.961165	43	**20**
81	6124	151	7293	170	0451	47	2156	198	8076	205	1122	43	19
82	6275	151	7463	170	0498	47	1958	197	7871	206	1079	44	18
83	6426	151	7633	170	0545	47	1761	198	7665	206	1035	43	17
84	6577	151	7803	171	0592	47	1563	197	7459	205	0992	44	16
85	6728	151	7974	170	0639	47	1366	197	7254	205	0948	43	15
86	6879	151	8144	170	0686	47	1169	197	7049	205	0905	44	14
87	7030	151	8314	170	0733	47	0972	196	6844	204	0861	43	13
88	7181	150	8484	170	0780	47	0776	197	6640	205	0818	44	12
89	7331	151	8654	170	0827	47	0579	196	6435	204	0774	43	11
90	0.277482	151	0.288824	170	1.040874	48	3.60383	196	3.46231	204	0.960731	44	**10**
91	7633	151	8994	171	0922	47	3.60187	195	6027	203	0687	43	09
92	7784	151	9165	170	0969	47	3.59992	196	5824	204	0644	44	08
93	7935	151	9335	170	1016	47	9796	195	5620	203	0600	44	07
94	8086	151	9505	170	1063	48	9601	195	5417	203	0556	43	06
95	8237	151	9675	171	1111	47	9406	195	5214	203	0513	44	05
96	8388	151	0.289846	170	1158	48	9211	194	5011	202	0469	44	04
97	8539	150	0.290016	170	1206	47	9017	195	4809	203	0425	44	03
98	8689	151	0186	171	1253	48	8822	194	4606	202	0381	44	02
99	8840	151	0357	170	1301	47	8628	194	4404	202	0337	43	01
100	0.278991		0.290527		1.041348		3.58434		3.44202		0.960294		**00**
	cos		cotg		cosec		sec		tang		sin		c

	197	**198**	**199**	**200**	**201**	**202**	**203**	**205**	**207**	**209**	**211**	**213**	**215**	**217**	**219**	**221**	**223**	**225**	
1	19.7	19.8	19.9	20.0	20.1	20.2	20.3	20.5	20.7	20.9	21.1	21.3	21.5	21.7	21.9	22.1	22.3	22.5	1
2	39.4	39.6	39.8	40.0	40.2	40.4	40.6	41.0	41.4	41.8	42.2	42.6	43.0	43.4	43.8	44.2	44.6	45.0	2
3	59.1	59.4	59.7	60.0	60.3	60.6	60.9	61.5	62.1	62.7	63.3	63.9	64.5	65.1	65.7	66.3	66.9	67.5	3
4	78.8	79.2	79.6	80.0	80.4	80.8	81.2	82.0	82.8	83.6	84.4	85.2	86.0	86.8	87.6	88.4	89.2	90.0	4
5	98.5	99.0	99.5	100.0	100.5	101.0	101.5	102.5	103.5	104.5	105.5	106.5	107.5	108.5	109.5	110.5	111.5	112.5	5
6	118.2	118.8	119.4	120.0	120.6	121.2	121.8	123.0	124.2	125.4	126.6	127.8	129.0	130.2	131.4	132.6	133.8	135.0	6
7	137.9	138.6	139.3	140.0	140.7	141.4	142.1	143.5	144.9	146.3	147.7	149.1	150.5	151.9	153.3	154.7	156.1	157.5	7
8	157.6	158.4	159.2	160.0	160.8	161.6	162.4	164.0	165.6	167.2	168.8	170.4	172.0	173.6	175.2	176.8	178.4	180.0	8
9	177.3	178.2	179.1	180.0	180.9	181.8	182.7	184.5	186.3	188.1	189.9	191.7	193.5	195.3	197.1	198.9	200.7	202.5	9

82g

18g

c	sin		tang		sec		cosec		cotg		cos		
00	0.278991	151	0.290527	170	1.041348	48	3.58434	193	3.44202	201	0.960294	44	**100**
01	9142	151	0697	171	1396	47	8241	194	4001	202	0250	44	99
02	9293	151	0868	170	1443	48	8047	193	3799	201	0206	44	98
03	9444	150	1038	170	1491	47	7854	193	3598	201	0162	44	97
04	9594	151	1208	171	1538	48	7661	193	3397	201	0118	44	96
05	9745	151	1379	170	1586	48	7468	192	3196	201	0074	44	95
06	0.279896	151	1549	171	1634	47	7276	193	2995	200	0.960030	44	94
07	0.280047	151	1720	170	1681	48	7083	192	2795	200	0.959986	44	93
08	0198	150	1890	171	1729	48	6891	192	2595	200	9942	44	92
09	0348	151	2061	170	1777	48	6699	192	2395	200	9898	44	91
10	0.280499	151	0.292231	171	1.041825	48	3.56507	191	3.42195	200	0.959854	44	**90**
11	0650	151	2402	170	1873	48	6316	192	1995	199	9810	44	89
12	0801	150	2572	171	1921	47	6124	191	1796	199	9766	44	88
13	0951	151	2743	170	1968	48	5933	191	1597	199	9722	44	87
14	1102	151	2913	171	2016	48	5742	190	1398	199	9678	44	86
15	1253	151	3084	170	2064	48	5552	191	1199	198	9634	45	85
16	1404	150	3254	171	2112	48	5361	190	1001	198	9589	44	84
17	1554	151	3425	170	2160	48	5171	190	0803	198	9545	44	83
18	1705	151	3595	171	2208	48	4981	190	0605	198	9501	44	82
19	1856	151	3766	171	2256	49	4791	189	0407	198	9457	45	81
20	0.282007	150	0.293937	170	1.042305	48	3.54602	190	3.40209	197	0.959412	44	**80**
21	2157	151	4107	171	2353	48	4412	189	3.40012	197	9368	44	79
22	2308	151	4278	171	2401	48	4223	189	3.39815	197	9324	45	78
23	2459	150	4449	170	2449	48	4034	189	9618	197	9279	44	77
24	2609	151	4619	171	2497	49	3845	188	9421	197	9235	44	76
25	2760	151	4790	171	2546	48	3657	189	9224	196	9191	45	75
26	2911	150	4961	171	2594	48	3468	188	9028	196	9146	44	74
27	3061	151	5132	170	2642	49	3280	188	8832	196	9102	45	73
28	3212	151	5302	171	2691	48	3092	187	8636	196	9057	44	72
29	3363	150	5473	171	2739	48	2905	188	8440	195	9013	45	71
30	0.283513	151	0.295644	171	1.042787	49	3.52717	187	3.38245	196	0.958968	44	**70**
31	3664	151	5815	171	2836	48	2530	187	8049	195	8924	45	69
32	3815	150	5986	171	2884	49	2343	187	7854	195	8879	44	68
33	3965	151	6157	170	2933	48	2156	187	7659	194	8835	45	67
34	4116	150	6327	171	2981	49	1969	186	7465	195	8790	45	66
35	4266	151	6498	171	3030	48	1783	187	7270	194	8745	44	65
36	4417	151	6669	171	3078	49	1596	186	7076	194	8701	45	64
37	4568	150	6840	171	3127	49	1410	185	6882	194	8656	45	63
38	4718	151	7011	171	3176	48	1225	186	6688	194	8611	44	62
39	4869	150	7182	171	3224	49	1039	186	6494	193	8567	45	61
40	0.285019	151	0.297353	171	1.043273	49	3.50853	185	3.36301	194	0.958522	45	**60**
41	5170	150	7524	171	3322	49	0668	185	6107	193	8477	45	59
42	5320	151	7695	171	3371	48	0483	185	5914	192	8432	45	58
43	5471	150	7866	171	3419	49	0298	184	5722	193	8387	44	57
44	5621	151	8037	171	3468	49	3.50114	185	5529	193	8343	45	56
45	5772	151	8208	171	3517	49	3.49929	184	5336	192	8298	45	55
46	5923	150	8379	171	3566	49	9745	184	5144	192	8253	45	54
47	6073	151	8550	171	3615	49	9561	184	4952	192	8208	45	53
48	6224	150	8721	171	3664	49	9377	183	4760	191	8163	45	52
49	6374	151	8892	171	3713	49	9194	184	4569	192	8118	45	51
50	0.286525		0.299063		1.043762		3.49010		3.34377		0.958073		**50**
	cos		cotg		cosec		sec		tang		sin		c

	44	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**150**	**151**	**170**	**171**	**172**	**174**	**175**	**176**	**177**	**178**	
1	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	15.0	15.1	17.0	17.1	17.2	17.4	17.5	17.6	17.7	17.8	1
2	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.2	30.0	30.2	34.0	34.2	34.4	34.8	35.0	35.2	35.4	35.6	2
3	13.2	13.5	13.8	14.1	14.4	14.7	15.0	15.3	45.0	45.3	51.0	51.3	51.6	52.2	52.5	52.8	53.1	53.4	3
4	17.6	18.0	18.4	18.8	19.2	19.6	20.0	20.4	60.0	60.4	68.0	68.4	68.8	69.6	70.0	70.4	70.8	71.2	4
5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	75.0	75.5	85.0	85.5	86.0	87.0	87.5	88.0	88.5	89.0	5
6	26.4	27.0	27.6	28.2	28.8	29.4	30.0	30.6	90.0	90.6	102.0	102.6	103.2	104.4	105.0	105.6	106.2	106.8	6
7	30.8	31.5	32.2	32.9	33.6	34.3	35.0	35.7	105.0	105.7	119.0	119.7	120.4	121.8	122.5	123.2	123.9	124.6	7
8	35.2	36.0	36.8	37.6	38.4	39.2	40.0	40.8	120.0	120.8	136.0	136.8	137.6	139.2	140.0	140.8	141.6	142.4	8
9	39.6	40.5	41.4	42.3	43.2	44.1	45.0	45.9	135.0	135.9	153.0	153.9	154.8	156.6	157.5	158.4	159.3	160.2	9

81g

18g

c	sin		tang		sec		cosec		cotg		cos		
50	0.286525	150	0.299063	172	1.043762	49	3.49010	183	3.34377	191	0.958073	45	**50**
51	6675	151	9235	171	3811	49	8827	183	4186	191	8028	45	49
52	6826	150	9406	171	3860	49	8644	183	3995	191	7983	45	48
53	6976	150	9577	171	3909	49	8461	182	3804	190	7938	45	47
54	7126	151	9748	171	3958	49	8279	183	3614	191	7893	45	46
55	7277	150	0.299919	171	4007	50	8096	182	3423	190	7848	46	45
56	7427	151	0.300090	172	4057	49	7914	182	3233	190	7802	45	44
57	7578	150	0262	171	4106	49	7732	182	3043	190	7757	45	43
58	7728	151	0433	171	4155	49	7550	181	2853	190	7712	45	42
59	7879	150	0604	172	4204	50	7369	182	2663	189	7667	45	41
60	0.288029	151	0.300776	171	1.044254	49	3.47187	181	3.32474	189	0.957622	46	**40**
61	8180	150	0947	171	4303	49	7006	181	2285	189	7576	45	39
62	8330	150	1118	171	4352	50	6825	181	2096	189	7531	45	38
63	8480	151	1289	172	4402	49	6644	181	1907	189	7486	46	37
64	8631	150	1461	171	4451	50	6463	180	1718	188	7440	45	36
65	8781	151	1632	172	4501	49	6283	180	1530	189	7395	45	35
66	8932	150	1804	171	4550	50	6103	180	1341	188	7350	46	34
67	9082	150	1975	171	4600	49	5923	180	1153	188	7304	45	33
68	9232	151	2146	172	4649	50	5743	180	0965	187	7259	46	32
69	9383	150	2318	171	4699	50	5563	179	0778	188	7213	45	31
70	0.289533	150	0.302489	172	1.044749	49	3.45384	179	3.30590	187	0.957168	45	**30**
71	9683	151	2661	171	4798	50	5205	180	0403	187	7123	46	29
72	9834	150	2832	172	4848	50	5025	178	0216	187	7077	46	28
73	0.289984	150	3004	171	4898	49	4847	179	3.30029	187	7031	45	27
74	0.290134	151	3175	172	4947	50	4668	179	3.29842	186	6986	46	26
75	0285	150	3347	171	4997	50	4489	178	9656	186	6940	45	25
76	0435	150	3518	172	5047	50	4311	178	9470	187	6895	46	24
77	0585	151	3690	171	5097	50	4133	178	9283	186	6849	46	23
78	0736	150	3861	172	5147	50	3955	178	9097	185	6803	45	22
79	0886	150	4033	172	5197	50	3777	177	8912	186	6758	46	21
80	0.291036	150	0.304205	171	1.045247	50	3.43600	177	3.28726	185	0.956712	46	**20**
81	1186	151	4376	172	5297	50	3423	178	8541	185	6666	45	19
82	1337	150	4548	171	5347	50	3245	176	8356	185	6621	46	18
83	1487	150	4719	172	5397	50	3069	177	8171	185	6575	46	17
84	1637	150	4891	172	5447	50	2892	177	7986	185	6529	46	16
85	1787	151	5063	172	5497	50	2715	176	7801	184	6483	46	15
86	1938	150	5235	171	5547	50	2539	176	7617	184	6437	46	14
87	2088	150	5406	172	5597	50	2363	176	7433	184	6391	45	13
88	2238	150	5578	172	5647	50	2187	176	7249	184	6346	46	12
89	2388	151	5750	172	5697	51	2011	176	7065	184	6300	46	11
90	0.292539	150	0.305922	171	1.045748	50	3.41835	175	3.26881	183	0.956254	46	**10**
91	2689	150	6093	172	5798	50	1660	175	6698	184	6208	46	09
92	2839	150	6265	172	5848	50	1485	175	6514	183	6162	46	08
93	2989	150	6437	172	5898	51	1310	175	6331	182	6116	46	07
94	3139	151	6609	172	5949	50	1135	175	6149	183	6070	46	06
95	3290	150	6781	172	5999	51	0960	175	5966	183	6024	46	05
96	3440	150	6953	171	6050	50	0785	174	5783	182	5978	47	04
97	3590	150	7124	172	6100	51	0611	174	5601	182	5931	46	03
98	3740	150	7296	172	6151	50	0437	174	5419	182	5885	46	02
99	3890	150	7468	172	6201	51	0263	174	5237	182	5839	46	01
100	0.294040		0.307640		1.046252		3.40089		3.25055		0.955793		**00**
	cos		cotg		cosec		sec		tang		sin		c

	179	**180**	**181**	**182**	**183**	**184**	**185**	**186**	**187**	**188**	**189**	**190**	**192**	**194**	**196**	**198**	**200**	**202**	
1	17.9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	19.0	19.2	19.4	19.6	19.8	20.0	20.2	1
2	35.8	36.0	36.2	36.4	36.6	36.8	37.0	37.2	37.4	37.6	37.8	38.0	38.4	38.8	39.2	39.6	40.0	40.4	2
3	53.7	54.0	54.3	54.6	54.9	55.2	55.5	55.8	56.1	56.4	56.7	57.0	57.6	58.2	58.8	59.4	60.0	60.6	3
4	71.6	72.0	72.4	72.8	73.2	73.6	74.0	74.4	74.8	75.2	75.6	76.0	76.8	77.6	78.4	79.2	80.0	80.8	4
5	89.5	90.0	90.5	91.0	91.5	92.0	92.5	93.0	93.5	94.0	94.5	95.0	96.0	97.0	98.0	99.0	100.0	101.0	5
6	107.4	108.0	108.6	109.2	109.8	110.4	111.0	111.6	112.2	112.8	113.4	114.0	115.2	116.4	117.6	118.8	120.0	121.2	6
7	125.3	126.0	126.7	127.4	128.1	128.8	129.5	130.2	130.9	131.6	132.3	133.0	134.4	135.8	137.2	138.6	140.0	141.4	7
8	143.2	144.0	144.8	145.6	146.4	147.2	148.0	148.8	149.6	150.4	151.2	152.0	153.6	155.2	156.8	158.4	160.0	161.6	8
9	161.1	162.0	162.9	163.8	164.7	165.6	166.5	167.4	168.3	169.2	170.1	171.0	172.8	174.6	176.4	178.2	180.0	181.8	9

81g

19g

c	sin		tang		sec		cosec		cotg		cos		
00	0.294040	150	0.307640	172	1.046252	50	3.40089	173	3.25055	182	0.955793	46	**100**
01	4190	151	7812	172	6302	51	3.39916	174	4873	181	5747	46	99
02	4341	150	7984	172	6353	50	9742	173	4692	181	5701	47	98
03	4491	150	8156	172	6403	51	9569	173	4511	181	5654	46	97
04	4641	150	8328	172	6454	51	9396	173	4330	181	5608	46	96
05	4791	150	8500	172	6505	51	9223	172	4149	181	5562	47	95
06	4941	150	8672	172	6556	50	9051	173	3968	180	5515	46	94
07	5091	150	8844	172	6606	51	8878	172	3788	180	5469	46	93
08	5241	150	9016	172	6657	51	8706	172	3608	181	5423	47	92
09	5391	150	9188	172	6708	51	8534	172	3427	179	5376	46	91
10	0.295541	150	0.309360	173	1.046759	51	3.38362	172	3.23248	180	0.955330	46	**90**
11	5691	150	9533	172	6810	51	8190	171	3068	180	5284	47	89
12	5841	150	9705	172	6861	50	8019	171	2888	179	5237	46	88
13	5991	151	0.309877	172	6911	51	7848	172	2709	179	5191	47	87
14	6142	150	0.310049	172	6962	51	7676	171	2530	179	5144	46	86
15	6292	150	0221	172	7013	52	7505	170	2351	179	5098	47	85
16	6442	150	0393	173	7065	51	7335	171	2172	179	5051	47	84
17	6592	150	0566	172	7116	51	7164	170	1993	178	5004	46	83
18	6742	150	0738	172	7167	51	6994	171	1815	179	4958	47	82
19	6892	150	0910	172	7218	51	6823	170	1636	178	4911	46	81
20	0.297042	150	0.311082	173	1.047269	51	3.36653	170	3.21458	178	0.954865	47	**80**
21	7192	150	1255	172	7320	51	6483	169	1280	177	4818	47	79
22	7342	150	1427	172	7371	52	6314	170	1103	178	4771	47	78
23	7492	149	1599	173	7423	51	6144	169	0925	177	4724	46	77
24	7641	150	1772	172	7474	51	5975	170	0748	178	4678	47	76
25	7791	150	1944	172	7525	52	5805	169	0570	177	4631	47	75
26	7941	150	2116	173	7577	51	5636	168	0393	177	4584	47	74
27	8091	150	2289	172	7628	51	5468	169	0216	176	4537	46	73
28	8241	150	2461	173	7679	52	5299	168	3.20040	177	4491	47	72
29	8391	150	2634	172	7731	51	5131	169	3.19863	176	4444	47	71
30	0.298541	150	0.312806	173	1.047782	52	3.34962	168	3.19687	176	0.954397	47	**70**
31	8691	150	2979	172	7834	51	4794	168	9511	176	4350	47	69
32	8841	150	3151	173	7885	52	4626	168	9335	176	4303	47	68
33	8991	150	3324	172	7937	51	4458	167	9159	176	4256	47	67
34	9141	150	3496	173	7988	52	4291	168	8983	175	4209	47	66
35	9291	149	3669	172	8040	52	4123	167	8808	175	4162	47	65
36	9440	150	3841	173	8092	51	3956	167	8633	175	4115	47	64
37	9590	150	4014	172	8143	52	3789	167	8458	175	4068	47	63
38	9740	150	4186	173	8195	52	3622	166	8283	175	4021	47	62
39	0.299890	150	4359	172	8247	52	3456	167	8108	175	3974	47	61
40	0.300040	150	0.314531	173	1.048299	51	3.33289	166	3.17933	174	0.953927	47	**60**
41	0190	150	4704	173	8350	52	3123	167	7759	174	3880	48	59
42	0340	149	4877	172	8402	52	2956	166	7585	174	3832	47	58
43	0489	150	5049	173	8454	52	2790	165	7411	174	3785	47	57
44	0639	150	5222	173	8506	52	2625	166	7237	174	3738	47	56
45	0789	150	5395	172	8558	52	2459	166	7063	174	3691	48	55
46	0939	150	5567	173	8610	52	2293	165	6889	173	3643	47	54
47	1089	149	5740	173	8662	52	2128	165	6716	173	3596	47	53
48	1238	150	5913	173	8714	52	1963	165	6543	173	3549	47	52
49	1388	150	6086	172	8766	52	1798	165	6370	173	3502	48	51
50	0.301538		0.316258		1.048818		3.31633		3.16197		0.953454		**50**
	cos		cotg		cosec		sec		tang		sin		c

	46	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**149**	**150**	**151**	**156**	**157**	**158**	**159**	**160**	**161**	
1	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	14.9	15.0	15.1	15.6	15.7	15.8	15.9	16.0	16.1	1
2	9.2	9.4	9.6	9.8	10.0	10.2	10.4	10.6	10.8	29.8	30.0	30.2	31.2	31.4	31.6	31.8	32.0	32.2	2
3	13.8	14.1	14.4	14.7	15.0	15.3	15.6	15.9	16.2	44.7	45.0	45.3	46.8	47.1	47.4	47.7	48.0	48.3	3
4	18.4	18.8	19.2	19.6	20.0	20.4	20.8	21.2	21.6	59.6	60.0	60.4	62.4	62.8	63.2	63.6	64.0	64.4	4
5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0	74.5	75.0	75.5	78.0	78.5	79.0	79.5	80.0	80.5	5
6	27.6	28.2	28.8	29.4	30.0	30.6	31.2	31.8	32.4	89.4	90.0	90.6	93.6	94.2	94.8	95.4	96.0	96.6	6
7	32.2	32.9	33.6	34.3	35.0	35.7	36.4	37.1	37.8	104.3	105.0	105.7	109.2	109.9	110.6	111.3	112.0	112.7	7
8	36.8	37.6	38.4	39.2	40.0	40.8	41.6	42.4	43.2	119.2	120.0	120.8	124.8	125.6	126.4	127.2	128.0	128.8	8
9	41.4	42.3	43.2	44.1	45.0	45.9	46.8	47.7	48.6	134.1	135.0	135.9	140.4	141.3	142.2	143.1	144.0	144.9	9

80g

19g

c	sin		tang		sec		cosec		cotg		cos		
50	0.301538	150	0.316258	173	1.048818	52	3.31633	164	3.16197	173	0.953454	47	**50**
51	1688	149	6431	173	8870	52	1469	165	6024	172	3407	48	49
52	1837	150	6604	173	8922	53	1304	164	5852	172	3359	47	48
53	1987	150	6777	173	8975	52	1140	164	5680	173	3312	47	47
54	2137	150	6950	173	9027	52	0976	164	5507	172	3265	48	46
55	2287	149	7123	173	9079	52	0812	164	5335	171	3217	47	45
56	2436	150	7296	172	9131	53	0648	164	5164	172	3170	48	44
57	2586	150	7468	173	9184	52	0484	163	4992	172	3122	48	43
58	2736	150	7641	173	9236	52	0321	163	4820	171	3074	47	42
59	2886	149	7814	173	9288	53	3.30158	163	4649	171	3027	48	41
60	0.303035	150	0.317987	173	1.049341	52	3.29995	163	3.14478	171	0.952979	47	**40**
61	3185	150	8160	173	9393	53	9832	163	4307	171	2932	48	39
62	3335	149	8333	173	9446	52	9669	163	4136	170	2884	48	38
63	3484	150	8506	173	9498	53	9506	162	3966	171	2836	47	37
64	3634	150	8679	173	9551	52	9344	162	3795	170	2789	48	36
65	3784	149	8852	173	9603	53	9182	162	3625	170	2741	48	35
66	3933	150	9025	173	9656	52	9020	162	3455	170	2693	47	34
67	4083	150	9198	173	9708	53	8858	162	3285	170	2646	48	33
68	4233	149	9371	174	9761	53	8696	162	3115	170	2598	48	32
69	4382	150	9545	173	9814	52	8534	161	2945	169	2550	48	31
70	0.304532	149	0.319718	173	1.049866	53	3.28373	161	3.12776	169	0.952502	48	**30**
71	4681	150	0.319891	173	9919	53	8212	161	2607	170	2454	48	29
72	4831	150	0.320064	173	1.049972	53	8051	161	2437	168	2406	47	28
73	4981	149	0237	173	1.050025	53	7890	161	2269	169	2359	48	27
74	5130	150	0410	174	0078	52	7729	161	2100	169	2311	48	26
75	5280	149	0584	173	0130	53	7568	160	1931	168	2263	48	25
76	5429	150	0757	173	0183	53	7408	160	1763	169	2215	48	24
77	5579	150	0930	173	0236	53	7248	160	1594	168	2167	48	23
78	5729	149	1103	174	0289	53	7088	160	1426	168	2119	48	22
79	5878	150	1277	173	0342	53	6928	160	1258	168	2071	48	21
80	0.306028	149	0.321450	173	1.050395	53	3.26768	160	3.11090	167	0.952023	48	**20**
81	6177	150	1623	174	0448	53	6608	159	0923	168	1975	49	19
82	6327	149	1797	173	0501	53	6449	159	0755	167	1926	48	18
83	6476	150	1970	173	0554	54	6290	160	0588	167	1878	48	17
84	6626	149	2143	174	0608	53	6130	158	0421	167	1830	48	16
85	6775	150	2317	173	0661	53	5972	159	0254	167	1782	48	15
86	6925	149	2490	174	0714	53	5813	159	3.10087	167	1734	48	14
87	7074	150	2664	173	0767	54	5654	158	3.09920	166	1686	49	13
88	7224	149	2837	173	0821	53	5496	159	9754	167	1637	48	12
89	7373	150	3010	174	0874	53	5337	158	9587	166	1589	48	11
90	0.307523	149	0.323184	173	1.050927	54	3.25179	158	3.09421	166	0.951541	49	**10**
91	7672	150	3357	174	0981	53	5021	158	9255	166	1492	48	09
92	7822	149	3531	173	1034	53	4863	157	9089	165	1444	48	08
93	7971	150	3704	174	1087	54	4706	158	8924	166	1396	49	07
94	8121	149	3878	174	1141	53	4548	157	8758	165	1347	48	06
95	8270	149	4052	173	1194	54	4391	157	8593	165	1299	49	05
96	8419	150	4225	174	1248	53	4234	157	8428	165	1250	48	04
97	8569	149	4399	173	1301	54	4077	157	8263	165	1202	48	03
98	8718	150	4572	174	1355	54	3920	157	8098	165	1154	49	02
99	8868	149	4746	174	1409	53	3763	156	7933	165	1105	48	01
100	0.309017		0.324920		1.051462		3.23607		3.07768		0.951057		**00**
	cos		cotg		cosec		sec		tang		sin		c

	162	**163**	**164**	**165**	**166**	**167**	**168**	**169**	**170**	**171**	**172**	**173**	**174**	**175**	**176**	**178**	**180**	**182**	
1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.8	18.0	18.2	1
2	32.4	32.6	32.8	33.0	33.2	33.4	33.6	33.8	34.0	34.2	34.4	34.6	34.8	35.0	35.2	35.6	36.0	36.4	2
3	48.6	48.9	49.2	49.5	49.8	50.1	50.4	50.7	51.0	51.3	51.6	51.9	52.2	52.5	52.8	53.4	54.0	54.6	3
4	64.8	65.2	65.6	66.0	66.4	66.8	67.2	67.6	68.0	68.4	68.8	69.2	69.6	70.0	70.4	71.2	72.0	72.8	4
5	81.0	81.5	82.0	82.5	83.0	83.5	84.0	84.5	85.0	85.5	86.0	86.5	87.0	87.5	88.0	89.0	90.0	91.0	5
6	97.2	97.8	98.4	99.0	99.6	100.2	100.8	101.4	102.0	102.6	103.2	103.8	104.4	105.0	105.6	106.8	108.0	109.2	6
7	113.4	114.1	114.8	115.5	116.2	116.9	117.6	118.3	119.0	119.7	120.4	121.1	121.8	122.5	123.2	124.6	126.0	127.4	7
8	129.6	130.4	131.2	132.0	132.8	133.6	134.4	135.2	136.0	136.8	137.6	138.4	139.2	140.0	140.8	142.4	144.0	145.6	8
9	145.8	146.7	147.6	148.5	149.4	150.3	151.2	152.1	153.0	153.9	154.8	155.7	156.6	157.5	158.4	160.2	162.0	163.8	9

80g

20g

c	sin		tang		sec		cosec		cotg		cos		
00	0.309017	149	0.324920	173	1.051462	54	3.23607	157	3.07768	164	0.951057	49	**100**
01	9166	150	5093	174	1516	54	3450	156	7604	164	1008	49	99
02	9316	149	5267	174	1570	53	3294	156	7440	164	0959	48	98
03	9465	149	5441	173	1623	54	3138	156	7276	164	0911	49	97
04	9614	150	5614	174	1677	54	2982	155	7112	164	0862	48	96
05	9764	149	5788	174	1731	54	2827	156	6948	164	0814	49	95
06	0.309913	150	5962	174	1785	54	2671	155	6784	163	0765	49	94
07	0.310063	149	6136	174	1839	54	2516	156	6621	164	0716	49	93
08	0212	149	6310	173	1893	53	2360	155	6457	163	0667	48	92
09	0361	150	6483	174	1946	54	2205	155	6294	163	0619	49	91
10	0.310511	149	0.326657	174	1.052000	54	3.22050	155	3.06131	163	0.950570	49	**90**
11	0660	149	6831	174	2054	54	1895	154	5968	162	0521	49	89
12	0809	149	7005	174	2108	55	1741	155	5806	163	0472	48	88
13	0958	150	7179	174	2163	54	1586	154	5643	162	0424	49	87
14	1108	149	7353	174	2217	54	1432	154	5481	162	0375	49	86
15	1257	149	7527	174	2271	54	1278	154	5319	162	0326	49	85
16	1406	150	7701	174	2325	54	1124	154	5157	162	0277	49	84
17	1556	149	7875	174	2379	54	0970	154	4995	162	0228	49	83
18	1705	149	8049	174	2433	55	0816	153	4833	162	0179	49	82
19	1854	149	8223	174	2488	54	0663	154	4671	161	0130	49	81
20	0.312003	150	0.328397	174	1.052542	54	3.20509	153	3.04510	161	0.950081	49	**80**
21	2153	149	8571	174	2596	54	0356	153	4349	161	0.950032	49	79
22	2302	149	8745	174	2650	55	0203	153	4188	161	0.949983	49	78
23	2451	149	8919	174	2705	54	3.20050	153	4027	161	9934	49	77
24	2600	149	9093	174	2759	55	3.19897	152	3866	161	9885	49	76
25	2749	149	9267	174	2814	54	9745	153	3705	160	9836	49	75
26	2899	149	9441	174	2868	55	9592	152	3545	161	9787	50	74
27	3048	149	9615	174	2923	54	9440	152	3384	160	9737	49	73
28	3197	149	9789	174	2977	55	9288	152	3224	160	9688	49	72
29	3346	149	0.329963	175	3032	54	9136	152	3064	160	9639	49	71
30	0.313495	149	0.330138	174	1.053086	55	3.18984	152	3.02904	160	0.949590	50	**70**
31	3644	150	0312	174	3141	55	8832	151	2744	159	9540	49	69
32	3794	149	0486	174	3196	54	8681	152	2585	160	9491	49	68
33	3943	149	0660	175	3250	55	8529	151	2425	159	9442	49	67
34	4092	149	0835	174	3305	55	8378	151	2266	159	9393	50	66
35	4241	149	1009	174	3360	55	8227	151	2107	159	9343	49	65
36	4390	149	1183	174	3415	54	8076	151	1948	159	9294	50	64
37	4539	149	1357	175	3469	55	7925	150	1789	159	9244	49	63
38	4688	149	1532	174	3524	55	7775	151	1630	158	9195	49	62
39	4837	150	1706	175	3579	55	7624	150	1472	159	9146	50	61
40	0.314987	149	0.331881	174	1.053634	55	3.17474	150	3.01313	158	0.949096	49	**60**
41	5136	149	2055	174	3689	55	7324	150	1155	158	9047	50	59
42	5285	149	2229	175	3744	55	7174	150	0997	158	8997	49	58
43	5434	149	2404	174	3799	55	7024	150	0839	158	8948	50	57
44	5583	149	2578	175	3854	55	6874	150	0681	157	8898	50	56
45	5732	149	2753	174	3909	55	6724	149	0524	158	8848	49	55
46	5881	149	2927	175	3964	55	6575	149	0366	157	8799	50	54
47	6030	149	3102	174	4019	55	6426	149	0209	158	8749	49	53
48	6179	149	3276	175	4074	56	6277	149	3.00051	157	8700	50	52
49	6328	149	3451	174	4130	55	6128	149	2.99894	156	8650	50	51
50	0.316477		0.333625		1.054185		3.15979		2.99738		0.948600		**50**
	cos		cotg		cosec		sec		tang		sin		c

	48	**49**	**50**	**51**	**53**	**54**	**55**	**56**	**57**	**141**	**142**	**143**	**144**	**145**	**146**	**147**	**148**	**149**	
1	4.8	4.9	5.0	5.1	5.3	5.4	5.5	5.6	5.7	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	1
2	9.6	9.8	10.0	10.2	10.6	10.8	11.0	11.2	11.4	28.2	28.4	28.6	28.8	29.0	29.2	29.4	29.6	29.8	2
3	14.4	14.7	15.0	15.3	15.9	16.2	16.5	16.8	17.1	42.3	42.6	42.9	43.2	43.5	43.8	44.1	44.4	44.7	3
4	19.2	19.6	20.0	20.4	21.2	21.6	22.0	22.4	22.8	56.4	56.8	57.2	57.6	58.0	58.4	58.8	59.2	59.6	4
5	24.0	24.5	25.0	25.5	26.5	27.0	27.5	28.0	28.5	70.5	71.0	71.5	72.0	72.5	73.0	73.5	74.0	74.5	5
6	28.8	29.4	30.0	30.6	31.8	32.4	33.0	33.6	34.2	84.6	85.2	85.8	86.4	87.0	87.6	88.2	88.8	89.4	6
7	33.6	34.3	35.0	35.7	37.1	37.8	38.5	39.2	39.9	98.7	99.4	100.1	100.8	101.5	102.2	102.9	103.6	104.3	7
8	38.4	39.2	40.0	40.8	42.4	43.2	44.0	44.8	45.6	112.8	113.6	114.4	115.2	116.0	116.8	117.6	118.4	119.2	8
9	43.2	44.1	45.0	45.9	47.7	48.6	49.5	50.4	51.3	126.9	127.8	128.7	129.6	130.5	131.4	132.3	133.2	134.1	9

79g

20g

c	sin		tang		sec		cosec		cotg		cos		
50	0.316477	149	0.333625	175	1.054185	55	3.15979	149	2.99738	157	0.948600	50	**50**
51	6626	149	3800	174	4240	55	5830	148	9581	157	8550	49	49
52	6775	149	3974	175	4295	56	5682	149	9424	156	8501	50	48
53	6924	149	4149	175	4351	55	5533	148	9268	157	8451	50	47
54	7073	149	4324	174	4406	56	5385	148	9111	156	8401	50	46
55	7222	149	4498	175	4462	55	5237	148	8955	156	8351	49	45
56	7371	149	4673	175	4517	55	5089	148	8799	156	8302	50	44
57	7520	149	4848	174	4572	56	4941	148	8643	155	8252	50	43
58	7669	149	5022	175	4628	55	4793	147	8488	156	8202	50	42
59	7818	149	5197	175	4683	56	4646	148	8332	155	8152	50	41
60	0.317967	149	0.335372	175	1.054739	56	3.14498	147	2.98177	156	0.948102	50	**40**
61	8116	148	5547	174	4795	55	4351	147	8021	155	8052	50	39
62	8264	149	5721	175	4850	56	4204	147	7866	155	8002	50	38
63	8413	149	5896	175	4906	55	4057	147	7711	155	7952	50	37
64	8562	149	6071	175	4961	56	3910	146	7556	154	7902	50	36
65	8711	149	6246	175	5017	56	3764	147	7402	155	7852	50	35
66	8860	149	6421	174	5073	56	3617	146	7247	154	7802	50	34
67	9009	149	6595	175	5129	55	3471	146	7093	155	7752	50	33
68	9158	149	6770	175	5184	56	3325	146	6938	154	7702	51	32
69	9307	149	6945	175	5240	56	3179	146	6784	154	7651	50	31
70	0.319456	148	0.337120	175	1.055296	56	3.13033	146	2.96630	154	0.947601	50	**30**
71	9604	149	7295	175	5352	56	2887	146	6476	153	7551	50	29
72	9753	149	7470	175	5408	56	2741	145	6323	154	7501	50	28
73	0.319902	149	7645	175	5464	56	2596	146	6169	153	7451	51	27
74	0.320051	149	7820	175	5520	56	2450	145	6016	154	7400	50	26
75	0200	148	7995	175	5576	56	2305	145	5862	153	7350	50	25
76	0348	149	8170	175	5632	56	2160	145	5709	153	7300	51	24
77	0497	149	8345	175	5688	56	2015	145	5556	153	7249	50	23
78	0646	149	8520	175	5744	56	1870	144	5403	152	7199	50	22
79	0795	149	8695	175	5800	57	1726	145	5251	153	7149	51	21
80	0.320944	148	0.338870	176	1.055857	56	3.11581	144	2.95098	152	0.947098	50	**20**
81	1092	149	9046	175	5913	56	1437	144	4946	153	7048	51	19
82	1241	149	9221	175	5969	56	1293	144	4793	152	6997	50	18
83	1390	149	9396	175	6025	57	1149	144	4641	152	6947	51	17
84	1539	148	9571	175	6082	56	1005	144	4489	152	6896	50	16
85	1687	149	9746	175	6138	56	0861	144	4337	151	6846	51	15
86	1836	149	0.339921	176	6194	57	0717	143	4186	152	6795	50	14
87	1985	149	0.340097	175	6251	56	0574	144	4034	151	6745	51	13
88	2134	148	0272	175	6307	57	0430	143	3883	152	6694	50	12
89	2282	149	0447	176	6364	56	0287	143	3731	151	6644	51	11
90	0.322431	149	0.340623	175	1.056420	57	3.10144	143	2.93580	151	0.946593	51	**10**
91	2580	148	0798	175	6477	56	3.10001	143	3429	151	6542	50	09
92	2728	149	0973	176	6533	57	3.09858	142	3278	151	6492	51	08
93	2877	149	1149	175	6590	57	9716	143	3127	150	6441	51	07
94	3026	148	1324	175	6647	56	9573	142	2977	151	6390	51	06
95	3174	149	1499	176	6703	57	9431	143	2826	150	6339	50	05
96	3323	149	1675	175	6760	57	9288	142	2676	150	6289	51	04
97	3472	148	1850	176	6817	56	9146	142	2526	150	6238	51	03
98	3620	149	2026	175	6873	57	9004	142	2376	150	6187	51	02
99	3769	148	2201	176	6930	57	8862	141	2226	150	6136	51	01
100	0.323917		0.342377		1.056987		3.08721		2.92076		0.946085		**00**
	cos		cotg		cosec		sec		tang		sin		c

	150	**151**	**152**	**153**	**154**	**155**	**156**	**157**	**158**	**159**	**160**	**161**	**162**	**164**	**173**	**174**	**175**	**176**	
1	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	16.0	16.1	16.2	16.4	17.3	17.4	17.5	17.6	1
2	30.0	30.2	30.4	30.6	30.8	31.0	31.2	31.4	31.6	31.8	32.0	32.2	32.4	32.8	34.6	34.8	35.0	35.2	2
3	45.0	45.3	45.6	45.9	46.2	46.5	46.8	47.1	47.4	47.7	48.0	48.3	48.6	49.2	51.9	52.2	52.5	52.8	3
4	60.0	60.4	60.8	61.2	61.6	62.0	62.4	62.8	63.2	63.6	64.0	64.4	64.8	65.6	69.2	69.6	70.0	70.4	4
5	75.0	75.5	76.0	76.5	77.0	77.5	78.0	78.5	79.0	79.5	80.0	80.5	81.0	82.0	86.5	87.0	87.5	88.0	5
6	90.0	90.6	91.2	91.8	92.4	93.0	93.6	94.2	94.8	95.4	96.0	96.6	97.2	98.4	103.8	104.4	105.0	105.6	6
7	105.0	105.7	106.4	107.1	107.8	108.5	109.2	109.9	110.6	111.3	112.0	112.7	113.4	114.8	121.1	121.8	122.5	123.2	7
8	120.0	120.8	121.6	122.4	123.2	124.0	124.8	125.6	126.4	127.2	128.0	128.8	129.6	131.2	138.4	139.2	140.0	140.8	8
9	135.0	135.9	136.8	137.7	138.6	139.5	140.4	141.3	142.2	143.1	144.0	144.9	145.8	147.6	155.7	156.6	157.5	158.4	9

79g

21g

c	sin		tang		sec		cosec		cotg		cos		
00	0.323917	149	0.342377	175	1.056987	57	3.08721	142	2.92076	150	0.946085	51	**100**
01	4066	149	2552	176	7044	57	8579	141	1926	149	6034	50	99
02	4215	148	2728	175	7101	57	8438	142	1777	149	5984	51	98
03	4363	149	2903	176	7158	57	8296	141	1628	150	5933	51	97
04	4512	148	3079	175	7215	57	8155	141	1478	149	5882	51	96
05	4660	149	3254	176	7272	57	8014	141	1329	149	5831	51	95
06	4809	148	3430	175	7329	57	7873	140	1180	149	5780	51	94
07	4957	149	3605	176	7386	57	7733	141	1031	148	5729	51	93
08	5106	149	3781	176	7443	57	7592	141	0883	149	5678	52	92
09	5255	148	3957	175	7500	57	7451	140	0734	148	5626	51	91
10	0.325403	149	0.344132	176	1.057557	57	3.07311	140	2.90586	148	0.945575	51	**90**
11	5552	148	4308	176	7614	58	7171	140	0438	149	5524	51	89
12	5700	149	4484	176	7672	57	7031	140	0289	148	5473	51	88
13	5849	148	4660	175	7729	57	6891	140	2.90141	147	5422	51	87
14	5997	149	4835	176	7786	57	6751	140	2.89994	148	5371	51	86
15	6146	148	5011	176	7843	58	6611	139	9846	148	5320	52	85
16	6294	149	5187	176	7901	57	6472	139	9698	147	5268	51	84
17	6443	148	5363	175	7958	58	6333	140	9551	148	5217	51	83
18	6591	149	5538	176	8016	57	6193	139	9403	147	5166	52	82
19	6740	148	5714	176	8073	57	6054	139	9256	147	5114	51	81
20	0.326888	148	0.345890	176	1.058130	58	3.05915	139	2.89109	147	0.945063	51	**80**
21	7036	149	6066	176	8188	57	5776	138	8962	147	5012	52	79
22	7185	148	6242	176	8245	58	5638	139	8815	146	4960	51	78
23	7333	149	6418	176	8303	58	5499	138	8669	147	4909	52	77
24	7482	148	6594	176	8361	57	5361	139	8522	146	4857	51	76
25	7630	149	6770	176	8418	58	5222	138	8376	147	4806	51	75
26	7779	148	6946	176	8476	58	5084	138	8229	146	4755	52	74
27	7927	148	7122	176	8534	57	4946	138	8083	146	4703	51	73
28	8075	149	7298	176	8591	58	4808	138	7937	146	4652	52	72
29	8224	148	7474	176	8649	58	4670	137	7791	145	4600	52	71
30	0.328372	148	0.347650	176	1.058707	58	3.04533	138	2.87646	146	0.944548	51	**70**
31	8520	149	7826	176	8765	58	4395	137	7500	145	4497	52	69
32	8669	148	8002	176	8823	58	4258	138	7355	146	4445	51	68
33	8817	149	8178	176	8881	57	4120	137	7209	145	4394	52	67
34	8966	148	8354	176	8938	58	3983	137	7064	145	4342	52	66
35	9114	148	8530	177	8996	58	3846	137	6919	145	4290	51	65
36	9262	149	8707	176	9054	58	3709	136	6774	145	4239	52	64
37	9411	148	8883	176	9112	59	3573	137	6629	144	4187	52	63
38	9559	148	9059	176	9171	58	3436	137	6485	145	4135	52	62
39	9707	148	9235	176	9229	58	3299	136	6340	144	4083	52	61
40	0.329855	149	0.349411	177	1.059287	58	3.03163	136	2.86196	145	0.944031	51	**60**
41	0.330004	148	9588	176	9345	58	3027	136	6051	144	3980	52	59
42	0152	148	9764	176	9403	58	2891	136	5907	144	3928	52	58
43	0300	149	0.349940	177	9461	59	2755	136	5763	144	3876	52	57
44	0449	148	0.350117	176	9520	58	2619	136	5619	144	3824	52	56
45	0597	148	0293	176	9578	58	2483	135	5475	143	3772	52	55
46	0745	148	0469	177	9636	59	2348	136	5332	144	3720	52	54
47	0893	148	0646	176	9695	58	2212	135	5188	143	3668	52	53
48	1041	149	0822	177	9753	58	2077	135	5045	144	3616	52	52
49	1190	148	0999	176	9811	59	1942	135	4901	143	3564	52	51
50	0.331338		0.351175		1.059870		3.01807		2.84758		0.943512		**50**
	cos		cotg		cosec		sec		tang		sin		c

	50	**51**	**52**	**53**	**54**	**57**	**58**	**59**	**60**	**129**	**130**	**131**	**132**	**133**	**134**	**135**	**136**	**137**	
1	5.0	5.1	5.2	5.3	5.4	5.7	5.8	5.9	6.0	12.9	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	1
2	10.0	10.2	10.4	10.6	10.8	11.4	11.6	11.8	12.0	25.8	26.0	26.2	26.4	26.6	26.8	27.0	27.2	27.4	2
3	15.0	15.3	15.6	15.9	16.2	17.1	17.4	17.7	18.0	38.7	39.0	39.3	39.6	39.9	40.2	40.5	40.8	41.1	3
4	20.0	20.4	20.8	21.2	21.6	22.8	23.2	23.6	24.0	51.6	52.0	52.4	52.8	53.2	53.6	54.0	54.4	54.8	4
5	25.0	25.5	26.0	26.5	27.0	28.5	29.0	29.5	30.0	64.5	65.0	65.5	66.0	66.5	67.0	67.5	68.0	68.5	5
6	30.0	30.6	31.2	31.8	32.4	34.2	34.8	35.4	36.0	77.4	78.0	78.6	79.2	79.8	80.4	81.0	81.6	82.2	6
7	35.0	35.7	36.4	37.1	37.8	39.9	40.6	41.3	42.0	90.3	91.0	91.7	92.4	93.1	93.8	94.5	95.2	95.9	7
8	40.0	40.8	41.6	42.4	43.2	45.6	46.4	47.2	48.0	103.2	104.0	104.8	105.6	106.4	107.2	108.0	108.8	109.6	8
9	45.0	45.9	46.8	47.7	48.6	51.3	52.2	53.1	54.0	116.1	117.0	117.9	118.8	119.7	120.6	121.5	122.4	123.3	9

78g

21g

c	sin		tang		sec		cosec		cotg		cos		
50	0.331338	148	0.351175	176	1.059870	58	3.01807	135	2.84758	143	0.943512	52	**50**
51	1486	148	1351	177	9928	59	1672	135	4615	143	3460	52	49
52	1634	148	1528	176	1.059987	58	1537	135	4472	142	3408	52	48
53	1782	149	1704	177	1.060045	59	1402	134	4330	143	3356	52	47
54	1931	148	1881	177	0104	58	1268	135	4187	142	3304	52	46
55	2079	148	2058	176	0162	59	1133	134	4045	143	3252	53	45
56	2227	148	2234	177	0221	59	0999	134	3902	142	3199	52	44
57	2375	148	2411	176	0280	59	0865	134	3760	142	3147	52	43
58	2523	148	2587	177	0339	58	0731	134	3618	142	3095	52	42
59	2671	149	2764	176	0397	59	0597	134	3476	142	3043	52	41
60	0.332820	148	0.352940	177	1.060456	59	3.00463	134	2.83334	142	0.942991	53	**40**
61	2968	148	3117	177	0515	59	0329	133	3192	141	2938	52	39
62	3116	148	3294	177	0574	59	0196	133	3051	142	2886	52	38
63	3264	148	3471	176	0633	58	3.00063	134	2909	141	2834	53	37
64	3412	148	3647	177	0691	59	2.99929	133	2768	142	2781	52	36
65	3560	148	3824	177	0750	59	9796	133	2626	141	2729	53	35
66	3708	148	4001	176	0809	59	9663	133	2485	141	2676	52	34
67	3856	148	4177	177	0868	59	9530	133	2344	141	2624	52	33
68	4004	148	4354	177	0927	59	9397	132	2203	140	2572	53	32
69	4152	148	4531	177	0986	60	9265	133	2063	141	2519	52	31
70	0.334300	148	0.354708	177	1.061046	59	2.99132	132	2.81922	140	0.942467	53	**30**
71	4448	148	4885	177	1105	59	9000	133	1782	141	2414	52	29
72	4596	148	5062	177	1164	59	8867	132	1641	140	2362	53	28
73	4744	148	5239	176	1223	59	8735	132	1501	140	2309	53	27
74	4892	148	5415	177	1282	60	8603	132	1361	140	2256	52	26
75	5040	148	5592	177	1342	59	8471	131	1221	140	2204	53	25
76	5188	148	5769	177	1401	59	8340	132	1081	140	2151	53	24
77	5336	148	5946	177	1460	60	8208	132	0941	139	2098	52	23
78	5484	148	6123	177	1520	59	8076	131	0802	140	2046	53	22
79	5632	148	6300	177	1579	59	7945	131	0662	139	1993	53	21
80	0.335780	148	0.356477	177	1.061638	60	2.97814	131	2.80523	140	0.941940	52	**20**
81	5928	148	6654	177	1698	59	7683	132	0383	139	1888	53	19
82	6076	148	6831	178	1757	60	7551	130	0244	139	1835	53	18
83	6224	148	7009	177	1817	59	7421	131	2.80105	139	1782	53	17
84	6372	148	7186	177	1876	60	7290	131	2.79966	138	1729	53	16
85	6520	148	7363	177	1936	60	7159	130	9828	139	1676	53	15
86	6668	148	7540	177	1996	59	7029	131	9689	139	1623	52	14
87	6816	148	7717	177	2055	60	6898	130	9550	138	1571	53	13
88	6964	148	7894	178	2115	60	6768	130	9412	138	1518	53	12
89	7112	148	8072	177	2175	60	6638	130	9274	138	1465	53	11
90	0.337260	147	0.358249	177	1.062235	59	2.96508	130	2.79136	138	0.941412	53	**10**
91	7407	148	8426	177	2294	60	6378	130	8998	138	1359	53	09
92	7555	148	8603	178	2354	60	6248	130	8860	138	1306	53	08
93	7703	148	8781	177	2414	60	6118	130	8722	138	1253	53	07
94	7851	148	8958	177	2474	60	5988	129	8584	137	1200	53	06
95	7999	148	9135	178	2534	60	5859	129	8447	138	1147	54	05
96	8147	148	9313	177	2594	60	5730	130	8309	137	1093	53	04
97	8295	147	9490	177	2654	60	5600	129	8172	137	1040	53	03
98	8442	148	9667	178	2714	60	5471	129	8035	137	0987	53	02
99	8590	148	0.359845	177	2774	60	5342	129	7898	137	0934	53	01
100	0.338738		0.360022		1.062834		2.95213		2.77761		0.940881		**00**
	cos		cotg		cosec		sec		tang		sin		c

	138	**139**	**140**	**141**	**142**	**143**	**144**	**145**	**146**	**147**	**148**	**149**	**150**	**175**	**176**	**177**	**178**	
1	13.8	13.9	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	15.0	17.5	17.6	17.7	17.8	1
2	27.6	27.8	28.0	28.2	28.4	28.6	28.8	29.0	29.2	29.4	29.6	29.8	30.0	35.0	35.2	35.4	35.6	2
3	41.4	41.7	42.0	42.3	42.6	42.9	43.2	43.5	43.8	44.1	44.4	44.7	45.0	52.5	52.8	53.1	53.4	3
4	55.2	55.6	56.0	56.4	56.8	57.2	57.6	58.0	58.4	58.8	59.2	59.6	60.0	70.0	70.4	70.8	71.2	4
5	69.0	69.5	70.0	70.5	71.0	71.5	72.0	72.5	73.0	73.5	74.0	74.5	75.0	87.5	88.0	88.5	89.0	5
6	82.8	83.4	84.0	84.6	85.2	85.8	86.4	87.0	87.6	88.2	88.8	89.4	90.0	105.0	105.6	106.2	106.8	6
7	96.6	97.3	98.0	98.7	99.4	100.1	100.8	101.5	102.2	102.9	103.6	104.3	105.0	122.5	123.2	123.9	124.6	7
8	110.4	111.2	112.0	112.8	113.6	114.4	115.2	116.0	116.8	117.6	118.4	119.2	120.0	140.0	140.8	141.6	142.4	8
9	124.2	125.1	126.0	126.9	127.8	128.7	129.6	130.5	131.4	132.3	133.2	134.1	135.0	157.5	158.4	159.3	160.2	9

78g

22g

c	sin		tang		sec		cosec		cotg		cos		
00	0.338738	148	0.360022	178	1.062834	60	2.95213	128	2.77761	137	0.940881	53	**100**
01	8886	147	0200	177	2894	60	5085	129	7624	137	0828	54	99
02	9033	148	0377	178	2954	60	4956	128	7487	136	0774	53	98
03	9181	148	0555	177	3014	61	4828	129	7351	137	0721	53	97
04	9329	148	0732	178	3075	60	4699	128	7214	136	0668	54	96
05	9477	148	0910	177	3135	60	4571	128	7078	137	0614	53	95
06	9625	147	1087	178	3195	60	4443	128	6941	136	0561	53	94
07	9772	148	1265	177	3255	61	4315	128	6805	136	0508	54	93
08	0.339920	148	1442	178	3316	60	4187	128	6669	136	0454	53	92
09	0.340068	147	1620	178	3376	61	4059	128	6533	135	0401	53	91
10	0.340215	148	0.361798	177	1.063437	60	2.93931	127	2.76398	136	0.940348	54	**90**
11	0363	148	1975	178	3497	61	3804	128	6262	136	0294	53	89
12	0511	148	2153	178	3558	60	3676	127	6126	135	0241	54	88
13	0659	147	2331	177	3618	61	3549	127	5991	135	0187	53	87
14	0806	148	2508	178	3679	60	3422	127	5856	135	0134	54	86
15	0954	148	2686	178	3739	61	3295	127	5721	135	0080	54	85
16	1102	147	2864	178	3800	60	3168	127	5586	135	0.940026	53	84
17	1249	148	3042	177	3860	61	3041	127	5451	135	0.939973	54	83
18	1397	147	3219	178	3921	61	2914	126	5316	135	9919	53	82
19	1544	148	3397	178	3982	61	2788	127	5181	135	9866	54	81
20	0.341692	148	0.363575	178	1.064043	60	2.92661	126	2.75046	134	0.939812	54	**80**
21	1840	147	3753	178	4103	61	2535	127	4912	134	9758	53	79
22	1987	148	3931	178	4164	61	2408	126	4778	135	9705	54	78
23	2135	148	4109	178	4225	61	2282	126	4643	134	9651	54	77
24	2283	147	4287	177	4286	61	2156	126	4509	134	9597	54	76
25	2430	148	4464	178	4347	61	2030	125	4375	134	9543	54	75
26	2578	147	4642	178	4408	61	1905	126	4241	134	9489	53	74
27	2725	148	4820	178	4469	61	1779	126	4107	133	9436	54	73
28	2873	147	4998	178	4530	61	1653	125	3974	134	9382	54	72
29	3020	148	5176	178	4591	61	1528	125	3840	133	9328	54	71
30	0.343168	147	0.365354	178	1.064652	61	2.91403	126	2.73707	134	0.939274	54	**70**
31	3315	148	5532	179	4713	61	1277	125	3573	133	9220	54	69
32	3463	148	5711	178	4774	61	1152	125	3440	133	9166	54	68
33	3611	147	5889	178	4835	62	1027	125	3307	133	9112	54	67
34	3758	148	6067	178	4897	61	0902	124	3174	133	9058	54	66
35	3906	147	6245	178	4958	61	0778	125	3041	132	9004	54	65
36	4053	148	6423	178	5019	62	0653	125	2909	133	8950	54	64
37	4201	147	6601	178	5081	61	0528	124	2776	133	8896	54	63
38	4348	147	6779	179	5142	61	0404	124	2643	132	8842	54	62
39	4495	148	6958	178	5203	62	0280	125	2511	132	8788	54	61
40	0.344643	147	0.367136	178	1.065265	61	2.90155	124	2.72379	133	0.938734	54	**60**
41	4790	148	7314	178	5326	62	2.90031	124	2246	132	8680	54	59
42	4938	147	7492	179	5388	61	2.89907	124	2114	132	8626	55	58
43	5085	148	7671	178	5449	62	9783	123	1982	131	8571	54	57
44	5233	147	7849	178	5511	61	9660	124	1851	132	8517	54	56
45	5380	148	8027	179	5572	62	9536	123	1719	132	8463	54	55
46	5528	147	8206	178	5634	62	9413	124	1587	131	8409	55	54
47	5675	147	8384	179	5696	61	9289	123	1456	132	8354	54	53
48	5822	148	8563	178	5757	62	9166	123	1324	131	8300	54	52
49	5970	147	8741	178	5819	62	9043	123	1193	131	8246	55	51
50	0.346117		0.368919		1.065881		2.88920		2.71062		0.938191		**50**
	cos		cotg		cosec		sec		tang		sin		c

	53	**54**	**55**	**56**	**60**	**61**	**62**	**63**	**64**	**117**	**118**	**119**	**120**	**121**	**122**	**123**	**124**	**125**	
1	5.3	5.4	5.5	5.6	6.0	6.1	6.2	6.3	6.4	11.7	11.8	11.9	12.0	12.1	12.2	12.3	12.4	12.5	1
2	10.6	10.8	11.0	11.2	12.0	12.2	12.4	12.6	12.8	23.4	23.6	23.8	24.0	24.2	24.4	24.6	24.8	25.0	2
3	15.9	16.2	16.5	16.8	18.0	18.3	18.6	18.9	19.2	35.1	35.4	35.7	36.0	36.3	36.6	36.9	37.2	37.5	3
4	21.2	21.6	22.0	22.4	24.0	24.4	24.8	25.2	25.6	46.8	47.2	47.6	48.0	48.4	48.8	49.2	49.6	50.0	4
5	26.5	27.0	27.5	28.0	30.0	30.5	31.0	31.5	32.0	58.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	62.5	5
6	31.8	32.4	33.0	33.6	36.0	36.6	37.2	37.8	38.4	70.2	70.8	71.4	72.0	72.6	73.2	73.8	74.4	75.0	6
7	37.1	37.8	38.5	39.2	42.0	42.7	43.4	44.1	44.8	81.9	82.6	83.3	84.0	84.7	85.4	86.1	86.8	87.5	7
8	42.4	43.2	44.0	44.8	48.0	48.8	49.6	50.4	51.2	93.6	94.4	95.2	96.0	96.8	97.6	98.4	99.2	100.0	8
9	47.7	48.6	49.5	50.4	54.0	54.9	55.8	56.7	57.6	105.3	106.2	107.1	108.0	108.9	109.8	110.7	111.6	112.5	9

77g

22g

c	sin		tang		sec		cosec		cotg		cos		
50	0.346117	147	0.368919	179	1.065881	61	2.88920	123	2.71062	131	0.938191	54	**50**
51	6264	148	9098	178	5942	62	8797	123	0931	131	8137	54	49
52	6412	147	9276	179	6004	62	8674	123	0800	131	8083	55	48
53	6559	147	9455	178	6066	62	8551	123	0669	131	8028	54	47
54	6706	148	9633	179	6128	62	8428	122	0538	130	7974	55	46
55	6854	147	9812	179	6190	62	8306	122	0408	131	7919	54	45
56	7001	147	0.369991	178	6252	62	8184	123	0277	130	7865	55	44
57	7148	148	0.370169	179	6314	62	8061	122	0147	131	7810	54	43
58	7296	147	0348	178	6376	62	7939	122	2.70016	130	7756	55	42
59	7443	147	0526	179	6438	62	7817	122	2.69886	130	7701	55	41
60	0.347590	148	0.370705	179	1.066500	62	2.87695	122	2.69756	130	0.937646	54	**40**
61	7738	147	0884	178	6562	62	7573	122	9626	130	7592	55	39
62	7885	147	1062	179	6624	62	7451	121	9496	129	7537	54	38
63	8032	147	1241	179	6686	63	7330	122	9367	130	7483	55	37
64	8179	148	1420	179	6749	62	7208	121	9237	129	7428	55	36
65	8327	147	1599	178	6811	62	7087	121	9108	130	7373	55	35
66	8474	147	1777	179	6873	63	6966	122	8978	129	7318	54	34
67	8621	147	1956	179	6936	62	6844	121	8849	129	7264	55	33
68	8768	148	2135	179	6998	62	6723	121	8720	129	7209	55	32
69	8916	147	2314	179	7060	63	6602	121	8591	129	7154	55	31
70	0.349063	147	0.372493	179	1.067123	62	2.86481	120	2.68462	129	0.937099	54	**30**
71	9210	147	2672	179	7185	63	6361	121	8333	129	7045	55	29
72	9357	147	2851	179	7248	62	6240	121	8204	129	6990	55	28
73	9504	147	3030	178	7310	63	6119	120	8075	128	6935	55	27
74	9651	148	3208	179	7373	62	5999	120	7947	129	6880	55	26
75	9799	147	3387	179	7435	63	5879	120	7818	128	6825	55	25
76	0.349946	147	3566	179	7498	63	5759	121	7690	128	6770	55	24
77	0.350093	147	3745	179	7561	62	5638	120	7562	128	6715	55	23
78	0240	147	3924	180	7623	63	5518	119	7434	128	6660	55	22
79	0387	147	4104	179	7686	63	5399	120	7306	128	6605	55	21
80	0.350534	147	0.374283	179	1.067749	63	2.85279	120	2.67178	128	0.936550	55	**20**
81	0681	148	4462	179	7812	62	5159	119	7050	128	6495	55	19
82	0829	147	4641	179	7874	63	5040	120	6922	127	6440	55	18
83	0976	147	4820	179	7937	63	4920	119	6795	128	6385	56	17
84	1123	147	4999	179	8000	63	4801	120	6667	127	6329	55	16
85	1270	147	5178	179	8063	63	4681	119	6540	127	6274	55	15
86	1417	147	5357	180	8126	63	4562	119	6413	127	6219	55	14
87	1564	147	5537	179	8189	63	4443	119	6286	127	6164	55	13
88	1711	147	5716	179	8252	63	4324	118	6159	127	6109	56	12
89	1858	147	5895	179	8315	63	4206	119	6032	127	6053	55	11
90	0.352005	147	0.376074	180	1.068378	63	2.84087	119	2.65905	127	0.935998	55	**10**
91	2152	147	6254	179	8441	64	3968	118	5778	127	5943	56	09
92	2299	147	6433	179	8505	63	3850	119	5651	126	5887	55	08
93	2446	147	6612	180	8568	63	3731	118	5525	126	5832	55	07
94	2593	147	6792	179	8631	63	3613	118	5399	127	5777	56	06
95	2740	147	6971	180	8694	64	3495	118	5272	126	5721	55	05
96	2887	147	7151	179	8758	63	3377	118	5146	126	5666	56	04
97	3034	147	7330	180	8821	63	3259	118	5020	126	5610	55	03
98	3181	147	7510	179	8884	64	3141	118	4894	126	5555	55	02
99	3328	147	7689	180	8948	63	3023	117	4768	126	5500	56	01
100	0.353475		0.377869		1.069011		2.82906		2.64642		0.935444		**00**
	cos		cotg		cosec		sec		tang		sin		c

	126	**127**	**128**	**129**	**130**	**131**	**132**	**133**	**134**	**135**	**136**	**137**	**147**	**148**	**177**	**178**	**179**	**180**	
1	12.6	12.7	12.8	12.9	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	14.7	14.8	17.7	17.8	17.9	18.0	1
2	25.2	25.4	25.6	25.8	26.0	26.2	26.4	26.6	26.8	27.0	27.2	27.4	29.4	29.6	35.4	35.6	35.8	36.0	2
3	37.8	38.1	38.4	38.7	39.0	39.3	39.6	39.9	40.2	40.5	40.8	41.1	44.1	44.4	53.1	53.4	53.7	54.0	3
4	50.4	50.8	51.2	51.6	52.0	52.4	52.8	53.2	53.6	54.0	54.4	54.8	58.8	59.2	70.8	71.2	71.6	72.0	4
5	63.0	63.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0	67.5	68.0	68.5	73.5	74.0	88.5	89.0	89.5	90.0	5
6	75.6	76.2	76.8	77.4	78.0	78.6	79.2	79.8	80.4	81.0	81.6	82.2	88.2	88.8	106.2	106.8	107.4	108.0	6
7	88.2	88.9	89.6	90.3	91.0	91.7	92.4	93.1	93.8	94.5	95.2	95.9	102.9	103.6	123.9	124.6	125.3	126.0	7
8	100.8	101.6	102.4	103.2	104.0	104.8	105.6	106.4	107.2	108.0	108.8	109.6	117.6	118.4	141.6	142.4	143.2	144.0	8
9	113.4	114.3	115.2	116.1	117.0	117.9	118.8	119.7	120.6	121.5	122.4	123.3	132.3	133.2	159.3	160.2	161.1	162.0	9

77g

23g

c	sin		tang		sec		cosec		cotg		cos		
00	0.353475	147	0.377869	179	1.069011	64	2.82906	118	2.64642	125	0.935444	56	**100**
01	3622	147	8048	180	9075	63	2788	117	4517	126	5388	55	99
02	3769	147	8228	179	9138	64	2671	118	4391	125	5333	56	98
03	3916	147	8407	180	9202	63	2553	117	4266	126	5277	55	97
04	4063	146	8587	179	9265	64	2436	117	4140	125	5222	56	96
05	4209	147	8766	180	9329	63	2319	117	4015	125	5166	56	95
06	4356	147	8946	180	9392	64	2202	117	3890	125	5110	55	94
07	4503	147	9126	179	9456	64	2085	117	3765	125	5055	56	93
08	4650	147	9305	180	9520	63	1968	117	3640	125	4999	56	92
09	4797	147	9485	180	9583	64	1851	116	3515	125	4943	55	91
10	0.354944	147	0.379665	179	1.069647	64	2.81735	117	2.63390	124	0.934888	56	**90**
11	5091	146	0.379844	180	9711	64	1618	116	3266	125	4832	56	89
12	5237	147	0.380024	180	9775	64	1502	116	3141	124	4776	56	88
13	5384	147	0204	180	9839	64	1386	117	3017	125	4720	56	87
14	5531	147	0384	180	9903	64	1269	116	2892	124	4664	55	86
15	5678	147	0564	179	1.069967	64	1153	116	2768	124	4609	56	85
16	5825	147	0743	180	1.070031	64	1037	116	2644	124	4553	56	84
17	5972	146	0923	180	0095	64	0921	115	2520	124	4497	56	83
18	6118	147	1103	180	0159	64	0806	116	2396	124	4441	56	82
19	6265	147	1283	180	0223	64	0690	116	2272	123	4385	56	81
20	0.356412	147	0.381463	180	1.070287	64	2.80574	115	2.62149	124	0.934329	56	**80**
21	6559	146	1643	180	0351	64	0459	116	2025	123	4273	56	79
22	6705	147	1823	180	0415	64	0343	115	1902	124	4217	56	78
23	6852	147	2003	180	0479	65	0228	115	1778	123	4161	56	77
24	6999	147	2183	180	0544	64	2.80113	115	1655	123	4105	56	76
25	7146	146	2363	180	0608	64	2.79998	115	1532	123	4049	56	75
26	7292	147	2543	180	0672	65	9883	115	1409	123	3993	57	74
27	7439	147	2723	180	0737	64	9768	115	1286	123	3936	56	73
28	7586	146	2903	180	0801	64	9653	114	1163	123	3880	56	72
29	7732	147	3083	180	0865	65	9539	115	1040	123	3824	56	71
30	0.357879	147	0.383263	181	1.070930	64	2.79424	114	2.60917	122	0.933768	56	**70**
31	8026	146	3444	180	0994	65	9310	115	0795	123	3712	57	69
32	8172	147	3624	180	1059	64	9195	114	0672	122	3655	56	68
33	8319	147	3804	180	1123	65	9081	114	0550	123	3599	56	67
34	8466	146	3984	180	1188	65	8967	114	0427	122	3543	56	66
35	8612	147	4164	181	1253	64	8853	114	0305	122	3487	57	65
36	8759	147	4345	180	1317	65	8739	114	0183	122	3430	56	64
37	8906	146	4525	180	1382	65	8625	114	2.60061	122	3374	57	63
38	9052	147	4705	181	1447	65	8511	114	2.59939	122	3317	56	62
39	9199	146	4886	180	1512	64	8397	113	9817	121	3261	56	61
40	0.359345	147	0.385066	180	1.071576	65	2.78284	114	2.59696	122	0.933205	57	**60**
41	9492	147	5246	181	1641	65	8170	113	9574	121	3148	56	59
42	9639	146	5427	180	1706	65	8057	113	9453	122	3092	57	58
43	9785	147	5607	181	1771	65	7944	113	9331	121	3035	56	57
44	0.359932	146	5788	180	1836	65	7831	114	9210	121	2979	57	56
45	0.360078	147	5968	181	1901	65	7717	113	9089	121	2922	56	55
46	0225	146	6149	180	1966	65	7604	112	8968	121	2866	57	54
47	0371	147	6329	181	2031	65	7492	113	8847	121	2809	57	53
48	0518	146	6510	180	2096	65	7379	113	8726	121	2752	56	52
49	0664	147	6690	181	2161	65	7266	112	8605	121	2696	57	51
50	0.360811		0.386871		1.072226		2.77154		2.58484		0.932639		**50**
	cos		cotg		cosec		sec		tang		sin		c

	55	**56**	**57**	**58**	**63**	**64**	**65**	**66**	**67**	**108**	**109**	**110**	**111**	**112**	**113**	**114**	**115**	
1	5.5	5.6	5.7	5.8	6.3	6.4	6.5	6.6	6.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	1
2	11.0	11.2	11.4	11.6	12.6	12.8	13.0	13.2	13.4	21.6	21.8	22.0	22.2	22.4	22.6	22.8	23.0	2
3	16.5	16.8	17.1	17.4	18.9	19.2	19.5	19.8	20.1	32.4	32.7	33.0	33.3	33.6	33.9	34.2	34.5	3
4	22.0	22.4	22.8	23.2	25.2	25.6	26.0	26.4	26.8	43.2	43.6	44.0	44.4	44.8	45.2	45.6	46.0	4
5	27.5	28.0	28.5	29.0	31.5	32.0	32.5	33.0	33.5	54.0	54.5	55.0	55.5	56.0	56.5	57.0	57.5	5
6	33.0	33.6	34.2	34.8	37.8	38.4	39.0	39.6	40.2	64.8	65.4	66.0	66.6	67.2	67.8	68.4	69.0	6
7	38.5	39.2	39.9	40.6	44.1	44.8	45.5	46.2	46.9	75.6	76.3	77.0	77.7	78.4	79.1	79.8	80.5	7
8	44.0	44.8	45.6	46.4	50.4	51.2	52.0	52.8	53.6	86.4	87.2	88.0	88.8	89.6	90.4	91.2	92.0	8
9	49.5	50.4	51.3	52.2	56.7	57.6	58.5	59.4	60.3	97.2	98.1	99.0	99.9	100.8	101.7	102.6	103.5	9

76g

23g

c	sin		tang		sec		cosec		cotg		cos		
50	0.360811	146	0.386871	180	1.072226	65	2.77154	113	2.58484	120	0.932639	57	**50**
51	0957	147	7051	181	2291	66	7041	112	8364	121	2582	56	49
52	1104	146	7232	181	2357	65	6929	113	8243	120	2526	57	48
53	1250	147	7413	180	2422	65	6816	112	8123	121	2469	57	47
54	1397	146	7593	181	2487	65	6704	112	8002	120	2412	57	46
55	1543	147	7774	181	2552	66	6592	112	7882	120	2355	56	45
56	1690	146	7955	180	2618	65	6480	112	7762	120	2299	57	44
57	1836	147	8135	181	2683	66	6368	112	7642	120	2242	57	43
58	1983	146	8316	181	2749	65	6256	111	7522	120	2185	57	42
59	2129	146	8497	181	2814	66	6145	112	7402	120	2128	57	41
60	0.362275	147	0.388678	181	1.072880	65	2.76033	111	2.57282	119	0.932071	57	**40**
61	2422	146	8859	180	2945	66	5922	112	7163	120	2014	57	39
62	2568	147	9039	181	3011	65	5810	111	7043	119	1957	57	38
63	2715	146	9220	181	3076	66	5699	111	6924	119	1900	57	37
64	2861	146	9401	181	3142	65	5588	111	6805	120	1843	57	36
65	3007	147	9582	181	3207	66	5477	111	6685	119	1786	57	35
66	3154	146	9763	181	3273	66	5366	111	6566	119	1729	57	34
67	3300	146	0.389944	181	3339	66	5255	111	6447	119	1672	57	33
68	3446	147	0.390125	181	3405	65	5144	111	6328	119	1615	57	32
69	3593	146	0306	181	3470	66	5033	111	6209	119	1558	57	31
70	0.363739	146	0.390487	181	1.073536	66	2.74922	110	2.56090	118	0.931501	57	**30**
71	3885	147	0668	181	3602	66	4812	111	5972	119	1444	57	29
72	4032	146	0849	181	3668	66	4701	110	5853	118	1387	58	28
73	4178	146	1030	181	3734	66	4591	110	5735	119	1329	57	27
74	4324	146	1211	181	3800	66	4481	110	5616	118	1272	57	26
75	4470	147	1392	182	3866	66	4371	110	5498	118	1215	57	25
76	4617	146	1574	181	3932	66	4261	110	5380	118	1158	58	24
77	4763	146	1755	181	3998	66	4151	110	5262	118	1100	57	23
78	4909	147	1936	181	4064	66	4041	110	5144	118	1043	57	22
79	5056	146	2117	181	4130	66	3931	110	5026	118	0986	58	21
80	0.365202	146	0.392298	182	1.074196	67	2.73821	109	2.54908	118	0.930928	57	**20**
81	5348	146	2480	181	4263	66	3712	110	4790	117	0871	57	19
82	5494	146	2661	181	4329	66	3602	109	4673	118	0814	58	18
83	5640	147	2842	182	4395	67	3493	110	4555	117	0756	57	17
84	5787	146	3024	181	4462	66	3383	109	4438	118	0699	58	16
85	5933	146	3205	181	4528	66	3274	109	4320	117	0641	57	15
86	6079	146	3386	182	4594	67	3165	109	4203	117	0584	58	14
87	6225	146	3568	181	4661	66	3056	109	4086	117	0526	57	13
88	6371	146	3749	182	4727	67	2947	109	3969	117	0469	58	12
89	6517	147	3931	181	4794	66	2838	108	3852	117	0411	57	11
90	0.366664	146	0.394112	182	1.074860	67	2.72730	109	2.53735	117	0.930354	58	**10**
91	6810	146	4294	181	4927	66	2621	109	3618	117	0296	58	09
92	6956	146	4475	182	4993	67	2512	108	3501	116	0238	57	08
93	7102	146	4657	181	5060	67	2404	109	3385	117	0181	58	07
94	7248	146	4838	182	5127	66	2295	108	3268	116	0123	58	06
95	7394	146	5020	181	5193	67	2187	108	3152	116	0065	57	05
96	7540	146	5201	182	5260	67	2079	108	3036	117	0.930008	58	04
97	7686	146	5383	182	5327	67	1971	108	2919	116	0.929950	58	03
98	7832	146	5565	181	5394	66	1863	108	2803	116	9892	58	02
99	7978	147	5746	182	5460	67	1755	108	2687	116	9834	58	01
100	0.368125		0.395928		1.075527		2.71647		2.52571		0.929776		**00**
	cos		cotg		cosec		sec		tang		sin		c

	116	**117**	**118**	**119**	**120**	**121**	**122**	**123**	**124**	**125**	**126**	**146**	**147**	**179**	**180**	**181**	**182**	
1	11.6	11.7	11.8	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	14.6	14.7	17.9	18.0	18.1	18.2	1
2	23.2	23.4	23.6	23.8	24.0	24.2	24.4	24.6	24.8	25.0	25.2	29.2	29.4	35.8	36.0	36.2	36.4	2
3	34.8	35.1	35.4	35.7	36.0	36.3	36.6	36.9	37.2	37.5	37.8	43.8	44.1	53.7	54.0	54.3	54.6	3
4	46.4	46.8	47.2	47.6	48.0	48.4	48.8	49.2	49.6	50.0	50.4	58.4	58.8	71.6	72.0	72.4	72.8	4
5	58.0	58.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	62.5	63.0	73.0	73.5	89.5	90.0	90.5	91.0	5
6	69.6	70.2	70.8	71.4	72.0	72.6	73.2	73.8	74.4	75.0	75.6	87.6	88.2	107.4	108.0	108.6	109.2	6
7	81.2	81.9	82.6	83.3	84.0	84.7	85.4	86.1	86.8	87.5	88.2	102.2	102.9	125.3	126.0	126.7	127.4	7
8	92.8	93.6	94.4	95.2	96.0	96.8	97.6	98.4	99.2	100.0	100.8	116.8	117.6	143.2	144.0	144.8	145.6	8
9	104.4	105.3	106.2	107.1	108.0	108.9	109.8	110.7	111.6	112.5	113.4	131.4	132.3	161.1	162.0	162.9	163.8	9

76g

24g

c	sin		tang		sec		cosec		cotg		cos		
00	0.368125	146	0.395928	182	1.075527	67	2.71647	108	2.52571	116	0.929776	57	**100**
01	8271	146	6110	181	5594	67	1539	107	2455	115	9719	58	99
02	8417	146	6291	182	5661	67	1432	108	2340	116	9661	58	98
03	8563	146	6473	182	5728	67	1324	107	2224	116	9603	58	97
04	8709	146	6655	182	5795	67	1217	108	2108	115	9545	58	96
05	8855	146	6837	182	5862	67	1109	107	1993	116	9487	58	95
06	9001	146	7019	181	5929	67	1002	107	1877	115	9429	58	94
07	9147	146	7200	182	5996	68	0895	107	1762	115	9371	58	93
08	9293	146	7382	182	6064	67	0788	107	1647	115	9313	58	92
09	9439	146	7564	182	6131	67	0681	107	1532	115	9255	58	91
10	0.369585	146	0.397746	182	1.076198	67	2.70574	107	2.51417	115	0.929197	58	**90**
11	9731	145	7928	182	6265	67	0467	106	1302	115	9139	58	89
12	0.369876	146	8110	182	6332	68	0361	107	1187	115	9081	58	88
13	0.370022	146	8292	182	6400	67	0254	107	1072	115	9023	58	87
14	0168	146	8474	182	6467	68	0147	106	0957	114	8965	58	86
15	0314	146	8656	182	6535	67	2.70041	106	0843	115	8907	59	85
16	0460	146	8838	182	6602	67	2.69935	107	0728	114	8848	58	84
17	0606	146	9020	182	6669	68	9828	106	0614	114	8790	58	83
18	0752	146	9202	182	6737	68	9722	106	0500	115	8732	58	82
19	0898	146	9384	183	6805	67	9616	106	0385	114	8674	59	81
20	0.371044	146	0.399567	182	1.076872	68	2.69510	106	2.50271	114	0.928615	58	**80**
21	1190	145	9749	182	6940	67	9404	106	0157	114	8557	58	79
22	1335	146	0.399931	182	7007	68	9298	105	2.50043	114	8499	59	78
23	1481	146	0.400113	182	7075	68	9193	106	2.49929	114	8440	58	77
24	1627	146	0295	183	7143	67	9087	106	9815	113	8382	58	76
25	1773	146	0478	182	7210	68	8981	105	9702	114	8324	59	75
26	1919	146	0660	182	7278	68	8876	105	9588	113	8265	58	74
27	2065	145	0842	183	7346	68	8771	106	9475	114	8207	59	73
28	2210	146	1025	182	7414	68	8665	105	9361	113	8148	58	72
29	2356	146	1207	182	7482	68	8560	105	9248	113	8090	59	71
30	0.372502	146	0.401389	183	1.077550	68	2.68455	105	2.49135	113	0.928031	58	**70**
31	2648	145	1572	182	7618	68	8350	105	9022	114	7973	59	69
32	2793	146	1754	183	7686	68	8245	105	8908	113	7914	58	68
33	2939	146	1937	182	7754	68	8140	105	8795	112	7856	59	67
34	3085	146	2119	183	7822	68	8035	104	8683	113	7797	58	66
35	3231	145	2302	182	7890	68	7931	105	8570	113	7739	59	65
36	3376	146	2484	183	7958	68	7826	104	8457	113	7680	59	64
37	3522	146	2667	182	8026	68	7722	105	8344	112	7621	58	63
38	3668	146	2849	183	8094	69	7617	104	8232	113	7563	59	62
39	3814	145	3032	182	8163	68	7513	104	8119	112	7504	59	61
40	0.373959	146	0.403214	183	1.078231	68	2.67409	104	2.48007	112	0.927445	59	**60**
41	4105	146	3397	183	8299	69	7305	104	7895	112	7386	58	59
42	4251	145	3580	182	8368	68	7201	104	7783	113	7328	59	58
43	4396	146	3762	183	8436	68	7097	104	7670	112	7269	59	57
44	4542	146	3945	183	8504	69	6993	104	7558	111	7210	59	56
45	4688	145	4128	182	8573	68	6889	104	7447	112	7151	59	55
46	4833	146	4310	183	8641	69	6785	103	7335	112	7092	59	54
47	4979	145	4493	183	8710	68	6682	104	7223	112	7033	59	53
48	5124	146	4676	183	8778	69	6578	103	7111	111	6974	58	52
49	5270	146	4859	183	8847	69	6475	104	7000	112	6916	59	51
50	0.375416		0.405042		1.078916		2.66371		2.46888		0.926857		**50**
	cos		cotg		cosec		sec		tang		sin		c

	57	**58**	**59**	**60**	**67**	**68**	**69**	**70**	**71**	**99**	**100**	**101**	**102**	**103**	**104**	**105**	**106**	
1	5.7	5.8	5.9	6.0	6.7	6.8	6.9	7.0	7.1	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	1
2	11.4	11.6	11.8	12.0	13.4	13.6	13.8	14.0	14.2	19.8	20.0	20.2	20.4	20.6	20.8	21.0	21.2	2
3	17.1	17.4	17.7	18.0	20.1	20.4	20.7	21.0	21.3	29.7	30.0	30.3	30.6	30.9	31.2	31.5	31.8	3
4	22.8	23.2	23.6	24.0	26.8	27.2	27.6	28.0	28.4	39.6	40.0	40.4	40.8	41.2	41.6	42.0	42.4	4
5	28.5	29.0	29.5	30.0	33.5	34.0	34.5	35.0	35.5	49.5	50.0	50.5	51.0	51.5	52.0	52.5	53.0	5
6	34.2	34.8	35.4	36.0	40.2	40.8	41.4	42.0	42.6	59.4	60.0	60.6	61.2	61.8	62.4	63.0	63.6	6
7	39.9	40.6	41.3	42.0	46.9	47.6	48.3	49.0	49.7	69.3	70.0	70.7	71.4	72.1	72.8	73.5	74.2	7
8	45.6	46.4	47.2	48.0	53.6	54.4	55.2	56.0	56.8	79.2	80.0	80.8	81.6	82.4	83.2	84.0	84.8	8
9	51.3	52.2	53.1	54.0	60.3	61.2	62.1	63.0	63.9	89.1	90.0	90.9	91.8	92.7	93.6	94.5	95.4	9

75g

24g

c	sin		tang		sec		cosec		cotg		cos		
50	0.375416	145	0.405042	183	1.078916	68	2.66371	103	2.46888	111	0.926857	59	**50**
51	5561	146	5225	182	8984	69	6268	103	6777	112	6798	59	49
52	5707	145	5407	183	9053	69	6165	103	6665	111	6739	59	48
53	5852	146	5590	183	9122	68	6062	103	6554	111	6680	59	47
54	5998	145	5773	183	9190	69	5959	103	6443	111	6621	60	46
55	6143	146	5956	183	9259	69	5856	103	6332	111	6561	59	45
56	6289	145	6139	183	9328	69	5753	103	6221	111	6502	59	44
57	6434	146	6322	183	9397	69	5650	102	6110	111	6443	59	43
58	6580	146	6505	183	9466	69	5548	103	5999	110	6384	59	42
59	6726	145	6688	183	9535	69	5445	102	5889	111	6325	59	41
60	0.376871	146	0.406871	183	1.079604	69	2.65343	103	2.45778	111	0.926266	59	**40**
61	7017	145	7054	184	9673	69	5240	102	5667	110	6207	60	39
62	7162	145	7238	183	9742	69	5138	102	5557	110	6147	59	38
63	7307	146	7421	183	9811	69	5036	102	5447	111	6088	59	37
64	7453	145	7604	183	9880	69	4934	102	5336	110	6029	60	36
65	7598	146	7787	183	1.079949	69	4832	102	5226	110	5969	59	35
66	7744	145	7970	184	1.080018	70	4730	102	5116	110	5910	59	34
67	7889	146	8154	183	0088	69	4628	102	5006	110	5851	60	33
68	8035	145	8337	183	0157	69	4526	102	4896	110	5791	59	32
69	8180	146	8520	183	0226	70	4424	101	4786	110	5732	59	31
70	0.378326	145	0.408703	184	1.080296	69	2.64323	102	2.44676	109	0.925673	60	**30**
71	8471	145	8887	183	0365	69	4221	101	4567	110	5613	59	29
72	8616	146	9070	183	0434	70	4120	102	4457	110	5554	60	28
73	8762	145	9253	184	0504	69	4018	101	4347	109	5494	59	27
74	8907	145	9437	183	0573	70	3917	101	4238	109	5435	60	26
75	9052	146	9620	184	0643	69	3816	101	4129	110	5375	59	25
76	9198	145	9804	183	0712	70	3715	101	4019	109	5316	60	24
77	9343	145	0.409987	184	0782	70	3614	101	3910	109	5256	60	23
78	9488	146	0.410171	183	0852	69	3513	101	3801	109	5196	59	22
79	9634	145	0354	184	0921	70	3412	101	3692	109	5137	60	21
80	0.379779	145	0.410538	183	1.080991	70	2.63311	101	2.43583	109	0.925077	59	**20**
81	0.379924	146	0721	184	1061	69	3210	100	3474	109	5018	60	19
82	0.380070	145	0905	183	1130	70	3110	101	3365	108	4958	60	18
83	0215	145	1088	184	1200	70	3009	100	3257	109	4898	60	17
84	0360	146	1272	184	1270	70	2909	101	3148	109	4838	59	16
85	0506	145	1456	183	1340	70	2808	100	3039	108	4779	60	15
86	0651	145	1639	184	1410	70	2708	100	2931	108	4719	60	14
87	0796	145	1823	184	1480	70	2608	100	2823	109	4659	60	13
88	0941	146	2007	184	1550	70	2508	100	2714	108	4599	60	12
89	1087	145	2191	183	1620	70	2408	100	2606	108	4539	59	11
90	0.381232	145	0.412374	184	1.081690	70	2.62308	100	2.42498	108	0.924480	60	**10**
91	1377	145	2558	184	1760	70	2208	100	2390	108	4420	60	09
92	1522	145	2742	184	1830	70	2108	100	2282	108	4360	60	08
93	1667	146	2926	184	1900	70	2008	99	2174	108	4300	60	07
94	1813	145	3110	184	1970	71	1909	100	2066	107	4240	60	06
95	1958	145	3294	184	2041	70	1809	99	1959	108	4180	60	05
96	2103	145	3478	184	2111	70	1710	100	1851	107	4120	60	04
97	2248	145	3662	184	2181	70	1610	99	1744	108	4060	60	03
98	2393	145	3846	184	2251	71	1511	99	1636	107	4000	60	02
99	2538	145	4030	184	2322	70	1412	99	1529	108	3940	60	01
100	0.382683		0.414214		1.082392		2.61313		2.41421		0.923880		**00**
	cos		cotg		cosec		sec		tang		sin		c

	107	**108**	**109**	**110**	**111**	**112**	**113**	**114**	**115**	**116**	**145**	**146**	**181**	**182**	**183**	**184**	
1	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.6	14.5	14.6	18.1	18.2	18.3	18.4	1
2	21.4	21.6	21.8	22.0	22.2	22.4	22.6	22.8	23.0	23.2	29.0	29.2	36.2	36.4	36.6	36.8	2
3	32.1	32.4	32.7	33.0	33.3	33.6	33.9	34.2	34.5	34.8	43.5	43.8	54.3	54.6	54.9	55.2	3
4	42.8	43.2	43.6	44.0	44.4	44.8	45.2	45.6	46.0	46.4	58.0	58.4	72.4	72.8	73.2	73.6	4
5	53.5	54.0	54.5	55.0	55.5	56.0	56.5	57.0	57.5	58.0	72.5	73.0	90.5	91.0	91.5	92.0	5
6	64.2	64.8	65.4	66.0	66.6	67.2	67.8	68.4	69.0	69.6	87.0	87.6	108.6	109.2	109.8	110.4	6
7	74.9	75.6	76.3	77.0	77.7	78.4	79.1	79.8	80.5	81.2	101.5	102.2	126.7	127.4	128.1	128.8	7
8	85.6	86.4	87.2	88.0	88.8	89.6	90.4	91.2	92.0	92.8	116.0	116.8	144.8	145.6	146.4	147.2	8
9	96.3	97.2	98.1	99.0	99.9	100.8	101.7	102.6	103.5	104.4	130.5	131.4	162.9	163.8	164.7	165.6	9

75g

25g

c	sin		tang		sec		cosec		cotg		cos		
00	0.382683	146	0.414214	184	1.082392	71	2.61313	99	2.41421	107	0.923880	61	**100**
01	2829	145	4398	184	2463	70	1214	99	1314	107	3819	60	99
02	2974	145	4582	184	2533	71	1115	99	1207	107	3759	60	98
03	3119	145	4766	184	2604	70	1016	99	1100	107	3699	60	97
04	3264	145	4950	184	2674	71	0917	99	0993	107	3639	60	96
05	3409	145	5134	184	2745	70	0818	99	0886	107	3579	61	95
06	3554	145	5318	184	2815	71	0719	98	0779	106	3518	60	94
07	3699	145	5502	185	2886	71	0621	99	0673	107	3458	60	93
08	3844	145	5687	184	2957	70	0522	98	0566	107	3398	60	92
09	3989	145	5871	184	3027	71	0424	98	0459	106	3338	61	91
10	0.384134	145	0.416055	184	1.083098	71	2.60326	99	2.40353	107	0.923277	60	**90**
11	4279	145	6239	185	3169	71	0227	98	0246	106	3217	60	89
12	4424	145	6424	184	3240	71	0129	98	0140	106	3157	61	88
13	4569	145	6608	184	3311	71	2.60031	98	2.40034	106	3096	60	87
14	4714	145	6792	185	3382	71	2.59933	98	2.39928	106	3036	61	86
15	4859	145	6977	184	3453	71	9835	98	9822	106	2975	60	85
16	5004	145	7161	185	3524	71	9737	97	9716	106	2915	61	84
17	5149	145	7346	184	3595	71	9640	98	9610	106	2854	60	83
18	5294	145	7530	184	3666	71	9542	98	9504	106	2794	61	82
19	5439	145	7714	185	3737	71	9444	97	9398	106	2733	60	81
20	0.385584	145	0.417899	184	1.083808	71	2.59347	98	2.39292	105	0.922673	61	**80**
21	5729	145	8083	185	3879	71	9249	97	9187	106	2612	60	79
22	5874	145	8268	185	3950	71	9152	97	9081	105	2552	61	78
23	6019	145	8453	184	4021	72	9055	97	8976	106	2491	61	77
24	6164	145	8637	185	4093	71	8958	98	8870	105	2430	60	76
25	6309	144	8822	184	4164	71	8860	97	8765	105	2370	61	75
26	6453	145	9006	185	4235	72	8763	97	8660	105	2309	61	74
27	6598	145	9191	185	4307	71	8666	96	8555	105	2248	61	73
28	6743	145	9376	185	4378	72	8570	97	8450	105	2187	60	72
29	6888	145	9561	184	4450	71	8473	97	8345	105	2127	61	71
30	0.387033	145	0.419745	185	1.084521	72	2.58376	97	2.38240	105	0.922066	61	**70**
31	7178	145	0.419930	185	4593	71	8279	96	8135	105	2005	61	69
32	7323	144	0.420115	185	4664	72	8183	97	8030	105	1944	61	68
33	7467	145	0300	185	4736	71	8086	96	7925	104	1883	60	67
34	7612	145	0485	184	4807	72	7990	96	7821	105	1823	61	66
35	7757	145	0669	185	4879	72	7894	97	7716	104	1762	61	65
36	7902	144	0854	185	4951	72	7797	96	7612	104	1701	61	64
37	8046	145	1039	185	5023	71	7701	96	7508	105	1640	61	63
38	8191	145	1224	185	5094	72	7605	96	7403	104	1579	61	62
39	8336	145	1409	185	5166	72	7509	96	7299	104	1518	61	61
40	0.388481	144	0.421594	185	1.085238	72	2.57413	96	2.37195	104	0.921457	61	**60**
41	8625	145	1779	185	5310	72	7317	96	7091	104	1396	61	59
42	8770	145	1964	185	5382	72	7221	95	6987	104	1335	61	58
43	8915	145	2149	185	5454	72	7126	96	6883	104	1274	61	57
44	9060	144	2334	185	5526	72	7030	96	6779	103	1213	62	56
45	9204	145	2519	186	5598	72	6934	95	6676	104	1151	61	55
46	9349	145	2705	185	5670	72	6839	95	6572	104	1090	61	54
47	9494	144	2890	185	5742	72	6744	96	6468	103	1029	61	53
48	9638	145	3075	185	5814	72	6648	95	6365	104	0968	61	52
49	9783	145	3260	185	5886	73	6553	95	6261	103	0907	62	51
50	0.389928		0.423445		1.085959		2.56458		2.36158		0.920845		**50**
	cos		cotg		cosec		sec		tang		sin		c

	60	**61**	**62**	**63**	**70**	**71**	**72**	**73**	**74**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	
1	6.0	6.1	6.2	6.3	7.0	7.1	7.2	7.3	7.4	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	1
2	12.0	12.2	12.4	12.6	14.0	14.2	14.4	14.6	14.8	18.2	18.4	18.6	18.8	19.0	19.2	19.4	19.6	2
3	18.0	18.3	18.6	18.9	21.0	21.3	21.6	21.9	22.2	27.3	27.6	27.9	28.2	28.5	28.8	29.1	29.4	3
4	24.0	24.4	24.8	25.2	28.0	28.4	28.8	29.2	29.6	36.4	36.8	37.2	37.6	38.0	38.4	38.8	39.2	4
5	30.0	30.5	31.0	31.5	35.0	35.5	36.0	36.5	37.0	45.5	46.0	46.5	47.0	47.5	48.0	48.5	49.0	5
6	36.0	36.6	37.2	37.8	42.0	42.6	43.2	43.8	44.4	54.6	55.2	55.8	56.4	57.0	57.6	58.2	58.8	6
7	42.0	42.7	43.4	44.1	49.0	49.7	50.4	51.1	51.8	63.7	64.4	65.1	65.8	66.5	67.2	67.9	68.6	7
8	48.0	48.8	49.6	50.4	56.0	56.8	57.6	58.4	59.2	72.8	73.6	74.4	75.2	76.0	76.8	77.6	78.4	8
9	54.0	54.9	55.8	56.7	63.0	63.9	64.8	65.7	66.6	81.9	82.8	83.7	84.6	85.5	86.4	87.3	88.2	9

74g

25g

c	sin		tang		sec		cosec		cotg		cos		
50	0.389928	144	0.423445	186	1.085959	72	2.56458	95	2.36158	103	0.920845	61	**50**
51	0.390072	145	3631	185	6031	72	6363	95	6055	103	0784	61	49
52	0217	145	3816	185	6103	72	6268	95	5952	104	0723	61	48
53	0362	144	4001	185	6175	73	6173	95	5848	103	0662	62	47
54	0506	145	4186	186	6248	72	6078	95	5745	103	0600	61	46
55	0651	144	4372	185	6320	73	5983	95	5642	102	0539	61	45
56	0795	145	4557	186	6393	72	5888	94	5540	103	0478	62	44
57	0940	145	4743	185	6465	73	5794	95	5437	103	0416	61	43
58	1085	144	4928	186	6538	72	5699	94	5334	103	0355	62	42
59	1229	145	5114	185	6610	73	5605	95	5231	102	0293	61	41
60	0.391374	144	0.425299	185	1.086683	72	2.55510	94	2.35129	103	0.920232	62	**40**
61	1518	145	5484	186	6755	73	5416	94	5026	102	0170	61	39
62	1663	144	5670	186	6828	73	5322	94	4924	103	0109	62	38
63	1807	145	5856	185	6901	72	5228	95	4821	102	0.920047	61	37
64	1952	144	6041	186	6973	73	5133	94	4719	102	0.919986	62	36
65	2096	145	6227	185	7046	73	5039	94	4617	102	9924	61	35
66	2241	144	6412	186	7119	73	4945	93	4515	102	9863	62	34
67	2385	145	6598	186	7192	73	4852	94	4413	102	9801	62	33
68	2530	144	6784	185	7265	73	4758	94	4311	102	9739	61	32
69	2674	145	6969	186	7338	72	4664	94	4209	102	9678	62	31
70	0.392819	144	0.427155	186	1.087410	73	2.54570	93	2.34107	102	0.919616	62	**30**
71	2963	145	7341	186	7483	73	4477	94	4005	101	9554	62	29
72	3108	144	7527	185	7556	74	4383	93	3904	102	9492	61	28
73	3252	144	7712	186	7630	73	4290	93	3802	102	9431	62	27
74	3396	145	7898	186	7703	73	4197	94	3700	101	9369	62	26
75	3541	144	8084	186	7776	73	4103	93	3599	101	9307	62	25
76	3685	145	8270	186	7849	73	4010	93	3498	102	9245	62	24
77	3830	144	8456	186	7922	73	3917	93	3396	101	9183	61	23
78	3974	144	8642	186	7995	74	3824	93	3295	101	9122	62	22
79	4118	145	8828	186	8069	73	3731	93	3194	101	9060	62	21
80	0.394263	144	0.429014	186	1.088142	73	2.53638	93	2.33093	101	0.918998	62	**20**
81	4407	144	9200	186	8215	74	3545	93	2992	101	8936	62	19
82	4551	145	9386	186	8289	73	3452	92	2891	101	8874	62	18
83	4696	144	9572	186	8362	74	3360	93	2790	101	8812	62	17
84	4840	144	9758	186	8436	73	3267	92	2689	101	8750	62	16
85	4984	145	0.429944	186	8509	74	3175	93	2588	100	8688	62	15
86	5129	144	0.430130	186	8583	73	3082	92	2488	101	8626	62	14
87	5273	144	0316	187	8656	74	2990	93	2387	100	8564	62	13
88	5417	145	0503	186	8730	73	2897	92	2287	101	8502	63	12
89	5562	144	0689	186	8803	74	2805	92	2186	100	8439	62	11
90	0.395706	144	0.430875	186	1.088877	74	2.52713	92	2.32086	100	0.918377	62	**10**
91	5850	144	1061	186	8951	74	2621	92	1986	101	8315	62	09
92	5994	145	1247	187	9025	73	2529	92	1885	100	8253	62	08
93	6139	144	1434	186	9098	74	2437	92	1785	100	8191	62	07
94	6283	144	1620	186	9172	74	2345	92	1685	100	8129	63	06
95	6427	144	1806	187	9246	74	2253	91	1585	100	8066	62	05
96	6571	144	1993	186	9320	74	2162	92	1485	100	8004	62	04
97	6715	145	2179	187	9394	74	2070	92	1385	99	7942	63	03
98	6860	144	2366	186	9468	74	1978	91	1286	100	7879	62	02
99	7004	144	2552	187	9542	74	1887	92	1186	100	7817	62	01
100	0.397148		0.432739		1.089616		2.51795		2.31086		0.917755		**00**
	cos		cotg		cosec		sec		tang		sin		c

	99	**100**	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**144**	**145**	**146**	**184**	**185**	**186**	**187**	
1	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	14.4	14.5	14.6	18.4	18.5	18.6	18.7	1
2	19.8	20.0	20.2	20.4	20.6	20.8	21.0	21.2	21.4	28.8	29.0	29.2	36.8	37.0	37.2	37.4	2
3	29.7	30.0	30.3	30.6	30.9	31.2	31.5	31.8	32.1	43.2	43.5	43.8	55.2	55.5	55.8	56.1	3
4	39.6	40.0	40.4	40.8	41.2	41.6	42.0	42.4	42.8	57.6	58.0	58.4	73.6	74.0	74.4	74.8	4
5	49.5	50.0	50.5	51.0	51.5	52.0	52.5	53.0	53.5	72.0	72.5	73.0	92.0	92.5	93.0	93.5	5
6	59.4	60.0	60.6	61.2	61.8	62.4	63.0	63.6	64.2	86.4	87.0	87.6	110.4	111.0	111.6	112.2	6
7	69.3	70.0	70.7	71.4	72.1	72.8	73.5	74.2	74.9	100.8	101.5	102.2	128.8	129.5	130.2	130.9	7
8	79.2	80.0	80.8	81.6	82.4	83.2	84.0	84.8	85.6	115.2	116.0	116.8	147.2	148.0	148.8	149.6	8
9	89.1	90.0	90.9	91.8	92.7	93.6	94.5	95.4	96.3	129.6	130.5	131.4	165.6	166.5	167.4	168.3	9

74g

26g

c	sin		tang		sec		cosec		cotg		cos		
00	0.397148	144	0.432739	186	1.089616	74	2.51795	91	2.31086	99	0.917755	63	**100**
01	7292	144	2925	187	9690	74	1704	91	0987	100	7692	62	99
02	7436	144	3112	186	9764	74	1613	92	0887	99	7630	63	98
03	7580	144	3298	187	9838	74	1521	91	0788	99	7567	62	97
04	7724	145	3485	186	9912	75	1430	91	0689	100	7505	63	96
05	7869	144	3671	187	1.089987	74	1339	91	0589	99	7442	62	95
06	8013	144	3858	187	1.090061	74	1248	91	0490	99	7380	63	94
07	8157	144	4045	186	0135	75	1157	91	0391	99	7317	62	93
08	8301	144	4231	187	0210	74	1066	90	0292	99	7255	63	92
09	8445	144	4418	187	0284	74	0976	91	0193	99	7192	62	91
10	0.398589	144	0.434605	187	1.090358	75	2.50885	91	2.30094	99	0.917130	63	**90**
11	8733	144	4792	186	0433	74	0794	90	2.29995	99	7067	63	89
12	8877	144	4978	187	0507	75	0704	91	9896	98	7004	62	88
13	9021	144	5165	187	0582	74	0613	90	9798	99	6942	63	87
14	9165	144	5352	187	0656	75	0523	90	9699	98	6879	63	86
15	9309	144	5539	187	0731	75	0433	91	9601	99	6816	62	85
16	9453	144	5726	187	0806	74	0342	90	9502	98	6754	63	84
17	9597	144	5913	187	0880	75	0252	90	9404	99	6691	63	83
18	9741	144	6100	187	0955	75	0162	90	9305	98	6628	63	82
19	0.399885	144	6287	187	1030	75	2.50072	90	9207	98	6565	63	81
20	0.400029	144	0.436474	187	1.091105	74	2.49982	90	2.29109	98	0.916502	62	**80**
21	0173	144	6661	187	1179	75	9892	90	9011	98	6440	63	79
22	0317	144	6848	187	1254	75	9802	90	8913	98	6377	63	78
23	0461	144	7035	187	1329	75	9712	90	8815	98	6314	63	77
24	0605	144	7222	187	1404	75	9622	89	8717	98	6251	63	76
25	0749	144	7409	187	1479	75	9533	90	8619	98	6188	63	75
26	0893	144	7596	187	1554	75	9443	89	8521	97	6125	63	74
27	1037	144	7783	187	1629	75	9354	90	8424	98	6062	63	73
28	1181	143	7970	188	1704	75	9264	89	8326	98	5999	63	72
29	1324	144	8158	187	1779	76	9175	89	8228	97	5936	63	71
30	0.401468	144	0.438345	187	1.091855	75	2.49086	90	2.28131	98	0.915873	63	**70**
31	1612	144	8532	188	1930	75	8996	89	8033	97	5810	63	69
32	1756	144	8720	187	2005	75	8907	89	7936	97	5747	63	68
33	1900	144	8907	187	2080	76	8818	89	7839	97	5684	64	67
34	2044	143	9094	188	2156	75	8729	89	7742	98	5620	63	66
35	2187	144	9282	187	2231	75	8640	89	7644	97	5557	63	65
36	2331	144	9469	187	2306	76	8551	88	7547	97	5494	63	64
37	2475	144	9656	188	2382	75	8463	89	7450	97	5431	63	63
38	2619	144	0.439844	187	2457	76	8374	89	7353	96	5368	64	62
39	2763	143	0.440031	188	2533	75	8285	88	7257	97	5304	63	61
40	0.402906	144	0.440219	187	1.092608	76	2.48197	89	2.27160	97	0.915241	63	**60**
41	3050	144	0406	188	2684	75	8108	88	7063	97	5178	63	59
42	3194	144	0594	188	2759	76	8020	89	6966	96	5115	64	58
43	3338	143	0782	187	2835	76	7931	88	6870	97	5051	63	57
44	3481	144	0969	188	2911	75	7843	88	6773	96	4988	64	56
45	3625	144	1157	187	2986	76	7755	89	6677	97	4924	63	55
46	3769	144	1344	188	3062	76	7666	88	6580	96	4861	63	54
47	3913	143	1532	188	3138	76	7578	88	6484	96	4798	64	53
48	4056	144	1720	188	3214	76	7490	88	6388	96	4734	63	52
49	4200	144	1908	187	3290	76	7402	88	6292	96	4671	64	51
50	0.404344		0.442095		1.093366		2.47314		2.26196		0.914607		**50**
	cos		cotg		cosec		sec		tang		sin		c

	62	**63**	**64**	**65**	**74**	**75**	**76**	**77**	**78**	**84**	**85**	**86**	**87**	**88**	**89**	**90**	**91**	
1	6.2	6.3	6.4	6.5	7.4	7.5	7.6	7.7	7.8	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	1
2	12.4	12.6	12.8	13.0	14.8	15.0	15.2	15.4	15.6	16.8	17.0	17.2	17.4	17.6	17.8	18.0	18.2	2
3	18.6	18.9	19.2	19.5	22.2	22.5	22.8	23.1	23.4	25.2	25.5	25.8	26.1	26.4	26.7	27.0	27.3	3
4	24.8	25.2	25.6	26.0	29.6	30.0	30.4	30.8	31.2	33.6	34.0	34.4	34.8	35.2	35.6	36.0	36.4	4
5	31.0	31.5	32.0	32.5	37.0	37.5	38.0	38.5	39.0	42.0	42.5	43.0	43.5	44.0	44.5	45.0	45.5	5
6	37.2	37.8	38.4	39.0	44.4	45.0	45.6	46.2	46.8	50.4	51.0	51.6	52.2	52.8	53.4	54.0	54.6	6
7	43.4	44.1	44.8	45.5	51.8	52.5	53.2	53.9	54.6	58.8	59.5	60.2	60.9	61.6	62.3	63.0	63.7	7
8	49.6	50.4	51.2	52.0	59.2	60.0	60.8	61.6	62.4	67.2	68.0	68.8	69.6	70.4	71.2	72.0	72.8	8
9	55.8	56.7	57.6	58.5	66.6	67.5	68.4	69.3	70.2	75.6	76.5	77.4	78.3	79.2	80.1	81.0	81.9	9

73g

26g

c	sin		tang		sec		cosec		cotg		cos		
50	0.404344	143	0.442095	188	1.093366	76	2.47314	87	2.26196	97	0.914607	63	**50**
51	4487	144	2283	188	3442	76	7227	88	6099	95	4544	64	49
52	4631	144	2471	188	3518	76	7139	88	6004	96	4480	63	48
53	4775	143	2659	188	3594	76	7051	88	5908	96	4417	64	47
54	4918	144	2847	188	3670	76	6963	87	5812	96	4353	64	46
55	5062	143	3035	188	3746	76	6876	88	5716	96	4289	63	45
56	5205	144	3223	187	3822	76	6788	87	5620	95	4226	64	44
57	5349	144	3410	188	3898	76	6701	87	5525	96	4162	64	43
58	5493	143	3598	188	3974	76	6614	88	5429	95	4098	63	42
59	5636	144	3786	188	4050	77	6526	87	5334	96	4035	64	41
60	0.405780	143	0.443974	189	1.094127	76	2.46439	87	2.25238	95	0.913971	64	**40**
61	5923	144	4163	188	4203	76	6352	87	5143	95	3907	64	39
62	6067	143	4351	188	4279	77	6265	87	5048	96	3843	63	38
63	6210	144	4539	188	4356	76	6178	87	4952	95	3780	64	37
64	6354	143	4727	188	4432	77	6091	87	4857	95	3716	64	36
65	6497	144	4915	188	4509	76	6004	87	4762	95	3652	64	35
66	6641	143	5103	188	4585	77	5917	87	4667	95	3588	64	34
67	6784	144	5291	189	4662	76	5830	86	4572	95	3524	64	33
68	6928	143	5480	188	4738	77	5744	87	4477	95	3460	64	32
69	7071	144	5668	188	4815	77	5657	86	4382	94	3396	64	31
70	0.407215	143	0.445856	189	1.094892	76	2.45571	87	2.24288	95	0.913332	64	**30**
71	7358	144	6045	188	4968	77	5484	86	4193	95	3268	64	29
72	7502	143	6233	188	5045	77	5398	87	4098	94	3204	64	28
73	7645	144	6421	189	5122	77	5311	86	4004	95	3140	64	27
74	7789	143	6610	188	5199	77	5225	86	3909	94	3076	64	26
75	7932	144	6798	189	5276	76	5139	86	3815	95	3012	64	25
76	8076	143	6987	188	5352	77	5053	86	3720	94	2948	64	24
77	8219	143	7175	189	5429	77	4967	86	3626	94	2884	64	23
78	8362	144	7364	188	5506	77	4881	86	3532	94	2820	64	22
79	8506	143	7552	189	5583	77	4795	86	3438	94	2756	64	21
80	0.408649	143	0.447741	188	1.095660	77	2.44709	86	2.23344	94	0.912692	65	**20**
81	8792	144	7929	189	5737	78	4623	86	3250	94	2627	64	19
82	8936	143	8118	188	5815	77	4537	86	3156	94	2563	64	18
83	9079	143	8306	189	5892	77	4451	85	3062	94	2499	64	17
84	9222	144	8495	189	5969	77	4366	86	2968	94	2435	65	16
85	9366	143	8684	188	6046	77	4280	85	2874	94	2370	64	15
86	9509	143	8872	189	6123	78	4195	86	2780	93	2306	64	14
87	9652	144	9061	189	6201	77	4109	85	2687	94	2242	65	13
88	9796	143	9250	189	6278	77	4024	85	2593	93	2177	64	12
89	0.409939	143	9439	189	6355	78	3939	85	2500	94	2113	64	11
90	0.410082	143	0.449628	188	1.096433	77	2.43854	86	2.22406	93	0.912049	65	**10**
91	0225	144	0.449816	189	6510	78	3768	85	2313	93	1984	64	09
92	0369	143	0.450005	189	6588	77	3683	85	2220	94	1920	65	08
93	0512	143	0194	189	6665	78	3598	85	2126	93	1855	64	07
94	0655	143	0383	189	6743	78	3513	85	2033	93	1791	65	06
95	0798	144	0572	189	6821	77	3428	84	1940	93	1726	64	05
96	0942	143	0761	189	6898	78	3344	85	1847	93	1662	65	04
97	1085	143	0950	189	6976	78	3259	85	1754	93	1597	64	03
98	1228	143	1139	189	7054	77	3174	85	1661	93	1533	65	02
99	1371	143	1328	189	7131	78	3089	84	1568	93	1468	65	01
100	0.411514		0.451517		1.097209		2.43005		2.21475		0.911403		**00**
	cos		cotg		cosec		sec		tang		sin		c

	92	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**	**143**	**144**	**145**	**186**	**187**	**188**	**189**	
1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	14.3	14.4	14.5	18.6	18.7	18.8	18.9	1
2	18.4	18.6	18.8	19.0	19.2	19.4	19.6	19.8	20.0	28.6	28.8	29.0	37.2	37.4	37.6	37.8	2
3	27.6	27.9	28.2	28.5	28.8	29.1	29.4	29.7	30.0	42.9	43.2	43.5	55.8	56.1	56.4	56.7	3
4	36.8	37.2	37.6	38.0	38.4	38.8	39.2	39.6	40.0	57.2	57.6	58.0	74.4	74.8	75.2	75.6	4
5	46.0	46.5	47.0	47.5	48.0	48.5	49.0	49.5	50.0	71.5	72.0	72.5	93.0	93.5	94.0	94.5	5
6	55.2	55.8	56.4	57.0	57.6	58.2	58.8	59.4	60.0	85.8	86.4	87.0	111.6	112.2	112.8	113.4	6
7	64.4	65.1	65.8	66.5	67.2	67.9	68.6	69.3	70.0	100.1	100.8	101.5	130.2	130.9	131.6	132.3	7
8	73.6	74.4	75.2	76.0	76.8	77.6	78.4	79.2	80.0	114.4	115.2	116.0	148.8	149.6	150.4	151.2	8
9	82.8	83.7	84.6	85.5	86.4	87.3	88.2	89.1	90.0	128.7	129.6	130.5	167.4	168.3	169.2	170.1	9

27g

c	sin		tang		sec		cosec		cotg		cos		
00	0.411514	144	0.451517	189	1.097209	78	2.43005	85	2.21475	92	0.911403	64	**100**
01	1658	143	1706	190	7287	78	2920	84	1383	93	1339	65	99
02	1801	143	1896	189	7365	78	2836	84	1290	93	1274	65	98
03	1944	143	2085	189	7443	78	2752	85	1197	92	1209	64	97
04	2087	143	2274	189	7521	78	2667	84	1105	93	1145	65	96
05	2230	143	2463	189	7599	78	2583	84	1012	92	1080	65	95
06	2373	143	2652	190	7677	78	2499	84	0920	92	1015	65	94
07	2516	143	2842	189	7755	78	2415	84	0828	93	0950	65	93
08	2659	143	3031	189	7833	78	2331	84	0735	92	0885	64	92
09	2802	143	3220	190	7911	78	2247	84	0643	92	0821	65	91
10	0.412945	144	0.453410	189	1.097989	78	2.42163	84	2.20551	92	0.910756	65	**90**
11	3089	143	3599	189	8067	79	2079	84	0459	92	0691	65	89
12	3232	143	3788	190	8146	78	1995	84	0367	92	0626	65	88
13	3375	143	3978	189	8224	78	1911	83	0275	92	0561	65	87
14	3518	143	4167	190	8302	79	1828	84	0183	92	0496	65	86
15	3661	143	4357	189	8381	78	1744	84	0091	91	0431	65	85
16	3804	143	4546	190	8459	79	1660	83	2.20000	92	0366	65	84
17	3947	143	4736	190	8538	78	1577	83	2.19908	92	0301	65	83
18	4090	143	4926	189	8616	79	1494	84	9816	91	0236	65	82
19	4233	143	5115	190	8695	78	1410	83	9725	92	0171	65	81
20	0.414376	143	0.455305	189	1.098773	79	2.41327	83	2.19633	91	0.910106	65	**80**
21	4519	142	5494	190	8852	78	1244	83	9542	92	0.910041	65	79
22	4661	143	5684	190	8930	79	1161	84	9450	91	0.909976	65	78
23	4804	143	5874	190	9009	79	1077	83	9359	91	9911	66	77
24	4947	143	6064	189	9088	79	0994	83	9268	92	9845	65	76
25	5090	143	6253	190	9167	78	0911	82	9176	91	9780	65	75
26	5233	143	6443	190	9245	79	0829	83	9085	91	9715	65	74
27	5376	143	6633	190	9324	79	0746	83	8994	91	9650	65	73
28	5519	143	6823	190	9403	79	0663	83	8903	91	9585	66	72
29	5662	143	7013	190	9482	79	0580	82	8812	91	9519	65	71
30	0.415805	143	0.457203	189	1.099561	79	2.40498	83	2.18721	90	0.909454	65	**70**
31	5948	142	7392	190	9640	79	0415	83	8631	91	9389	66	69
32	6090	143	7582	190	9719	79	0332	82	8540	91	9323	65	68
33	6233	143	7772	190	9798	79	0250	82	8449	90	9258	65	67
34	6376	143	7962	190	9877	79	0168	83	8359	91	9193	66	66
35	6519	143	8152	191	1.099956	79	0085	82	8268	91	9127	65	65
36	6662	142	8343	190	1.100035	80	2.40003	82	8177	90	9062	66	64
37	6804	143	8533	190	0115	79	2.39921	82	8087	90	8996	65	63
38	6947	143	8723	190	0194	79	9839	83	7997	91	8931	66	62
39	7090	143	8913	190	0273	79	9756	82	7906	90	8865	65	61
40	0.417233	142	0.459103	190	1.100352	80	2.39674	82	2.17816	90	0.908800	66	**60**
41	7375	143	9293	190	0432	79	9592	81	7726	90	8734	65	59
42	7518	143	9483	191	0511	80	9511	82	7636	90	8669	66	58
43	7661	143	9674	190	0591	79	9429	82	7546	90	8603	66	57
44	7804	142	0.459864	190	0670	80	9347	82	7456	90	8537	65	56
45	7946	143	0.460054	191	0750	79	9265	82	7366	90	8472	66	55
46	8089	143	0245	190	0829	80	9183	81	7276	90	8406	66	54
47	8232	142	0435	190	0909	80	9102	82	7186	90	8340	65	53
48	8374	143	0625	191	0989	79	9020	81	7096	90	8275	66	52
49	8517	143	0816	190	1068	80	8939	82	7006	89	8209	66	51
50	0.418660		0.461006		1.101148		2.38857		2.16917		0.908143		**50**
	cos		cotg		cosec		sec		tang		sin		c

	64	**65**	**66**	**67**	**78**	**79**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	
1	6.4	6.5	6.6	6.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	1
2	12.8	13.0	13.2	13.4	15.6	15.8	16.0	16.2	16.4	16.6	16.8	17.0	17.2	17.4	2
3	19.2	19.5	19.8	20.1	23.4	23.7	24.0	24.3	24.6	24.9	25.2	25.5	25.8	26.1	3
4	25.6	26.0	26.4	26.8	31.2	31.6	32.0	32.4	32.8	33.2	33.6	34.0	34.4	34.8	4
5	32.0	32.5	33.0	33.5	39.0	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	43.5	5
6	38.4	39.0	39.6	40.2	46.8	47.4	48.0	48.6	49.2	49.8	50.4	51.0	51.6	52.2	6
7	44.8	45.5	46.2	46.9	54.6	55.3	56.0	56.7	57.4	58.1	58.8	59.5	60.2	60.9	7
8	51.2	52.0	52.8	53.6	62.4	63.2	64.0	64.8	65.6	66.4	67.2	68.0	68.8	69.6	8
9	57.6	58.5	59.4	60.3	70.2	71.1	72.0	72.9	73.8	74.7	75.6	76.5	77.4	78.3	9

72g

27g

c	sin		tang		sec		cosec		cotg		cos		
50	0.418660	142	0.461006	191	1.101148	80	2.38857	81	2.16917	90	0.908143	66	**50**
51	8802	143	1197	190	1228	80	8776	81	6827	89	8077	65	49
52	8945	143	1387	191	1308	79	8695	81	6738	90	8012	66	48
53	9088	142	1578	190	1387	80	8614	82	6648	89	7946	66	47
54	9230	143	1768	191	1467	80	8532	81	6559	90	7880	66	46
55	9373	142	1959	191	1547	80	8451	81	6469	89	7814	66	45
56	9515	143	2150	190	1627	80	8370	81	6380	89	7748	66	44
57	9658	143	2340	191	1707	80	8289	81	6291	89	7682	66	43
58	9801	142	2531	191	1787	80	8208	81	6202	89	7616	66	42
59	0.419943	143	2722	190	1867	80	8127	80	6113	89	7550	66	41
60	0.420086	142	0.462912	191	1.101947	80	2.38047	81	2.16024	89	0.907484	66	**40**
61	0228	143	3103	191	2027	81	7966	81	5935	89	7418	66	39
62	0371	142	3294	191	2108	80	7885	80	5846	89	7352	66	38
63	0513	143	3485	191	2188	80	7805	81	5757	89	7286	66	37
64	0656	142	3676	190	2268	80	7724	80	5668	89	7220	66	36
65	0798	143	3866	191	2348	81	7644	81	5579	88	7154	66	35
66	0941	142	4057	191	2429	80	7563	80	5491	89	7088	66	34
67	1083	143	4248	191	2509	81	7483	81	5402	89	7022	66	33
68	1226	142	4439	191	2590	80	7402	80	5313	88	6956	66	32
69	1368	143	4630	191	2670	81	7322	80	5225	88	6890	67	31
70	0.421511	142	0.464821	191	1.102751	80	2.37242	80	2.15137	89	0.906823	66	**30**
71	1653	143	5012	191	2831	81	7162	80	5048	88	6757	66	29
72	1796	142	5203	191	2912	80	7082	80	4960	88	6691	66	28
73	1938	142	5394	191	2992	81	7002	80	4872	89	6625	67	27
74	2080	143	5585	192	3073	81	6922	80	4783	88	6558	66	26
75	2223	142	5777	191	3154	80	6842	80	4695	88	6492	66	25
76	2365	143	5968	191	3234	81	6762	80	4607	88	6426	67	24
77	2508	142	6159	191	3315	81	6682	80	4519	88	6359	66	23
78	2650	142	6350	191	3396	81	6602	79	4431	88	6293	66	22
79	2792	143	6541	192	3477	81	6523	80	4343	88	6227	67	21
80	0.422935	142	0.466733	191	1.103558	81	2.36443	79	2.14255	87	0.906160	66	**20**
81	3077	142	6924	191	3639	81	6364	80	4168	88	6094	67	19
82	3219	143	7115	192	3720	81	6284	79	4080	88	6027	66	18
83	3362	142	7307	191	3801	81	6205	80	3992	87	5961	67	17
84	3504	142	7498	192	3882	81	6125	79	3905	88	5894	66	16
85	3646	142	7690	191	3963	81	6046	79	3817	87	5828	67	15
86	3788	143	7881	191	4044	81	5967	79	3730	88	5761	66	14
87	3931	142	8072	192	4125	81	5888	80	3642	87	5695	67	13
88	4073	142	8264	192	4206	81	5808	79	3555	88	5628	67	12
89	4215	142	8456	191	4287	82	5729	79	3467	87	5561	66	11
90	0.424357	143	0.468647	192	1.104369	81	2.35650	79	2.13380	87	0.905495	67	**10**
91	4500	142	8839	191	4450	81	5571	78	3293	87	5428	67	09
92	4642	142	9030	192	4531	82	5493	79	3206	87	5361	66	08
93	4784	142	9222	192	4613	81	5414	79	3119	87	5295	67	07
94	4926	143	9414	191	4694	82	5335	79	3032	87	5228	67	06
95	5069	142	9605	192	4776	81	5256	78	2945	87	5161	67	05
96	5211	142	9797	192	4857	82	5178	79	2858	87	5094	66	04
97	5353	142	0.469989	192	4939	81	5099	79	2771	87	5028	67	03
98	5495	142	0.470181	191	5020	82	5020	78	2684	87	4961	67	02
99	5637	142	0372	192	5102	82	4942	79	2597	86	4894	67	01
100	0.425779		0.470564		1.105184		2.34863		2.12511		0.904827		**00**
	cos		cotg		cosec		sec		tang		sin		c

	88	**89**	**90**	**91**	**92**	**93**	**142**	**143**	**144**	**189**	**190**	**191**	**192**	
1	8.8	8.9	9.0	9.1	9.2	9.3	14.2	14.3	14.4	18.9	19.0	19.1	19.2	1
2	17.6	17.8	18.0	18.2	18.4	18.6	28.4	28.6	28.8	37.8	38.0	38.2	38.4	2
3	26.4	26.7	27.0	27.3	27.6	27.9	42.6	42.9	43.2	56.7	57.0	57.3	57.6	3
4	35.2	35.6	36.0	36.4	36.8	37.2	56.8	57.2	57.6	75.6	76.0	76.4	76.8	4
5	44.0	44.5	45.0	45.5	46.0	46.5	71.0	71.5	72.0	94.5	95.0	95.5	96.0	5
6	52.8	53.4	54.0	54.6	55.2	55.8	85.2	85.8	86.4	113.4	114.0	114.6	115.2	6
7	61.6	62.3	63.0	63.7	64.4	65.1	99.4	100.1	100.8	132.3	133.0	133.7	134.4	7
8	70.4	71.2	72.0	72.8	73.6	74.4	113.6	114.4	115.2	151.2	152.0	152.8	153.6	8
9	79.2	80.1	81.0	81.9	82.8	83.7	127.8	128.7	129.6	170.1	171.0	171.9	172.8	9

72g

28g

c	sin		tang		sec		cosec		cotg		cos		
00	0.425779	142	0.470564	192	1.105184	81	2.34863	78	2.12511	87	0.904827	67	**100**
01	5921	143	0756	192	5265	82	4785	78	2424	86	4760	67	99
02	6064	142	0948	192	5347	82	4707	78	2338	87	4693	67	98
03	6206	142	1140	192	5429	82	4629	79	2251	86	4626	67	97
04	6348	142	1332	192	5511	82	4550	78	2165	87	4559	67	96
05	6490	142	1524	192	5593	81	4472	78	2078	86	4492	67	95
06	6632	142	1716	192	5674	82	4394	78	1992	86	4425	67	94
07	6774	142	1908	192	5756	82	4316	78	1906	87	4358	67	93
08	6916	142	2100	192	5838	82	4238	78	1819	86	4291	67	92
09	7058	142	2292	192	5920	82	4160	78	1733	86	4224	67	91
10	0.427200	142	0.472484	192	1.106002	83	2.34082	77	2.11647	86	0.904157	67	**90**
11	7342	142	2676	193	6085	82	4005	78	1561	86	4090	67	89
12	7484	142	2869	192	6167	82	3927	78	1475	86	4023	67	88
13	7626	142	3061	192	6249	82	3849	77	1389	86	3956	67	87
14	7768	142	3253	192	6331	82	3772	78	1303	85	3889	68	86
15	7910	142	3445	193	6413	83	3694	78	1218	86	3821	67	85
16	8052	142	3638	192	6496	82	3616	77	1132	86	3754	67	84
17	8194	142	3830	192	6578	82	3539	77	1046	86	3687	67	83
18	8336	142	4022	193	6660	83	3462	78	0960	85	3620	68	82
19	8478	142	4215	192	6743	82	3384	77	0875	86	3552	67	81
20	0.428620	142	0.474407	193	1.106825	83	2.33307	77	2.10789	85	0.903485	67	**80**
21	8762	142	4600	192	6908	82	3230	77	0704	86	3418	68	79
22	8904	141	4792	193	6990	83	3153	77	0618	85	3350	67	78
23	9045	142	4985	192	7073	83	3076	78	0533	85	3283	68	77
24	9187	142	5177	193	7156	82	2998	77	0448	85	3215	67	76
25	9329	142	5370	192	7238	83	2921	76	0363	86	3148	67	75
26	9471	142	5562	193	7321	83	2845	77	0277	85	3081	68	74
27	9613	142	5755	193	7404	82	2768	77	0192	85	3013	67	73
28	9755	142	5948	192	7486	83	2691	77	0107	85	2946	68	72
29	0.429897	141	6140	193	7569	83	2614	77	2.10022	85	2878	67	71
30	0.430038	142	0.476333	193	1.107652	83	2.32537	76	2.09937	85	0.902811	68	**70**
31	0180	142	6526	192	7735	83	2461	77	9852	85	2743	68	69
32	0322	142	6718	193	7818	83	2384	76	9767	84	2675	67	68
33	0464	142	6911	193	7901	83	2308	77	9683	85	2608	68	67
34	0606	141	7104	193	7984	83	2231	76	9598	85	2540	67	66
35	0747	142	7297	193	8067	83	2155	77	9513	84	2473	68	65
36	0889	142	7490	193	8150	83	2078	76	9429	85	2405	68	64
37	1031	142	7683	193	8233	83	2002	76	9344	85	2337	68	63
38	1173	141	7876	193	8316	84	1926	77	9259	84	2269	67	62
39	1314	142	8069	193	8400	83	1849	76	9175	84	2202	68	61
40	0.431456	142	0.478262	193	1.108483	83	2.31773	76	2.09091	85	0.902134	68	**60**
41	1598	141	8455	193	8566	83	1697	76	9006	84	2066	68	59
42	1739	142	8648	193	8649	84	1621	76	8922	84	1998	67	58
43	1881	142	8841	193	8733	83	1545	76	8838	85	1931	68	57
44	2023	141	9034	193	8816	84	1469	76	8753	84	1863	68	56
45	2164	142	9227	193	8900	83	1393	75	8669	84	1795	68	55
46	2306	142	9420	193	8983	84	1318	76	8585	84	1727	68	54
47	2448	141	9613	194	9067	83	1242	76	8501	84	1659	68	53
48	2589	142	0.479807	193	9150	84	1166	76	8417	84	1591	68	52
49	2731	142	0.480000	193	9234	84	1090	75	8333	83	1523	68	51
50	0.432873		0.480193		1.109318		2.31015		2.08250		0.901455		**50**
	cos		cotg		cosec		sec		tang		sin		c

	67	**68**	**69**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**81**	**82**	
1	6.7	6.8	6.9	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.1	8.2	1
2	13.4	13.6	13.8	14.6	14.8	15.0	15.2	15.4	15.6	15.8	16.2	16.4	2
3	20.1	20.4	20.7	21.9	22.2	22.5	22.8	23.1	23.4	23.7	24.3	24.6	3
4	26.8	27.2	27.6	29.2	29.6	30.0	30.4	30.8	31.2	31.6	32.4	32.8	4
5	33.5	34.0	34.5	36.5	37.0	37.5	38.0	38.5	39.0	39.5	40.5	41.0	5
6	40.2	40.8	41.4	43.8	44.4	45.0	45.6	46.2	46.8	47.4	48.6	49.2	6
7	46.9	47.6	48.3	51.1	51.8	52.5	53.2	53.9	54.6	55.3	56.7	57.4	7
8	53.6	54.4	55.2	58.4	59.2	60.0	60.8	61.6	62.4	63.2	64.8	65.6	8
9	60.3	61.2	62.1	65.7	66.6	67.5	68.4	69.3	70.2	71.1	72.9	73.8	9

71g

28g

c	sin		tang		sec		cosec		cotg		cos		
50	0.432873	141	0.480193	193	1.109318	83	2.31015	76	2.08250	84	0.901455	68	**50**
51	3014	142	0386	194	9401	84	0939	75	8166	84	1387	68	49
52	3156	141	0580	193	9485	84	0864	76	8082	84	1319	68	48
53	3297	142	0773	194	9569	84	0788	75	7998	83	1251	68	47
54	3439	141	0967	193	9653	83	0713	75	7915	84	1183	68	46
55	3580	142	1160	193	9736	84	0638	76	7831	83	1115	68	45
56	3722	142	1353	194	9820	84	0562	75	7748	84	1047	68	44
57	3864	141	1547	193	9904	84	0487	75	7664	83	0979	69	43
58	4005	142	1740	194	1.109988	84	0412	75	7581	84	0910	68	42
59	4147	141	1934	194	1.110072	84	0337	75	7497	83	0842	68	41
60	0.434288	142	0.482128	193	1.110156	84	2.30262	75	2.07414	83	0.900774	68	**40**
61	4430	141	2321	194	0240	85	0187	75	7331	83	0706	68	39
62	4571	141	2515	194	0325	84	0112	75	7248	84	0638	69	38
63	4712	142	2709	193	0409	84	2.30037	75	7164	83	0569	68	37
64	4854	141	2902	194	0493	84	2.29962	75	7081	83	0501	68	36
65	4995	142	3096	194	0577	84	9887	74	6998	83	0433	69	35
66	5137	141	3290	193	0661	85	9813	75	6915	83	0364	68	34
67	5278	142	3483	194	0746	84	9738	75	6832	83	0296	68	33
68	5420	141	3677	194	0830	85	9663	74	6749	82	0228	69	32
69	5561	141	3871	194	0915	84	9589	75	6667	83	0159	68	31
70	0.435702	142	0.484065	194	1.110999	85	2.29514	74	2.06584	83	0.900091	69	**30**
71	5844	141	4259	194	1084	84	9440	74	6501	83	0.900022	68	29
72	5985	142	4453	194	1168	85	9366	75	6418	82	0.899954	69	28
73	6127	141	4647	194	1253	84	9291	74	6336	83	9885	68	27
74	6268	141	4841	194	1337	85	9217	74	6253	82	9817	69	26
75	6409	142	5035	194	1422	85	9143	74	6171	83	9748	68	25
76	6551	141	5229	194	1507	84	9069	75	6088	82	9680	69	24
77	6692	141	5423	194	1591	85	8994	74	6006	82	9611	68	23
78	6833	141	5617	194	1676	85	8920	74	5924	83	9543	69	22
79	6974	142	5811	194	1761	85	8846	74	5841	82	9474	69	21
80	0.437116	141	0.486005	195	1.111846	85	2.28772	74	2.05759	82	0.899405	68	**20**
81	7257	141	6200	194	1931	85	8698	73	5677	82	9337	69	19
82	7398	142	6394	194	2016	85	8625	74	5595	82	9268	69	18
83	7540	141	6588	194	2101	85	8551	74	5513	82	9199	69	17
84	7681	141	6782	195	2186	85	8477	74	5431	82	9130	68	16
85	7822	141	6977	194	2271	85	8403	73	5349	82	9062	69	15
86	7963	141	7171	194	2356	85	8330	74	5267	82	8993	69	14
87	8104	142	7365	195	2441	85	8256	73	5185	82	8924	69	13
88	8246	141	7560	194	2526	85	8183	74	5103	82	8855	69	12
89	8387	141	7754	195	2611	86	8109	73	5021	81	8786	68	11
90	0.438528	141	0.487949	194	1.112697	85	2.28036	74	2.04940	82	0.898718	69	**10**
91	8669	141	8143	195	2782	85	7962	73	4858	82	8649	69	09
92	8810	141	8338	194	2867	86	7889	73	4776	81	8580	69	08
93	8951	142	8532	195	2953	85	7816	74	4695	82	8511	69	07
94	9093	141	8727	194	3038	86	7742	73	4613	81	8442	69	06
95	9234	141	8921	195	3124	85	7669	73	4532	82	8373	69	05
96	9375	141	9116	195	3209	86	7596	73	4450	81	8304	69	04
97	9516	141	9311	194	3295	85	7523	73	4369	81	8235	69	03
98	9657	141	9505	195	3380	86	7450	73	4288	81	8166	69	02
99	9798	141	9700	195	3466	86	7377	73	4207	82	8097	69	01
100	0.439939		0.489895		1.113552		2.27304		2.04125		0.898028		**00**
	cos		cotg		cosec		sec		tang		sin		c

	83	**84**	**85**	**86**	**87**	**141**	**142**	**143**	**192**	**193**	**194**	**195**	
1	8.3	8.4	8.5	8.6	8.7	14.1	14.2	14.3	19.2	19.3	19.4	19.5	1
2	16.6	16.8	17.0	17.2	17.4	28.2	28.4	28.6	38.4	38.6	38.8	39.0	2
3	24.9	25.2	25.5	25.8	26.1	42.3	42.6	42.9	57.6	57.9	58.2	58.5	3
4	33.2	33.6	34.0	34.4	34.8	56.4	56.8	57.2	76.8	77.2	77.6	78.0	4
5	41.5	42.0	42.5	43.0	43.5	70.5	71.0	71.5	96.0	96.5	97.0	97.5	5
6	49.8	50.4	51.0	51.6	52.2	84.6	85.2	85.8	115.2	115.8	116.4	117.0	6
7	58.1	58.8	59.5	60.2	60.9	98.7	99.4	100.1	134.4	135.1	135.8	136.5	7
8	66.4	67.2	68.0	68.8	69.6	112.8	113.6	114.4	153.6	154.4	155.2	156.0	8
9	74.7	75.6	76.5	77.4	78.3	126.9	127.8	128.7	172.8	173.7	174.6	175.5	9

71g

29g

c	sin		tang		sec		cosec		cotg		cos		
00	0.439939	141	0.489895	195	1.113552	85	2.27304	73	2.04125	81	0.898028	70	**100**
01	0.440080	141	0.490090	195	3637	86	7231	73	4044	81	7958	69	99
02	0221	141	0285	194	3723	86	7158	72	3963	81	7889	69	98
03	0362	141	0479	195	3809	86	7086	73	3882	81	7820	69	97
04	0503	141	0674	195	3895	86	7013	73	3801	81	7751	69	96
05	0644	141	0869	195	3981	85	6940	72	3720	81	7682	69	95
06	0785	141	1064	195	4066	86	6868	73	3639	80	7613	70	94
07	0926	141	1259	195	4152	86	6795	72	3559	81	7543	69	93
08	1067	141	1454	195	4238	86	6723	73	3478	81	7474	69	92
09	1208	141	1649	195	4324	86	6650	72	3397	81	7405	70	91
10	0.441349	141	0.491844	195	1.114410	87	2.26578	72	2.03316	80	0.897335	69	**90**
11	1490	141	2039	195	4497	86	6506	73	3236	81	7266	69	89
12	1631	141	2234	196	4583	86	6433	72	3155	80	7197	70	88
13	1772	141	2430	195	4669	86	6361	72	3075	81	7127	69	87
14	1913	141	2625	195	4755	86	6289	72	2994	80	7058	69	86
15	2054	141	2820	195	4841	87	6217	72	2914	81	6989	70	85
16	2195	141	3015	196	4928	86	6145	72	2833	80	6919	69	84
17	2336	141	3211	195	5014	87	6073	72	2753	80	6850	70	83
18	2477	140	3406	195	5101	86	6001	72	2673	80	6780	69	82
19	2617	141	3601	196	5187	87	5929	72	2593	80	6711	70	81
20	0.442758	141	0.493797	195	1.115274	86	2.25857	72	2.02513	81	0.896641	70	**80**
21	2899	141	3992	195	5360	87	5785	72	2432	80	6571	69	79
22	3040	141	4187	196	5447	86	5713	71	2352	80	6502	70	78
23	3181	141	4383	195	5533	87	5642	72	2272	80	6432	69	77
24	3322	140	4578	196	5620	87	5570	72	2192	79	6363	70	76
25	3462	141	4774	195	5707	86	5498	71	2113	80	6293	70	75
26	3603	141	4969	196	5793	87	5427	72	2033	80	6223	69	74
27	3744	141	5165	196	5880	87	5355	71	1953	80	6154	70	73
28	3885	140	5361	195	5967	87	5284	72	1873	80	6084	70	72
29	4025	141	5556	196	6054	87	5212	71	1793	79	6014	70	71
30	0.444166	141	0.495752	196	1.116141	87	2.25141	71	2.01714	80	0.895944	69	**70**
31	4307	141	5948	195	6228	87	5070	72	1634	79	5875	70	69
32	4448	140	6143	196	6315	87	4998	71	1555	80	5805	70	68
33	4588	141	6339	196	6402	87	4927	71	1475	79	5735	70	67
34	4729	141	6535	196	6489	87	4856	71	1396	80	5665	70	66
35	4870	140	6731	196	6576	87	4785	71	1316	79	5595	70	65
36	5010	141	6927	195	6663	87	4714	71	1237	79	5525	69	64
37	5151	141	7122	196	6750	87	4643	71	1158	80	5456	70	63
38	5292	140	7318	196	6837	88	4572	71	1078	79	5386	70	62
39	5432	141	7514	196	6925	87	4501	71	0999	79	5316	70	61
40	0.445573	141	0.497710	196	1.117012	87	2.24430	71	2.00920	79	0.895246	70	**60**
41	5714	140	7906	196	7099	88	4359	70	0841	79	5176	70	59
42	5854	141	8102	196	7187	87	4289	71	0762	79	5106	70	58
43	5995	140	8298	196	7274	87	4218	71	0683	79	5036	70	57
44	6135	141	8494	197	7361	88	4147	70	0604	79	4966	71	56
45	6276	140	8691	196	7449	88	4077	71	0525	79	4895	70	55
46	6416	141	8887	196	7537	87	4006	70	0446	78	4825	70	54
47	6557	141	9083	196	7624	88	3936	71	0368	79	4755	70	53
48	6698	140	9279	196	7712	87	3865	70	0289	79	4685	70	52
49	6838	141	9475	197	7799	88	3795	71	0210	79	4615	70	51
50	0.446979		0.499672		1.117887		2.23724		2.00131		0.894545		**50**
	cos		cotg		cosec		sec		tang		sin		c

	68	**69**	**70**	**71**	**72**	**73**	**76**	**77**	**78**	**79**	**80**	**81**	**85**	
1	6.8	6.9	7.0	7.1	7.2	7.3	7.6	7.7	7.8	7.9	8.0	8.1	8.5	1
2	13.6	13.8	14.0	14.2	14.4	14.6	15.2	15.4	15.6	15.8	16.0	16.2	17.0	2
3	20.4	20.7	21.0	21.3	21.6	21.9	22.8	23.1	23.4	23.7	24.0	24.3	25.5	3
4	27.2	27.6	28.0	28.4	28.8	29.2	30.4	30.8	31.2	31.6	32.0	32.4	34.0	4
5	34.0	34.5	35.0	35.5	36.0	36.5	38.0	38.5	39.0	39.5	40.0	40.5	42.5	5
6	40.8	41.4	42.0	42.6	43.2	43.8	45.6	46.2	46.8	47.4	48.0	48.6	51.0	6
7	47.6	48.3	49.0	49.7	50.4	51.1	53.2	53.9	54.6	55.3	56.0	56.7	59.5	7
8	54.4	55.2	56.0	56.8	57.6	58.4	60.8	61.6	62.4	63.2	64.0	64.8	68.0	8
9	61.2	62.1	63.0	63.9	64.8	65.7	68.4	69.3	70.2	71.1	72.0	72.9	76.5	9

70g

29g

c	sin		tang		sec		cosec		cotg		cos		
50	0.446979	140	0.499672	196	1.117887	88	2.23724	70	2.00131	78	0.894545	71	**50**
51	7119	141	0.499868	196	7975	88	3654	70	2.00053	79	4474	70	49
52	7260	140	0.500064	197	8063	88	3584	70	1.99974	78	4404	70	48
53	7400	141	0261	196	8151	87	3514	71	9896	79	4334	70	47
54	7541	140	0457	197	8238	88	3443	70	9817	78	4264	71	46
55	7681	141	0654	196	8326	88	3373	70	9739	78	4193	70	45
56	7822	140	0850	197	8414	88	3303	70	9661	79	4123	70	44
57	7962	140	1047	196	8502	88	3233	70	9582	78	4053	71	43
58	8102	141	1243	197	8590	89	3163	70	9504	78	3982	70	42
59	8243	140	1440	196	8679	88	3093	69	9426	78	3912	71	41
60	0.448383	141	0.501636	197	1.118767	88	2.23024	70	1.99348	78	0.893841	70	**40**
61	8524	140	1833	196	8855	88	2954	70	9270	79	3771	70	39
62	8664	140	2029	197	8943	88	2884	70	9191	78	3701	71	38
63	8804	141	2226	197	9031	89	2814	69	9113	77	3630	70	37
64	8945	140	2423	197	9120	88	2745	70	9036	78	3560	71	36
65	9085	140	2620	196	9208	88	2675	70	8958	78	3489	71	35
66	9225	141	2816	197	9296	89	2605	69	8880	78	3418	70	34
67	9366	140	3013	197	9385	88	2536	70	8802	78	3348	71	33
68	9506	140	3210	197	9473	89	2466	69	8724	78	3277	70	32
69	9646	141	3407	197	9562	88	2397	69	8646	77	3207	71	31
70	0.449787	140	0.503604	197	1.119650	89	2.22328	70	1.98569	78	0.893136	71	**30**
71	0.449927	140	3801	197	9739	89	2258	69	8491	77	3065	70	29
72	0.450067	141	3998	197	9828	88	2189	69	8414	78	2995	71	28
73	0208	140	4195	197	1.119916	89	2120	69	8336	77	2924	71	27
74	0348	140	4392	197	1.120005	89	2051	70	8259	78	2853	71	26
75	0488	140	4589	197	0094	88	1981	69	8181	77	2782	70	25
76	0628	140	4786	197	0182	89	1912	69	8104	78	2712	71	24
77	0768	141	4983	197	0271	89	1843	69	8026	77	2641	71	23
78	0909	140	5180	197	0360	89	1774	69	7949	77	2570	71	22
79	1049	140	5377	198	0449	89	1705	68	7872	77	2499	71	21
80	0.451189	140	0.505575	197	1.120538	89	2.21637	69	1.97795	77	0.892428	71	**20**
81	1329	140	5772	197	0627	89	1568	69	7718	77	2357	70	19
82	1469	141	5969	197	0716	89	1499	69	7641	78	2287	71	18
83	1610	140	6166	198	0805	89	1430	68	7563	77	2216	71	17
84	1750	140	6364	197	0894	90	1362	69	7486	76	2145	71	16
85	1890	140	6561	198	0984	89	1293	69	7410	77	2074	71	15
86	2030	140	6759	197	1073	89	1224	68	7333	77	2003	71	14
87	2170	140	6956	197	1162	89	1156	69	7256	77	1932	71	13
88	2310	140	7153	198	1251	90	1087	68	7179	77	1861	71	12
89	2450	140	7351	197	1341	89	1019	69	7102	76	1790	71	11
90	0.452590	140	0.507548	198	1.121430	90	2.20950	68	1.97026	77	0.891719	72	**10**
91	2730	140	7746	198	1520	89	0882	68	6949	77	1647	71	09
92	2870	141	7944	197	1609	89	0814	69	6872	76	1576	71	08
93	3011	140	8141	198	1698	90	0745	68	6796	77	1505	71	07
94	3151	140	8339	198	1788	90	0677	68	6719	76	1434	71	06
95	3291	140	8537	197	1878	89	0609	68	6643	77	1363	71	05
96	3431	140	8734	198	1967	90	0541	68	6566	76	1292	72	04
97	3571	140	8932	198	2057	90	0473	68	6490	76	1220	71	03
98	3711	140	9130	198	2147	89	0405	68	6414	77	1149	71	02
99	3851	139	9328	197	2236	90	0337	68	6337	76	1078	71	01
100	0.453990		0.509525		1.122326		2.20269		1.96261		0.891007		**00**
	cos		cotg		cosec		sec		tang		sin		c

	86	**87**	**88**	**89**	**90**	**139**	**140**	**141**	**194**	**195**	**196**	**197**	**198**	
1	8.6	8.7	8.8	8.9	9.0	13.9	14.0	14.1	19.4	19.5	19.6	19.7	19.8	1
2	17.2	17.4	17.6	17.8	18.0	27.8	28.0	28.2	38.8	39.0	39.2	39.4	39.6	2
3	25.8	26.1	26.4	26.7	27.0	41.7	42.0	42.3	58.2	58.5	58.8	59.1	59.4	3
4	34.4	34.8	35.2	35.6	36.0	55.6	56.0	56.4	77.6	78.0	78.4	78.8	79.2	4
5	43.0	43.5	44.0	44.5	45.0	69.5	70.0	70.5	97.0	97.5	98.0	98.5	99.0	5
6	51.6	52.2	52.8	53.4	54.0	83.4	84.0	84.6	116.4	117.0	117.6	118.2	118.8	6
7	60.2	60.9	61.6	62.3	63.0	97.3	98.0	98.7	135.8	136.5	137.2	137.9	138.6	7
8	68.8	69.6	70.4	71.2	72.0	111.2	112.0	112.8	155.2	156.0	156.8	157.6	158.4	8
9	77.4	78.3	79.2	80.1	81.0	125.1	126.0	126.9	174.6	175.5	176.4	177.3	178.2	9

70g

30g

c	sin		tang		sec		cosec		cotg		cos		
00	0.453990	140	0.509525	198	1.122326	90	2.20269	68	1.96261	76	0.891007	72	**100**
01	4130	140	9723	198	2416	90	0201	68	6185	76	0935	71	99
02	4270	140	0.509921	198	2506	90	0133	68	6109	76	0864	72	98
03	4410	140	0.510119	198	2596	90	2.20065	67	6033	76	0792	71	97
04	4550	140	0317	198	2686	90	2.19998	68	5957	76	0721	71	96
05	4690	140	0515	198	2776	90	9930	68	5881	76	0650	72	95
06	4830	140	0713	198	2866	90	9862	67	5805	76	0578	71	94
07	4970	140	0911	198	2956	90	9795	68	5729	76	0507	72	93
08	5110	140	1109	198	3046	90	9727	67	5653	76	0435	71	92
09	5250	140	1307	199	3136	91	9660	68	5577	76	0364	72	91
10	0.455390	139	0.511506	198	1.123227	90	2.19592	67	1.95501	75	0.890292	71	**90**
11	5529	140	1704	198	3317	90	9525	68	5426	76	0221	72	89
12	5669	140	1902	198	3407	91	9457	67	5350	76	0149	71	88
13	5809	140	2100	199	3498	90	9390	67	5274	75	0078	72	87
14	5949	140	2299	198	3588	90	9323	67	5199	76	0.890006	72	86
15	6089	139	2497	198	3678	91	9256	68	5123	75	0.889934	71	85
16	6228	140	2695	199	3769	90	9188	67	5048	76	9863	72	84
17	6368	140	2894	198	3859	91	9121	67	4972	75	9791	72	83
18	6508	140	3092	199	3950	91	9054	67	4897	76	9719	71	82
19	6648	139	3291	198	4041	90	8987	67	4821	75	9648	72	81
20	0.456787	140	0.513489	199	1.124131	91	2.18920	67	1.94746	75	0.889576	72	**80**
21	6927	140	3688	198	4222	91	8853	67	4671	75	9504	72	79
22	7067	140	3886	199	4313	90	8786	66	4596	76	9432	71	78
23	7207	139	4085	198	4403	91	8720	67	4520	75	9361	72	77
24	7346	140	4283	199	4494	91	8653	67	4445	75	9289	72	76
25	7486	140	4482	199	4585	91	8586	67	4370	75	9217	72	75
26	7626	139	4681	198	4676	91	8519	66	4295	75	9145	72	74
27	7765	140	4879	199	4767	91	8453	67	4220	75	9073	72	73
28	7905	140	5078	199	4858	91	8386	67	4145	75	9001	72	72
29	8045	139	5277	199	4949	91	8319	66	4070	74	8929	72	71
30	0.458184	140	0.515476	198	1.125040	91	2.18253	67	1.93996	75	0.888857	72	**70**
31	8324	139	5674	199	5131	91	8186	66	3921	75	8785	72	69
32	8463	140	5873	199	5222	92	8120	66	3846	75	8713	72	68
33	8603	140	6072	199	5314	91	8054	67	3771	74	8641	72	67
34	8743	139	6271	199	5405	91	7987	66	3697	75	8569	72	66
35	8882	140	6470	199	5496	91	7921	66	3622	75	8497	72	65
36	9022	139	6669	199	5587	92	7855	67	3547	74	8425	72	64
37	9161	140	6868	199	5679	91	7788	66	3473	75	8353	72	63
38	9301	139	7067	199	5770	92	7722	66	3398	74	8281	72	62
39	9440	140	7266	199	5862	91	7656	66	3324	74	8209	73	61
40	0.459580	139	0.517465	200	1.125953	92	2.17590	66	1.93250	75	0.888136	72	**60**
41	9719	140	7665	199	6045	91	7524	66	3175	74	8064	72	59
42	9859	139	7864	199	6136	92	7458	66	3101	74	7992	72	58
43	0.459998	140	8063	199	6228	92	7392	66	3027	74	7920	72	57
44	0.460138	139	8262	199	6320	91	7326	66	2953	75	7848	73	56
45	0277	140	8461	200	6411	92	7260	65	2878	74	7775	72	55
46	0417	139	8661	199	6503	92	7195	66	2804	74	7703	72	54
47	0556	140	8860	200	6595	92	7129	66	2730	74	7631	73	53
48	0696	139	9060	199	6687	92	7063	66	2656	74	7558	72	52
49	0835	139	9259	199	6779	91	6997	65	2582	74	7486	73	51
50	0.460974		0.519458		1.126870		2.16932		1.92508		0.887413		**50**
	cos		cotg		cosec		sec		tang		sin		c

	63	**64**	**65**	**66**	**67**	**68**	**71**	**72**	**73**	**74**	**75**	**76**	
1	6.3	6.4	6.5	6.6	6.7	6.8	7.1	7.2	7.3	7.4	7.5	7.6	1
2	12.6	12.8	13.0	13.2	13.4	13.6	14.2	14.4	14.6	14.8	15.0	15.2	2
3	18.9	19.2	19.5	19.8	20.1	20.4	21.3	21.6	21.9	22.2	22.5	22.8	3
4	25.2	25.6	26.0	26.4	26.8	27.2	28.4	28.8	29.2	29.6	30.0	30.4	4
5	31.5	32.0	32.5	33.0	33.5	34.0	35.5	36.0	36.5	37.0	37.5	38.0	5
6	37.8	38.4	39.0	39.6	40.2	40.8	42.6	43.2	43.8	44.4	45.0	45.6	6
7	44.1	44.8	45.5	46.2	46.9	47.6	49.7	50.4	51.1	51.8	52.5	53.2	7
8	50.4	51.2	52.0	52.8	53.6	54.4	56.8	57.6	58.4	59.2	60.0	60.8	8
9	56.7	57.6	58.5	59.4	60.3	61.2	63.9	64.8	65.7	66.6	67.5	68.4	9

69g

30g

c	sin		tang		sec		cosec		cotg		cos		
50	0.460974	140	0.519458	200	1.126870	92	2.16932	66	1.92508	74	0.887413	72	**50**
51	1114	139	9658	199	6962	92	6866	65	2434	74	7341	72	49
52	1253	140	0.519857	200	7054	92	6801	66	2360	73	7269	73	48
53	1393	139	0.520057	200	7146	93	6735	65	2287	74	7196	72	47
54	1532	139	0257	199	7239	92	6670	66	2213	74	7124	73	46
55	1671	140	0456	200	7331	92	6604	65	2139	74	7051	72	45
56	1811	139	0656	199	7423	92	6539	65	2065	73	6979	73	44
57	1950	139	0855	200	7515	92	6474	66	1992	74	6906	73	43
58	2089	139	1055	200	7607	93	6408	65	1918	73	6833	72	42
59	2228	140	1255	200	7700	92	6343	65	1845	74	6761	73	41
60	0.462368	139	0.521455	200	1.127792	92	2.16278	65	1.91771	73	0.886688	72	**40**
61	2507	139	1655	199	7884	93	6213	65	1698	74	6616	73	39
62	2646	140	1854	200	7977	92	6148	65	1624	73	6543	73	38
63	2786	139	2054	200	8069	93	6083	65	1551	73	6470	72	37
64	2925	139	2254	200	8162	93	6018	65	1478	74	6398	73	36
65	3064	139	2454	200	8255	92	5953	65	1404	73	6325	73	35
66	3203	139	2654	200	8347	93	5888	65	1331	73	6252	73	34
67	3342	140	2854	200	8440	92	5823	65	1258	73	6179	72	33
68	3482	139	3054	200	8532	93	5758	64	1185	73	6107	73	32
69	3621	139	3254	200	8625	93	5694	65	1112	73	6034	73	31
70	0.463760	139	0.523454	200	1.128718	93	2.15629	65	1.91039	73	0.885961	73	**30**
71	3899	139	3654	201	8811	93	5564	65	0966	73	5888	73	29
72	4038	139	3855	200	8904	93	5499	64	0893	73	5815	73	28
73	4177	140	4055	200	8997	93	5435	65	0820	73	5742	73	27
74	4317	139	4255	200	9090	93	5370	64	0747	73	5669	73	26
75	4456	139	4455	201	9183	93	5306	65	0674	73	5596	73	25
76	4595	139	4656	200	9276	93	5241	64	0601	73	5523	73	24
77	4734	139	4856	200	9369	93	5177	64	0528	72	5450	73	23
78	4873	139	5056	201	9462	93	5113	65	0456	73	5377	73	22
79	5012	139	5257	200	9555	93	5048	64	0383	73	5304	73	21
80	0.465151	139	0.525457	201	1.129648	94	2.14984	64	1.90310	72	0.885231	73	**20**
81	5290	139	5658	200	9742	93	4920	65	0238	73	5158	73	19
82	5429	139	5858	201	9835	93	4855	64	0165	72	5085	73	18
83	5568	139	6059	200	1.129928	94	4791	64	0093	73	5012	73	17
84	5707	139	6259	201	1.130022	93	4727	64	1.90020	72	4939	73	16
85	5846	139	6460	200	0115	93	4663	64	1.89948	72	4866	73	15
86	5985	139	6660	201	0208	94	4599	64	9876	73	4793	74	14
87	6124	139	6861	201	0302	94	4535	64	9803	72	4719	73	13
88	6263	139	7062	200	0396	93	4471	64	9731	72	4646	73	12
89	6402	139	7262	201	0489	94	4407	64	9659	72	4573	73	11
90	0.466541	139	0.527463	201	1.130583	94	2.14343	63	1.89587	72	0.884500	74	**10**
91	6680	139	7664	201	0677	93	4280	64	9515	73	4426	73	09
92	6819	139	7865	201	0770	94	4216	64	9442	72	4353	73	08
93	6958	139	8066	201	0864	94	4152	64	9370	72	4280	74	07
94	7097	139	8267	201	0958	94	4088	63	9298	72	4206	73	06
95	7236	138	8468	201	1052	94	4025	64	9226	72	4133	74	05
96	7374	139	8669	201	1146	94	3961	63	9154	71	4059	73	04
97	7513	139	8870	201	1240	94	3898	64	9083	72	3986	73	03
98	7652	139	9071	201	1334	94	3834	63	9011	72	3913	74	02
99	7791	139	9272	201	1428	94	3771	64	8939	72	3839	73	01
100	0.467930		0.529473		1.131522		2.13707		1.88867		0.883766		**00**
	cos		cotg		cosec		sec		tang		sin		c

	90	**91**	**92**	**93**	**94**	**138**	**139**	**140**	**198**	**199**	**200**	**201**	
1	9.0	9.1	9.2	9.3	9.4	13.8	13.9	14.0	19.8	19.9	20.0	20.1	1
2	18.0	18.2	18.4	18.6	18.8	27.6	27.8	28.0	39.6	39.8	40.0	40.2	2
3	27.0	27.3	27.6	27.9	28.2	41.4	41.7	42.0	59.4	59.7	60.0	60.3	3
4	36.0	36.4	36.8	37.2	37.6	55.2	55.6	56.0	79.2	79.6	80.0	80.4	4
5	45.0	45.5	46.0	46.5	47.0	69.0	69.5	70.0	99.0	99.5	100.0	100.5	5
6	54.0	54.6	55.2	55.8	56.4	82.8	83.4	84.0	118.8	119.4	120.0	120.6	6
7	63.0	63.7	64.4	65.1	65.8	96.6	97.3	98.0	138.6	139.3	140.0	140.7	7
8	72.0	72.8	73.6	74.4	75.2	110.4	111.2	112.0	158.4	159.2	160.0	160.8	8
9	81.0	81.9	82.8	83.7	84.6	124.2	125.1	126.0	178.2	179.1	180.0	180.9	9

69g

31g

c	sin		tang		sec		cosec		cotg		cos		
00	0.467930	139	0.529473	201	1.131522	94	2.13707	63	1.88867	72	0.883766	74	**100**
01	8069	138	9674	201	1616	94	3644	63	8795	71	3692	73	99
02	8207	139	0.529875	201	1710	94	3581	64	8724	72	3619	74	98
03	8346	139	0.530076	201	1804	94	3517	63	8652	71	3545	74	97
04	8485	139	0277	202	1898	95	3454	63	8581	72	3471	73	96
05	8624	139	0479	201	1993	94	3391	63	8509	72	3398	74	95
06	8763	138	0680	201	2087	95	3328	63	8437	71	3324	73	94
07	8901	139	0881	202	2182	94	3265	64	8366	71	3251	74	93
08	9040	139	1083	201	2276	94	3201	63	8295	72	3177	74	92
09	9179	138	1284	202	2370	95	3138	63	8223	71	3103	73	91
10	0.469317	139	0.531486	201	1.132465	95	2.13075	63	1.88152	71	0.883030	74	**90**
11	9456	139	1687	202	2560	94	3012	62	8081	72	2956	74	89
12	9595	139	1889	201	2654	95	2950	63	8009	71	2882	74	88
13	9734	138	2090	202	2749	95	2887	63	7938	71	2808	74	87
14	0.469872	139	2292	201	2844	94	2824	63	7867	71	2734	73	86
15	0.470011	138	2493	202	2938	95	2761	63	7796	71	2661	74	85
16	0149	139	2695	202	3033	95	2698	62	7725	71	2587	74	84
17	0288	139	2897	201	3128	95	2636	63	7654	71	2513	74	83
18	0427	138	3098	202	3223	95	2573	63	7583	71	2439	74	82
19	0565	139	3300	202	3318	95	2510	62	7512	71	2365	74	81
20	0.470704	139	0.533502	202	1.133413	95	2.12448	63	1.87441	71	0.882291	74	**80**
21	0843	138	3704	201	3508	95	2385	62	7370	71	2217	74	79
22	0981	139	3905	202	3603	95	2323	63	7299	71	2143	74	78
23	1120	138	4107	202	3698	95	2260	62	7228	70	2069	74	77
24	1258	139	4309	202	3793	95	2198	62	7158	71	1995	74	76
25	1397	138	4511	202	3888	95	2136	63	7087	71	1921	74	75
26	1535	139	4713	202	3983	96	2073	62	7016	70	1847	74	74
27	1674	138	4915	202	4079	95	2011	62	6946	71	1773	74	73
28	1812	139	5117	202	4174	95	1949	62	6875	71	1699	74	72
29	1951	138	5319	202	4269	96	1887	63	6804	70	1625	74	71
30	0.472089	139	0.535521	202	1.134365	95	2.11824	62	1.86734	71	0.881551	74	**70**
31	2228	138	5723	203	4460	96	1762	62	6663	70	1477	75	69
32	2366	139	5926	202	4556	95	1700	62	6593	70	1402	74	68
33	2505	138	6128	202	4651	96	1638	62	6523	71	1328	74	67
34	2643	138	6330	202	4747	95	1576	62	6452	70	1254	74	66
35	2781	139	6532	203	4842	96	1514	62	6382	70	1180	75	65
36	2920	138	6735	202	4938	96	1452	62	6312	70	1105	74	64
37	3058	139	6937	202	5034	95	1390	61	6242	71	1031	74	63
38	3197	138	7139	203	5129	96	1329	62	6171	70	0957	75	62
39	3335	138	7342	202	5225	96	1267	62	6101	70	0882	74	61
40	0.473473	139	0.537544	203	1.135321	96	2.11205	62	1.86031	70	0.880808	74	**60**
41	3612	138	7747	202	5417	96	1143	61	5961	70	0734	75	59
42	3750	138	7949	203	5513	96	1082	62	5891	70	0659	74	58
43	3888	139	8152	202	5609	96	1020	61	5821	70	0585	75	57
44	4027	138	8354	203	5705	96	0959	62	5751	70	0510	74	56
45	4165	138	8557	203	5801	96	0897	61	5681	70	0436	75	55
46	4303	139	8760	202	5897	96	0836	62	5611	69	0361	74	54
47	4442	138	8962	203	5993	96	0774	61	5542	70	0287	75	53
48	4580	138	9165	203	6089	97	0713	62	5472	70	0212	74	52
49	4718	138	9368	203	6186	96	0651	61	5402	69	0138	75	51
50	0.474856		0.539571		1.136282		2.10590		1.85333		0.880063		**50**
	cos		cotg		cosec		sec		tang		sin		c

	59	**60**	**61**	**62**	**63**	**64**	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	
1	5.9	6.0	6.1	6.2	6.3	6.4	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	1
2	11.8	12.0	12.2	12.4	12.6	12.8	13.4	13.6	13.8	14.0	14.2	14.4	14.6	14.8	15.0	2
3	17.7	18.0	18.3	18.6	18.9	19.2	20.1	20.4	20.7	21.0	21.3	21.6	21.9	22.2	22.5	3
4	23.6	24.0	24.4	24.8	25.2	25.6	26.8	27.2	27.6	28.0	28.4	28.8	29.2	29.6	30.0	4
5	29.5	30.0	30.5	31.0	31.5	32.0	33.5	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5	5
6	35.4	36.0	36.6	37.2	37.8	38.4	40.2	40.8	41.4	42.0	42.6	43.2	43.8	44.4	45.0	6
7	41.3	42.0	42.7	43.4	44.1	44.8	46.9	47.6	48.3	49.0	49.7	50.4	51.1	51.8	52.5	7
8	47.2	48.0	48.8	49.6	50.4	51.2	53.6	54.4	55.2	56.0	56.8	57.6	58.4	59.2	60.0	8
9	53.1	54.0	54.9	55.8	56.7	57.6	60.3	61.2	62.1	63.0	63.9	64.8	65.7	66.6	67.5	9

68g

31g

c	sin		tang		sec		cosec		cotg		cos		
50	0.474856	139	0.539571	203	1.136282	96	2.10590	61	1.85333	70	0.880063	74	**50**
51	4995	138	9774	202	6378	97	0529	62	5263	70	0.879989	75	49
52	5133	138	0.539976	203	6475	96	0467	61	5193	69	9914	75	48
53	5271	138	0.540179	203	6571	96	0406	61	5124	70	9839	74	47
54	5409	138	0382	203	6667	97	0345	61	5054	69	9765	75	46
55	5547	139	0585	203	6764	97	0284	61	4985	70	9690	75	45
56	5686	138	0788	203	6861	96	0223	61	4915	69	9615	74	44
57	5824	138	0991	203	6957	97	0162	61	4846	69	9541	75	43
58	5962	138	1194	203	7054	96	0101	61	4777	70	9466	75	42
59	6100	138	1397	204	7150	97	2.10040	61	4707	69	9391	75	41
60	0.476238	138	0.541601	203	1.137247	97	2.09979	61	1.84638	69	0.879316	75	**40**
61	6376	138	1804	203	7344	97	9918	61	4569	70	9241	74	39
62	6514	139	2007	203	7441	97	9857	61	4499	69	9167	75	38
63	6653	138	2210	203	7538	97	9796	60	4430	69	9092	75	37
64	6791	138	2413	204	7635	96	9736	61	4361	69	9017	75	36
65	6929	138	2617	203	7731	97	9675	61	4292	69	8942	75	35
66	7067	138	2820	203	7828	98	9614	60	4223	69	8867	75	34
67	7205	138	3023	204	7926	97	9554	61	4154	69	8792	75	33
68	7343	138	3227	203	8023	97	9493	61	4085	69	8717	75	32
69	7481	138	3430	204	8120	97	9432	60	4016	69	8642	75	31
70	0.477619	138	0.543634	203	1.138217	97	2.09372	61	1.83947	68	0.878567	75	**30**
71	7757	138	3837	204	8314	97	9311	60	3879	69	8492	75	29
72	7895	138	4041	204	8411	98	9251	60	3810	69	8417	75	28
73	8033	138	4245	203	8509	97	9191	61	3741	69	8342	75	27
74	8171	138	4448	204	8606	97	9130	60	3672	68	8267	75	26
75	8309	138	4652	203	8703	98	9070	60	3604	69	8192	75	25
76	8447	138	4855	204	8801	97	9010	61	3535	69	8117	76	24
77	8585	138	5059	204	8898	98	8949	60	3466	68	8041	75	23
78	8723	137	5263	204	8996	98	8889	60	3398	69	7966	75	22
79	8860	138	5467	204	9094	97	8829	60	3329	68	7891	75	21
80	0.478998	138	0.545671	203	1.139191	98	2.08769	60	1.83261	69	0.877816	75	**20**
81	9136	138	5874	204	9289	98	8709	60	3192	68	7741	76	19
82	9274	138	6078	204	9387	97	8649	60	3124	68	7665	75	18
83	9412	138	6282	204	9484	98	8589	60	3056	69	7590	75	17
84	9550	138	6486	204	9582	98	8529	60	2987	68	7515	76	16
85	9688	137	6690	204	9680	98	8469	60	2919	68	7439	75	15
86	9825	138	6894	204	9778	98	8409	60	2851	69	7364	75	14
87	0.479963	138	7098	205	9876	98	8349	60	2782	68	7289	76	13
88	0.480101	138	7303	204	1.139974	98	8289	59	2714	68	7213	75	12
89	0239	138	7507	204	1.140072	98	8230	60	2646	68	7138	76	11
90	0.480377	137	0.547711	204	1.140170	98	2.08170	60	1.82578	68	0.877062	75	**10**
91	0514	138	7915	204	0268	98	8110	59	2510	68	6987	76	09
92	0652	138	8119	205	0366	98	8051	60	2442	68	6911	75	08
93	0790	138	8324	204	0464	99	7991	59	2374	68	6836	76	07
94	0928	137	8528	204	0563	98	7932	60	2306	68	6760	75	06
95	1065	138	8732	205	0661	98	7872	59	2238	68	6685	76	05
96	1203	138	8937	204	0759	99	7813	60	2170	67	6609	75	04
97	1341	137	9141	205	0858	98	7753	59	2103	68	6534	76	03
98	1478	138	9346	204	0956	98	7694	60	2035	68	6458	76	02
99	1616	138	9550	205	1054	99	7634	59	1967	68	6382	75	01
100	0.481754		0.549755		1.141153		2.07575		1.81899		0.876307		**00**
	cos		cotg		cosec		sec		tang		sin		c

	76	**94**	**95**	**96**	**97**	**98**	**99**	**137**	**138**	**139**	**201**	**202**	**203**	**204**	**205**	
1	7.6	9.4	9.5	9.6	9.7	9.8	9.9	13.7	13.8	13.9	20.1	20.2	20.3	20.4	20.5	1
2	15.2	18.8	19.0	19.2	19.4	19.6	19.8	27.4	27.6	27.8	40.2	40.4	40.6	40.8	41.0	2
3	22.8	28.2	28.5	28.8	29.1	29.4	29.7	41.1	41.4	41.7	60.3	60.6	60.9	61.2	61.5	3
4	30.4	37.6	38.0	38.4	38.8	39.2	39.6	54.8	55.2	55.6	80.4	80.8	81.2	81.6	82.0	4
5	38.0	47.0	47.5	48.0	48.5	49.0	49.5	68.5	69.0	69.5	100.5	101.0	101.5	102.0	102.5	5
6	45.6	56.4	57.0	57.6	58.2	58.8	59.4	82.2	82.8	83.4	120.6	121.2	121.8	122.4	123.0	6
7	53.2	65.8	66.5	67.2	67.9	68.6	69.3	95.9	96.6	97.3	140.7	141.4	142.1	142.8	143.5	7
8	60.8	75.2	76.0	76.8	77.6	78.4	79.2	109.6	110.4	111.2	160.8	161.6	162.4	163.2	164.0	8
9	68.4	84.6	85.5	86.4	87.3	88.2	89.1	123.3	124.2	125.1	180.9	181.8	182.7	183.6	184.5	9

32g

c	sin		tang		sec		cosec		cotg		cos		
00	0.481754	137	0.549755	204	1.141153	99	2.07575	59	1.81899	67	0.876307	76	**100**
01	1891	138	0.549959	205	1252	98	7516	60	1832	68	6231	76	99
02	2029	138	0.550164	204	1350	99	7456	59	1764	68	6155	75	98
03	2167	137	0368	205	1449	99	7397	59	1696	67	6080	76	97
04	2304	138	0573	205	1548	98	7338	59	1629	68	6004	76	96
05	2442	137	0778	205	1646	99	7279	59	1561	67	5928	76	95
06	2579	138	0983	204	1745	99	7220	59	1494	68	5852	76	94
07	2717	137	1187	205	1844	99	7161	59	1426	67	5776	75	93
08	2854	138	1392	205	1943	99	7102	59	1359	67	5701	76	92
09	2992	138	1597	205	2042	99	7043	59	1292	68	5625	76	91
10	0.483130	137	0.551802	205	1.142141	99	2.06984	59	1.81224	67	0.875549	76	**90**
11	3267	138	2007	205	2240	99	6925	59	1157	67	5473	76	89
12	3405	137	2212	205	2339	99	6866	59	1090	67	5397	76	88
13	3542	138	2417	205	2438	99	6807	59	1023	67	5321	76	87
14	3680	137	2622	205	2537	99	6748	58	0956	68	5245	76	86
15	3817	138	2827	205	2636	100	6690	59	0888	67	5169	76	85
16	3955	137	3032	205	2736	99	6631	59	0821	67	5093	76	84
17	4092	137	3237	205	2835	99	6572	58	0754	67	5017	76	83
18	4229	138	3442	206	2934	100	6514	59	0687	67	4941	76	82
19	4367	137	3648	205	3034	99	6455	58	0620	67	4865	76	81
20	0.484504	138	0.553853	205	1.143133	99	2.06397	59	1.80553	67	0.874789	76	**80**
21	4642	137	4058	205	3232	100	6338	58	0486	66	4713	76	79
22	4779	137	4263	206	3332	100	6280	59	0420	67	4637	77	78
23	4916	138	4469	205	3432	99	6221	58	0353	67	4560	76	77
24	5054	137	4674	206	3531	100	6163	59	0286	67	4484	76	76
25	5191	138	4880	205	3631	99	6104	58	0219	66	4408	76	75
26	5329	137	5085	206	3730	100	6046	58	0153	67	4332	76	74
27	5466	137	5291	205	3830	100	5988	59	0086	67	4256	77	73
28	5603	138	5496	206	3930	100	5929	58	1.80019	66	4179	76	72
29	5741	137	5702	205	4030	100	5871	58	1.79953	67	4103	76	71
30	0.485878	137	0.555907	206	1.144130	100	2.05813	58	1.79886	66	0.874027	77	**70**
31	6015	137	6113	206	4230	100	5755	58	9820	67	3950	76	69
32	6152	138	6319	205	4330	100	5697	58	9753	66	3874	76	68
33	6290	137	6524	206	4430	100	5639	58	9687	67	3798	77	67
34	6427	137	6730	206	4530	100	5581	58	9620	66	3721	76	66
35	6564	137	6936	206	4630	100	5523	58	9554	66	3645	77	65
36	6701	138	7142	205	4730	100	5465	58	9488	67	3568	76	64
37	6839	137	7347	206	4830	100	5407	58	9421	66	3492	77	63
38	6976	137	7553	206	4930	101	5349	58	9355	66	3415	76	62
39	7113	137	7759	206	5031	100	5291	58	9289	66	3339	77	61
40	0.487250	137	0.557965	206	1.145131	100	2.05233	57	1.79223	67	0.873262	76	**60**
41	7387	137	8171	206	5231	101	5176	58	9156	66	3186	77	59
42	7524	138	8377	206	5332	100	5118	58	9090	66	3109	76	58
43	7662	137	8583	206	5432	101	5060	57	9024	66	3033	77	57
44	7799	137	8789	207	5533	101	5003	58	8958	66	2956	76	56
45	7936	137	8996	206	5634	100	4945	58	8892	66	2880	77	55
46	8073	137	9202	206	5734	101	4887	57	8826	66	2803	77	54
47	8210	137	9408	206	5835	100	4830	58	8760	65	2726	77	53
48	8347	137	9614	207	5935	101	4772	57	8695	66	2649	76	52
49	8484	137	0.559821	206	6036	101	4715	58	8629	66	2573	77	51
50	0.488621		0.560027		1.146137		2.04657		1.78563		0.872496		**50**
	cos		cotg		cosec		sec		tang		sin		c

	55	**56**	**57**	**58**	**59**	**60**	**64**	**65**	**66**	**67**	**68**	**75**	**76**	**77**	**78**	
1	5.5	5.6	5.7	5.8	5.9	6.0	6.4	6.5	6.6	6.7	6.8	7.5	7.6	7.7	7.8	1
2	11.0	11.2	11.4	11.6	11.8	12.0	12.8	13.0	13.2	13.4	13.6	15.0	15.2	15.4	15.6	2
3	16.5	16.8	17.1	17.4	17.7	18.0	19.2	19.5	19.8	20.1	20.4	22.5	22.8	23.1	23.4	3
4	22.0	22.4	22.8	23.2	23.6	24.0	25.6	26.0	26.4	26.8	27.2	30.0	30.4	30.8	31.2	4
5	27.5	28.0	28.5	29.0	29.5	30.0	32.0	32.5	33.0	33.5	34.0	37.5	38.0	38.5	39.0	5
6	33.0	33.6	34.2	34.8	35.4	36.0	38.4	39.0	39.6	40.2	40.8	45.0	45.6	46.2	46.8	6
7	38.5	39.2	39.9	40.6	41.3	42.0	44.8	45.5	46.2	46.9	47.6	52.5	53.2	53.9	54.6	7
8	44.0	44.8	45.6	46.4	47.2	48.0	51.2	52.0	52.8	53.6	54.4	60.0	60.8	61.6	62.4	8
9	49.5	50.4	51.3	52.2	53.1	54.0	57.6	58.5	59.4	60.3	61.2	67.5	68.4	69.3	70.2	9

67g

32g

c	sin		tang		sec		cosec		cotg		cos		
50	0.488621	137	0.560027	206	1.146137	101	2.04657	57	1.78563	66	0.872496	77	**50**
51	8758	137	0233	207	6238	101	4600	57	8497	66	2419	77	49
52	8895	137	0440	206	6339	101	4543	58	8431	65	2342	76	48
53	9032	137	0646	207	6440	101	4485	57	8366	66	2266	77	47
54	9169	137	0853	206	6541	101	4428	57	8300	66	2189	77	46
55	9306	137	1059	207	6642	101	4371	57	8234	65	2112	77	45
56	9443	137	1266	206	6743	101	4314	57	8169	66	2035	77	44
57	9580	137	1472	207	6844	101	4257	58	8103	65	1958	77	43
58	9717	137	1679	206	6945	101	4199	57	8038	66	1881	77	42
59	9854	137	1885	207	7046	102	4142	57	7972	65	1804	77	41
60	0.489991	137	0.562092	207	1.147148	101	2.04085	57	1.77907	66	0.871727	77	**40**
61	0.490128	137	2299	207	7249	101	4028	57	7841	65	1650	77	39
62	0265	137	2506	206	7350	102	3971	57	7776	65	1573	77	38
63	0402	137	2712	207	7452	101	3914	57	7711	66	1496	77	37
64	0539	137	2919	207	7553	102	3857	56	7645	65	1419	77	36
65	0676	137	3126	207	7655	101	3801	57	7580	65	1342	77	35
66	0813	136	3333	207	7756	102	3744	57	7515	65	1265	77	34
67	0949	137	3540	207	7858	101	3687	57	7450	65	1188	77	33
68	1086	137	3747	207	7959	102	3630	56	7385	66	1111	77	32
69	1223	137	3954	207	8061	102	3574	57	7319	65	1034	77	31
70	0.491360	137	0.564161	207	1.148163	102	2.03517	57	1.77254	65	0.870957	78	**30**
71	1497	136	4368	207	8265	101	3460	56	7189	65	0879	77	29
72	1633	137	4575	207	8366	102	3404	57	7124	65	0802	77	28
73	1770	137	4782	208	8468	102	3347	57	7059	65	0725	77	27
74	1907	137	4990	207	8570	102	3290	56	6994	65	0648	78	26
75	2044	136	5197	207	8672	102	3234	57	6929	64	0570	77	25
76	2180	137	5404	208	8774	102	3177	56	6865	65	0493	77	24
77	2317	137	5612	207	8876	102	3121	56	6800	65	0416	77	23
78	2454	137	5819	207	8978	102	3065	57	6735	65	0339	78	22
79	2591	136	6026	208	9080	103	3008	56	6670	64	0261	77	21
80	0.492727	137	0.566234	207	1.149183	102	2.02952	56	1.76606	65	0.870184	78	**20**
81	2864	137	6441	208	9285	102	2896	57	6541	65	0106	77	19
82	3001	136	6649	207	9387	102	2839	56	6476	64	0.870029	78	18
83	3137	137	6856	208	9489	103	2783	56	6412	65	0.869951	77	17
84	3274	137	7064	207	9592	102	2727	56	6347	65	9874	78	16
85	3411	136	7271	208	9694	103	2671	56	6282	64	9796	77	15
86	3547	137	7479	208	9797	102	2615	56	6218	64	9719	78	14
87	3684	136	7687	207	1.149899	103	2559	56	6154	65	9641	77	13
88	3820	137	7894	208	1.150002	102	2503	56	6089	64	9564	78	12
89	3957	137	8102	208	0104	103	2447	56	6025	65	9486	77	11
90	0.494094	136	0.568310	208	1.150207	103	2.02391	56	1.75960	64	0.869409	78	**10**
91	4230	137	8518	208	0310	102	2335	56	5896	64	9331	78	09
92	4367	136	8726	208	0412	103	2279	56	5832	65	9253	77	08
93	4503	137	8934	207	0515	103	2223	56	5767	64	9176	78	07
94	4640	136	9141	208	0618	103	2167	55	5703	64	9098	78	06
95	4776	137	9349	208	0721	103	2112	56	5639	64	9020	77	05
96	4913	136	9557	209	0824	103	2056	56	5575	64	8943	78	04
97	5049	137	9766	208	0927	103	2000	56	5511	64	8865	78	03
98	5186	136	0.569974	208	1030	103	1944	55	5447	64	8787	78	02
99	5322	137	0.570182	208	1133	103	1889	56	5383	64	8709	77	01
100	0.495459		0.570390		1.151236		2.01833		1.75319		0.868632		**00**
	cos		cotg		cosec		sec		tang		sin		c

	98	99	100	101	102	103	136	137	138	204	205	206	207	208	209	
1	9.8	9.9	10.0	10.1	10.2	10.3	13.6	13.7	13.8	20.4	20.5	20.6	20.7	20.8	20.9	1
2	19.6	19.8	20.0	20.2	20.4	20.6	27.2	27.4	27.6	40.8	41.0	41.2	41.4	41.6	41.8	2
3	29.4	29.7	30.0	30.3	30.6	30.9	40.8	41.1	41.4	61.2	61.5	61.8	62.1	62.4	62.7	3
4	39.2	39.6	40.0	40.4	40.8	41.2	54.4	54.8	55.2	81.6	82.0	82.4	82.8	83.2	83.6	4
5	49.0	49.5	50.0	50.5	51.0	51.5	68.0	68.5	69.0	102.0	102.5	103.0	103.5	104.0	104.5	5
6	58.8	59.4	60.0	60.6	61.2	61.8	81.6	82.2	82.8	122.4	123.0	123.6	124.2	124.8	125.4	6
7	68.6	69.3	70.0	70.7	71.4	72.1	95.2	95.9	96.6	142.8	143.5	144.2	144.9	145.6	146.3	7
8	78.4	79.2	80.0	80.8	81.6	82.4	108.8	109.6	110.4	163.2	164.0	164.8	165.6	166.4	167.2	8
9	88.2	89.1	90.0	90.9	91.8	92.7	122.4	123.3	124.2	183.6	184.5	185.4	186.3	187.2	188.1	9

67g

33g

c	sin		tang		sec		cosec		cotg		cos		
00	0.495459	136	0.570390	208	1.151236	103	2.018332	556	1.753187	640	0.868632	78	**100**
01	5595	137	0598	208	1339	104	7776	555	2547	639	8554	78	99
02	5732	136	0806	209	1443	103	7221	555	1908	639	8476	78	98
03	5868	136	1015	208	1546	103	6666	555	1269	639	8398	78	97
04	6004	137	1223	208	1649	103	6111	554	1.750630	638	8320	78	96
05	6141	136	1431	209	1752	104	5557	554	1.749992	638	8242	78	95
06	6277	136	1640	208	1856	103	5003	553	9354	638	8164	78	94
07	6413	137	1848	209	1959	104	4450	553	8716	637	8086	78	93
08	6550	136	2057	208	2063	103	3897	553	8079	637	8008	78	92
09	6686	136	2265	209	2166	104	3344	553	7442	637	7930	78	91
10	0.496822	137	0.572474	208	1.152270	104	2.012791	552	1.746805	636	0.867852	78	**90**
11	6959	136	2682	209	2374	103	2239	552	6169	636	7774	78	89
12	7095	136	2891	208	2477	104	1687	551	5533	635	7696	78	88
13	7231	137	3099	209	2581	104	1136	551	4898	635	7618	78	87
14	7368	136	3308	209	2685	104	0585	551	4263	635	7540	78	86
15	7504	136	3517	209	2789	104	2.010034	550	3628	635	7462	78	85
16	7640	136	3726	208	2893	103	2.009484	550	2993	634	7384	79	84
17	7776	137	3934	209	2996	104	8934	550	2359	634	7305	78	83
18	7913	136	4143	209	3100	104	8384	549	1725	633	7227	78	82
19	8049	136	4352	209	3204	104	7835	549	1092	633	7149	78	81
20	0.498185	136	0.574561	209	1.153308	105	2.007286	549	1.740459	633	0.867071	79	**80**
21	8321	136	4770	209	3413	104	6737	548	1.739826	632	6992	78	79
22	8457	137	4979	209	3517	104	6189	548	9194	632	6914	78	78
23	8594	136	5188	209	3621	104	5641	547	8562	632	6836	78	77
24	8730	136	5397	209	3725	105	5094	547	7930	631	6758	79	76
25	8866	136	5606	209	3830	104	4547	547	7299	631	6679	78	75
26	9002	136	5815	210	3934	104	4000	547	6668	631	6601	79	74
27	9138	136	6025	209	4038	105	3453	546	6037	630	6522	78	73
28	9274	136	6234	209	4143	104	2907	546	5407	630	6444	78	72
29	9410	136	6443	209	4247	105	2361	545	4777	630	6366	79	71
30	0.499546	137	0.576652	210	1.154352	104	2.001816	545	1.734147	629	0.866287	78	**70**
31	9683	136	6862	209	4456	105	1271	545	3518	629	6209	79	69
32	9819	136	7071	209	4561	105	0726	545	2889	629	6130	78	68
33	0.499955	136	7280	210	4666	104	2.000181	544	2260	628	6052	79	67
34	0.500091	136	7490	209	4770	105	1.999637	543	1632	628	5973	79	66
35	0227	136	7699	210	4875	105	9094	544	1004	627	5894	78	65
36	0363	136	7909	209	4980	105	8550	543	1.730377	628	5816	79	64
37	0499	136	8118	210	5085	105	8007	543	1.729749	627	5737	78	63
38	0635	136	8328	210	5190	105	7464	542	9122	626	5659	79	62
39	0771	136	8538	209	5295	105	6922	542	8496	626	5580	79	61
40	0.500907	136	0.578747	210	1.155400	105	1.996380	542	1.727870	626	0.865501	78	**60**
41	1043	136	8957	210	5505	105	5838	541	7244	626	5423	79	59
42	1179	135	9167	210	5610	105	5297	541	6618	625	5344	79	58
43	1314	136	9377	209	5715	105	4756	541	5993	625	5265	79	57
44	1450	136	9586	210	5820	106	4215	540	5368	624	5186	78	56
45	1586	136	0.579796	210	5926	105	3675	540	4744	625	5108	79	55
46	1722	136	0.580006	210	6031	105	3135	539	4119	623	5029	79	54
47	1858	136	0216	210	6136	106	2596	540	3496	624	4950	79	53
48	1994	136	0426	210	6242	105	2056	539	2872	623	4871	79	52
49	2130	136	0636	210	6347	105	1517	538	2249	623	4792	79	51
50	0.502266		0.580846		1.156452		1.990979		1.721626		0.864713		**50**
	cos		cotg		cosec		sec		tang		sin		c

	78	**79**	**80**	**103**	**104**	**105**	**106**	**107**	**108**	**135**	**136**	**137**	**208**	**209**	**210**	**211**	**212**	**522**	
1	7.8	7.9	8.0	10.3	10.4	10.5	10.6	10.7	10.8	13.5	13.6	13.7	20.8	20.9	21.0	21.1	21.2	52.2	1
2	15.6	15.8	16.0	20.6	20.8	21.0	21.2	21.4	21.6	27.0	27.2	27.4	41.6	41.8	42.0	42.2	42.4	104.4	2
3	23.4	23.7	24.0	30.9	31.2	31.5	31.8	32.1	32.4	40.5	40.8	41.1	62.4	62.7	63.0	63.3	63.6	156.6	3
4	31.2	31.6	32.0	41.2	41.6	42.0	42.4	42.8	43.2	54.0	54.4	54.8	83.2	83.6	84.0	84.4	84.8	208.8	4
5	39.0	39.5	40.0	51.5	52.0	52.5	53.0	53.5	54.0	67.5	68.0	68.5	104.0	104.5	105.0	105.5	106.0	261.0	5
6	46.8	47.4	48.0	61.8	62.4	63.0	63.6	64.2	64.8	81.0	81.6	82.2	124.8	125.4	126.0	126.6	127.2	313.2	6
7	54.6	55.3	56.0	72.1	72.8	73.5	74.2	74.9	75.6	94.5	95.2	95.9	145.6	146.3	147.0	147.7	148.4	365.4	7
8	62.4	63.2	64.0	82.4	83.2	84.0	84.8	85.6	86.4	108.0	108.8	109.6	166.4	167.2	168.0	168.8	169.6	417.6	8
9	70.2	71.1	72.0	92.7	93.6	94.5	95.4	96.3	97.2	121.5	122.4	123.3	187.2	188.1	189.0	189.9	190.8	469.8	9

66g

33g

c	sin		tang		sec		cosec		cotg		cos		
50	0.502266	135	0.580846	210	1.156452	106	1.990979	539	1.721626	622	0.864713	78	**50**
51	2401	136	1056	210	6558	106	1.990440	537	1004	623	4635	79	49
52	2537	136	1266	211	6664	105	1.989903	538	1.720381	621	4556	79	48
53	2673	136	1477	210	6769	106	9365	537	1.719760	622	4477	79	47
54	2809	136	1687	210	6875	106	8828	537	9138	621	4398	79	46
55	2945	135	1897	210	6981	105	8291	537	8517	621	4319	79	45
56	3080	136	2107	211	7086	106	7754	536	7896	620	4240	79	44
57	3216	136	2318	210	7192	106	7218	536	7276	620	4161	79	43
58	3352	135	2528	210	7298	106	6682	535	6656	620	4082	79	42
59	3487	136	2738	211	7404	106	6147	536	6036	620	4003	80	41
60	0.503623	136	0.582949	210	1.157510	106	1.985611	534	1.715416	619	0.863923	79	**40**
61	3759	136	3159	211	7616	106	5077	535	4797	619	3844	79	39
62	3895	135	3370	210	7722	106	4542	534	4178	618	3765	79	38
63	4030	136	3580	211	7828	106	4008	534	3560	618	3686	79	37
64	4166	136	3791	211	7934	107	3474	534	2942	618	3607	79	36
65	4302	135	4002	210	8041	106	2940	533	2324	618	3528	80	35
66	4437	136	4212	211	8147	106	2407	533	1706	617	3448	79	34
67	4573	135	4423	211	8253	106	1874	532	1089	617	3369	79	33
68	4708	136	4634	211	8359	107	1342	532	1.710472	616	3290	79	32
69	4844	136	4845	210	8466	106	0810	532	1.709856	616	3211	80	31
70	0.504980	135	0.585055	211	1.158572	107	1.980278	532	1.709240	616	0.863131	79	**30**
71	5115	136	5266	211	8679	106	1.979746	531	8624	616	3052	79	29
72	5251	135	5477	211	8785	107	9215	531	8008	615	2973	80	28
73	5386	136	5688	211	8892	107	8684	530	7393	615	2893	79	27
74	5522	135	5899	211	8999	106	8154	530	6778	614	2814	80	26
75	5657	136	6110	211	9105	107	7624	530	6164	614	2734	79	25
76	5793	135	6321	211	9212	107	7094	530	5550	614	2655	80	24
77	5928	136	6532	211	9319	107	6564	529	4936	614	2575	79	23
78	6064	135	6743	212	9426	107	6035	529	4322	613	2496	79	22
79	6199	136	6955	211	9533	106	5506	528	3709	613	2417	80	21
80	0.506335	135	0.587166	211	1.159639	107	1.974978	528	1.703096	612	0.862337	80	**20**
81	6470	136	7377	211	9746	107	4450	528	2484	612	2257	79	19
82	6606	135	7588	212	9853	108	3922	528	1872	612	2178	80	18
83	6741	136	7800	211	1.159961	107	3394	527	1260	612	2098	79	17
84	6877	135	8011	211	1.160068	107	2867	527	0648	611	2019	80	16
85	7012	135	8222	212	0175	107	2340	526	1.700037	611	1939	80	15
86	7147	136	8434	211	0282	107	1814	527	1.699426	610	1859	79	14
87	7283	135	8645	212	0389	108	1287	525	8816	611	1780	80	13
88	7418	135	8857	212	0497	107	0762	526	8205	610	1700	80	12
89	7553	136	9069	211	0604	107	1.970236	525	7595	609	1620	79	11
90	0.507689	135	0.589280	212	1.160711	108	1.969711	525	1.696986	609	0.861541	80	**10**
91	7824	135	9492	211	0819	107	9186	525	6377	609	1461	80	09
92	7959	136	9703	212	0926	108	8661	524	5768	609	1381	80	08
93	8095	135	0.589915	212	1034	108	8137	524	5159	608	1301	80	07
94	8230	135	0.590127	212	1142	107	7613	523	4551	608	1221	79	06
95	8365	135	0339	212	1249	108	7090	524	3943	608	1142	80	05
96	8500	136	0551	211	1357	108	6566	522	3335	607	1062	80	04
97	8636	135	0762	212	1465	108	6044	523	2728	607	0982	80	03
98	8771	135	0974	212	1573	107	5521	522	2121	607	0902	80	02
99	8906	135	1186	212	1680	108	4999	522	1514	606	0822	80	01
100	0.509041		0.591398		1.161788		1.964477		1.690908		0.860742		**00**
	cos		cotg		cosec		sec		tang		sin		c

	525	**528**	**531**	**534**	**537**	**540**	**545**	**550**	**555**	**606**	**609**	**612**	**615**	**620**	**625**	**630**	**635**	**640**	
1	52.5	52.8	53.1	53.4	53.7	54.0	54.5	55.0	55.5	60.6	60.9	61.2	61.5	62.0	62.5	63.0	63.5	64.0	1
2	105.0	105.6	106.2	106.8	107.4	108.0	109.0	110.0	111.0	121.2	121.8	122.4	123.0	124.0	125.0	126.0	127.0	128.0	2
3	157.5	158.4	159.3	160.2	161.1	162.0	163.5	165.0	166.5	181.8	182.7	183.6	184.5	186.0	187.5	189.0	190.5	192.0	3
4	210.0	211.2	212.4	213.6	214.8	216.0	218.0	220.0	222.0	242.4	243.6	244.8	246.0	248.0	250.0	252.0	254.0	256.0	4
5	262.5	264.0	265.5	267.0	268.5	270.0	272.5	275.0	277.5	303.0	304.5	306.0	307.5	310.0	312.5	315.0	317.5	320.0	5
6	315.0	316.8	318.6	320.4	322.2	324.0	327.0	330.0	333.0	363.6	365.4	367.2	369.0	372.0	375.0	378.0	381.0	384.0	6
7	367.5	369.6	371.7	373.8	375.9	378.0	381.5	385.0	388.5	424.2	426.3	428.4	430.5	434.0	437.5	441.0	444.5	448.0	7
8	420.0	422.4	424.8	427.2	429.6	432.0	436.0	440.0	444.0	484.8	487.2	489.6	492.0	496.0	500.0	504.0	508.0	512.0	8
9	472.5	475.2	477.9	480.6	483.3	486.0	490.5	495.0	499.5	545.4	548.1	550.8	553.5	558.0	562.5	567.0	571.5	576.0	9

66g

34g

c	sin		tang		sec		cosec		cotg		cos		
00	0.509041	136	0.591398	212	1.161788	108	1.964477	522	1.690908	606	0.860742	80	**100**
01	9177	135	1610	212	1896	108	3955	521	1.690302	606	0662	80	99
02	9312	135	1822	213	2004	108	3434	521	1.689696	605	0582	80	98
03	9447	135	2035	212	2112	108	2913	521	9091	606	0502	80	97
04	9582	135	2247	212	2220	109	2392	520	8485	604	0422	80	96
05	9717	135	2459	212	2329	108	1872	520	7881	605	0342	80	95
06	9852	136	2671	212	2437	108	1352	520	7276	604	0262	80	94
07	0.509988	135	2883	213	2545	108	0832	519	6672	604	0182	80	93
08	0.510123	135	3096	212	2653	109	1.960313	519	6068	603	0102	80	92
09	0258	135	3308	213	2762	108	1.959794	519	5465	603	0.860022	81	91
10	0.510393	135	0.593521	212	1.162870	108	1.959275	518	1.684862	603	0.859941	80	**90**
11	0528	135	3733	212	2978	109	8757	518	4259	603	9861	80	89
12	0663	135	3945	213	3087	108	8239	518	3656	602	9781	80	88
13	0798	135	4158	212	3195	109	7721	517	3054	602	9701	80	87
14	0933	135	4370	213	3304	109	7204	518	2452	601	9621	81	86
15	1068	135	4583	213	3413	108	6686	516	1851	601	9540	80	85
16	1203	135	4796	212	3521	109	6170	517	1250	601	9460	80	84
17	1338	135	5008	213	3630	109	5653	516	0649	601	9380	81	83
18	1473	135	5221	213	3739	109	5137	516	1.680048	600	9299	80	82
19	1608	135	5434	213	3848	109	4621	515	1.679448	600	9219	80	81
20	0.511743	135	0.595647	212	1.163957	109	1.954106	515	1.678848	600	0.859139	81	**80**
21	1878	135	5859	213	4066	108	3591	515	8248	599	9058	80	79
22	2013	135	6072	213	4174	110	3076	515	7649	599	8978	81	78
23	2148	135	6285	213	4284	109	2561	514	7050	599	8897	80	77
24	2283	135	6498	213	4393	109	2047	514	6451	598	8817	81	76
25	2418	134	6711	213	4502	109	1533	513	5853	598	8736	80	75
26	2552	135	6924	213	4611	109	1020	514	5255	598	8656	81	74
27	2687	135	7137	213	4720	109	1.950506	512	4657	598	8575	80	73
28	2822	135	7350	214	4829	110	1.949994	513	4059	597	8495	81	72
29	2957	135	7564	213	4939	109	9481	512	3462	597	8414	80	71
30	0.513092	135	0.597777	213	1.165048	109	1.948969	512	1.672865	596	0.858334	81	**70**
31	3227	135	7990	213	5157	110	8457	512	2269	596	8253	81	69
32	3362	134	8203	214	5267	109	7945	511	1673	596	8172	80	68
33	3496	135	8417	213	5376	110	7434	511	1077	596	8092	81	67
34	3631	135	8630	213	5486	110	6923	511	1.670481	595	8011	81	66
35	3766	135	8843	214	5596	109	6412	511	1.669886	595	7930	80	65
36	3901	134	9057	213	5705	110	5901	510	9291	595	7850	81	64
37	4035	135	9270	214	5815	110	5391	509	8696	594	7769	81	63
38	4170	135	9484	213	5925	110	4882	510	8102	594	7688	81	62
39	4305	135	9697	214	6035	110	4372	509	7508	594	7607	80	61
40	0.514440	134	0.599911	213	1.166145	109	1.943863	509	1.666914	593	0.857527	81	**60**
41	4574	135	0.600124	214	6254	110	3354	508	6321	593	7446	81	59
42	4709	135	0338	214	6364	110	2846	508	5728	593	7365	81	58
43	4844	134	0552	214	6474	110	2338	508	5135	592	7284	81	57
44	4978	135	0766	213	6584	111	1830	508	4543	592	7203	81	56
45	5113	135	0979	214	6695	110	1322	507	3951	592	7122	81	55
46	5248	134	1193	214	6805	110	0815	507	3359	592	7041	81	54
47	5382	135	1407	214	6915	110	1.940308	507	2767	591	6960	80	53
48	5517	134	1621	214	7025	111	1.939801	506	2176	591	6880	81	52
49	5651	135	1835	214	7136	110	9295	506	1585	591	6799	81	51
50	0.515786		0.602049		1.167246		1.938789		1.660994		0.856718		**50**
	cos		cotg		cosec		sec		tang		sin		c

	80	**81**	**82**	**108**	**109**	**110**	**111**	**112**	**113**	**134**	**135**	**136**	**212**	**213**	**214**	**215**	**216**	**491**	
1	8.0	8.1	8.2	10.8	10.9	11.0	11.1	11.2	11.3	13.4	13.5	13.6	21.2	21.3	21.4	21.5	21.6	49.1	1
2	16.0	16.2	16.4	21.6	21.8	22.0	22.2	22.4	22.6	26.8	27.0	27.2	42.4	42.6	42.8	43.0	43.2	98.2	2
3	24.0	24.3	24.6	32.4	32.7	33.0	33.3	33.6	33.9	40.2	40.5	40.8	63.6	63.9	64.2	64.5	64.8	147.3	3
4	32.0	32.4	32.8	43.2	43.6	44.0	44.4	44.8	45.2	53.6	54.0	54.4	84.8	85.2	85.6	86.0	86.4	196.4	4
5	40.0	40.5	41.0	54.0	54.5	55.0	55.5	56.0	56.5	67.0	67.5	68.0	106.0	106.5	107.0	107.5	108.0	245.5	5
6	48.0	48.6	49.2	64.8	65.4	66.0	66.6	67.2	67.8	80.4	81.0	81.6	127.2	127.8	128.4	129.0	129.6	294.6	6
7	56.0	56.7	57.4	75.6	76.3	77.0	77.7	78.4	79.1	93.8	94.5	95.2	148.4	149.1	149.8	150.5	151.2	343.7	7
8	64.0	64.8	65.6	86.4	87.2	88.0	88.8	89.6	90.4	107.2	108.0	108.8	169.6	170.4	171.2	172.0	172.8	392.8	8
9	72.0	72.9	73.8	97.2	98.1	99.0	99.9	100.8	101.7	120.6	121.5	122.4	190.8	191.7	192.6	193.5	194.4	441.9	9

65g

34g

c	sin		tang		sec		cosec		cotg		cos		
50	0.515786	134	0.602049	214	1.167246	110	1.938789	506	1.660994	590	0.856718	82	**50**
51	5920	135	2263	214	7356	111	8283	505	1.660404	590	6636	81	49
52	6055	135	2477	214	7467	110	7778	505	1.659814	589	6555	81	48
53	6190	134	2691	214	7577	111	7273	505	9225	590	6474	81	47
54	6324	135	2905	215	7688	110	6768	504	8635	589	6393	81	46
55	6459	134	3120	214	7798	111	6264	505	8046	589	6312	81	45
56	6593	135	3334	214	7909	111	5759	503	7457	588	6231	81	44
57	6728	134	3548	214	8020	111	5256	504	6869	588	6150	81	43
58	6862	135	3762	215	8131	110	4752	503	6281	588	6069	82	42
59	6997	134	3977	214	8241	111	4249	503	5693	588	5987	81	41
60	0.517131	134	0.604191	215	1.168352	111	1.933746	503	1.655105	587	0.855906	81	**40**
61	7265	135	4406	214	8463	111	3243	502	4518	587	5825	81	39
62	7400	134	4620	215	8574	111	2741	502	3931	586	5744	82	38
63	7534	135	4835	214	8685	111	2239	501	3345	587	5662	81	37
64	7669	134	5049	215	8796	111	1738	502	2758	586	5581	81	36
65	7803	134	5264	214	8907	111	1236	501	2172	585	5500	81	35
66	7937	135	5478	215	9018	112	0735	501	1587	586	5419	82	34
67	8072	134	5693	215	9130	111	1.930234	500	1001	585	5337	81	33
68	8206	134	5908	215	9241	111	1.929734	500	1.650416	585	5256	82	32
69	8340	135	6123	214	9352	112	9234	500	1.649831	584	5174	81	31
70	0.518475	134	0.606337	215	1.169464	111	1.928734	499	1.649247	584	0.855093	82	**30**
71	8609	134	6552	215	9575	111	8235	500	8663	584	5011	81	29
72	8743	135	6767	215	9686	112	7735	499	8079	584	4930	82	28
73	8878	134	6982	215	9798	112	7236	498	7495	583	4848	81	27
74	9012	134	7197	215	1.169910	111	6738	498	6912	583	4767	82	26
75	9146	134	7412	215	1.170021	112	6240	498	6329	583	4685	81	25
76	9280	135	7627	215	0133	111	5742	498	5746	582	4604	82	24
77	9415	134	7842	215	0244	112	5244	497	5164	582	4522	81	23
78	9549	134	8057	216	0356	112	4747	498	4582	582	4441	82	22
79	9683	134	8273	215	0468	112	4249	496	4000	582	4359	82	21
80	0.519817	135	0.608488	215	1.170580	112	1.923753	497	1.643418	581	0.854277	81	**20**
81	0.519952	134	8703	215	0692	112	3256	496	2837	581	4196	82	19
82	0.520086	134	8918	216	0804	112	2760	496	2256	580	4114	82	18
83	0220	134	9134	215	0916	112	2264	495	1676	580	4032	81	17
84	0354	134	9349	215	1028	112	1769	496	1096	580	3951	82	16
85	0488	134	9564	216	1140	112	1273	495	1.640516	580	3869	82	15
86	0622	134	9780	215	1252	112	0778	494	1.639936	579	3787	82	14
87	0756	134	0.609995	216	1364	113	1.920284	495	9357	580	3705	81	13
88	0890	135	0.610211	216	1477	112	1.919789	494	8777	578	3624	82	12
89	1025	134	0427	215	1589	112	9295	493	8199	579	3542	82	11
90	0.521159	134	0.610642	216	1.171701	113	1.918802	494	1.637620	578	0.853460	82	**10**
91	1293	134	0858	216	1814	112	8308	493	7042	578	3378	82	09
92	1427	134	1074	215	1926	113	7815	493	6464	577	3296	82	08
93	1561	134	1289	216	2039	112	7322	492	5887	578	3214	82	07
94	1695	134	1505	216	2151	113	6830	492	5309	577	3132	82	06
95	1829	134	1721	216	2264	113	6338	492	4732	576	3050	82	05
96	1963	134	1937	216	2377	112	5846	492	4156	577	2968	82	04
97	2097	134	2153	216	2489	113	5354	491	3579	576	2886	82	03
98	2231	134	2369	216	2602	113	4863	491	3003	576	2804	82	02
99	2365	134	2585	216	2715	113	4372	491	2427	575	2722	82	01
100	0.522499		0.612801		1.172828		1.913881		1.631852		0.852640		**00**
	cos		cotg		cosec		sec		tang		sin		c

	494	**497**	**500**	**505**	**510**	**515**	**520**	**575**	**578**	**581**	**584**	**587**	**590**	**593**	**596**	**599**	**602**	**605**	
1	49.4	49.7	50.0	50.5	51.0	51.5	52.0	57.5	57.8	58.1	58.4	58.7	59.0	59.3	59.6	59.9	60.2	60.5	1
2	98.8	99.4	100.0	101.0	102.0	103.0	104.0	115.0	115.6	116.2	116.8	117.4	118.0	118.6	119.2	119.8	120.4	121.0	2
3	148.2	149.1	150.0	151.5	153.0	154.5	156.0	172.5	173.4	174.3	175.2	176.1	177.0	177.9	178.8	179.7	180.6	181.5	3
4	197.6	198.8	200.0	202.0	204.0	206.0	208.0	230.0	231.2	232.4	233.6	234.8	236.0	237.2	238.4	239.6	240.8	242.0	4
5	247.0	248.5	250.0	252.5	255.0	257.5	260.0	287.5	289.0	290.5	292.0	293.5	295.0	296.5	298.0	299.5	301.0	302.5	5
6	296.4	298.2	300.0	303.0	306.0	309.0	312.0	345.0	346.8	348.6	350.4	352.2	354.0	355.8	357.6	359.4	361.2	363.0	6
7	345.8	347.9	350.0	353.5	357.0	360.5	364.0	402.5	404.6	406.7	408.8	410.9	413.0	415.1	417.2	419.3	421.4	423.5	7
8	395.2	397.6	400.0	404.0	408.0	412.0	416.0	460.0	462.4	464.8	467.2	469.6	472.0	474.4	476.8	479.2	481.6	484.0	8
9	444.6	447.3	450.0	454.5	459.0	463.5	468.0	517.5	520.2	522.9	525.6	528.3	531.0	533.7	536.4	539.1	541.8	544.5	9

65g

35g

c	sin		tang		sec		cosec		cotg		cos		
00	0.522499	133	0.612801	216	1.172828	113	1.913881	491	1.631852	576	0.852640	82	**100**
01	2632	134	3017	216	2941	113	3390	490	1276	574	2558	82	99
02	2766	134	3233	216	3054	113	2900	490	0702	575	2476	82	98
03	2900	134	3449	216	3167	113	2410	489	1.630127	574	2394	82	97
04	3034	134	3665	217	3280	113	1921	489	1.629553	574	2312	82	96
05	3168	134	3882	216	3393	113	1432	489	8979	574	2230	83	95
06	3302	134	4098	216	3506	113	0943	489	8405	574	2147	82	94
07	3436	134	4314	217	3619	113	1.910454	488	7831	573	2065	82	93
08	3570	133	4531	216	3732	114	1.909966	488	7258	573	1983	82	92
09	3703	134	4747	217	3846	113	9478	488	6685	572	1901	83	91
10	0.523837	134	0.614964	216	1.173959	114	1.908990	488	1.626113	573	0.851818	82	**90**
11	3971	134	5180	217	4073	113	8502	487	5540	572	1736	82	89
12	4105	134	5397	216	4186	114	8015	487	4968	571	1654	83	88
13	4239	133	5613	217	4300	113	7528	486	4397	572	1571	82	87
14	4372	134	5830	216	4413	114	7042	486	3825	571	1489	82	86
15	4506	134	6046	217	4527	114	6556	486	3254	571	1407	83	85
16	4640	134	6263	217	4641	113	6070	486	2683	570	1324	82	84
17	4774	133	6480	217	4754	114	5584	486	2113	570	1242	83	83
18	4907	134	6697	217	4868	114	5098	485	1543	570	1159	82	82
19	5041	134	6914	216	4982	114	4613	484	0973	570	1077	83	81
20	0.525175	133	0.617130	217	1.175096	114	1.904129	485	1.620403	570	0.850994	82	**80**
21	5308	134	7347	217	5210	114	3644	484	1.619833	569	0912	83	79
22	5442	134	7564	217	5324	114	3160	484	9264	568	0829	82	78
23	5576	133	7781	217	5438	114	2676	484	8696	569	0747	83	77
24	5709	134	7998	218	5552	114	2192	483	8127	568	0664	82	76
25	5843	133	8216	217	5666	114	1709	483	7559	568	0582	83	75
26	5976	134	8433	217	5780	114	1226	483	6991	568	0499	82	74
27	6110	134	8650	217	5894	115	0743	482	6423	567	0417	83	73
28	6244	133	8867	217	6009	114	1.900261	483	5856	567	0334	83	72
29	6377	134	9084	218	6123	114	1.899778	481	5289	567	0251	83	71
30	0.526511	133	0.619302	217	1.176237	115	1.899297	482	1.614722	566	0.850168	82	**70**
31	6644	134	9519	217	6352	114	8815	481	4156	567	0086	83	69
32	6778	133	9736	218	6466	115	8334	481	3589	566	0.850003	83	68
33	6911	134	0.619954	217	6581	115	7853	481	3023	565	0.849920	82	67
34	7045	133	0.620171	218	6696	114	7372	480	2458	566	9838	83	66
35	7178	134	0389	217	6810	115	6892	481	1892	565	9755	83	65
36	7312	133	0606	218	6925	115	6411	479	1327	564	9672	83	64
37	7445	134	0824	218	7040	114	5932	480	0763	565	9589	83	63
38	7579	133	1042	217	7154	115	5452	479	1.610198	564	9506	83	62
39	7712	134	1259	218	7269	115	4973	479	1.609634	564	9423	83	61
40	0.527846	133	0.621477	218	1.177384	115	1.894494	479	1.609070	564	0.849340	83	**60**
41	7979	133	1695	218	7499	115	4015	478	8506	563	9257	82	59
42	8112	134	1913	217	7614	115	3537	479	7943	563	9175	83	58
43	8246	133	2130	218	7729	115	3058	477	7380	563	9092	83	57
44	8379	133	2348	218	7844	116	2581	478	6817	562	9009	83	56
45	8512	134	2566	218	7960	115	2103	477	6255	562	8926	83	55
46	8646	133	2784	218	8075	115	1626	477	5693	562	8843	84	54
47	8779	133	3002	218	8190	115	1149	477	5131	562	8759	83	53
48	8912	134	3220	218	8305	116	0672	476	4569	561	8676	83	52
49	9046	133	3438	219	8421	115	1.890196	476	4008	562	8593	83	51
50	0.529179		0.623657		1.178536		1.889720		1.603446		0.848510		**50**
	cos		cotg		cosec		sec		tang		sin		c

	82	**83**	**84**	**85**	**113**	**114**	**115**	**116**	**117**	**118**	**132**	**133**	**134**	**216**	**217**	**218**	**219**	**220**	
1	8.2	8.3	8.4	8.5	11.3	11.4	11.5	11.6	11.7	11.8	13.2	13.3	13.4	21.6	21.7	21.8	21.9	22.0	1
2	16.4	16.6	16.8	17.0	22.6	22.8	23.0	23.2	23.4	23.6	26.4	26.6	26.8	43.2	43.4	43.6	43.8	44.0	2
3	24.6	24.9	25.2	25.5	33.9	34.2	34.5	34.8	35.1	35.4	39.6	39.9	40.2	64.8	65.1	65.4	65.7	66.0	3
4	32.8	33.2	33.6	34.0	45.2	45.6	46.0	46.4	46.8	47.2	52.8	53.2	53.6	86.4	86.8	87.2	87.6	88.0	4
5	41.0	41.5	42.0	42.5	56.5	57.0	57.5	58.0	58.5	59.0	66.0	66.5	67.0	108.0	108.5	109.0	109.5	110.0	5
6	49.2	49.8	50.4	51.0	67.8	68.4	69.0	69.6	70.2	70.8	79.2	79.8	80.4	129.6	130.2	130.8	131.4	132.0	6
7	57.4	58.1	58.8	59.5	79.1	79.8	80.5	81.2	81.9	82.6	92.4	93.1	93.8	151.2	151.9	152.6	153.3	154.0	7
8	65.6	66.4	67.2	68.0	90.4	91.2	92.0	92.8	93.6	94.4	105.6	106.4	107.2	172.8	173.6	174.4	175.2	176.0	8
9	73.8	74.7	75.6	76.5	101.7	102.6	103.5	104.4	105.3	106.2	118.8	119.7	120.6	194.4	195.3	196.2	197.1	198.0	9

64g

35g

c	sin		tang		sec		cosec		cotg		cos		
50	0.529179	133	0.623657	218	1.178536	116	1.889720	476	1.603446	560	0.848510	83	**50**
51	9312	134	3875	218	8652	115	9244	476	2886	561	8427	83	49
52	9446	133	4093	218	8767	116	8768	475	2325	560	8344	83	48
53	9579	133	4311	219	8883	115	8293	475	1765	560	8261	83	47
54	9712	133	4530	218	8998	116	7818	475	1205	560	8178	84	46
55	9845	133	4748	218	9114	116	7343	474	0645	559	8094	83	45
56	0.529978	134	4966	219	9230	116	6869	474	1.600086	559	8011	83	44
57	0.530112	133	5185	218	9346	115	6395	474	1.599527	559	7928	83	43
58	0245	133	5403	219	9461	116	5921	473	8968	559	7845	84	42
59	0378	133	5622	219	9577	116	5448	474	8409	558	7761	83	41
60	0.530511	133	0.625841	218	1.179693	116	1.884974	473	1.597851	558	0.847678	83	**40**
61	0644	133	6059	219	9809	116	4501	472	7293	557	7595	84	39
62	0777	134	6278	219	1.179925	116	4029	473	6736	558	7511	83	38
63	0911	133	6497	218	1.180041	117	3556	472	6178	557	7428	84	37
64	1044	133	6715	219	0158	116	3084	472	5621	557	7344	83	36
65	1177	133	6934	219	0274	116	2612	471	5064	557	7261	83	35
66	1310	133	7153	219	0390	116	2141	471	4507	556	7178	84	34
67	1443	133	7372	219	0506	117	1670	471	3951	556	7094	83	33
68	1576	133	7591	219	0623	116	1199	471	3395	556	7011	84	32
69	1709	133	7810	219	0739	117	0728	471	2839	555	6927	83	31
70	0.531842	133	0.628029	219	1.180856	116	1.880257	470	1.592284	555	0.846844	84	**30**
71	1975	133	8248	219	0972	117	1.879787	470	1729	555	6760	84	29
72	2108	133	8467	219	1089	116	9317	469	1174	555	6676	83	28
73	2241	133	8686	219	1205	117	8848	469	0619	554	6593	84	27
74	2374	133	8905	219	1322	117	8379	469	1.590065	554	6509	83	26
75	2507	133	9124	220	1439	117	7910	469	1.589511	554	6426	84	25
76	2640	133	9344	219	1556	116	7441	469	8957	554	6342	84	24
77	2773	133	9563	219	1672	117	6972	468	8403	553	6258	83	23
78	2906	133	0.629782	220	1789	117	6504	468	7850	553	6175	84	22
79	3039	133	0.630002	219	1906	117	6036	467	7297	553	6091	84	21
80	0.533172	133	0.630221	220	1.182023	117	1.875569	468	1.586744	552	0.846007	84	**20**
81	3305	132	0441	219	2140	117	5101	467	6192	552	5923	83	19
82	3437	133	0660	220	2257	117	4634	466	5640	552	5840	84	18
83	3570	133	0880	219	2374	118	4168	467	5088	552	5756	84	17
84	3703	133	1099	220	2492	117	3701	466	4536	551	5672	84	16
85	3836	133	1319	220	2609	117	3235	466	3985	551	5588	84	15
86	3969	133	1539	220	2726	118	2769	466	3434	551	5504	84	14
87	4102	132	1759	219	2844	117	2303	465	2883	550	5420	84	13
88	4234	133	1978	220	2961	117	1838	465	2333	551	5336	83	12
89	4367	133	2198	220	3078	118	1373	465	1782	550	5253	84	11
90	0.534500	133	0.632418	220	1.183196	117	1.870908	465	1.581232	549	0.845169	84	**10**
91	4633	132	2638	220	3313	118	1.870443	464	0683	550	5085	84	09
92	4765	133	2858	220	3431	118	1.869979	464	1.580133	549	5001	84	08
93	4898	133	3078	220	3549	118	9515	464	1.579584	549	4917	84	07
94	5031	132	3298	220	3667	117	9051	463	9035	548	4833	84	06
95	5163	133	3518	220	3784	118	8588	463	8487	549	4749	85	05
96	5296	133	3738	220	3902	118	8125	463	7938	548	4664	84	04
97	5429	133	3958	221	4020	118	7662	463	7390	547	4580	84	03
98	5562	132	4179	220	4138	118	7199	462	6843	548	4496	84	02
99	5694	133	4399	220	4256	118	6737	462	6295	547	4412	84	01
100	0.535827		0.634619		1.184374		1.866275		1.575748		0.844328		**00**
	cos		cotg		cosec		sec		tang		sin		c

	221	**462**	**464**	**467**	**470**	**475**	**480**	**485**	**490**	**547**	**550**	**553**	**556**	**559**	**562**	**565**	**570**	**575**	
1	22.1	46.2	46.4	46.7	47.0	47.5	48.0	48.5	49.0	54.7	55.0	55.3	55.6	55.9	56.2	56.5	57.0	57.5	1
2	44.2	92.4	92.8	93.4	94.0	95.0	96.0	97.0	98.0	109.4	110.0	110.6	111.2	111.8	112.4	113.0	114.0	115.0	2
3	66.3	138.6	139.2	140.1	141.0	142.5	144.0	145.5	147.0	164.1	165.0	165.9	166.8	167.7	168.6	169.5	171.0	172.5	3
4	88.4	184.8	185.6	186.8	188.0	190.0	192.0	194.0	196.0	218.8	220.0	221.2	222.4	223.6	224.8	226.0	228.0	230.0	4
5	110.5	231.0	232.0	233.5	235.0	237.5	240.0	242.5	245.0	273.5	275.0	276.5	278.0	279.5	281.0	282.5	285.0	287.5	5
6	132.6	277.2	278.4	280.2	282.0	285.0	288.0	291.0	294.0	328.2	330.0	331.8	333.6	335.4	337.2	339.0	342.0	345.0	6
7	154.7	323.4	324.8	326.9	329.0	332.5	336.0	339.5	343.0	382.9	385.0	387.1	389.2	391.3	393.4	395.5	399.0	402.5	7
8	176.8	369.6	371.2	373.6	376.0	380.0	384.0	388.0	392.0	437.6	440.0	442.4	444.8	447.2	449.6	452.0	456.0	460.0	8
9	198.9	415.8	417.6	420.3	423.0	427.5	432.0	436.5	441.0	492.3	495.0	497.7	500.4	503.1	505.8	508.5	513.0	517.5	9

64g

36g

c	sin		tang		sec		cosec		cotg		cos		
00	0.535827	132	0.634619	221	1.184374	118	1.866275	462	1.575748	547	0.844328	84	**100**
01	5959	133	4840	220	4492	118	5813	462	5201	547	4244	84	99
02	6092	133	5060	221	4610	118	5351	461	4654	546	4160	85	98
03	6225	132	5281	220	4728	119	4890	461	4108	546	4075	84	97
04	6357	133	5501	221	4847	118	4429	461	3562	546	3991	84	96
05	6490	132	5722	220	4965	118	3968	460	3016	546	3907	84	95
06	6622	133	5942	221	5083	119	3508	460	2470	545	3823	85	94
07	6755	132	6163	220	5202	118	3048	460	1925	545	3738	84	93
08	6887	133	6383	221	5320	119	2588	460	1380	545	3654	84	92
09	7020	132	6604	221	5439	118	2128	459	0835	545	3570	85	91
10	0.537152	133	0.636825	221	1.185557	119	1.861669	459	1.570290	544	0.843485	84	**90**
11	7285	132	7046	221	5676	119	1210	459	1.569746	544	3401	85	89
12	7417	133	7267	220	5795	118	0751	458	9202	544	3316	84	88
13	7550	132	7487	221	5913	119	1.860293	459	8658	543	3232	84	87
14	7682	133	7708	221	6032	119	1.859834	458	8115	543	3148	85	86
15	7815	132	7929	221	6151	119	9376	457	7572	543	3063	84	85
16	7947	133	8150	221	6270	119	8919	458	7029	543	2979	85	84
17	8080	132	8371	222	6389	119	8461	457	6486	542	2894	84	83
18	8212	132	8593	221	6508	119	8004	457	5944	543	2810	85	82
19	8344	133	8814	221	6627	119	7547	456	5401	541	2725	85	81
20	0.538477	132	0.639035	221	1.186746	119	1.857091	457	1.564860	542	0.842640	84	**80**
21	8609	132	9256	221	6865	119	6634	456	4318	541	2556	85	79
22	8741	133	9477	222	6984	119	6178	456	3777	541	2471	84	78
23	8874	132	9699	221	7103	120	5722	455	3236	541	2387	85	77
24	9006	132	0.639920	222	7223	119	5267	455	2695	541	2302	85	76
25	9138	133	0.640142	221	7342	120	4812	455	2154	540	2217	84	75
26	9271	132	0363	222	7462	119	4357	455	1614	540	2133	85	74
27	9403	132	0585	221	7581	120	3902	455	1074	540	2048	85	73
28	9535	132	0806	222	7701	119	3447	454	1.560534	539	1963	85	72
29	9667	133	1028	221	7820	120	2993	454	1.559995	539	1878	84	71
30	0.539800	132	0.641249	222	1.187940	119	1.852539	453	1.559456	539	0.841794	85	**70**
31	0.539932	132	1471	222	8059	120	2086	454	8917	539	1709	85	69
32	0.540064	132	1693	222	8179	120	1632	453	8378	539	1624	85	68
33	0196	132	1915	221	8299	120	1179	453	7839	538	1539	85	67
34	0328	133	2136	222	8419	120	0726	452	7301	538	1454	85	66
35	0461	132	2358	222	8539	120	1.850274	453	6763	537	1369	85	65
36	0593	132	2580	222	8659	120	1.849821	452	6226	538	1284	85	64
37	0725	132	2802	222	8779	120	9369	452	5688	537	1199	84	63
38	0857	132	3024	222	8899	120	8917	451	5151	537	1115	85	62
39	0989	132	3246	222	9019	120	8466	451	4614	536	1030	85	61
40	0.541121	132	0.643468	223	1.189139	120	1.848015	451	1.554078	536	0.840945	85	**60**
41	1253	132	3691	222	9259	120	7564	451	3542	536	0860	85	59
42	1385	132	3913	222	9379	121	7113	451	3006	536	0775	86	58
43	1517	133	4135	222	9500	120	6662	450	2470	536	0689	85	57
44	1650	132	4357	223	9620	121	6212	450	1934	535	0604	85	56
45	1782	132	4580	222	9741	120	5762	449	1399	535	0519	85	55
46	1914	132	4802	222	9861	121	5313	450	0864	535	0434	85	54
47	2046	132	5024	223	1.189982	120	4863	449	1.550329	534	0349	85	53
48	2178	132	5247	222	1.190102	121	4414	449	1.549795	535	0264	85	52
49	2310	132	5469	223	0223	121	3965	448	9260	534	0179	85	51
50	0.542442		0.645692		1.190344		1.843517		1.548726		0.840094		**50**
	cos		cotg		cosec		sec		tang		sin		c

	84	**85**	**86**	**87**	**118**	**119**	**120**	**121**	**122**	**123**	**124**	**131**	**132**	**133**	**220**	**221**	**222**	**223**	
1	8.4	8.5	8.6	8.7	11.8	11.9	12.0	12.1	12.2	12.3	12.4	13.1	13.2	13.3	22.0	22.1	22.2	22.3	1
2	16.8	17.0	17.2	17.4	23.6	23.8	24.0	24.2	24.4	24.6	24.8	26.2	26.4	26.6	44.0	44.2	44.4	44.6	2
3	25.2	25.5	25.8	26.1	35.4	35.7	36.0	36.3	36.6	36.9	37.2	39.3	39.6	39.9	66.0	66.3	66.6	66.9	3
4	33.6	34.0	34.4	34.8	47.2	47.6	48.0	48.4	48.8	49.2	49.6	52.4	52.8	53.2	88.0	88.4	88.8	89.2	4
5	42.0	42.5	43.0	43.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	65.5	66.0	66.5	110.0	110.5	111.0	111.5	5
6	50.4	51.0	51.6	52.2	70.8	71.4	72.0	72.6	73.2	73.8	74.4	78.6	79.2	79.8	132.0	132.6	133.2	133.8	6
7	58.8	59.5	60.2	60.9	82.6	83.3	84.0	84.7	85.4	86.1	86.8	91.7	92.4	93.1	154.0	154.7	155.4	156.1	7
8	67.2	68.0	68.8	69.6	94.4	95.2	96.0	96.8	97.6	98.4	99.2	104.8	105.6	106.4	176.0	176.8	177.6	178.4	8
9	75.6	76.5	77.4	78.3	106.2	107.1	108.0	108.9	109.8	110.7	111.6	117.9	118.8	119.7	198.0	198.9	199.8	200.7	9

63g

36g

c	sin		tang		sec		cosec		cotg		cos		
50	0.542442	131	0.645692	222	1.190344	120	1.843517	449	1.548726	533	0.840094	86	**50**
51	2573	132	5914	223	0464	121	3068	448	8193	534	0.840008	85	49
52	2705	132	6137	223	0585	121	2620	448	7659	533	0.839923	85	48
53	2837	132	6360	222	0706	121	2172	447	7126	533	9838	85	47
54	2969	132	6582	223	0827	121	1725	447	6593	533	9753	86	46
55	3101	132	6805	223	0948	121	1278	447	6060	532	9667	85	45
56	3233	132	7028	223	1069	121	0831	447	5528	532	9582	85	44
57	3365	132	7251	223	1190	121	1.840384	447	4996	532	9497	86	43
58	3497	132	7474	223	1311	121	1.839937	446	4464	532	9411	85	42
59	3629	131	7697	223	1432	122	9491	446	3932	531	9326	86	41
60	0.543760	132	0.647920	223	1.191554	121	1.839045	446	1.543401	531	0.839240	85	**40**
61	3892	132	8143	223	1675	121	8599	445	2870	531	9155	85	39
62	4024	132	8366	223	1796	122	8154	445	2339	531	9070	86	38
63	4156	132	8589	223	1918	121	7709	445	1808	530	8984	85	37
64	4288	131	8812	223	2039	122	7264	445	1278	530	8899	86	36
65	4419	132	9035	224	2161	121	6819	444	0748	530	8813	85	35
66	4551	132	9259	223	2282	122	6375	445	1.540218	530	8728	86	34
67	4683	132	9482	223	2404	122	5930	443	1.539688	529	8642	86	33
68	4815	131	9705	224	2526	121	5487	444	9159	529	8556	85	32
69	4946	132	0.649929	223	2647	122	5043	443	8630	529	8471	86	31
70	0.545078	132	0.650152	224	1.192769	122	1.834600	444	1.538101	528	0.838385	85	**30**
71	5210	131	0376	223	2891	122	4156	442	7573	529	8300	86	29
72	5341	132	0599	224	3013	122	3714	443	7044	528	8214	86	28
73	5473	132	0823	224	3135	122	3271	442	6516	527	8128	85	27
74	5605	131	1047	223	3257	122	2829	442	5989	528	8043	86	26
75	5736	132	1270	224	3379	122	2387	442	5461	527	7957	86	25
76	5868	132	1494	224	3501	122	1945	442	4934	527	7871	86	24
77	6000	131	1718	224	3623	122	1503	441	4407	527	7785	85	23
78	6131	132	1942	223	3745	123	1062	441	3880	527	7700	86	22
79	6263	131	2165	224	3868	122	0621	441	3353	526	7614	86	21
80	0.546394	132	0.652389	224	1.193990	122	1.830180	441	1.532827	526	0.837528	86	**20**
81	6526	131	2613	224	4112	123	1.829739	440	2301	526	7442	86	19
82	6657	132	2837	224	4235	122	9299	440	1775	525	7356	86	18
83	6789	131	3061	224	4357	123	8859	440	1250	526	7270	85	17
84	6920	132	3285	225	4480	122	8419	439	0724	525	7185	86	16
85	7052	131	3510	224	4602	123	7980	439	1.530199	524	7099	86	15
86	7183	132	3734	224	4725	123	7541	439	1.529675	525	7013	86	14
87	7315	131	3958	224	4848	122	7102	439	9150	524	6927	86	13
88	7446	132	4182	225	4970	123	6663	439	8626	524	6841	86	12
89	7578	131	4407	224	5093	123	6224	438	8102	524	6755	86	11
90	0.547709	132	0.654631	224	1.195216	123	1.825786	438	1.527578	523	0.836669	86	**10**
91	7841	131	4855	225	5339	123	5348	437	7055	524	6583	86	09
92	7972	131	5080	224	5462	123	4911	438	6531	523	6497	86	08
93	8103	132	5304	225	5585	123	4473	437	6008	522	6411	87	07
94	8235	131	5529	225	5708	123	4036	437	5486	523	6324	86	06
95	8366	132	5754	224	5831	124	3599	437	4963	522	6238	86	05
96	8498	131	5978	225	5955	123	3162	436	4441	522	6152	86	04
97	8629	131	6203	225	6078	123	2726	436	3919	522	6066	86	03
98	8760	132	6428	224	6201	124	2290	436	3397	521	5980	86	02
99	8892	131	6652	225	6325	123	1854	436	2876	521	5894	87	01
100	0.549023		0.656877		1.196448		1.821418		1.522355		0.835807		**00**
	cos		cotg		cosec		sec		tang		sin		c

	224	**225**	**437**	**440**	**443**	**446**	**449**	**452**	**455**	**460**	**522**	**525**	**528**	**531**	**534**	**537**	**540**	**545**	
1	22.4	22.5	43.7	44.0	44.3	44.6	44.9	45.2	45.5	46.0	52.2	52.5	52.8	53.1	53.4	53.7	54.0	54.5	1
2	44.8	45.0	87.4	88.0	88.6	89.2	89.8	90.4	91.0	92.0	104.4	105.0	105.6	106.2	106.8	107.4	108.0	109.0	2
3	67.2	67.5	131.1	132.0	132.9	133.8	134.7	135.6	136.5	138.0	156.6	157.5	158.4	159.3	160.2	161.1	162.0	163.5	3
4	89.6	90.0	174.8	176.0	177.2	178.4	179.6	180.8	182.0	184.0	208.8	210.0	211.2	212.4	213.6	214.8	216.0	218.0	4
5	112.0	112.5	218.5	220.0	221.5	223.0	224.5	226.0	227.5	230.0	261.0	262.5	264.0	265.5	267.0	268.5	270.0	272.5	5
6	134.4	135.0	262.2	264.0	265.8	267.6	269.4	271.2	273.0	276.0	313.2	315.0	316.8	318.6	320.4	322.2	324.0	327.0	6
7	156.8	157.5	305.9	308.0	310.1	312.2	314.3	316.4	318.5	322.0	365.4	367.5	369.6	371.7	373.8	375.9	378.0	381.5	7
8	179.2	180.0	349.6	352.0	354.4	356.8	359.2	361.6	364.0	368.0	417.6	420.0	422.4	424.8	427.2	429.6	432.0	436.0	8
9	201.6	202.5	393.3	396.0	398.7	401.4	404.1	406.8	409.5	414.0	469.8	472.5	475.2	477.9	480.6	483.3	486.0	490.5	9

63g

37g

c	sin		tang		sec		cosec		cotg		cos		
00	0.549023	131	0.656877	225	1.196448	123	1.821418	436	1.522355	521	0.835807	86	**100**
01	9154	131	7102	225	6571	124	0982	435	1834	521	5721	86	99
02	9285	132	7327	225	6695	124	0547	435	1313	521	5635	86	98
03	9417	131	7552	225	6819	123	1.820112	434	0792	520	5549	87	97
04	9548	131	7777	225	6942	124	1.819678	435	1.520272	520	5462	86	96
05	9679	131	8002	225	7066	124	9243	434	1.519752	520	5376	86	95
06	9810	132	8227	225	7190	123	8809	434	9232	519	5290	87	94
07	0.549942	131	8452	226	7313	124	8375	433	8713	520	5203	86	93
08	0.550073	131	8678	225	7437	124	7942	434	8193	519	5117	87	92
09	0204	131	8903	225	7561	124	7508	433	7674	518	5030	86	91
10	0.550335	131	0.659128	225	1.197685	124	1.817075	433	1.517156	519	0.834944	87	**90**
11	0466	131	9353	226	7809	124	6642	433	6637	518	4857	86	89
12	0597	131	9579	225	7933	124	6209	432	6119	518	4771	87	88
13	0728	132	0.659804	226	8057	125	5777	432	5601	518	4684	86	87
14	0860	131	0.660030	225	8182	124	5345	432	5083	517	4598	87	86
15	0991	131	0255	226	8306	124	4913	432	4566	518	4511	86	85
16	1122	131	0481	226	8430	125	4481	431	4048	517	4425	87	84
17	1253	131	0707	225	8555	124	4050	431	3531	517	4338	86	83
18	1384	131	0932	226	8679	124	3619	431	3014	516	4252	87	82
19	1515	131	1158	226	8803	125	3188	431	2498	516	4165	87	81
20	0.551646	131	0.661384	226	1.198928	125	1.812757	430	1.511982	516	0.834078	86	**80**
21	1777	131	1610	225	9053	124	2327	430	1466	516	3992	87	79
22	1908	131	1835	226	9177	125	1897	430	0950	516	3905	87	78
23	2039	131	2061	226	9302	125	1467	430	1.510434	515	3818	86	77
24	2170	131	2287	226	9427	124	1037	429	1.509919	515	3732	87	76
25	2301	131	2513	226	9551	125	0608	430	9404	515	3645	87	75
26	2432	131	2739	226	9676	125	1.810178	428	8889	515	3558	87	74
27	2563	131	2965	227	9801	125	1.809750	429	8374	514	3471	86	73
28	2694	130	3192	226	1.199926	125	9321	429	7860	514	3385	87	72
29	2824	131	3418	226	1.200051	125	8892	428	7346	514	3298	87	71
30	0.552955	131	0.663644	226	1.200176	125	1.808464	428	1.506832	514	0.833211	87	**70**
31	3086	131	3870	227	0301	126	8036	427	6318	513	3124	87	69
32	3217	131	4097	226	0427	125	7609	428	5805	513	3037	87	68
33	3348	131	4323	226	0552	125	7181	427	5292	513	2950	87	67
34	3479	131	4549	227	0677	126	6754	427	4779	513	2863	87	66
35	3610	130	4776	226	0803	125	6327	427	4266	512	2776	87	65
36	3740	131	5002	227	0928	126	5900	426	3754	512	2689	87	64
37	3871	131	5229	227	1054	125	5474	426	3242	512	2602	87	63
38	4002	131	5456	226	1179	126	5048	426	2730	512	2515	87	62
39	4133	130	5682	227	1305	125	4622	426	2218	511	2428	87	61
40	0.554263	131	0.665909	227	1.201430	126	1.804196	425	1.501707	511	0.832341	87	**60**
41	4394	131	6136	226	1556	126	3771	426	1196	511	2254	87	59
42	4525	131	6362	227	1682	126	3345	425	0685	511	2167	87	58
43	4656	130	6589	227	1808	125	2920	424	1.500174	510	2080	87	57
44	4786	131	6816	227	1933	126	2496	425	1.499664	511	1993	87	56
45	4917	131	7043	227	2059	126	2071	424	9153	510	1906	87	55
46	5048	130	7270	227	2185	126	1647	424	8643	509	1819	88	54
47	5178	131	7497	227	2311	126	1223	424	8134	510	1731	87	53
48	5309	131	7724	227	2437	127	0799	423	7624	509	1644	87	52
49	5440	130	7951	228	2564	126	1.800376	424	7115	509	1557	87	51
50	0.555570		0.668179		1.202690		1.799952		1.496606		0.831470		**50**
	cos		cotg		cosec		sec		tang		sin		c

	86	**87**	**88**	**89**	**123**	**124**	**125**	**126**	**127**	**128**	**129**	**130**	**131**	**132**	**225**	**226**	**227**	**228**	
1	8.6	8.7	8.8	8.9	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.2	22.5	22.6	22.7	22.8	1
2	17.2	17.4	17.6	17.8	24.6	24.8	25.0	25.2	25.4	25.6	25.8	26.0	26.2	26.4	45.0	45.2	45.4	45.6	2
3	25.8	26.1	26.4	26.7	36.9	37.2	37.5	37.8	38.1	38.4	38.7	39.0	39.3	39.6	67.5	67.8	68.1	68.4	3
4	34.4	34.8	35.2	35.6	49.2	49.6	50.0	50.4	50.8	51.2	51.6	52.0	52.4	52.8	90.0	90.4	90.8	91.2	4
5	43.0	43.5	44.0	44.5	61.5	62.0	62.5	63.0	63.5	64.0	64.5	65.0	65.5	66.0	112.5	113.0	113.5	114.0	5
6	51.6	52.2	52.8	53.4	73.8	74.4	75.0	75.6	76.2	76.8	77.4	78.0	78.6	79.2	135.0	135.6	136.2	136.8	6
7	60.2	60.9	61.6	62.3	86.1	86.8	87.5	88.2	88.9	89.6	90.3	91.0	91.7	92.4	157.5	158.2	158.9	159.6	7
8	68.8	69.6	70.4	71.2	98.4	99.2	100.0	100.8	101.6	102.4	103.2	104.0	104.8	105.6	180.0	180.8	181.6	182.4	8
9	77.4	78.3	79.2	80.1	110.7	111.6	112.5	113.4	114.3	115.2	116.1	117.0	117.9	118.8	202.5	203.4	204.3	205.2	9

62g

37g

c	sin		tang		sec		cosec		cotg		cos		
50	0.555570	131	0.668179	227	1.202690	126	1.799952	423	1.496606	509	0.831470	88	**50**
51	5701	130	8406	227	2816	126	9529	422	6097	509	1382	87	49
52	5831	131	8633	227	2942	127	9107	423	5588	508	1295	87	48
53	5962	131	8860	228	3069	126	8684	422	5080	508	1208	88	47
54	6093	130	9088	227	3195	127	8262	422	4572	508	1120	87	46
55	6223	131	9315	228	3322	126	7840	422	4064	507	1033	87	45
56	6354	130	9543	227	3448	127	7418	422	3557	508	0946	88	44
57	6484	131	9770	228	3575	126	6996	421	3049	507	0858	87	43
58	6615	130	0.669998	227	3701	127	6575	421	2542	507	0771	88	42
59	6745	131	0.670225	228	3828	127	6154	421	2035	506	0683	87	41
60	0.556876	130	0.670453	228	1.203955	127	1.795733	420	1.491529	507	0.830596	88	**40**
61	7006	131	0681	228	4082	127	5313	421	1022	506	0508	87	39
62	7137	130	0909	227	4209	127	4892	420	0516	506	0421	88	38
63	7267	130	1136	228	4336	127	4472	420	1.490010	506	0333	87	37
64	7397	131	1364	228	4463	127	4052	419	1.489504	505	0246	88	36
65	7528	130	1592	228	4590	127	3633	420	8999	505	0158	87	35
66	7658	131	1820	228	4717	127	3213	419	8494	505	0.830071	88	34
67	7789	130	2048	228	4844	127	2794	419	7989	505	0.829983	88	33
68	7919	130	2276	228	4971	127	2375	419	7484	505	9895	87	32
69	8049	131	2504	228	5098	128	1956	418	6979	504	9808	88	31
70	0.558180	130	0.672732	229	1.205226	127	1.791538	418	1.486475	504	0.829720	88	**30**
71	8310	130	2961	228	5353	127	1120	418	5971	504	9632	87	29
72	8440	131	3189	228	5480	128	0702	418	5467	503	9545	88	28
73	8571	130	3417	228	5608	128	1.790284	417	4964	504	9457	88	27
74	8701	130	3645	229	5736	127	1.789867	418	4460	503	9369	88	26
75	8831	130	3874	228	5863	128	9449	417	3957	503	9281	87	25
76	8961	131	4102	229	5991	128	9032	416	3454	502	9194	88	24
77	9092	130	4331	228	6119	127	8616	417	2952	503	9106	88	23
78	9222	130	4559	229	6246	128	8199	416	2449	502	9018	88	22
79	9352	130	4788	229	6374	128	7783	416	1947	502	8930	88	21
80	0.559482	130	0.675017	228	1.206502	128	1.787367	416	1.481445	501	0.828842	88	**20**
81	9612	131	5245	229	6630	128	6951	416	0944	502	8754	87	19
82	9743	130	5474	229	6758	128	6535	415	1.480442	501	8667	88	18
83	0.559873	130	5703	229	6886	128	6120	415	1.479941	501	8579	88	17
84	0.560003	130	5932	228	7014	128	5705	415	9440	501	8491	88	16
85	0133	130	6160	229	7142	129	5290	415	8939	500	8403	88	15
86	0263	130	6389	229	7271	128	4875	414	8439	501	8315	88	14
87	0393	130	6618	229	7399	128	4461	414	7938	500	8227	88	13
88	0523	130	6847	229	7527	129	4047	414	7438	500	8139	88	12
89	0653	131	7076	229	7656	128	3633	414	6938	499	8051	89	11
90	0.560784	130	0.677305	230	1.207784	129	1.783219	413	1.476439	500	0.827962	88	**10**
91	0914	130	7535	229	7913	128	2806	413	5939	499	7874	88	09
92	1044	130	7764	229	8041	129	2393	413	5440	499	7786	88	08
93	1174	130	7993	229	8170	129	1980	413	4941	498	7698	88	07
94	1304	130	8222	230	8299	128	1567	413	4443	499	7610	88	06
95	1434	130	8452	229	8427	129	1154	412	3944	498	7522	88	05
96	1564	130	8681	230	8556	129	0742	412	3446	498	7434	89	04
97	1694	130	8911	229	8685	129	1.780330	412	2948	498	7345	88	03
98	1824	129	9140	230	8814	129	1.779918	411	2450	497	7257	88	02
99	1953	130	9370	229	8943	129	9507	412	1953	498	7169	88	01
100	0.562083		0.679599		1.209072		1.779095		1.471455		0.827081		**00**
	cos		cotg		cosec		sec		tang		sin		c

	229	**230**	**412**	**415**	**418**	**421**	**424**	**427**	**430**	**435**	**497**	**500**	**503**	**506**	**509**	**512**	**515**	**520**	
1	22.9	23.0	41.2	41.5	41.8	42.1	42.4	42.7	43.0	43.5	49.7	50.0	50.3	50.6	50.9	51.2	51.5	52.0	1
2	45.8	46.0	82.4	83.0	83.6	84.2	84.8	85.4	86.0	87.0	99.4	100.0	100.6	101.2	101.8	102.4	103.0	104.0	2
3	68.7	69.0	123.6	124.5	125.4	126.3	127.2	128.1	129.0	130.5	149.1	150.0	150.9	151.8	152.7	153.6	154.5	156.0	3
4	91.6	92.0	164.8	166.0	167.2	168.4	169.6	170.8	172.0	174.0	198.8	200.0	201.2	202.4	203.6	204.8	206.0	208.0	4
5	114.5	115.0	206.0	207.5	209.0	210.5	212.0	213.5	215.0	217.5	248.5	250.0	251.5	253.0	254.5	256.0	257.5	260.0	5
6	137.4	138.0	247.2	249.0	250.8	252.6	254.4	256.2	258.0	261.0	298.2	300.0	301.8	303.6	305.4	307.2	309.0	312.0	6
7	160.3	161.0	288.4	290.5	292.6	294.7	296.8	298.9	301.0	304.5	347.9	350.0	352.1	354.2	356.3	358.4	360.5	364.0	7
8	183.2	184.0	329.6	332.0	334.4	336.8	339.2	341.6	344.0	348.0	397.6	400.0	402.4	404.8	407.2	409.6	412.0	416.0	8
9	206.1	207.0	370.8	373.5	376.2	378.9	381.6	384.3	387.0	391.5	447.3	450.0	452.7	455.4	458.1	460.8	463.5	468.0	9

62g

38g

c	sin		tang		sec		cosec		cotg		cos		
00	0.562083	130	0.679599	230	1.209072	129	1.779095	411	1.471455	497	0.827081	89	**100**
01	2213	130	0.679829	230	9201	129	8684	410	0958	497	6992	88	99
02	2343	130	0.680059	229	9330	130	8274	411	1.470461	496	6904	88	98
03	2473	130	0288	230	9460	129	7863	410	1.469965	497	6816	89	97
04	2603	130	0518	230	9589	129	7453	411	9468	496	6727	88	96
05	2733	130	0748	230	9718	129	7042	410	8972	496	6639	89	95
06	2863	129	0978	230	9847	130	6632	409	8476	495	6550	88	94
07	2992	130	1208	230	1.209977	129	6223	410	7981	496	6462	88	93
08	3122	130	1438	230	1.210106	130	5813	409	7485	495	6374	89	92
09	3252	130	1668	230	0236	130	5404	409	6990	495	6285	88	91
10	0.563382	130	0.681898	230	1.210366	129	1.774995	409	1.466495	495	0.826197	89	**90**
11	3512	129	2128	230	0495	130	4586	408	6000	494	6108	88	89
12	3641	130	2358	231	0625	130	4178	409	5506	495	6020	89	88
13	3771	130	2589	230	0755	130	3769	408	5011	494	5931	89	87
14	3901	130	2819	230	0885	130	3361	407	4517	494	5842	88	86
15	4031	129	3049	231	1015	130	2954	408	4023	493	5754	89	85
16	4160	130	3280	230	1145	130	2546	407	3530	494	5665	88	84
17	4290	130	3510	231	1275	130	2139	408	3036	493	5577	89	83
18	4420	129	3741	230	1405	130	1731	407	2543	493	5488	89	82
19	4549	130	3971	231	1535	130	1324	406	2050	493	5399	88	81
20	0.564679	130	0.684202	230	1.211665	130	1.770918	407	1.461557	492	0.825311	89	**80**
21	4809	129	4432	231	1795	131	0511	406	1065	492	5222	89	79
22	4938	130	4663	231	1926	130	1.770105	406	0573	493	5133	89	78
23	5068	129	4894	231	2056	130	1.769699	406	1.460080	491	5044	88	77
24	5197	130	5125	230	2186	131	9293	405	1.459589	492	4956	89	76
25	5327	130	5355	231	2317	130	8888	405	9097	491	4867	89	75
26	5457	129	5586	231	2447	131	8483	406	8606	492	4778	89	74
27	5586	130	5817	231	2578	131	8077	404	8114	490	4689	89	73
28	5716	129	6048	231	2709	130	7673	405	7624	491	4600	88	72
29	5845	130	6279	231	2839	131	7268	404	7133	491	4512	89	71
30	0.565975	129	0.686510	231	1.212970	131	1.766864	405	1.456642	490	0.824423	89	**70**
31	6104	130	6741	232	3101	131	6459	403	6152	490	4334	89	69
32	6234	129	6973	231	3232	131	6056	404	5662	490	4245	89	68
33	6363	130	7204	231	3363	131	5652	404	5172	489	4156	89	67
34	6493	129	7435	231	3494	131	5248	403	4683	490	4067	89	66
35	6622	129	7666	232	3625	131	4845	403	4193	489	3978	89	65
36	6751	130	7898	231	3756	131	4442	403	3704	489	3889	89	64
37	6881	129	8129	232	3887	131	4039	402	3215	488	3800	89	63
38	7010	130	8361	231	4018	132	3637	403	2727	489	3711	89	62
39	7140	129	8592	232	4150	131	3234	402	2238	488	3622	89	61
40	0.567269	129	0.688824	232	1.214281	131	1.762832	402	1.451750	488	0.823533	90	**60**
41	7398	130	9056	231	4412	132	2430	401	1262	488	3443	89	59
42	7528	129	9287	232	4544	131	2029	402	0774	488	3354	89	58
43	7657	129	9519	232	4675	132	1627	401	1.450286	487	3265	89	57
44	7786	130	9751	232	4807	132	1226	401	1.449799	487	3176	89	56
45	7916	129	0.689983	231	4939	131	0825	401	9312	487	3087	89	55
46	8045	129	0.690214	232	5070	132	0424	400	8825	487	2998	90	54
47	8174	129	0446	232	5202	132	1.760024	400	8338	486	2908	89	53
48	8303	130	0678	232	5334	132	1.759624	401	7852	486	2819	89	52
49	8433	129	0910	233	5466	132	9223	399	7366	486	2730	89	51
50	0.568562		0.691143		1.215598		1.758824		1.446880		0.822641		**50**
	cos		cotg		cosec		sec		tang		sin		c

	88	**89**	**90**	**91**	**128**	**129**	**130**	**131**	**132**	**133**	**134**	**135**	**229**	**230**	**231**	**232**	**233**	**234**	
1	8.8	8.9	9.0	9.1	12.8	12.9	13.0	13.1	13.2	13.3	13.4	13.5	22.9	23.0	23.1	23.2	23.3	23.4	1
2	17.6	17.8	18.0	18.2	25.6	25.8	26.0	26.2	26.4	26.6	26.8	27.0	45.8	46.0	46.2	46.4	46.6	46.8	2
3	26.4	26.7	27.0	27.3	38.4	38.7	39.0	39.3	39.6	39.9	40.2	40.5	68.7	69.0	69.3	69.6	69.9	70.2	3
4	35.2	35.6	36.0	36.4	51.2	51.6	52.0	52.4	52.8	53.2	53.6	54.0	91.6	92.0	92.4	92.8	93.2	93.6	4
5	44.0	44.5	45.0	45.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0	67.5	114.5	115.0	115.5	116.0	116.5	117.0	5
6	52.8	53.4	54.0	54.6	76.8	77.4	78.0	78.6	79.2	79.8	80.4	81.0	137.4	138.0	138.6	139.2	139.8	140.4	6
7	61.6	62.3	63.0	63.7	89.6	90.3	91.0	91.7	92.4	93.1	93.8	94.5	160.3	161.0	161.7	162.4	163.1	163.8	7
8	70.4	71.2	72.0	72.8	102.4	103.2	104.0	104.8	105.6	106.4	107.2	108.0	183.2	184.0	184.8	185.6	186.4	187.2	8
9	79.2	80.1	81.0	81.9	115.2	116.1	117.0	117.9	118.8	119.7	120.6	121.5	206.1	207.0	207.9	208.8	209.7	210.6	9

61g

38g

c	sin		tang		sec		cosec		cotg		cos		
50	0.568562	129	0.691143	232	1.215598	132	1.758824	400	1.446880	486	0.822641	90	**50**
51	8691	129	1375	232	5730	132	8424	399	6394	486	2551	89	49
52	8820	129	1607	232	5862	132	8025	400	5908	485	2462	90	48
53	8949	130	1839	232	5994	132	7625	399	5423	485	2372	89	47
54	9079	129	2071	233	6126	132	7226	398	4938	485	2283	89	46
55	9208	129	2304	232	6258	133	6828	399	4453	485	2194	90	45
56	9337	129	2536	233	6391	132	6429	398	3968	484	2104	89	44
57	9466	129	2769	232	6523	132	6031	398	3484	485	2015	90	43
58	9595	129	3001	233	6655	133	5633	398	2999	484	1925	89	42
59	9724	129	3234	232	6788	132	5235	398	2515	484	1836	90	41
60	0.569853	129	0.693466	233	1.216920	133	1.754837	397	1.442031	483	0.821746	89	**40**
61	0.569982	129	3699	233	7053	133	4440	397	1548	484	1657	90	39
62	0.570111	130	3932	232	7186	132	4043	397	1064	483	1567	89	38
63	0241	129	4164	233	7318	133	3646	397	0581	483	1478	90	37
64	0370	129	4397	233	7451	133	3249	396	1.440098	482	1388	89	36
65	0499	129	4630	233	7584	133	2853	397	1.439616	483	1299	90	35
66	0628	129	4863	233	7717	133	2456	396	9133	482	1209	90	34
67	0757	129	5096	233	7850	133	2060	395	8651	482	1119	89	33
68	0886	128	5329	233	7983	133	1665	396	8169	482	1030	90	32
69	1014	129	5562	233	8116	133	1269	395	7687	482	0940	90	31
70	0.571143	129	0.695795	233	1.218249	133	1.750874	396	1.437205	481	0.820850	89	**30**
71	1272	129	6028	233	8382	133	0478	394	6724	482	0761	90	29
72	1401	129	6261	234	8515	134	1.750084	395	6242	481	0671	90	28
73	1530	129	6495	233	8649	133	1.749689	395	5761	480	0581	90	27
74	1659	129	6728	233	8782	133	9294	394	5281	481	0491	90	26
75	1788	129	6961	234	8915	134	8900	394	4800	480	0401	89	25
76	1917	129	7195	233	9049	133	8506	394	4320	480	0312	90	24
77	2046	129	7428	234	9182	134	8112	393	3840	480	0222	90	23
78	2175	128	7662	233	9316	134	7719	394	3360	480	0132	90	22
79	2303	129	7895	234	9450	133	7325	393	2880	479	0.820042	90	21
80	0.572432	129	0.698129	233	1.219583	134	1.746932	393	1.432401	480	0.819952	90	**20**
81	2561	129	8362	234	9717	134	6539	393	1921	479	9862	90	19
82	2690	128	8596	234	9851	134	6146	392	1442	479	9772	90	18
83	2818	129	8830	234	1.219985	134	5754	392	0963	478	9682	90	17
84	2947	129	9064	234	1.220119	134	5362	393	0485	479	9592	90	16
85	3076	129	9298	233	0253	134	4969	391	1.430006	478	9502	90	15
86	3205	128	9531	234	0387	134	4578	392	1.429528	478	9412	90	14
87	3333	129	9765	234	0521	134	4186	391	9050	477	9322	90	13
88	3462	129	0.699999	235	0655	135	3795	392	8573	478	9232	90	12
89	3591	128	0.700234	234	0790	134	3403	391	8095	477	9142	90	11
90	0.573719	129	0.700468	234	1.220924	134	1.743012	390	1.427618	477	0.819052	90	**10**
91	3848	129	0702	234	1058	135	2622	391	7141	477	8962	90	09
92	3977	128	0936	234	1193	134	2231	390	6664	477	8872	91	08
93	4105	129	1170	235	1327	135	1841	390	6187	477	8781	90	07
94	4234	129	1405	234	1462	134	1451	390	5710	476	8691	90	06
95	4363	128	1639	235	1596	135	1061	390	5234	476	8601	90	05
96	4491	129	1874	234	1731	135	0671	389	4758	476	8511	90	04
97	4620	128	2108	235	1866	134	1.740282	390	4282	475	8421	91	03
98	4748	129	2343	234	2000	135	1.739892	389	3807	476	8330	90	02
99	4877	128	2577	235	2135	135	9503	388	3331	475	8240	90	01
100	0.575005		0.702812		1.222270		1.739115		1.422856		0.818150		**00**
	cos		cotg		cosec		sec		tang		sin		c

	235	**389**	**392**	**395**	**398**	**401**	**404**	**407**	**410**	**475**	**476**	**479**	**482**	**485**	**488**	**491**	**494**	**497**	
1	23.5	38.9	39.2	39.5	39.8	40.1	40.4	40.7	41.0	47.5	47.6	47.9	48.2	48.5	48.8	49.1	49.4	49.7	1
2	47.0	77.8	78.4	79.0	79.6	80.2	80.8	81.4	82.0	95.0	95.2	95.8	96.4	97.0	97.6	98.2	98.8	99.4	2
3	70.5	116.7	117.6	118.5	119.4	120.3	121.2	122.1	123.0	142.5	142.8	143.7	144.6	145.5	146.4	147.3	148.2	149.1	3
4	94.0	155.6	156.8	158.0	159.2	160.4	161.6	162.8	164.0	190.0	190.4	191.6	192.8	194.0	195.2	196.4	197.6	198.8	4
5	117.5	194.5	196.0	197.5	199.0	200.5	202.0	203.5	205.0	237.5	238.0	239.5	241.0	242.5	244.0	245.5	247.0	248.5	5
6	141.0	233.4	235.2	237.0	238.8	240.6	242.4	244.2	246.0	285.0	285.6	287.4	289.2	291.0	292.8	294.6	296.4	298.2	6
7	164.5	272.3	274.4	276.5	278.6	280.7	282.8	284.9	287.0	332.5	333.2	335.3	337.4	339.5	341.6	343.7	345.8	347.9	7
8	188.0	311.2	313.6	316.0	318.4	320.8	323.2	325.6	328.0	380.0	380.8	383.2	385.6	388.0	390.4	392.8	395.2	397.6	8
9	211.5	350.1	352.8	355.5	358.2	360.9	363.6	366.3	369.0	427.5	428.4	431.1	433.8	436.5	439.2	441.9	444.6	447.3	9

61g

39g

c	sin		tang		sec		cosec		cotg		cos		
00	0.575005	129	0.702812	234	1.222270	135	1.739115	389	1.422856	475	0.818150	91	**100**
01	5134	128	3046	235	2405	135	8726	388	2381	475	8059	90	99
02	5262	129	3281	235	2540	135	8338	389	1906	474	7969	90	98
03	5391	128	3516	235	2675	135	7949	387	1432	475	7879	91	97
04	5519	129	3751	235	2810	136	7562	388	0957	474	7788	90	96
05	5648	128	3986	235	2946	135	7174	388	0483	474	7698	91	95
06	5776	129	4221	235	3081	135	6786	387	1.420009	473	7607	90	94
07	5905	128	4456	235	3216	136	6399	387	1.419536	474	7517	91	93
08	6033	128	4691	235	3352	135	6012	387	9062	473	7426	90	92
09	6161	129	4926	235	3487	136	5625	387	8589	473	7336	91	91
10	0.576290	128	0.705161	235	1.223623	135	1.735238	386	1.418116	473	0.817245	90	**90**
11	6418	128	5396	236	3758	136	4852	386	7643	473	7155	91	89
12	6546	129	5632	235	3894	135	4466	386	7170	472	7064	90	88
13	6675	128	5867	235	4029	136	4080	386	6698	472	6974	91	87
14	6803	128	6102	236	4165	136	3694	386	6226	472	6883	90	86
15	6931	129	6338	235	4301	136	3308	385	5754	472	6793	91	85
16	7060	128	6573	236	4437	136	2923	385	5282	472	6702	91	84
17	7188	128	6809	235	4573	136	2538	385	4810	471	6611	90	83
18	7316	128	7044	236	4709	136	2153	385	4339	471	6521	91	82
19	7444	129	7280	236	4845	136	1768	384	3868	471	6430	91	81
20	0.577573	128	0.707516	235	1.224981	136	1.731384	385	1.413397	471	0.816339	90	**80**
21	7701	128	7751	236	5117	136	0999	384	2926	471	6249	91	79
22	7829	128	7987	236	5253	137	0615	383	2455	470	6158	91	78
23	7957	129	8223	236	5390	136	1.730232	384	1985	470	6067	91	77
24	8086	128	8459	236	5526	136	1.729848	384	1515	470	5976	91	76
25	8214	128	8695	236	5662	137	9464	383	1045	470	5885	90	75
26	8342	128	8931	236	5799	136	9081	383	0575	469	5795	91	74
27	8470	128	9167	236	5935	137	8698	383	1.410106	470	5704	91	73
28	8598	128	9403	236	6072	137	8315	382	1.409636	469	5613	91	72
29	8726	128	9639	236	6209	136	7933	383	9167	469	5522	91	71
30	0.578854	128	0.709875	237	1.226345	137	1.727550	382	1.408698	468	0.815431	91	**70**
31	8982	128	0.710112	236	6482	137	7168	382	8230	469	5340	91	69
32	9110	128	0348	236	6619	137	6786	381	7761	468	5249	91	68
33	9238	129	0584	237	6756	137	6405	382	7293	468	5158	91	67
34	9367	128	0821	236	6893	137	6023	381	6825	468	5067	91	66
35	9495	128	1057	237	7030	137	5642	381	6357	468	4976	91	65
36	9623	128	1294	236	7167	137	5261	381	5889	467	4885	91	64
37	9751	128	1530	237	7304	137	4880	381	5422	468	4794	91	63
38	0.579879	128	1767	237	7441	138	4499	380	4954	467	4703	91	62
39	0.580007	127	2004	236	7579	137	4119	381	4487	466	4612	91	61
40	0.580134	128	0.712240	237	1.227716	137	1.723738	380	1.404021	467	0.814521	91	**60**
41	0262	128	2477	237	7853	138	3358	380	3554	466	4430	92	59
42	0390	128	2714	237	7991	137	2978	379	3088	467	4338	91	58
43	0518	128	2951	237	8128	138	2599	380	2621	466	4247	91	57
44	0646	128	3188	237	8266	137	2219	379	2155	465	4156	91	56
45	0774	128	3425	237	8403	138	1840	379	1690	466	4065	91	55
46	0902	128	3662	237	8541	138	1461	379	1224	465	3974	92	54
47	1030	128	3899	237	8679	138	1082	378	0759	466	3882	91	53
48	1158	127	4136	237	8817	138	0704	379	1.400293	465	3791	91	52
49	1285	128	4373	238	8955	137	1.720325	378	1.399828	464	3700	92	51
50	0.581413		0.714611		1.229092		1.719947		1.399364		0.813608		**50**
	cos		cotg		cosec		sec		tang		sin		c

	90	**91**	**92**	**93**	**127**	**128**	**129**	**135**	**136**	**137**	**138**	**139**	**140**	**141**	**234**	**235**	**236**	**237**	
1	9.0	9.1	9.2	9.3	12.7	12.8	12.9	13.5	13.6	13.7	13.8	13.9	14.0	14.1	23.4	23.5	23.6	23.7	1
2	18.0	18.2	18.4	18.6	25.4	25.6	25.8	27.0	27.2	27.4	27.6	27.8	28.0	28.2	46.8	47.0	47.2	47.4	2
3	27.0	27.3	27.6	27.9	38.1	38.4	38.7	40.5	40.8	41.1	41.4	41.7	42.0	42.3	70.2	70.5	70.8	71.1	3
4	36.0	36.4	36.8	37.2	50.8	51.2	51.6	54.0	54.4	54.8	55.2	55.6	56.0	56.4	93.6	94.0	94.4	94.8	4
5	45.0	45.5	46.0	46.5	63.5	64.0	64.5	67.5	68.0	68.5	69.0	69.5	70.0	70.5	117.0	117.5	118.0	118.5	5
6	54.0	54.6	55.2	55.8	76.2	76.8	77.4	81.0	81.6	82.2	82.8	83.4	84.0	84.6	140.4	141.0	141.6	142.2	6
7	63.0	63.7	64.4	65.1	88.9	89.6	90.3	94.5	95.2	95.9	96.6	97.3	98.0	98.7	163.8	164.5	165.2	165.9	7
8	72.0	72.8	73.6	74.4	101.6	102.4	103.2	108.0	108.8	109.6	110.4	111.2	112.0	112.8	187.2	188.0	188.8	189.6	8
9	81.0	81.9	82.8	83.7	114.3	115.2	116.1	121.5	122.4	123.3	124.2	125.1	126.0	126.9	210.6	211.5	212.4	213.3	9

60g

39g

c	sin		tang		sec		cosec		cotg		cos		
50	0.581413	128	0.714611	237	1.229092	138	1.719947	378	1.399364	465	0.813608	91	**50**
51	1541	128	4848	237	9230	139	9569	377	8899	464	3517	91	49
52	1669	128	5085	238	9369	138	9192	378	8435	465	3426	92	48
53	1797	127	5323	237	9507	138	8814	377	7970	463	3334	91	47
54	1924	128	5560	238	9645	138	8437	377	7507	464	3243	91	46
55	2052	128	5798	237	9783	138	8060	377	7043	464	3152	92	45
56	2180	127	6035	238	1.229921	139	7683	377	6579	463	3060	91	44
57	2307	128	6273	238	1.230060	138	7306	377	6116	463	2969	92	43
58	2435	128	6511	237	0198	139	6929	376	5653	463	2877	91	42
59	2563	127	6748	238	0337	138	6553	376	5190	463	2786	92	41
60	0.582690	128	0.716986	238	1.230475	139	1.716177	376	1.394727	463	0.812694	91	**40**
61	2818	128	7224	238	0614	138	5801	376	4264	462	2603	92	39
62	2946	127	7462	238	0752	139	5425	375	3802	462	2511	92	38
63	3073	128	7700	238	0891	139	5050	375	3340	462	2419	91	37
64	3201	128	7938	238	1030	139	4675	375	2878	462	2328	92	36
65	3329	127	8176	238	1169	139	4300	375	2416	461	2236	91	35
66	3456	128	8414	238	1308	139	3925	375	1955	461	2145	92	34
67	3584	127	8652	239	1447	139	3550	374	1494	462	2053	92	33
68	3711	128	8891	238	1586	139	3176	375	1032	461	1961	91	32
69	3839	127	9129	238	1725	139	2801	374	0571	460	1870	92	31
70	0.583966	128	0.719367	239	1.231864	139	1.712427	373	1.390111	461	0.811778	92	**30**
71	4094	127	9606	238	2003	140	2054	374	1.389650	460	1686	92	29
72	4221	128	0.719844	238	2143	139	1680	373	9190	460	1594	91	28
73	4349	127	0.720082	239	2282	139	1307	374	8730	460	1503	92	27
74	4476	128	0321	239	2421	140	0933	373	8270	460	1411	92	26
75	4604	127	0560	238	2561	139	0560	372	7810	459	1319	92	25
76	4731	128	0798	239	2700	140	1.710188	373	7351	460	1227	92	24
77	4859	127	1037	239	2840	140	1.709815	372	6891	459	1135	92	23
78	4986	127	1276	239	2980	139	9443	373	6432	459	1043	91	22
79	5113	128	1515	239	3119	140	9070	371	5973	458	0952	92	21
80	0.585241	127	0.721754	238	1.233259	140	1.708699	372	1.385515	459	0.810860	92	**20**
81	5368	127	1992	239	3399	140	8327	372	5056	458	0768	92	19
82	5495	128	2231	239	3539	140	7955	371	4598	458	0676	92	18
83	5623	127	2470	240	3679	140	7584	371	4140	458	0584	92	17
84	5750	127	2710	239	3819	140	7213	371	3682	458	0492	92	16
85	5877	128	2949	239	3959	140	6842	371	3224	458	0400	92	15
86	6005	127	3188	239	4099	140	6471	371	2766	457	0308	92	14
87	6132	127	3427	240	4239	141	6100	370	2309	457	0216	92	13
88	6259	127	3667	239	4380	140	5730	370	1852	457	0124	93	12
89	6386	128	3906	239	4520	140	5360	370	1395	457	0.810031	92	11
90	0.586514	127	0.724145	240	1.234660	141	1.704990	370	1.380938	456	0.809939	92	**10**
91	6641	127	4385	239	4801	140	4620	369	0482	457	9847	92	09
92	6768	127	4624	240	4941	141	4251	370	1.380025	456	9755	92	08
93	6895	128	4864	240	5082	141	3881	369	1.379569	456	9663	92	07
94	7023	127	5104	239	5223	140	3512	369	9113	455	9571	93	06
95	7150	127	5343	240	5363	141	3143	368	8658	456	9478	92	05
96	7277	127	5583	240	5504	141	2775	369	8202	455	9386	92	04
97	7404	127	5823	240	5645	141	2406	368	7747	455	9294	92	03
98	7531	127	6063	240	5786	141	2038	368	7292	455	9202	93	02
99	7658	127	6303	240	5927	141	1670	368	6837	455	9109	92	01
100	0.587785		0.726543		1.236068		1.701302		1.376382		0.809017		**00**
	cos		cotg		cosec		sec		tang		sin		c

	238	**239**	**240**	**368**	**371**	**374**	**377**	**380**	**383**	**386**	**389**	**456**	**459**	**462**	**465**	**468**	**471**	**474**	
1	23.8	23.9	24.0	36.8	37.1	37.4	37.7	38.0	38.3	38.6	38.9	45.6	45.9	46.2	46.5	46.8	47.1	47.4	1
2	47.6	47.8	48.0	73.6	74.2	74.8	75.4	76.0	76.6	77.2	77.8	91.2	91.8	92.4	93.0	93.6	94.2	94.8	2
3	71.4	71.7	72.0	110.4	111.3	112.2	113.1	114.0	114.9	115.8	116.7	136.8	137.7	138.6	139.5	140.4	141.3	142.2	3
4	95.2	95.6	96.0	147.2	148.4	149.6	150.8	152.0	153.2	154.4	155.6	182.4	183.6	184.8	186.0	187.2	188.4	189.6	4
5	119.0	119.5	120.0	184.0	185.5	187.0	188.5	190.0	191.5	193.0	194.5	228.0	229.5	231.0	232.5	234.0	235.5	237.0	5
6	142.8	143.4	144.0	220.8	222.6	224.4	226.2	228.0	229.8	231.6	233.4	273.6	275.4	277.2	279.0	280.8	282.6	284.4	6
7	166.6	167.3	168.0	257.6	259.7	261.8	263.9	266.0	268.1	270.2	272.3	319.2	321.3	323.4	325.5	327.6	329.7	331.8	7
8	190.4	191.2	192.0	294.4	296.8	299.2	301.6	304.0	306.4	308.8	311.2	364.8	367.2	369.6	372.0	374.4	376.8	379.2	8
9	214.2	215.1	216.0	331.2	333.9	336.6	339.3	342.0	344.7	347.4	350.1	410.4	413.1	415.8	418.5	421.2	423.9	426.6	9

60g

40g

c	sin		tang		sec		cosec		cotg		cos		
00	0.587785	127	0.726543	240	1.236068	141	1.701302	368	1.376382	455	0.809017	92	**100**
01	7912	127	6783	240	6209	141	0934	368	5927	454	8925	93	99
02	8039	127	7023	240	6350	141	0566	367	5473	454	8832	92	98
03	8166	127	7263	240	6491	142	1.700199	367	5019	454	8740	92	97
04	8293	127	7503	240	6633	141	1.699832	367	4565	454	8648	93	96
05	8420	127	7743	240	6774	142	9465	367	4111	453	8555	92	95
06	8547	127	7983	241	6916	141	9098	366	3658	454	8463	93	94
07	8674	127	8224	240	7057	142	8732	367	3204	453	8370	92	93
08	8801	127	8464	241	7199	141	8365	366	2751	453	8278	93	92
09	8928	127	8705	240	7340	142	7999	366	2298	453	8185	92	91
10	0.589055	127	0.728945	241	1.237482	142	1.697633	365	1.371845	452	0.808093	93	**90**
11	9182	127	9186	240	7624	141	7268	366	1393	453	8000	92	89
12	9309	127	9426	241	7765	142	6902	365	0940	452	7908	93	88
13	9436	127	9667	241	7907	142	6537	365	0488	452	7815	93	87
14	9563	127	0.729908	241	8049	142	6172	365	1.370036	452	7722	92	86
15	9690	127	0.730149	241	8191	142	5807	365	1.369584	452	7630	93	85
16	9817	127	0390	240	8333	142	5442	364	9132	451	7537	92	84
17	0.589944	126	0630	241	8475	142	5078	365	8681	451	7445	93	83
18	0.590070	127	0871	241	8617	143	4713	364	8230	451	7352	93	82
19	0197	127	1112	241	8760	142	4349	364	7779	451	7259	93	81
20	0.590324	127	0.731353	242	1.238902	142	1.693985	364	1.367328	451	0.807166	92	**80**
21	0451	126	1595	241	9044	143	3621	363	6877	450	7074	93	79
22	0577	127	1836	241	9187	142	3258	363	6427	450	6981	93	78
23	0704	127	2077	241	9329	143	2895	364	5977	451	6888	93	77
24	0831	127	2318	242	9472	142	2531	363	5526	449	6795	92	76
25	0958	126	2560	241	9614	143	2168	362	5077	450	6703	93	75
26	1084	127	2801	241	9757	143	1806	363	4627	450	6610	93	74
27	1211	127	3042	242	1.239900	143	1443	362	4177	449	6517	93	73
28	1338	126	3284	242	1.240043	142	1081	362	3728	449	6424	93	72
29	1464	127	3526	241	0185	143	0719	362	3279	449	6331	93	71
30	0.591591	127	0.733767	242	1.240328	143	1.690357	362	1.362830	449	0.806238	93	**70**
31	1718	126	4009	242	0471	143	1.689995	362	2381	448	6145	93	69
32	1844	127	4251	241	0614	143	9633	361	1933	449	6052	93	68
33	1971	127	4492	242	0757	144	9272	361	1484	448	5959	93	67
34	2098	126	4734	242	0901	143	8911	361	1036	448	5866	93	66
35	2224	127	4976	242	1044	143	8550	361	0588	447	5773	93	65
36	2351	126	5218	242	1187	144	8189	361	1.360141	448	5680	93	64
37	2477	127	5460	242	1331	143	7828	360	1.359693	447	5587	93	63
38	2604	126	5702	242	1474	144	7468	360	9246	448	5494	93	62
39	2730	127	5944	243	1618	143	7108	360	8798	447	5401	93	61
40	0.592857	126	0.736187	242	1.241761	144	1.686748	360	1.358351	446	0.805308	93	**60**
41	2983	127	6429	242	1905	143	6388	360	7905	447	5215	93	59
42	3110	126	6671	242	2048	144	6028	359	7458	446	5122	94	58
43	3236	127	6913	243	2192	144	5669	359	7012	447	5028	93	57
44	3363	126	7156	242	2336	144	5310	359	6565	446	4935	93	56
45	3489	127	7398	243	2480	144	4951	359	6119	446	4842	93	55
46	3616	126	7641	242	2624	144	4592	359	5673	445	4749	93	54
47	3742	126	7883	243	2768	144	4233	358	5228	446	4656	94	53
48	3868	127	8126	243	2912	144	3875	358	4782	445	4562	93	52
49	3995	126	8369	242	3056	144	3517	358	4337	445	4469	93	51
50	0.594121		0.738611		1.243200		1.683159		1.353892		0.804376		**50**
	cos		cotg		cosec		sec		tang		sin		c

	92	**93**	**94**	**95**	**125**	**126**	**127**	**141**	**142**	**143**	**144**	**145**	**146**	**147**	**148**	**240**	**241**	**242**	
1	9.2	9.3	9.4	9.5	12.5	12.6	12.7	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	24.0	24.1	24.2	1
2	18.4	18.6	18.8	19.0	25.0	25.2	25.4	28.2	28.4	28.6	28.8	29.0	29.2	29.4	29.6	48.0	48.2	48.4	2
3	27.6	27.9	28.2	28.5	37.5	37.8	38.1	42.3	42.6	42.9	43.2	43.5	43.8	44.1	44.4	72.0	72.3	72.6	3
4	36.8	37.2	37.6	38.0	50.0	50.4	50.8	56.4	56.8	57.2	57.6	58.0	58.4	58.8	59.2	96.0	96.4	96.8	4
5	46.0	46.5	47.0	47.5	62.5	63.0	63.5	70.5	71.0	71.5	72.0	72.5	73.0	73.5	74.0	120.0	120.5	121.0	5
6	55.2	55.8	56.4	57.0	75.0	75.6	76.2	84.6	85.2	85.8	86.4	87.0	87.6	88.2	88.8	144.0	144.6	145.2	6
7	64.4	65.1	65.8	66.5	87.5	88.2	88.9	98.7	99.4	100.1	100.8	101.5	102.2	102.9	103.6	168.0	168.7	169.4	7
8	73.6	74.4	75.2	76.0	100.0	100.8	101.6	112.8	113.6	114.4	115.2	116.0	116.8	117.6	118.4	192.0	192.8	193.6	8
9	82.8	83.7	84.6	85.5	112.5	113.4	114.3	126.9	127.8	128.7	129.6	130.5	131.4	132.3	133.2	216.0	216.9	217.8	9

59g

40g

c	sin		tang		sec		cosec		cotg		cos		
50	0.594121	126	0.738611	243	1.243200	145	1.683159	358	1.353892	445	0.804376	94	**50**
51	4247	127	8854	243	3345	144	2801	358	3447	445	4282	93	49
52	4374	126	9097	243	3489	144	2443	357	3002	444	4189	93	48
53	4500	126	9340	243	3633	145	2086	358	2558	445	4096	94	47
54	4626	127	9583	243	3778	144	1728	357	2113	444	4002	93	46
55	4753	126	0.739826	243	3922	145	1371	357	1669	444	3909	94	45
56	4879	126	0.740069	243	4067	144	1014	356	1225	444	3815	93	44
57	5005	126	0312	243	4211	145	0658	357	0781	443	3722	94	43
58	5131	127	0555	244	4356	145	1.680301	356	1.350338	444	3628	93	42
59	5258	126	0799	243	4501	145	1.679945	356	1.349894	443	3535	94	41
60	0.595384	126	0.741042	243	1.244646	145	1.679589	356	1.349451	443	0.803441	93	**40**
61	5510	126	1285	244	4791	145	9233	356	9008	443	3348	94	39
62	5636	126	1529	243	4936	145	8877	355	8565	442	3254	93	38
63	5762	127	1772	244	5081	145	8522	356	8123	443	3161	94	37
64	5889	126	2016	243	5226	145	8166	355	7680	442	3067	93	36
65	6015	126	2259	244	5371	145	7811	355	7238	442	2974	94	35
66	6141	126	2503	244	5516	146	7456	355	6796	442	2880	94	34
67	6267	126	2747	244	5662	145	7101	354	6354	442	2786	93	33
68	6393	126	2991	243	5807	145	6747	355	5912	441	2693	94	32
69	6519	126	3234	244	5952	146	6392	354	5471	442	2599	94	31
70	0.596645	126	0.743478	244	1.246098	145	1.676038	354	1.345029	441	0.802505	94	**30**
71	6771	126	3722	244	6243	146	5684	354	4588	441	2411	93	29
72	6897	126	3966	244	6389	146	5330	353	4147	441	2318	94	28
73	7023	126	4210	244	6535	145	4977	354	3706	440	2224	94	27
74	7149	126	4454	244	6680	146	4623	353	3266	441	2130	94	26
75	7275	126	4698	245	6826	146	4270	353	2825	440	2036	93	25
76	7401	126	4943	244	6972	146	3917	353	2385	440	1943	94	24
77	7527	126	5187	244	7118	146	3564	353	1945	440	1849	94	23
78	7653	126	5431	245	7264	146	3211	352	1505	439	1755	94	22
79	7779	126	5676	244	7410	146	2859	352	1066	440	1661	94	21
80	0.597905	126	0.745920	245	1.247556	147	1.672507	353	1.340626	439	0.801567	94	**20**
81	8031	126	6165	244	7703	146	2154	351	1.340187	439	1473	94	19
82	8157	126	6409	245	7849	146	1803	352	1.339748	439	1379	94	18
83	8283	126	6654	245	7995	147	1451	352	9309	439	1285	94	17
84	8409	125	6899	244	8142	146	1099	351	8870	439	1191	94	16
85	8534	126	7143	245	8288	147	0748	351	8431	438	1097	94	15
86	8660	126	7388	245	8435	146	0397	351	7993	438	1003	94	14
87	8786	126	7633	245	8581	147	1.670046	351	7555	438	0909	94	13
88	8912	126	7878	245	8728	147	1.669695	351	7117	438	0815	94	12
89	9038	125	8123	245	8875	146	9344	350	6679	438	0721	94	11
90	0.599163	126	0.748368	245	1.249021	147	1.668994	350	1.336241	437	0.800627	94	**10**
91	9289	126	8613	245	9168	147	8644	350	5804	437	0533	94	09
92	9415	126	8858	245	9315	147	8294	350	5367	438	0439	95	08
93	9541	125	9103	245	9462	147	7944	350	4929	436	0344	94	07
94	9666	126	9348	246	9609	147	7594	349	4493	437	0250	94	06
95	9792	126	9594	245	9756	148	7245	350	4056	437	0156	94	05
96	0.599918	125	0.749839	246	1.249904	147	6895	349	3619	436	0.800062	94	04
97	0.600043	126	0.750085	245	1.250051	147	6546	349	3183	436	0.799968	95	03
98	0169	126	0330	246	0198	147	6197	348	2747	436	9873	94	02
99	0295	125	0576	245	0345	148	5849	349	2311	436	9779	94	01
100	0.600420		0.750821		1.250493		1.665500		1.331875		0.799685		**00**
	cos		cotg		cosec		sec		tang		sin		c

	243	**244**	**245**	**246**	**349**	**352**	**355**	**358**	**361**	**364**	**367**	**436**	**439**	**442**	**445**	**448**	**451**	**454**	
1	24.3	24.4	24.5	24.6	34.9	35.2	35.5	35.8	36.1	36.4	36.7	43.6	43.9	44.2	44.5	44.8	45.1	45.4	1
2	48.6	48.8	49.0	49.2	69.8	70.4	71.0	71.6	72.2	72.8	73.4	87.2	87.8	88.4	89.0	89.6	90.2	90.8	2
3	72.9	73.2	73.5	73.8	104.7	105.6	106.5	107.4	108.3	109.2	110.1	130.8	131.7	132.6	133.5	134.4	135.3	136.2	3
4	97.2	97.6	98.0	98.4	139.6	140.8	142.0	143.2	144.4	145.6	146.8	174.4	175.6	176.8	178.0	179.2	180.4	181.6	4
5	121.5	122.0	122.5	123.0	174.5	176.0	177.5	179.0	180.5	182.0	183.5	218.0	219.5	221.0	222.5	224.0	225.5	227.0	5
6	145.8	146.4	147.0	147.6	209.4	211.2	213.0	214.8	216.6	218.4	220.2	261.6	263.4	265.2	267.0	268.8	270.6	272.4	6
7	170.1	170.8	171.5	172.2	244.3	246.4	248.5	250.6	252.7	254.8	256.9	305.2	307.3	309.4	311.5	313.6	315.7	317.8	7
8	194.4	195.2	196.0	196.8	279.2	281.6	284.0	286.4	288.8	291.2	293.6	348.8	351.2	353.6	356.0	358.4	360.8	363.2	8
9	218.7	219.6	220.5	221.4	314.1	316.8	319.5	322.2	324.9	327.6	330.3	392.4	395.1	397.8	400.5	403.2	405.9	408.6	9

59g

41g

c	sin		tang		sec		cosec		cotg		cos		
00	0.600420	126	0.750821	246	1.250493	147	1.665500	348	1.331875	436	0.799685	95	**100**
01	0546	125	1067	246	0640	148	5152	348	1439	435	9590	94	99
02	0671	126	1313	245	0788	148	4804	348	1004	435	9496	94	98
03	0797	126	1558	246	0936	147	4456	348	0569	435	9402	95	97
04	0923	125	1804	246	1083	148	4108	348	1.330134	435	9307	94	96
05	1048	126	2050	246	1231	148	3760	347	1.329699	435	9213	95	95
06	1174	125	2296	246	1379	148	3413	347	9264	435	9118	94	94
07	1299	126	2542	246	1527	148	3066	347	8829	434	9024	94	93
08	1425	125	2788	246	1675	148	2719	347	8395	434	8930	95	92
09	1550	126	3034	246	1823	148	2372	347	7961	434	8835	94	91
10	0.601676	125	0.753280	247	1.251971	148	1.662025	346	1.327527	434	0.798741	95	**90**
11	1801	126	3527	246	2119	148	1679	347	7093	434	8646	95	89
12	1927	125	3773	246	2267	149	1332	346	6659	433	8551	94	88
13	2052	125	4019	247	2416	148	0986	346	6226	433	8457	95	87
14	2177	126	4266	246	2564	149	0640	345	5793	433	8362	94	86
15	2303	125	4512	247	2713	148	1.660295	346	5360	433	8268	95	85
16	2428	126	4759	246	2861	149	1.659949	345	4927	433	8173	95	84
17	2554	125	5005	247	3010	148	9604	346	4494	433	8078	94	83
18	2679	125	5252	247	3158	149	9258	345	4061	432	7984	95	82
19	2804	126	5499	246	3307	149	8913	344	3629	432	7889	95	81
20	0.602930	125	0.755745	247	1.253456	149	1.658569	345	1.323197	432	0.797794	94	**80**
21	3055	125	5992	247	3605	148	8224	344	2765	432	7700	95	79
22	3180	125	6239	247	3753	149	7880	345	2333	432	7605	95	78
23	3305	126	6486	247	3902	149	7535	344	1901	431	7510	95	77
24	3431	125	6733	247	4051	150	7191	344	1470	431	7415	94	76
25	3556	125	6980	247	4201	149	6847	343	1039	432	7321	95	75
26	3681	125	7227	247	4350	149	6504	344	0607	431	7226	95	74
27	3806	126	7474	248	4499	149	6160	343	1.320176	430	7131	95	73
28	3932	125	7722	247	4648	150	5817	344	1.319746	431	7036	95	72
29	4057	125	7969	247	4798	149	5473	343	9315	430	6941	95	71
30	0.604182	125	0.758216	248	1.254947	150	1.655130	342	1.318885	430	0.796846	95	**70**
31	4307	125	8464	247	5097	149	4788	343	8455	431	6751	94	69
32	4432	125	8711	248	5246	150	4445	342	8024	429	6657	95	68
33	4557	126	8959	247	5396	149	4103	343	7595	430	6562	95	67
34	4683	125	9206	248	5545	150	3760	342	7165	430	6467	95	66
35	4808	125	9454	248	5695	150	3418	342	6735	429	6372	95	65
36	4933	125	9702	248	5845	150	3076	341	6306	429	6277	95	64
37	5058	125	0.759950	247	5995	150	2735	342	5877	429	6182	95	63
38	5183	125	0.760197	248	6145	150	2393	341	5448	429	6087	96	62
39	5308	125	0445	248	6295	150	2052	341	5019	429	5991	95	61
40	0.605433	125	0.760693	248	1.256445	150	1.651711	341	1.314590	428	0.795896	95	**60**
41	5558	125	0941	248	6595	150	1370	341	4162	428	5801	95	59
42	5683	125	1189	248	6745	151	1029	341	3734	428	5706	95	58
43	5808	125	1437	249	6896	150	0688	340	3306	428	5611	95	57
44	5933	125	1686	248	7046	151	0348	340	2878	428	5516	95	56
45	6058	125	1934	248	7197	150	1.650008	340	2450	428	5421	96	55
46	6183	125	2182	248	7347	151	1.649668	340	2022	427	5325	95	54
47	6308	125	2430	249	7498	150	9328	340	1595	427	5230	95	53
48	6433	124	2679	248	7648	151	8988	340	1168	427	5135	96	52
49	6557	125	2927	249	7799	151	8648	339	0741	427	5040		51
50	0.606682		0.763176		1.257950		1.648309		1.310314		0.794944		**50**
	cos		cotg		cosec		sec		tang		sin		c

	94	**95**	**96**	**97**	**124**	**125**	**126**	**147**	**148**	**149**	**150**	**151**	**152**	**153**	**154**	**245**	**246**	**247**	
1	9.4	9.5	9.6	9.7	12.4	12.5	12.6	14.7	14.8	14.9	15.0	15.1	15.2	15.3	15.4	24.5	24.6	24.7	1
2	18.8	19.0	19.2	19.4	24.8	25.0	25.2	29.4	29.6	29.8	30.0	30.2	30.4	30.6	30.8	49.0	49.2	49.4	2
3	28.2	28.5	28.8	29.1	37.2	37.5	37.8	44.1	44.4	44.7	45.0	45.3	45.6	45.9	46.2	73.5	73.8	74.1	3
4	37.6	38.0	38.4	38.8	49.6	50.0	50.4	58.8	59.2	59.6	60.0	60.4	60.8	61.2	61.6	98.0	98.4	98.8	4
5	47.0	47.5	48.0	48.5	62.0	62.5	63.0	73.5	74.0	74.5	75.0	75.5	76.0	76.5	77.0	122.5	123.0	123.5	5
6	56.4	57.0	57.6	58.2	74.4	75.0	75.6	88.2	88.8	89.4	90.0	90.6	91.2	91.8	92.4	147.0	147.6	148.2	6
7	65.8	66.5	67.2	67.9	86.8	87.5	88.2	102.9	103.6	104.3	105.0	105.7	106.4	107.1	107.8	171.5	172.2	172.9	7
8	75.2	76.0	76.8	77.6	99.2	100.0	100.8	117.6	118.4	119.2	120.0	120.8	121.6	122.4	123.2	196.0	196.8	197.6	8
9	84.6	85.5	86.4	87.3	111.6	112.5	113.4	132.3	133.2	134.1	135.0	135.9	136.8	137.7	138.6	220.5	221.4	222.3	9

58g

41g

c	sin		tang		sec		cosec		cotg		cos		
50	0.606682	125	0.763176	248	1.257950	151	1.648309	339	1.310314	427	0.794944	95	**50**
51	6807	125	3424	249	8101	150	7970	339	1.309887	426	4849	95	49
52	6932	125	3673	249	8251	151	7631	339	9461	427	4754	96	48
53	7057	125	3922	249	8402	151	7292	339	9034	426	4658	95	47
54	7182	125	4171	248	8553	152	6953	338	8608	426	4563	95	46
55	7307	124	4419	249	8705	151	6615	338	8182	426	4468	96	45
56	7431	125	4668	249	8856	151	6277	338	7756	425	4372	95	44
57	7556	125	4917	249	9007	151	5939	338	7331	426	4277	96	43
58	7681	125	5166	249	9158	152	5601	338	6905	425	4181	95	42
59	7806	124	5415	250	9310	151	5263	338	6480	425	4086	96	41
60	0.607930	125	0.765665	249	1.259461	152	1.644925	337	1.306055	425	0.793990	95	**40**
61	8055	125	5914	249	9613	151	4588	337	5630	425	3895	96	39
62	8180	124	6163	249	9764	152	4251	337	5205	424	3799	95	38
63	8304	125	6412	250	1.259916	152	3914	337	4781	425	3704	96	37
64	8429	125	6662	249	1.260068	151	3577	337	4356	424	3608	95	36
65	8554	124	6911	250	0219	152	3240	336	3932	424	3513	96	35
66	8678	125	7161	249	0371	152	2904	336	3508	424	3417	96	34
67	8803	125	7410	250	0523	152	2568	337	3084	424	3321	95	33
68	8928	124	7660	249	0675	152	2231	336	2660	423	3226	96	32
69	9052	125	7909	250	0827	152	1895	335	2237	424	3130	96	31
70	0.609177	124	0.768159	250	1.260979	152	1.641560	336	1.301813	423	0.793034	95	**30**
71	9301	125	8409	250	1131	153	1224	335	1390	423	2939	96	29
72	9426	124	8659	250	1284	152	0889	336	0967	423	2843	96	28
73	9550	125	8909	250	1436	152	0553	335	0544	422	2747	95	27
74	9675	124	9159	250	1588	153	1.640218	334	1.300122	423	2652	96	26
75	9799	125	9409	250	1741	152	1.639884	335	1.299699	422	2556	96	25
76	0.609924	124	9659	250	1893	153	9549	335	9277	422	2460	96	24
77	0.610048	125	0.769909	250	2046	153	9214	334	8855	422	2364	96	23
78	0173	124	0.770159	251	2199	152	8880	334	8433	422	2268	96	22
79	0297	125	0410	250	2351	153	8546	334	8011	422	2172	95	21
80	0.610422	124	0.770660	250	1.262504	153	1.638212	334	1.297589	421	0.792077	96	**20**
81	0546	124	0910	251	2657	153	7878	334	7168	422	1981	96	19
82	0670	125	1161	250	2810	153	7544	333	6746	421	1885	96	18
83	0795	124	1411	251	2963	153	7211	333	6325	421	1789	96	17
84	0919	125	1662	251	3116	153	6878	334	5904	420	1693	96	16
85	1044	124	1913	250	3269	153	6544	332	5484	421	1597	96	15
86	1168	124	2163	251	3422	154	6212	333	5063	420	1501	96	14
87	1292	125	2414	251	3576	153	5879	333	4643	421	1405	96	13
88	1417	124	2665	251	3729	153	5546	332	4222	420	1309	96	12
89	1541	124	2916	251	3882	154	5214	332	3802	420	1213	96	11
90	0.611665	124	0.773167	251	1.264036	153	1.634882	333	1.293382	420	0.791117	96	**10**
91	1789	125	3418	251	4189	154	4549	331	2962	419	1021	96	09
92	1914	124	3669	251	4343	154	4218	332	2543	420	0925	97	08
93	2038	124	3920	251	4497	153	3886	332	2123	419	0828	96	07
94	2162	124	4171	251	4650	154	3554	331	1704	419	0732	96	06
95	2286	124	4422	252	4804	154	3223	331	1285	419	0636	96	05
96	2410	125	4674	251	4958	154	2892	331	0866	419	0540	96	04
97	2535	124	4925	251	5112	154	2561	331	0447	418	0444	96	03
98	2659	124	5176	252	5266	154	2230	331	1.290029	419	0348	97	02
99	2783	124	5428	252	5420	154	1899	330	1.289610	418	0251	96	01
100	0.612907		0.775680		1.265574		1.631569		1.289192		0.790155		**00**
	cos		cotg		cosec		sec		tang		sin		c

	248	**249**	**250**	**252**	**330**	**333**	**336**	**339**	**342**	**345**	**348**	**418**	**421**	**424**	**427**	**430**	**433**	**436**	
1	24.8	24.9	25.0	25.2	33.0	33.3	33.6	33.9	34.2	34.5	34.8	41.8	42.1	42.4	42.7	43.0	43.3	43.6	1
2	49.6	49.8	50.0	50.4	66.0	66.6	67.2	67.8	68.4	69.0	69.6	83.6	84.2	84.8	85.4	86.0	86.6	87.2	2
3	74.4	74.7	75.0	75.6	99.0	99.9	100.8	101.7	102.6	103.5	104.4	125.4	126.3	127.2	128.1	129.0	129.9	130.8	3
4	99.2	99.6	100.0	100.8	132.0	133.2	134.4	135.6	136.8	138.0	139.2	167.2	168.4	169.6	170.8	172.0	173.2	174.4	4
5	124.0	124.5	125.0	126.0	165.0	166.5	168.0	169.5	171.0	172.5	174.0	209.0	210.5	212.0	213.5	215.0	216.5	218.0	5
6	148.8	149.4	150.0	151.2	198.0	199.8	201.6	203.4	205.2	207.0	208.8	250.8	252.6	254.4	256.2	258.0	259.8	261.6	6
7	173.6	174.3	175.0	176.4	231.0	233.1	235.2	237.3	239.4	241.5	243.6	292.6	294.7	296.8	298.9	301.0	303.1	305.2	7
8	198.4	199.2	200.0	201.6	264.0	266.4	268.8	271.2	273.6	276.0	278.4	334.4	336.8	339.2	341.6	344.0	346.4	348.8	8
9	223.2	224.1	225.0	226.8	297.0	299.7	302.4	305.1	307.8	310.5	313.2	376.2	378.9	381.6	384.3	387.0	389.7	392.4	9

58g

42g

c	sin		tang		sec		cosec		cotg		cos		
00	0.612907	124	0.775680	251	1.265574	155	1.631569	331	1.289192	418	0.790155	96	**100**
01	3031	124	5931	252	5729	154	1238	330	8774	418	0.790059	97	99
02	3155	124	6183	252	5883	154	0908	330	8356	417	0.789962	96	98
03	3279	124	6435	251	6037	155	0578	329	7939	418	9866	96	97
04	3403	124	6686	252	6192	154	1.630249	330	7521	417	9770	97	96
05	3527	124	6938	252	6346	155	1.629919	330	7104	418	9673	96	95
06	3651	125	7190	252	6501	155	9589	329	6686	417	9577	96	94
07	3776	124	7442	252	6656	154	9260	329	6269	417	9481	97	93
08	3900	123	7694	252	6810	155	8931	329	5852	416	9384	96	92
09	4023	124	7946	252	6965	155	8602	329	5436	417	9288	97	91
10	0.614147	124	0.778198	253	1.267120	155	1.628273	328	1.285019	416	0.789191	96	**90**
11	4271	124	8451	252	7275	155	7945	329	4603	416	9095	97	89
12	4395	124	8703	252	7430	155	7616	328	4187	416	8998	96	88
13	4519	124	8955	253	7585	155	7288	328	3771	416	8902	97	87
14	4643	124	9208	252	7740	155	6960	328	3355	416	8805	96	86
15	4767	124	9460	253	7895	156	6632	327	2939	416	8709	97	85
16	4891	124	9713	252	8051	155	6305	328	2523	415	8612	96	84
17	5015	124	0.779965	253	8206	155	5977	327	2108	415	8516	97	83
18	5139	124	0.780218	253	8361	156	5650	328	1693	415	8419	97	82
19	5263	123	0471	253	8517	155	5322	327	1278	415	8322	96	81
20	0.615386	124	0.780724	252	1.268672	156	1.624995	326	1.280863	415	0.788226	97	**80**
21	5510	124	0976	253	8828	156	4669	327	0448	414	8129	97	79
22	5634	124	1229	253	8984	155	4342	327	1.280034	415	8032	96	78
23	5758	124	1482	253	9139	156	4015	326	1.279619	414	7936	97	77
24	5882	123	1735	254	9295	156	3689	326	9205	414	7839	97	76
25	6005	124	1989	253	9451	156	3363	326	8791	414	7742	97	75
26	6129	124	2242	253	9607	156	3037	326	8377	413	7645	97	74
27	6253	123	2495	253	9763	156	2711	326	7964	414	7548	96	73
28	6376	124	2748	254	1.269919	156	2385	325	7550	413	7452	97	72
29	6500	124	3002	253	1.270075	157	2060	326	7137	414	7355	97	71
30	0.616624	123	0.783255	253	1.270232	156	1.621734	325	1.276723	413	0.787258	97	**70**
31	6747	124	3508	254	0388	156	1409	325	6310	412	7161	97	69
32	6871	124	3762	254	0544	157	1084	324	5898	413	7064	97	68
33	6995	123	4016	253	0701	156	0760	325	5485	413	6967	97	67
34	7118	124	4269	254	0857	157	0435	325	5072	412	6870	97	66
35	7242	123	4523	254	1014	157	1.620110	324	4660	412	6773	97	65
36	7365	124	4777	254	1171	156	1.619786	324	4248	412	6676	96	64
37	7489	124	5031	254	1327	157	9462	324	3836	412	6580	98	63
38	7613	123	5285	254	1484	157	9138	324	3424	412	6482	97	62
39	7736	124	5539	254	1641	157	8814	323	3012	412	6385	97	61
40	0.617860	123	0.785793	254	1.271798	157	1.618491	324	1.272600	411	0.786288	97	**60**
41	7983	124	6047	254	1955	157	8167	323	2189	411	6191	97	59
42	8107	123	6301	254	2112	157	7844	323	1778	411	6094	97	58
43	8230	124	6555	254	2269	157	7521	323	1367	411	5997	97	57
44	8354	123	6809	255	2426	158	7198	323	0956	411	5900	97	56
45	8477	123	7064	254	2584	157	6875	323	0545	410	5803	97	55
46	8600	124	7318	255	2741	158	6552	322	1.270135	411	5706	97	54
47	8724	123	7573	254	2899	157	6230	322	1.269724	410	5609	98	53
48	8847	124	7827	255	3056	158	5908	322	9314	410	5511	97	52
49	8971	123	8082	254	3214	157	5586	322	8904	410	5414	97	51
50	0.619094		0.788336		1.273371		1.615264		1.268494		0.785317		**50**
	cos		cotg		cosec		sec		tang		sin		c

	96	**97**	**98**	**99**	**122**	**123**	**124**	**125**	**154**	**155**	**156**	**157**	**158**	**159**	**160**	**161**	**251**	**252**	
1	9.6	9.7	9.8	9.9	12.2	12.3	12.4	12.5	15.4	15.5	15.6	15.7	15.8	15.9	16.0	16.1	25.1	25.2	1
2	19.2	19.4	19.6	19.8	24.4	24.6	24.8	25.0	30.8	31.0	31.2	31.4	31.6	31.8	32.0	32.2	50.2	50.4	2
3	28.8	29.1	29.4	29.7	36.6	36.9	37.2	37.5	46.2	46.5	46.8	47.1	47.4	47.7	48.0	48.3	75.3	75.6	3
4	38.4	38.8	39.2	39.6	48.8	49.2	49.6	50.0	61.6	62.0	62.4	62.8	63.2	63.6	64.0	64.4	100.4	100.8	4
5	48.0	48.5	49.0	49.5	61.0	61.5	62.0	62.5	77.0	77.5	78.0	78.5	79.0	79.5	80.0	80.5	125.5	126.0	5
6	57.6	58.2	58.8	59.4	73.2	73.8	74.4	75.0	92.4	93.0	93.6	94.2	94.8	95.4	96.0	96.6	150.6	151.2	6
7	67.2	67.9	68.6	69.3	85.4	86.1	86.8	87.5	107.8	108.5	109.2	109.9	110.6	111.3	112.0	112.7	175.7	176.4	7
8	76.8	77.6	78.4	79.2	97.6	98.4	99.2	100.0	123.2	124.0	124.8	125.6	126.4	127.2	128.0	128.8	200.8	201.6	8
9	86.4	87.3	88.2	89.1	109.8	110.7	111.6	112.5	138.6	139.5	140.4	141.3	142.2	143.1	144.0	144.9	225.9	226.8	9

57g

42g

c	sin		tang		sec		cosec		cotg		cos		
50	0.619094	123	0.788336	255	1.273371	158	1.615264	322	1.268494	410	0.785317	97	**50**
51	9217	124	8591	255	3529	158	4942	322	8084	409	5220	98	49
52	9341	123	8846	255	3687	158	4620	321	7675	410	5122	97	48
53	9464	123	9101	255	3845	158	4299	321	7265	409	5025	97	47
54	9587	124	9356	255	4003	158	3978	321	6856	409	4928	98	46
55	9711	123	9611	255	4161	158	3657	321	6447	409	4830	97	45
56	9834	123	0.789866	255	4319	158	3336	321	6038	409	4733	97	44
57	0.619957	123	0.790121	255	4477	158	3015	321	5629	408	4636	98	43
58	0.620080	124	0376	255	4635	158	2694	320	5221	409	4538	97	42
59	0204	123	0631	256	4793	159	2374	320	4812	408	4441	98	41
60	0.620327	123	0.790887	255	1.274952	158	1.612054	320	1.264404	408	0.784343	97	**40**
61	0450	123	1142	255	5110	159	1734	320	3996	408	4246	97	39
62	0573	123	1397	256	5269	158	1414	320	3588	408	4149	98	38
63	0696	123	1653	255	5427	159	1094	320	3180	408	4051	97	37
64	0819	124	1908	256	5586	158	0774	319	2772	407	3954	98	36
65	0943	123	2164	256	5744	159	0455	319	2365	408	3856	98	35
66	1066	123	2420	255	5903	159	1.610136	320	1957	407	3758	97	34
67	1189	123	2675	256	6062	159	1.609816	318	1550	407	3661	98	33
68	1312	123	2931	256	6221	159	9498	319	1143	407	3563	97	32
69	1435	123	3187	256	6380	159	9179	319	0736	406	3466	98	31
70	0.621558	123	0.793443	256	1.276539	159	1.608860	318	1.260330	407	0.783368	98	**30**
71	1681	123	3699	256	6698	159	8542	318	1.259923	406	3270	97	29
72	1804	123	3955	256	6857	160	8224	319	9517	406	3173	98	28
73	1927	123	4211	256	7017	159	7905	317	9111	406	3075	98	27
74	2050	123	4467	257	7176	159	7588	318	8705	406	2977	97	26
75	2173	123	4724	256	7335	160	7270	318	8299	406	2880	98	25
76	2296	123	4980	256	7495	160	6952	317	7893	405	2782	98	24
77	2419	123	5236	257	7655	159	6635	318	7488	406	2684	98	23
78	2542	123	5493	256	7814	160	6317	317	7082	405	2586	97	22
79	2665	123	5749	257	7974	160	6000	317	6677	405	2489	98	21
80	0.622788	123	0.796006	257	1.278134	159	1.605683	316	1.256272	405	0.782391	98	**20**
81	2911	123	6263	256	8293	160	5367	317	5867	405	2293	98	19
82	3034	122	6519	257	8453	160	5050	316	5462	404	2195	98	18
83	3156	123	6776	257	8613	160	4734	317	5058	405	2097	98	17
84	3279	123	7033	257	8773	161	4417	316	4653	404	1999	98	16
85	3402	123	7290	257	8934	160	4101	316	4249	404	1901	98	15
86	3525	123	7547	257	9094	160	3785	316	3845	404	1803	97	14
87	3648	122	7804	257	9254	160	3469	315	3441	404	1706	98	13
88	3770	123	8061	257	9414	161	3154	316	3037	403	1608	98	12
89	3893	123	8318	257	9575	160	2838	315	2634	404	1510	98	11
90	0.624016	123	0.798575	258	1.279735	161	1.602523	315	1.252230	403	0.781412	98	**10**
91	4139	122	8833	257	1.279896	161	2208	315	1827	403	1314	99	09
92	4261	123	9090	257	1.280057	160	1893	315	1424	403	1215	98	08
93	4384	123	9347	258	0217	161	1578	315	1021	403	1117	98	07
94	4507	123	9605	257	0378	161	1263	314	0618	403	1019	98	06
95	4630	122	0.799862	258	0539	161	0949	314	1.250215	402	0921	98	05
96	4752	123	0.800120	258	0700	161	0635	314	1.249813	403	0823	98	04
97	4875	122	0378	257	0861	161	0321	314	9410	402	0725	98	03
98	4997	123	0635	258	1022	161	1.600007	314	9008	402	0627	98	02
99	5120	123	0893	258	1183	161	1.599693	314	8606	402	0529	99	01
100	0.625243		0.801151		1.281344		1.599379		1.248204		0.780430		**00**
	cos		cotg		cosec		sec		tang		sin		c

	253	**254**	**255**	**256**	**257**	**258**	**315**	**318**	**321**	**324**	**327**	**330**	**402**	**405**	**408**	**411**	**414**	**417**	
1	25.3	25.4	25.5	25.6	25.7	25.8	31.5	31.8	32.1	32.4	32.7	33.0	40.2	40.5	40.8	41.1	41.4	41.7	1
2	50.6	50.8	51.0	51.2	51.4	51.6	63.0	63.6	64.2	64.8	65.4	66.0	80.4	81.0	81.6	82.2	82.8	83.4	2
3	75.9	76.2	76.5	76.8	77.1	77.4	94.5	95.4	96.3	97.2	98.1	99.0	120.6	121.5	122.4	123.3	124.2	125.1	3
4	101.2	101.6	102.0	102.4	102.8	103.2	126.0	127.2	128.4	129.6	130.8	132.0	160.8	162.0	163.2	164.4	165.6	166.8	4
5	126.5	127.0	127.5	128.0	128.5	129.0	157.5	159.0	160.5	162.0	163.5	165.0	201.0	202.5	204.0	205.5	207.0	208.5	5
6	151.8	152.4	153.0	153.6	154.2	154.8	189.0	190.8	192.6	194.4	196.2	198.0	241.2	243.0	244.8	246.6	248.4	250.2	6
7	177.1	177.8	178.5	179.2	179.9	180.6	220.5	222.6	224.7	226.8	228.9	231.0	281.4	283.5	285.6	287.7	289.8	291.9	7
8	202.4	203.2	204.0	204.8	205.6	206.4	252.0	254.4	256.8	259.2	261.6	264.0	321.6	324.0	326.4	328.8	331.2	333.6	8
9	227.7	228.6	229.5	230.4	231.3	232.2	283.5	286.2	288.9	291.6	294.3	297.0	361.8	364.5	367.2	369.9	372.6	375.3	9

57g

43g

c	sin		tang		sec		cosec		cotg		cos		
00	0.625243	122	0.801151	258	1.281344	162	1.599379	313	1.248204	402	0.780430	98	**100**
01	5365	123	1409	258	1506	161	9066	314	7802	401	0332	98	99
02	5488	122	1667	258	1667	161	8752	313	7401	402	0234	98	98
03	5610	123	1925	258	1828	162	8439	313	6999	401	0136	99	97
04	5733	122	2183	258	1990	161	8126	313	6598	401	0.780037	98	96
05	5855	123	2441	259	2151	162	7813	313	6197	401	0.779939	98	95
06	5978	122	2700	258	2313	162	7500	312	5796	401	9841	99	94
07	6100	123	2958	258	2475	162	7188	312	5395	400	9742	98	93
08	6223	122	3216	259	2637	161	6876	313	4995	401	9644	98	92
09	6345	123	3475	258	2798	162	6563	312	4594	400	9546	99	91
10	0.626468	122	0.803733	259	1.282960	162	1.596251	312	1.244194	400	0.779447	98	**90**
11	6590	123	3992	259	3122	162	5939	311	3794	400	9349	99	89
12	6713	122	4251	258	3284	163	5628	312	3394	400	9250	98	88
13	6835	122	4509	259	3447	162	5316	311	2994	400	9152	98	87
14	6957	123	4768	259	3609	162	5005	312	2594	399	9054	99	86
15	7080	122	5027	259	3771	162	4693	311	2195	400	8955	98	85
16	7202	122	5286	259	3933	163	4382	311	1795	399	8857	99	84
17	7324	123	5545	259	4096	162	4071	310	1396	399	8758	99	83
18	7447	122	5804	259	4258	163	3761	311	0997	399	8659	98	82
19	7569	122	6063	259	4421	163	3450	310	0598	399	8561	99	81
20	0.627691	123	0.806322	259	1.284584	162	1.593140	311	1.240199	398	0.778462	98	**80**
21	7814	122	6581	260	4746	163	2829	310	1.239801	399	8364	99	79
22	7936	122	6841	259	4909	163	2519	310	9402	398	8265	99	78
23	8058	122	7100	259	5072	163	2209	310	9004	398	8166	98	77
24	8180	123	7359	260	5235	163	1899	309	8606	398	8068	99	76
25	8303	122	7619	260	5398	163	1590	310	8208	398	7969	99	75
26	8425	122	7879	259	5561	163	1280	309	7810	398	7870	98	74
27	8547	122	8138	260	5724	164	0971	309	7412	397	7772	99	73
28	8669	122	8398	260	5888	163	0662	309	7015	398	7673	99	72
29	8791	122	8658	259	6051	163	0353	309	6617	397	7574	99	71
30	0.628913	123	0.808917	260	1.286214	164	1.590044	309	1.236220	397	0.777475	98	**70**
31	9036	122	9177	260	6378	163	1.589735	308	5823	397	7377	99	69
32	9158	122	9437	260	6541	164	9427	309	5426	397	7278	99	68
33	9280	122	9697	260	6705	164	9118	308	5029	396	7179	99	67
34	9402	122	0.809957	261	6869	163	8810	308	4633	397	7080	99	66
35	9524	122	0.810218	260	7032	164	8502	308	4236	396	6981	99	65
36	9646	122	0478	260	7196	164	8194	307	3840	396	6882	99	64
37	9768	122	0738	260	7360	164	7887	308	3444	396	6783	99	63
38	0.629890	122	0998	261	7524	164	7579	307	3048	396	6684	99	62
39	0.630012	122	1259	260	7688	164	7272	308	2652	396	6585	98	61
40	0.630134	122	0.811519	261	1.287852	165	1.586964	307	1.232256	395	0.776487	99	**60**
41	0256	122	1780	261	8017	164	6657	307	1861	395	6388	99	59
42	0378	122	2041	260	8181	164	6350	306	1466	396	6289	100	58
43	0500	122	2301	261	8345	165	6044	307	1070	395	6189	99	57
44	0622	122	2562	261	8510	164	5737	307	0675	395	6090	99	56
45	0744	121	2823	261	8674	165	5430	306	1.230280	394	5991	99	55
46	0865	122	3084	261	8839	164	5124	306	1.229886	395	5892	99	54
47	0987	122	3345	261	9003	165	4818	306	9491	394	5793	99	53
48	1109	122	3606	261	9168	165	4512	306	9097	395	5694	99	52
49	1231	122	3867	261	9333	165	4206	306	8702	394	5595	99	51
50	0.631353		0.814128		1.289498		1.583900		1.228308		0.775496		**50**
	cos		cotg		cosec		sec		tang		sin		c

	98	**99**	**100**	**101**	**121**	**122**	**123**	**161**	**162**	**163**	**164**	**165**	**166**	**167**	**168**	**169**	**258**	**259**	
1	9.8	9.9	10.0	10.1	12.1	12.2	12.3	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	25.8	25.9	1
2	19.6	19.8	20.0	20.2	24.2	24.4	24.6	32.2	32.4	32.6	32.8	33.0	33.2	33.4	33.6	33.8	51.6	51.8	2
3	29.4	29.7	30.0	30.3	36.3	36.6	36.9	48.3	48.6	48.9	49.2	49.5	49.8	50.1	50.4	50.7	77.4	77.7	3
4	39.2	39.6	40.0	40.4	48.4	48.8	49.2	64.4	64.8	65.2	65.6	66.0	66.4	66.8	67.2	67.6	103.2	103.6	4
5	49.0	49.5	50.0	50.5	60.5	61.0	61.5	80.5	81.0	81.5	82.0	82.5	83.0	83.5	84.0	84.5	129.0	129.5	5
6	58.8	59.4	60.0	60.6	72.6	73.2	73.8	96.6	97.2	97.8	98.4	99.0	99.6	100.2	100.8	101.4	154.8	155.4	6
7	68.6	69.3	70.0	70.7	84.7	85.4	86.1	112.7	113.4	114.1	114.8	115.5	116.2	116.9	117.6	118.3	180.6	181.3	7
8	78.4	79.2	80.0	80.8	96.8	97.6	98.4	128.8	129.6	130.4	131.2	132.0	132.8	133.6	134.4	135.2	206.4	207.2	8
9	88.2	89.1	90.0	90.9	108.9	109.8	110.7	144.9	145.8	146.7	147.6	148.5	149.4	150.3	151.2	152.1	232.2	233.1	9

56g

43g

c	sin		tang		sec		cosec		cotg		cos		
50	0.631353	122	0.814128	261	1.289498	165	1.583900	305	1.228308	394	0.775496	99	**50**
51	1475	121	4389	262	9663	165	3595	305	7914	394	5397	100	49
52	1596	122	4651	261	9828	165	3290	306	7520	393	5297	99	48
53	1718	122	4912	261	1.289993	165	2984	305	7127	394	5198	99	47
54	1840	122	5173	262	1.290158	165	2679	305	6733	393	5099	99	46
55	1962	121	5435	261	0323	165	2374	304	6340	394	5000	100	45
56	2083	122	5696	262	0488	166	2070	305	5946	393	4900	99	44
57	2205	122	5958	262	0654	165	1765	304	5553	393	4801	99	43
58	2327	121	6220	261	0819	166	1461	305	5160	392	4702	100	42
59	2448	122	6481	262	0985	165	1156	304	4768	393	4602	99	41
60	0.632570	122	0.816743	262	1.291150	166	1.580852	304	1.224375	393	0.774503	99	**40**
61	2692	121	7005	262	1316	166	0548	303	3982	392	4404	100	39
62	2813	122	7267	262	1482	166	1.580245	304	3590	392	4304	99	38
63	2935	122	7529	262	1648	166	1.579941	304	3198	392	4205	100	37
64	3057	121	7791	262	1814	166	9637	303	2806	392	4105	99	36
65	3178	122	8053	263	1980	166	9334	303	2414	392	4006	99	35
66	3300	121	8316	262	2146	166	9031	303	2022	391	3907	100	34
67	3421	122	8578	262	2312	166	8728	303	1631	392	3807	99	33
68	3543	121	8840	263	2478	166	8425	303	1239	391	3708	100	32
69	3664	122	9103	262	2644	167	8122	302	0848	391	3608	100	31
70	0.633786	121	0.819365	263	1.292811	166	1.577820	303	1.220457	391	0.773508	99	**30**
71	3907	122	9628	262	2977	167	7517	302	1.220066	391	3409	100	29
72	4029	121	0.819890	263	3144	166	7215	302	1.219675	391	3309	99	28
73	4150	122	0.820153	263	3310	167	6913	302	9284	390	3210	100	27
74	4272	121	0416	263	3477	167	6611	302	8894	390	3110	100	26
75	4393	122	0679	263	3644	166	6309	301	8504	391	3010	99	25
76	4515	121	0942	263	3810	167	6008	302	8113	390	2911	100	24
77	4636	121	1205	263	3977	167	5706	301	7723	390	2811	100	23
78	4757	122	1468	263	4144	167	5405	301	7333	389	2711	99	22
79	4879	121	1731	263	4311	167	5104	301	6944	390	2612	100	21
80	0.635000	122	0.821994	263	1.294478	168	1.574803	301	1.216554	390	0.772512	100	**20**
81	5122	121	2257	264	4646	167	4502	301	6164	389	2412	100	19
82	5243	121	2521	263	4813	167	4201	300	5775	389	2312	99	18
83	5364	121	2784	263	4980	168	3901	301	5386	389	2213	100	17
84	5485	122	3047	264	5148	167	3600	300	4997	389	2113	100	16
85	5607	121	3311	264	5315	168	3300	300	4608	389	2013	100	15
86	5728	121	3575	263	5483	167	3000	300	4219	388	1913	100	14
87	5849	121	3838	264	5650	168	2700	300	3831	389	1813	100	13
88	5970	122	4102	264	5818	168	2400	300	3442	388	1713	100	12
89	6092	121	4366	264	5986	168	2100	299	3054	388	1613	99	11
90	0.636213	121	0.824630	263	1.296154	167	1.571801	299	1.212666	388	0.771514	100	**10**
91	6334	121	4893	264	6321	168	1502	300	2278	388	1414	100	09
92	6455	121	5157	265	6489	169	1202	299	1890	388	1314	100	08
93	6576	122	5422	264	6658	168	0903	298	1502	387	1214	100	07
94	6698	121	5686	264	6826	168	0605	299	1115	388	1114	100	06
95	6819	121	5950	264	6994	168	0306	299	0727	387	1014	100	05
96	6940	121	6214	265	7162	169	1.570007	298	1.210340	387	0914	100	04
97	7061	121	6479	264	7331	168	1.569709	298	1.209953	387	0814	101	03
98	7182	121	6743	264	7499	169	9411	299	9566	387	0713	100	02
99	7303	121	7007	265	7668	168	9112	297	9179	387	0613	100	01
100	0.637424		0.827272		1.297836		1.568815		1.208792		0.770513		**00**
	cos		cotg		cosec		sec		tang		sin		c

	260	**261**	**262**	**263**	**264**	**265**	**298**	**301**	**304**	**307**	**310**	**313**	**387**	**390**	**393**	**396**	**399**	**402**	
1	26.0	26.1	26.2	26.3	26.4	26.5	29.8	30.1	30.4	30.7	31.0	31.3	38.7	39.0	39.3	39.6	39.9	40.2	1
2	52.0	52.2	52.4	52.6	52.8	53.0	59.6	60.2	60.8	61.4	62.0	62.6	77.4	78.0	78.6	79.2	79.8	80.4	2
3	78.0	78.3	78.6	78.9	79.2	79.5	89.4	90.3	91.2	92.1	93.0	93.9	116.1	117.0	117.9	118.8	119.7	120.6	3
4	104.0	104.4	104.8	105.2	105.6	106.0	119.2	120.4	121.6	122.8	124.0	125.2	154.8	156.0	157.2	158.4	159.6	160.8	4
5	130.0	130.5	131.0	131.5	132.0	132.5	149.0	150.5	152.0	153.5	155.0	156.5	193.5	195.0	196.5	198.0	199.5	201.0	5
6	156.0	156.6	157.2	157.8	158.4	159.0	178.8	180.6	182.4	184.2	186.0	187.8	232.2	234.0	235.8	237.6	239.4	241.2	6
7	182.0	182.7	183.4	184.1	184.8	185.5	208.6	210.7	212.8	214.9	217.0	219.1	270.9	273.0	275.1	277.2	279.3	281.4	7
8	208.0	208.8	209.6	210.4	211.2	212.0	238.4	240.8	243.2	245.6	248.0	250.4	309.6	312.0	314.4	316.8	319.2	321.6	8
9	234.0	234.9	235.8	236.7	237.6	238.5	268.2	270.9	273.6	276.3	279.0	281.7	348.3	351.0	353.7	356.4	359.1	361.8	9

56g

44g

c	sin		tang		sec		cosec		cotg		cos		
00	0.637424	121	0.827272	265	1.297836	169	1.568815	298	1.208792	386	0.770513	100	**100**
01	7545	121	7537	264	8005	169	8517	298	8406	387	0413	100	99
02	7666	121	7801	265	8174	169	8219	297	8019	386	0313	100	98
03	7787	121	8066	265	8343	168	7922	298	7633	386	0213	100	97
04	7908	121	8331	265	8511	169	7624	297	7247	386	0113	101	96
05	8029	121	8596	265	8680	169	7327	297	6861	386	0.770012	100	95
06	8150	121	8861	265	8849	170	7030	297	6475	385	0.769912	100	94
07	8271	121	9126	265	9019	169	6733	297	6090	386	9812	100	93
08	8392	121	9391	265	9188	169	6436	296	5704	385	9712	101	92
09	8513	121	9656	265	9357	170	6140	297	5319	385	9611	100	91
10	0.638634	120	0.829921	266	1.299527	169	1.565843	296	1.204934	385	0.769511	100	**90**
11	8754	121	0.830187	265	9696	170	5547	296	4549	385	9411	101	89
12	8875	121	0452	265	1.299866	169	5251	296	4164	385	9310	100	88
13	8996	121	0717	266	1.300035	170	4955	296	3779	385	9210	100	87
14	9117	121	0983	265	0205	170	4659	296	3394	384	9110	101	86
15	9238	120	1248	266	0375	169	4363	295	3010	385	9009	100	85
16	9358	121	1514	266	0544	170	4068	296	2625	384	8909	101	84
17	9479	121	1780	266	0714	170	3772	295	2241	384	8808	100	83
18	9600	121	2046	265	0884	170	3477	295	1857	384	8708	101	82
19	9721	120	2311	266	1054	170	3182	295	1473	383	8607	100	81
20	0.639841	121	0.832577	266	1.301224	171	1.562887	295	1.201090	384	0.768507	101	**80**
21	0.639962	121	2843	266	1395	170	2592	294	0706	384	8406	100	79
22	0.640083	121	3109	267	1565	170	2298	295	1.200322	383	8306	101	78
23	0204	120	3376	266	1735	171	2003	294	1.199939	383	8205	100	77
24	0324	121	3642	266	1906	170	1709	294	9556	383	8105	101	76
25	0445	120	3908	266	2076	171	1415	294	9173	383	8004	100	75
26	0565	121	4174	267	2247	171	1121	294	8790	383	7904	101	74
27	0686	121	4441	266	2418	170	0827	294	8407	382	7803	101	73
28	0807	120	4707	267	2588	171	0533	294	8025	383	7702	100	72
29	0927	121	4974	267	2759	171	1.560239	293	7642	382	7602	101	71
30	0.641048	120	0.835241	266	1.302930	171	1.559946	293	1.197260	382	0.767501	101	**70**
31	1168	121	5507	267	3101	171	9653	294	6878	382	7400	101	69
32	1289	120	5774	267	3272	171	9359	293	6496	382	7299	100	68
33	1409	121	6041	267	3443	171	9066	292	6114	382	7199	101	67
34	1530	120	6308	267	3614	172	8774	293	5732	381	7098	101	66
35	1650	121	6575	267	3786	171	8481	293	5351	382	6997	101	65
36	1771	120	6842	267	3957	172	8188	292	4969	381	6896	100	64
37	1891	121	7109	267	4129	171	7896	292	4588	381	6796	101	63
38	2012	120	7376	267	4300	172	7604	292	4207	381	6695	101	62
39	2132	121	7643	268	4472	171	7312	292	3826	381	6594	101	61
40	0.642253	120	0.837911	267	1.304643	172	1.557020	292	1.193445	381	0.766493	101	**60**
41	2373	120	8178	268	4815	172	6728	292	3064	381	6392	101	59
42	2493	121	8446	267	4987	172	6436	291	2683	380	6291	101	58
43	2614	120	8713	268	5159	172	6145	292	2303	380	6190	101	57
44	2734	120	8981	267	5331	172	5853	291	1923	381	6089	101	56
45	2854	121	9248	268	5503	172	5562	291	1542	380	5988	101	55
46	2975	120	9516	268	5675	172	5271	291	1162	380	5887	101	54
47	3095	120	0.839784	268	5847	173	4980	291	0782	379	5786	101	53
48	3215	121	0.840052	268	6020	172	4689	290	0403	380	5685	101	52
49	3336	120	0320	268	6192	172	4399	291	1.190023	379	5584	101	51
50	0.643456		0.840588		1.306364		1.554108		1.189644		0.765483		**50**
	cos		cotg		cosec		sec		tang		sin		c

	100	**101**	**102**	**119**	**120**	**121**	**168**	**169**	**170**	**172**	**173**	**174**	**175**	**176**	**177**	**264**	**265**	**266**	
1	10.0	10.1	10.2	11.9	12.0	12.1	16.8	16.9	17.0	17.2	17.3	17.4	17.5	17.6	17.7	26.4	26.5	26.6	1
2	20.0	20.2	20.4	23.8	24.0	24.2	33.6	33.8	34.0	34.4	34.6	34.8	35.0	35.2	35.4	52.8	53.0	53.2	2
3	30.0	30.3	30.6	35.7	36.0	36.3	50.4	50.7	51.0	51.6	51.9	52.2	52.5	52.8	53.1	79.2	79.5	79.8	3
4	40.0	40.4	40.8	47.6	48.0	48.4	67.2	67.6	68.0	68.8	69.2	69.6	70.0	70.4	70.8	105.6	106.0	106.4	4
5	50.0	50.5	51.0	59.5	60.0	60.5	84.0	84.5	85.0	86.0	86.5	87.0	87.5	88.0	88.5	132.0	132.5	133.0	5
6	60.0	60.6	61.2	71.4	72.0	72.6	100.8	101.4	102.0	103.2	103.8	104.4	105.0	105.6	106.2	158.4	159.0	159.6	6
7	70.0	70.7	71.4	83.3	84.0	84.7	117.6	118.3	119.0	120.4	121.1	121.8	122.5	123.2	123.9	184.8	185.5	186.2	7
8	80.0	80.8	81.6	95.2	96.0	96.8	134.4	135.2	136.0	137.6	138.4	139.2	140.0	140.8	141.6	211.2	212.0	212.8	8
9	90.0	90.9	91.8	107.1	108.0	108.9	151.2	152.1	153.0	154.8	155.7	156.6	157.5	158.4	159.3	237.6	238.5	239.4	9

55g

44g

c	sin		tang		sec		cosec		cotg		cos		
50	0.643456	120	0.840588	268	1.306364	173	1.554108	290	1.189644	380	0.765483	101	**50**
51	3576	120	0856	268	6537	173	3818	290	9264	379	5382	101	49
52	3696	121	1124	268	6710	172	3528	290	8885	379	5281	101	48
53	3817	120	1392	269	6882	173	3238	290	8506	379	5180	101	47
54	3937	120	1661	268	7055	173	2948	290	8127	378	5079	101	46
55	4057	120	1929	269	7228	173	2658	290	7749	379	4978	102	45
56	4177	120	2198	268	7401	173	2368	289	7370	379	4876	101	44
57	4297	120	2466	269	7574	173	2079	289	6991	378	4775	101	43
58	4417	120	2735	268	7747	173	1790	290	6613	378	4674	101	42
59	4537	120	3003	269	7920	173	1500	289	6235	378	4573	101	41
60	0.644657	121	0.843272	269	1.308093	173	1.551211	289	1.185857	378	0.764472	102	**40**
61	4778	120	3541	269	8266	174	0922	288	5479	378	4370	101	39
62	4898	120	3810	269	8440	173	0634	289	5101	377	4269	101	38
63	5018	120	4079	269	8613	174	0345	288	4724	378	4168	102	37
64	5138	120	4348	269	8787	174	1.550057	289	4346	377	4066	101	36
65	5258	120	4617	269	8961	173	1.549768	288	3969	377	3965	101	35
66	5378	120	4886	269	9134	174	9480	288	3592	377	3864	102	34
67	5498	120	5155	270	9308	174	9192	288	3215	377	3762	101	33
68	5618	120	5425	269	9482	174	8904	287	2838	377	3661	102	32
69	5738	120	5694	269	9656	174	8617	288	2461	377	3559	101	31
70	0.645858	119	0.845963	270	1.309830	174	1.548329	287	1.182084	376	0.763458	101	**30**
71	5977	120	6233	270	1.310004	174	8042	288	1708	377	3357	102	29
72	6097	120	6503	269	0178	174	7754	287	1331	376	3255	101	28
73	6217	120	6772	270	0352	175	7467	287	0955	376	3154	102	27
74	6337	120	7042	270	0527	174	7180	287	0579	376	3052	102	26
75	6457	120	7312	270	0701	175	6893	286	1.180203	376	2950	101	25
76	6577	120	7582	270	0876	174	6607	287	1.179827	375	2849	102	24
77	6697	119	7852	270	1050	175	6320	286	9452	376	2747	101	23
78	6816	120	8122	270	1225	174	6034	286	9076	375	2646	102	22
79	6936	120	8392	270	1399	175	5748	287	8701	376	2544	101	21
80	0.647056	120	0.848662	270	1.311574	175	1.545461	286	1.178325	375	0.762443	102	**20**
81	7176	119	8932	271	1749	175	5175	285	7950	375	2341	102	19
82	7295	120	9203	270	1924	175	4890	286	7575	374	2239	101	18
83	7415	120	9473	270	2099	175	4604	286	7201	375	2138	102	17
84	7535	120	0.849743	271	2274	175	4318	285	6826	375	2036	102	16
85	7655	119	0.850014	271	2449	176	4033	285	6451	374	1934	102	15
86	7774	120	0285	270	2625	175	3748	285	6077	374	1832	101	14
87	7894	120	0555	271	2800	176	3463	285	5703	375	1731	102	13
88	8014	119	0826	271	2976	175	3178	285	5328	374	1629	102	12
89	8133	120	1097	271	3151	176	2893	285	4954	373	1527	102	11
90	0.648253	119	0.851368	271	1.313327	175	1.542608	284	1.174581	374	0.761425	102	**10**
91	8372	120	1639	271	3502	176	2324	285	4207	374	1323	102	09
92	8492	120	1910	271	3678	176	2039	284	3833	373	1221	101	08
93	8612	119	2181	271	3854	176	1755	284	3460	373	1120	102	07
94	8731	120	2452	271	4030	176	1471	284	3087	374	1018	102	06
95	8851	119	2723	272	4206	176	1187	284	2713	373	0916	102	05
96	8970	120	2995	271	4382	176	0903	284	2340	373	0814	102	04
97	9090	119	3266	272	4558	176	0619	283	1967	372	0712	102	03
98	9209	120	3538	271	4734	177	0336	284	1595	373	0610	102	02
99	9329	119	3809	272	4911	176	1.540052	283	1222	372	0508	102	01
100	0.649448		0.854081		1.315087		1.539769		1.170850		0.760406		**00**
	cos		cotg		cosec		sec		tang		sin		c

	267	**268**	**269**	**270**	**271**	**272**	**283**	**286**	**289**	**292**	**295**	**298**	**372**	**375**	**378**	**381**	**384**	**387**	
1	26.7	26.8	26.9	27.0	27.1	27.2	28.3	28.6	28.9	29.2	29.5	29.8	37.2	37.5	37.8	38.1	38.4	38.7	1
2	53.4	53.6	53.8	54.0	54.2	54.4	56.6	57.2	57.8	58.4	59.0	59.6	74.4	75.0	75.6	76.2	76.8	77.4	2
3	80.1	80.4	80.7	81.0	81.3	81.6	84.9	85.8	86.7	87.6	88.5	89.4	111.6	112.5	113.4	114.3	115.2	116.1	3
4	106.8	107.2	107.6	108.0	108.4	108.8	113.2	114.4	115.6	116.8	118.0	119.2	148.8	150.0	151.2	152.4	153.6	154.8	4
5	133.5	134.0	134.5	135.0	135.5	136.0	141.5	143.0	144.5	146.0	147.5	149.0	186.0	187.5	189.0	190.5	192.0	193.5	5
6	160.2	160.8	161.4	162.0	162.6	163.2	169.8	171.6	173.4	175.2	177.0	178.8	223.2	225.0	226.8	228.6	230.4	232.2	6
7	186.9	187.6	188.3	189.0	189.7	190.4	198.1	200.2	202.3	204.4	206.5	208.6	260.4	262.5	264.6	266.7	268.8	270.9	7
8	213.6	214.4	215.2	216.0	216.8	217.6	226.4	228.8	231.2	233.6	236.0	238.4	297.6	300.0	302.4	304.8	307.2	309.6	8
9	240.3	241.2	242.1	243.0	243.9	244.8	254.7	257.4	260.1	262.8	265.5	268.2	334.8	337.5	340.2	342.9	345.6	348.3	9

55g

45g

c	sin		tang		sec		cosec		cotg		cos		
00	0.649448	119	0.854081	271	1.315087	176	1.539769	283	1.170850	373	0.760406	102	**100**
01	9567	120	4352	272	5263	177	9486	283	0477	372	0304	102	99
02	9687	119	4624	272	5440	177	9203	283	1.170105	372	0202	102	98
03	9806	120	4896	272	5617	176	8920	283	1.169733	372	0.760100	102	97
04	0.649926	119	5168	272	5793	177	8637	282	9361	372	0.759998	102	96
05	0.650045	119	5440	272	5970	177	8355	283	8989	371	9896	102	95
06	0164	120	5712	272	6147	177	8072	282	8618	372	9794	103	94
07	0284	119	5984	272	6324	177	7790	282	8246	371	9691	102	93
08	0403	119	6256	273	6501	177	7508	282	7875	372	9589	102	92
09	0522	120	6529	272	6678	177	7226	282	7503	371	9487	102	91
10	0.650642	119	0.856801	272	1.316855	178	1.536944	281	1.167132	371	0.759385	102	**90**
11	0761	119	7073	273	7033	177	6663	282	6761	371	9283	103	89
12	0880	119	7346	272	7210	177	6381	281	6390	370	9180	102	88
13	0999	120	7618	273	7387	178	6100	282	6020	371	9078	102	87
14	1119	119	7891	273	7565	177	5818	281	5649	370	8976	102	86
15	1238	119	8164	273	7742	178	5537	281	5279	371	8874	103	85
16	1357	119	8437	273	7920	178	5256	281	4908	370	8771	102	84
17	1476	119	8710	272	8098	178	4975	280	4538	370	8669	102	83
18	1595	120	8982	273	8276	178	4695	281	4168	370	8567	103	82
19	1715	119	9255	274	8454	178	4414	280	3798	370	8464	102	81
20	0.651834	119	0.859529	273	1.318632	178	1.534134	281	1.163428	369	0.758362	102	**80**
21	1953	119	0.859802	273	8810	178	3853	280	3059	370	8260	103	79
22	2072	119	0.860075	273	8988	178	3573	280	2689	369	8157	102	78
23	2191	119	0348	274	9166	178	3293	280	2320	369	8055	103	77
24	2310	119	0622	273	9344	179	3013	279	1951	369	7952	102	76
25	2429	119	0895	274	9523	178	2734	280	1582	369	7850	103	75
26	2548	119	1169	273	9701	179	2454	280	1213	369	7747	102	74
27	2667	119	1442	274	1.319880	178	2174	279	0844	369	7645	103	73
28	2786	119	1716	274	1.320058	179	1895	279	0475	368	7542	102	72
29	2905	119	1990	274	0237	179	1616	279	1.160107	369	7440	103	71
30	0.653024	119	0.862264	273	1.320416	179	1.531337	279	1.159738	368	0.757337	103	**70**
31	3143	119	2537	274	0595	179	1058	279	9370	368	7234	102	69
32	3262	119	2811	274	0774	179	0779	278	9002	368	7132	103	68
33	3381	119	3085	275	0953	179	0501	279	8634	368	7029	102	67
34	3500	119	3360	274	1132	179	1.530222	278	8266	368	6927	103	66
35	3619	119	3634	274	1311	180	1.529944	278	7898	367	6824	103	65
36	3738	118	3908	274	1491	179	9666	278	7531	368	6721	102	64
37	3856	119	4182	275	1670	179	9388	278	7163	367	6619	103	63
38	3975	119	4457	274	1849	180	9110	278	6796	367	6516	103	62
39	4094	119	4731	275	2029	179	8832	278	6429	368	6413	103	61
40	0.654213	119	0.865006	275	1.322208	180	1.528554	277	1.156061	367	0.756310	102	**60**
41	4332	119	5281	274	2388	180	8277	278	5694	366	6208	103	59
42	4451	118	5555	275	2568	180	7999	277	5328	367	6105	103	58
43	4569	119	5830	275	2748	180	7722	277	4961	367	6002	103	57
44	4688	119	6105	275	2928	180	7445	277	4594	366	5899	103	56
45	4807	118	6380	275	3108	180	7168	277	4228	366	5796	103	55
46	4925	119	6655	275	3288	180	6891	276	3862	366	5693	102	54
47	5044	119	6930	275	3468	180	6615	277	3496	366	5591	103	53
48	5163	119	7205	275	3648	181	6338	276	3130	366	5488	103	52
49	5282	118	7480	276	3829	180	6062	277	2764	366	5385	103	51
50	0.655400		0.867756		1.324009		1.525785		1.152398		0.755282		**50**
	cos		cotg		cosec		sec		tang		sin		c

	102	**103**	**104**	**117**	**118**	**119**	**120**	**176**	**177**	**178**	**179**	**180**	**181**	**182**	**183**	**184**	**185**	**269**	
1	10.2	10.3	10.4	11.7	11.8	11.9	12.0	17.6	17.7	17.8	17.9	18.0	18.1	18.2	18.3	18.4	18.5	26.9	1
2	20.4	20.6	20.8	23.4	23.6	23.8	24.0	35.2	35.4	35.6	35.8	36.0	36.2	36.4	36.6	36.8	37.0	53.8	2
3	30.6	30.9	31.2	35.1	35.4	35.7	36.0	52.8	53.1	53.4	53.7	54.0	54.3	54.6	54.9	55.2	55.5	80.7	3
4	40.8	41.2	41.6	46.8	47.2	47.6	48.0	70.4	70.8	71.2	71.6	72.0	72.4	72.8	73.2	73.6	74.0	107.6	4
5	51.0	51.5	52.0	58.5	59.0	59.5	60.0	88.0	88.5	89.0	89.5	90.0	90.5	91.0	91.5	92.0	92.5	134.5	5
6	61.2	61.8	62.4	70.2	70.8	71.4	72.0	105.6	106.2	106.8	107.4	108.0	108.6	109.2	109.8	110.4	111.0	161.4	6
7	71.4	72.1	72.8	81.9	82.6	83.3	84.0	123.2	123.9	124.6	125.3	126.0	126.7	127.4	128.1	128.8	129.5	188.3	7
8	81.6	82.4	83.2	93.6	94.4	95.2	96.0	140.8	141.6	142.4	143.2	144.0	144.8	145.6	146.4	147.2	148.0	215.2	8
9	91.8	92.7	93.6	105.3	106.2	107.1	108.0	158.4	159.3	160.2	161.1	162.0	162.9	163.8	164.7	165.6	166.5	242.1	9

54g

45g

c	sin		tang		sec		cosec		cotg		cos		
50	0.655400	119	0.867756	275	1.324009	181	1.525785	276	1.152398	366	0.755282	103	**50**
51	5519	118	8031	276	4190	180	5509	276	2032	365	5179	103	49
52	5637	119	8307	275	4370	181	5233	276	1667	366	5076	103	48
53	5756	119	8582	276	4551	181	4957	275	1301	365	4973	103	47
54	5875	118	8858	276	4732	180	4682	276	0936	365	4870	103	46
55	5993	119	9134	275	4912	181	4406	275	0571	365	4767	103	45
56	6112	118	9409	276	5093	181	4131	276	1.150206	365	4664	103	44
57	6230	119	9685	276	5274	182	3855	275	1.149841	364	4561	103	43
58	6349	118	0.869961	276	5456	181	3580	275	9477	365	4458	103	42
59	6467	119	0.870237	276	5637	181	3305	275	9112	364	4355	104	41
60	0.656586	118	0.870513	276	1.325818	181	1.523030	274	1.148748	365	0.754251	103	**40**
61	6704	119	0789	277	5999	182	2756	275	8383	364	4148	103	39
62	6823	118	1066	276	6181	181	2481	275	8019	364	4045	103	38
63	6941	119	1342	276	6362	182	2206	274	7655	364	3942	103	37
64	7060	118	1618	277	6544	181	1932	274	7291	363	3839	104	36
65	7178	118	1895	276	6725	182	1658	274	6928	364	3735	103	35
66	7296	119	2171	277	6907	182	1384	274	6564	364	3632	103	34
67	7415	118	2448	276	7089	182	1110	274	6200	363	3529	103	33
68	7533	118	2724	277	7271	182	0836	274	5837	363	3426	104	32
69	7651	119	3001	277	7453	182	0562	273	5474	363	3322	103	31
70	0.657770	118	0.873278	277	1.327635	182	1.520289	273	1.145111	363	0.753219	103	**30**
71	7888	118	3555	277	7817	182	1.520016	274	4748	363	3116	104	29
72	8006	119	3832	277	7999	183	1.519742	273	4385	363	3012	103	28
73	8125	118	4109	277	8182	182	9469	273	4022	363	2909	103	27
74	8243	118	4386	277	8364	183	9196	273	3659	362	2806	104	26
75	8361	118	4663	278	8547	182	8923	272	3297	362	2702	103	25
76	8479	119	4941	277	8729	183	8651	273	2935	363	2599	104	24
77	8598	118	5218	277	8912	183	8378	272	2572	362	2495	103	23
78	8716	118	5495	278	9095	182	8106	273	2210	362	2392	104	22
79	8834	118	5773	278	9277	183	7833	272	1848	361	2288	103	21
80	0.658952	118	0.876051	277	1.329460	183	1.517561	272	1.141487	362	0.752185	104	**20**
81	9070	118	6328	278	9643	183	7289	272	1125	362	2081	103	19
82	9188	118	6606	278	1.329826	183	7017	272	0763	361	1978	104	18
83	9306	119	6884	278	1.330009	184	6745	271	0402	361	1874	103	17
84	9425	118	7162	278	0193	183	6474	272	1.140041	362	1771	104	16
85	9543	118	7440	278	0376	183	6202	271	1.139679	361	1667	103	15
86	9661	118	7718	278	0559	184	5931	271	9318	361	1564	104	14
87	9779	118	7996	278	0743	184	5660	271	8957	360	1460	104	13
88	0.659897	118	8274	278	0927	183	5389	271	8597	361	1356	103	12
89	0.660015	118	8552	279	1110	184	5118	271	8236	360	1253	104	11
90	0.660133	118	0.878831	278	1.331294	184	1.514847	271	1.137876	361	0.751149	104	**10**
91	0251	118	9109	279	1478	184	4576	270	7515	360	1045	103	09
92	0369	118	9388	278	1662	184	4306	271	7155	360	0942	104	08
93	0487	118	9666	279	1846	184	4035	270	6795	360	0838	104	07
94	0605	118	0.879945	279	2030	184	3765	270	6435	360	0734	104	06
95	0723	117	0.880224	279	2214	184	3495	270	6075	360	0630	104	05
96	0840	118	0503	278	2398	184	3225	270	5715	360	0526	103	04
97	0958	118	0781	279	2582	185	2955	270	5355	359	0423	104	03
98	1076	118	1060	279	2767	184	2685	270	4996	359	0319	104	02
99	1194	118	1339	280	2951	185	2415	269	4637	360	0215	104	01
100	0.661312		0.881619		1.333136		1.512146		1.134277		0.750111		**00**
	cos		cotg		cosec		sec		tang		sin		c

	270	**271**	**272**	**273**	**274**	**275**	**277**	**279**	**281**	**283**	**359**	**361**	**363**	**365**	**367**	**369**	**371**	**373**	
1	27.0	27.1	27.2	27.3	27.4	27.5	27.7	27.9	28.1	28.3	35.9	36.1	36.3	36.5	36.7	36.9	37.1	37.3	1
2	54.0	54.2	54.4	54.6	54.8	55.0	55.4	55.8	56.2	56.6	71.8	72.2	72.6	73.0	73.4	73.8	74.2	74.6	2
3	81.0	81.3	81.6	81.9	82.2	82.5	83.1	83.7	84.3	84.9	107.7	108.3	108.9	109.5	110.1	110.7	111.3	111.9	3
4	108.0	108.4	108.8	109.2	109.6	110.0	110.8	111.6	112.4	113.2	143.6	144.4	145.2	146.0	146.8	147.6	148.4	149.2	4
5	135.0	135.5	136.0	136.5	137.0	137.5	138.5	139.5	140.5	141.5	179.5	180.5	181.5	182.5	183.5	184.5	185.5	186.5	5
6	162.0	162.6	163.2	163.8	164.4	165.0	166.2	167.4	168.6	169.8	215.4	216.6	217.8	219.0	220.2	221.4	222.6	223.8	6
7	189.0	189.7	190.4	191.1	191.8	192.5	193.9	195.3	196.7	198.1	251.3	252.7	254.1	255.5	256.9	258.3	259.7	261.1	7
8	216.0	216.8	217.6	218.4	219.2	220.0	221.6	223.2	224.8	226.4	287.2	288.8	290.4	292.0	293.6	295.2	296.8	298.4	8
9	243.0	243.9	244.8	245.7	246.6	247.5	249.3	251.1	252.9	254.7	323.1	324.9	326.7	328.5	330.3	332.1	333.9	335.7	9

54g

46g

c	sin		tang		sec		cosec		cotg		cos		
00	0.661312	118	0.881619	279	1.333136	185	1.512146	269	1.134277	359	0.750111	104	**100**
01	1430	117	1898	279	3321	184	1877	270	3918	359	0.750007	104	99
02	1547	118	2177	279	3505	185	1607	269	3559	359	0.749903	104	98
03	1665	118	2456	280	3690	185	1338	269	3200	358	9799	104	97
04	1783	118	2736	279	3875	185	1069	269	2842	359	9695	104	96
05	1901	118	3015	280	4060	185	0800	268	2483	358	9591	104	95
06	2019	117	3295	280	4245	185	0532	269	2125	359	9487	104	94
07	2136	118	3575	279	4430	186	1.510263	268	1766	358	9383	104	93
08	2254	118	3854	280	4616	185	1.509995	269	1408	358	9279	104	92
09	2372	117	4134	280	4801	185	9726	268	1050	358	9175	104	91
10	0.662489	118	0.884414	280	1.334986	186	1.509458	268	1.130692	358	0.749071	104	**90**
11	2607	118	4694	280	5172	185	9190	268	1.130334	358	8967	104	89
12	2725	117	4974	280	5357	186	8922	267	1.129976	357	8863	104	88
13	2842	118	5254	281	5543	186	8655	268	9619	358	8759	104	87
14	2960	117	5535	280	5729	186	8387	268	9261	357	8655	104	86
15	3077	118	5815	280	5915	186	8119	267	8904	357	8551	104	85
16	3195	118	6095	281	6101	186	7852	267	8547	357	8447	105	84
17	3313	117	6376	280	6287	186	7585	267	8190	357	8342	104	83
18	3430	118	6656	281	6473	186	7318	267	7833	357	8238	104	82
19	3548	117	6937	281	6659	186	7051	267	7476	357	8134	104	81
20	0.663665	118	0.887218	280	1.336845	186	1.506784	267	1.127119	356	0.748030	104	**80**
21	3783	117	7498	281	7031	187	6517	266	6763	357	7926	105	79
22	3900	118	7779	281	7218	186	6251	267	6406	356	7821	104	78
23	4018	117	8060	281	7404	187	5984	266	6050	356	7717	104	77
24	4135	117	8341	281	7591	187	5718	266	5694	356	7613	105	76
25	4252	118	8622	281	7778	187	5452	266	5338	356	7508	104	75
26	4370	117	8903	282	7965	186	5186	266	4982	356	7404	104	74
27	4487	118	9185	281	8151	187	4920	266	4626	356	7300	105	73
28	4605	117	9466	281	8338	187	4654	266	4270	355	7195	104	72
29	4722	117	0.889747	282	8525	187	4388	265	3915	356	7091	105	71
30	0.664839	118	0.890029	281	1.338712	188	1.504123	266	1.123559	355	0.746986	104	**70**
31	4957	117	0310	282	8900	187	3857	265	3204	355	6882	105	69
32	5074	117	0592	282	9087	187	3592	265	2849	355	6777	104	68
33	5191	118	0874	281	9274	188	3327	265	2494	355	6673	104	67
34	5309	117	1155	282	9462	187	3062	265	2139	355	6569	105	66
35	5426	117	1437	282	9649	188	2797	265	1784	355	6464	105	65
36	5543	117	1719	282	1.339837	188	2532	264	1429	354	6359	104	64
37	5660	117	2001	282	1.340025	187	2268	265	1075	355	6255	105	63
38	5777	118	2283	282	0212	188	2003	264	0720	354	6150	104	62
39	5895	117	2565	283	0400	188	1739	264	0366	354	6046	105	61
40	0.666012	117	0.892848	282	1.340588	188	1.501475	264	1.120012	354	0.745941	104	**60**
41	6129	117	3130	283	0776	189	1211	264	1.119658	354	5837	105	59
42	6246	117	3413	282	0965	188	0947	264	9304	354	5732	105	58
43	6363	117	3695	283	1153	188	0683	264	8950	354	5627	104	57
44	6480	118	3978	282	1341	188	0419	263	8596	353	5523	105	56
45	6598	117	4260	283	1529	189	1.500156	264	8243	354	5418	105	55
46	6715	117	4543	283	1718	189	1.499892	263	7889	353	5313	105	54
47	6832	117	4826	283	1907	188	9629	263	7536	353	5208	104	53
48	6949	117	5109	283	2095	189	9366	263	7183	353	5104	105	52
49	7066	117	5392	283	2284	189	9103	263	6830	353	4999	105	51
50	0.667183		0.895675		1.342473		1.498840		1.116477		0.744894		**50**
	cos		cotg		cosec		sec		tang		sin		c

	104	**105**	**106**	**116**	**117**	**118**	**184**	**185**	**186**	**187**	**188**	**189**	**190**	**191**	**192**	**193**	**256**	**258**	
1	10.4	10.5	10.6	11.6	11.7	11.8	18.4	18.5	18.6	18.7	18.8	18.9	19.0	19.1	19.2	19.3	25.6	25.8	1
2	20.8	21.0	21.2	23.2	23.4	23.6	36.8	37.0	37.2	37.4	37.6	37.8	38.0	38.2	38.4	38.6	51.2	51.6	2
3	31.2	31.5	31.8	34.8	35.1	35.4	55.2	55.5	55.8	56.1	56.4	56.7	57.0	57.3	57.6	57.9	76.8	77.4	3
4	41.6	42.0	42.4	46.4	46.8	47.2	73.6	74.0	74.4	74.8	75.2	75.6	76.0	76.4	76.8	77.2	102.4	103.2	4
5	52.0	52.5	53.0	58.0	58.5	59.0	92.0	92.5	93.0	93.5	94.0	94.5	95.0	95.5	96.0	96.5	128.0	129.0	5
6	62.4	63.0	63.6	69.6	70.2	70.8	110.4	111.0	111.6	112.2	112.8	113.4	114.0	114.6	115.2	115.8	153.6	154.8	6
7	72.8	73.5	74.2	81.2	81.9	82.6	128.8	129.5	130.2	130.9	131.6	132.3	133.0	133.7	134.4	135.1	179.2	180.6	7
8	83.2	84.0	84.8	92.8	93.6	94.4	147.2	148.0	148.8	149.6	150.4	151.2	152.0	152.8	153.6	154.4	204.8	206.4	8
9	93.6	94.5	95.4	104.4	105.3	106.2	165.6	166.5	167.4	168.3	169.2	170.1	171.0	171.9	172.8	173.7	230.4	232.2	9

53g

46g

c	sin		tang		sec		cosec		cotg		cos		
50	0.667183	117	0.895675	283	1.342473	189	1.498840	263	1.116477	353	0.744894	105	**50**
51	7300	117	5958	283	2662	189	8577	263	6124	353	4789	105	49
52	7417	117	6241	283	2851	189	8314	262	5771	353	4684	104	48
53	7534	117	6524	284	3040	189	8052	263	5419	352	4580	105	47
54	7651	117	6808	283	3229	189	7789	262	5066	353	4475	105	46
55	7768	117	7091	284	3418	190	7527	262	4714	352	4370	105	45
56	7885	116	7375	283	3608	189	7265	262	4362	352	4265	105	44
57	8001	117	7658	284	3797	190	7003	262	4010	352	4160	105	43
58	8118	117	7942	284	3987	189	6741	262	3658	352	4055	105	42
59	8235	117	8226	284	4176	190	6479	261	3306	352	3950	105	41
60	0.668352	117	0.898510	284	1.344366	190	1.496218	262	1.112954	351	0.743845	105	**40**
61	8469	117	8794	284	4556	190	5956	261	2603	352	3740	105	39
62	8586	116	9078	284	4746	189	5695	262	2251	351	3635	105	38
63	8702	117	9362	284	4935	191	5433	261	1900	352	3530	105	37
64	8819	117	9646	284	5126	190	5172	261	1548	351	3425	105	36
65	8936	117	0.899930	284	5316	190	4911	261	1197	351	3320	105	35
66	9053	117	0.900214	285	5506	190	4650	260	0846	350	3215	105	34
67	9170	116	0499	284	5696	191	4390	261	0496	351	3110	105	33
68	9286	117	0783	285	5887	190	4129	260	1.110145	351	3005	105	32
69	9403	117	1068	285	6077	191	3869	261	1.109794	350	2900	106	31
70	0.669520	116	0.901353	284	1.346268	190	1.493608	260	1.109444	351	0.742794	105	**30**
71	9636	117	1637	285	6458	191	3348	260	9093	350	2689	105	29
72	9753	117	1922	285	6649	191	3088	260	8743	350	2584	105	28
73	9870	116	2207	285	6840	191	2828	260	8393	350	2479	105	27
74	0.669986	117	2492	285	7031	191	2568	260	8043	350	2374	106	26
75	0.670103	116	2777	285	7222	191	2308	259	7693	350	2268	105	25
76	0219	117	3062	285	7413	191	2049	260	7343	349	2163	105	24
77	0336	117	3347	286	7604	191	1789	259	6994	350	2058	106	23
78	0453	116	3633	285	7795	192	1530	259	6644	349	1952	105	22
79	0569	117	3918	286	7987	191	1271	259	6295	349	1847	105	21
80	0.670686	116	0.904204	285	1.348178	192	1.491012	259	1.105946	350	0.741742	106	**20**
81	0802	117	4489	286	8370	191	0753	259	5596	349	1636	105	19
82	0919	116	4775	285	8561	192	0494	259	5247	348	1531	105	18
83	1035	116	5060	286	8753	192	1.490235	258	4899	349	1426	106	17
84	1151	117	5346	286	8945	192	1.489977	259	4550	349	1320	105	16
85	1268	116	5632	286	9137	192	9718	258	4201	348	1215	106	15
86	1384	117	5918	286	9329	192	9460	258	3853	349	1109	105	14
87	1501	116	6204	286	9521	192	9202	258	3504	348	1004	106	13
88	1617	117	6490	286	9713	192	8944	258	3156	348	0898	105	12
89	1734	116	6776	287	1.349905	192	8686	258	2808	348	0793	106	11
90	0.671850	116	0.907063	286	1.350097	193	1.488428	258	1.102460	348	0.740687	105	**10**
91	1966	117	7349	287	0290	192	8170	258	2112	348	0582	106	09
92	2083	116	7636	286	0482	193	7912	257	1764	348	0476	105	08
93	2199	116	7922	287	0675	192	7655	257	1416	347	0371	106	07
94	2315	116	8209	286	0867	193	7398	257	1069	348	0265	106	06
95	2431	117	8495	287	1060	193	7141	258	0721	347	0159	105	05
96	2548	116	8782	287	1253	193	6883	256	0374	347	0.740054	106	04
97	2664	116	9069	287	1446	193	6627	257	1.100027	348	0.739948	106	03
98	2780	116	9356	287	1639	193	6370	257	1.099679	346	9842	105	02
99	2896	117	9643	287	1832	193	6113	257	9333	347	9737	106	01
100	0.673013		0.909930		1.352025		1.485856		1.098986		0.739631		**00**
	cos		cotg		cosec		sec		tang		sin		c

	260	**262**	**264**	**266**	**268**	**270**	**279**	**281**	**283**	**285**	**287**	**346**	**348**	**350**	**352**	**354**	**356**	**358**	
1	26.0	26.2	26.4	26.6	26.8	27.0	27.9	28.1	28.3	28.5	28.7	34.6	34.8	35.0	35.2	35.4	35.6	35.8	1
2	52.0	52.4	52.8	53.2	53.6	54.0	55.8	56.2	56.6	57.0	57.4	69.2	69.6	70.0	70.4	70.8	71.2	71.6	2
3	78.0	78.6	79.2	79.8	80.4	81.0	83.7	84.3	84.9	85.5	86.1	103.8	104.4	105.0	105.6	106.2	106.8	107.4	3
4	104.0	104.8	105.6	106.4	107.2	108.0	111.6	112.4	113.2	114.0	114.8	138.4	139.2	140.0	140.8	141.6	142.4	143.2	4
5	130.0	131.0	132.0	133.0	134.0	135.0	139.5	140.5	141.5	142.5	143.5	173.0	174.0	175.0	176.0	177.0	178.0	179.0	5
6	156.0	157.2	158.4	159.6	160.8	162.0	167.4	168.6	169.8	171.0	172.2	207.6	208.8	210.0	211.2	212.4	213.6	214.8	6
7	182.0	183.4	184.8	186.2	187.6	189.0	195.3	196.7	198.1	199.5	200.9	242.2	243.6	245.0	246.4	247.8	249.2	250.6	7
8	208.0	209.6	211.2	212.8	214.4	216.0	223.2	224.8	226.4	228.0	229.6	276.8	278.4	280.0	281.6	283.2	284.8	286.4	8
9	234.0	235.8	237.6	239.4	241.2	243.0	251.1	252.9	254.7	256.5	258.3	311.4	313.2	315.0	316.8	318.6	320.4	322.2	9

53g

47g

c	sin		tang		sec		cosec		cotg		cos		
00	0.673013	116	0.909930	287	1.352025	194	1.485856	256	1.098986	347	0.739631	106	**100**
01	3129	116	0.910217	287	2219	193	5600	256	8639	347	9525	105	99
02	3245	116	0504	288	2412	194	5344	256	8292	346	9420	106	98
03	3361	116	0792	287	2606	193	5088	257	7946	347	9314	106	97
04	3477	116	1079	288	2799	194	4831	255	7599	346	9208	106	96
05	3593	116	1367	287	2993	193	4576	256	7253	346	9102	106	95
06	3709	116	1654	288	3186	194	4320	256	6907	346	8996	105	94
07	3825	116	1942	288	3380	194	4064	256	6561	346	8891	106	93
08	3941	116	2230	288	3574	194	3808	255	6215	346	8785	106	92
09	4057	116	2518	287	3768	194	3553	255	5869	345	8679	106	91
10	0.674173	116	0.912805	288	1.353962	194	1.483298	255	1.095524	346	0.738573	106	**90**
11	4289	116	3093	289	4156	195	3043	256	5178	345	8467	106	89
12	4405	116	3382	288	4351	194	2787	254	4833	346	8361	106	88
13	4521	116	3670	288	4545	195	2533	255	4487	345	8255	106	87
14	4637	116	3958	288	4740	194	2278	255	4142	345	8149	106	86
15	4753	116	4246	289	4934	195	2023	255	3797	345	8043	106	85
16	4869	116	4535	288	5129	194	1768	254	3452	345	7937	106	84
17	4985	116	4823	289	5323	195	1514	254	3107	344	7831	106	83
18	5101	116	5112	288	5518	195	1260	255	2763	345	7725	106	82
19	5217	116	5400	289	5713	195	1005	254	2418	344	7619	106	81
20	0.675333	116	0.915689	289	1.355908	195	1.480751	254	1.092074	345	0.737513	106	**80**
21	5449	115	5978	289	6103	195	0497	253	1729	344	7407	106	79
22	5564	116	6267	289	6298	196	1.480244	254	1385	344	7301	106	78
23	5680	116	6556	289	6494	195	1.479990	254	1041	344	7195	106	77
24	5796	116	6845	289	6689	195	9736	253	0697	344	7089	107	76
25	5912	116	7134	289	6884	196	9483	253	0353	344	6982	106	75
26	6028	115	7423	290	7080	195	9230	254	1.090009	343	6876	106	74
27	6143	116	7713	289	7275	196	8976	253	1.089666	344	6770	106	73
28	6259	116	8002	290	7471	196	8723	253	9322	343	6664	106	72
29	6375	115	8292	289	7667	196	8470	253	8979	344	6558	107	71
30	0.676490	116	0.918581	290	1.357863	196	1.478217	252	1.088635	343	0.736451	106	**70**
31	6606	116	8871	290	8059	196	7965	253	8292	343	6345	106	69
32	6722	115	9161	290	8255	196	7712	252	7949	343	6239	106	68
33	6837	116	9451	289	8451	196	7460	253	7606	343	6133	107	67
34	6953	116	0.919740	290	8647	197	7207	252	7263	342	6026	106	66
35	7069	115	0.920030	291	8844	196	6955	252	6921	343	5920	107	65
36	7184	116	0321	290	9040	197	6703	252	6578	342	5813	106	64
37	7300	115	0611	290	9237	196	6451	252	6236	343	5707	106	63
38	7415	116	0901	290	9433	197	6199	252	5893	342	5601	107	62
39	7531	115	1191	291	9630	197	5947	251	5551	342	5494	106	61
40	0.677646	116	0.921482	290	1.359827	197	1.475696	252	1.085209	342	0.735388	107	**60**
41	7762	115	1772	291	1.360024	196	5444	251	4867	342	5281	106	59
42	7877	116	2063	290	0220	198	5193	251	4525	342	5175	107	58
43	7993	115	2353	291	0418	197	4942	251	4183	342	5068	106	57
44	8108	116	2644	291	0615	197	4691	251	3841	341	4962	107	56
45	8224	115	2935	291	0812	197	4440	251	3500	342	4855	106	55
46	8339	116	3226	291	1009	198	4189	251	3158	341	4749	107	54
47	8455	115	3517	291	1207	197	3938	251	2817	341	4642	106	53
48	8570	115	3808	291	1404	198	3687	250	2476	341	4536	107	52
49	8685	116	4099	291	1602	197	3437	251	2135	341	4429	106	51
50	0.678801		0.924390		1.361799		1.473186		1.081794		0.734323		**50**
	cos		cotg		cosec		sec		tang		sin		c

	105	**106**	**107**	**108**	**114**	**115**	**116**	**193**	**194**	**195**	**196**	**197**	**198**	**199**	**200**	**202**	**203**	**244**	
1	10.5	10.6	10.7	10.8	11.4	11.5	11.6	19.3	19.4	19.5	19.6	19.7	19.8	19.9	20.0	20.2	20.3	24.4	1
2	21.0	21.2	21.4	21.6	22.8	23.0	23.2	38.6	38.8	39.0	39.2	39.4	39.6	39.8	40.0	40.4	40.6	48.8	2
3	31.5	31.8	32.1	32.4	34.2	34.5	34.8	57.9	58.2	58.5	58.8	59.1	59.4	59.7	60.0	60.6	60.9	73.2	3
4	42.0	42.4	42.8	43.2	45.6	46.0	46.4	77.2	77.6	78.0	78.4	78.8	79.2	79.6	80.0	80.8	81.2	97.6	4
5	52.5	53.0	53.5	54.0	57.0	57.5	58.0	96.5	97.0	97.5	98.0	98.5	99.0	99.5	100.0	101.0	101.5	122.0	5
6	63.0	63.6	64.2	64.8	68.4	69.0	69.6	115.8	116.4	117.0	117.6	118.2	118.8	119.4	120.0	121.2	121.8	146.4	6
7	73.5	74.2	74.9	75.6	79.8	80.5	81.2	135.1	135.8	136.5	137.2	137.9	138.6	139.3	140.0	141.4	142.1	170.8	7
8	84.0	84.8	85.6	86.4	91.2	92.0	92.8	154.4	155.2	156.0	156.8	157.6	158.4	159.2	160.0	161.6	162.4	195.2	8
9	94.5	95.4	96.3	97.2	102.6	103.5	104.4	173.7	174.6	175.5	176.4	177.3	178.2	179.1	180.0	181.8	182.7	219.6	9

52g

47g

c	sin		tang		sec		cosec		cotg		cos		
50	0.678801	115	0.924390	292	1.361799	198	1.473186	250	1.081794	341	0.734323	107	**50**
51	8916	115	4682	291	1997	198	2936	250	1453	341	4216	107	49
52	9031	116	4973	292	2195	198	2686	250	1112	340	4109	106	48
53	9147	115	5265	291	2393	198	2436	250	0772	341	4003	107	47
54	9262	115	5556	292	2591	198	2186	250	0431	340	3896	107	46
55	9377	116	5848	292	2789	199	1936	249	1.080091	340	3789	107	45
56	9493	115	6140	292	2988	198	1687	250	1.079751	341	3682	106	44
57	9608	115	6432	292	3186	198	1437	249	9410	340	3576	107	43
58	9723	115	6724	292	3384	199	1188	250	9070	340	3469	107	42
59	9838	115	7016	292	3583	198	0938	249	8730	339	3362	107	41
60	0.679953	116	0.927308	292	1.363781	199	1.470689	249	1.078391	340	0.733255	106	**40**
61	0.680069	115	7600	292	3980	199	0440	249	8051	340	3149	107	39
62	0184	115	7892	293	4179	199	1.470191	249	7711	339	3042	107	38
63	0299	115	8185	292	4378	199	1.469942	248	7372	339	2935	107	37
64	0414	115	8477	293	4577	199	9694	249	7033	340	2828	107	36
65	0529	115	8770	292	4776	199	9445	249	6693	339	2721	107	35
66	0644	115	9062	293	4975	199	9196	248	6354	339	2614	107	34
67	0759	115	9355	293	5174	200	8948	248	6015	339	2507	107	33
68	0874	115	9648	293	5374	199	8700	248	5676	339	2400	107	32
69	0989	115	0.929941	293	5573	199	8452	248	5338	338	2293	107	31
70	0.681104	115	0.930234	293	1.365772	200	1.468204	248	1.074999	339	0.732186	107	**30**
71	1219	115	0527	293	5972	200	7956	248	4660	338	2079	107	29
72	1334	115	0820	293	6172	200	7708	247	4322	338	1972	107	28
73	1449	115	1113	293	6372	199	7461	248	3984	339	1865	107	27
74	1564	115	1406	294	6571	200	7213	247	3645	338	1758	107	26
75	1679	115	1700	293	6771	201	6966	248	3307	338	1651	107	25
76	1794	115	1993	294	6972	200	6718	247	2969	338	1544	107	24
77	1909	115	2287	293	7172	200	6471	247	2631	337	1437	107	23
78	2024	115	2580	294	7372	200	6224	247	2294	338	1330	107	22
79	2139	115	2874	294	7572	201	5977	246	1956	337	1223	107	21
80	0.682254	114	0.933168	294	1.367773	200	1.465731	247	1.071619	338	0.731116	108	**20**
81	2368	115	3462	294	7973	201	5484	247	1281	337	1008	107	19
82	2483	115	3756	294	8174	201	5237	246	0944	337	0901	107	18
83	2598	115	4050	294	8375	200	4991	246	0607	337	0794	107	17
84	2713	115	4344	294	8575	201	4745	247	1.070270	337	0687	107	16
85	2828	114	4638	295	8776	201	4498	246	1.069933	337	0580	108	15
86	2942	115	4933	294	8977	201	4252	246	9596	337	0472	107	14
87	3057	115	5227	295	9178	202	4006	245	9259	337	0365	107	13
88	3172	115	5522	294	9380	201	3761	246	8922	336	0258	108	12
89	3287	114	5816	295	9581	201	3515	246	8586	336	0150	107	11
90	0.683401	115	0.936111	295	1.369782	202	1.463269	245	1.068250	337	0.730043	107	**10**
91	3516	115	6406	295	1.369984	201	3024	246	7913	336	0.729936	108	09
92	3631	114	6701	294	1.370185	202	2778	245	7577	336	9828	107	08
93	3745	115	6995	295	0387	202	2533	245	7241	336	9721	108	07
94	3860	114	7290	296	0589	202	2288	245	6905	336	9613	107	06
95	3974	115	7586	295	0791	201	2043	245	6569	335	9506	107	05
96	4089	115	7881	295	0992	203	1798	245	6234	336	9399	108	04
97	4204	114	8176	295	1195	202	1553	244	5898	336	9291	107	03
98	4318	115	8471	296	1397	202	1309	245	5562	335	9184	108	02
99	4433	114	8767	296	1599	202	1064	244	5227	335	9076	107	01
100	0.684547		0.939063		1.371801		1.460820		1.064892		0.728969		**00**
	cos		cotg		cosec		sec		tang		sin		c

	246	**248**	**250**	**252**	**254**	**256**	**287**	**289**	**291**	**293**	**295**	**335**	**337**	**339**	**341**	**343**	**345**	**347**	
1	24.6	24.8	25.0	25.2	25.4	25.6	28.7	28.9	29.1	29.3	29.5	33.5	33.7	33.9	34.1	34.3	34.5	34.7	1
2	49.2	49.6	50.0	50.4	50.8	51.2	57.4	57.8	58.2	58.6	59.0	67.0	67.4	67.8	68.2	68.6	69.0	69.4	2
3	73.8	74.4	75.0	75.6	76.2	76.8	86.1	86.7	87.3	87.9	88.5	100.5	101.1	101.7	102.3	102.9	103.5	104.1	3
4	98.4	99.2	100.0	100.8	101.6	102.4	114.8	115.6	116.4	117.2	118.0	134.0	134.8	135.6	136.4	137.2	138.0	138.8	4
5	123.0	124.0	125.0	126.0	127.0	128.0	143.5	144.5	145.5	146.5	147.5	167.5	168.5	169.5	170.5	171.5	172.5	173.5	5
6	147.6	148.8	150.0	151.2	152.4	153.6	172.2	173.4	174.6	175.8	177.0	201.0	202.2	203.4	204.6	205.8	207.0	208.2	6
7	172.2	173.6	175.0	176.4	177.8	179.2	200.9	202.3	203.7	205.1	206.5	234.5	235.9	237.3	238.7	240.1	241.5	242.9	7
8	196.8	198.4	200.0	201.6	203.2	204.8	229.6	231.2	232.8	234.4	236.0	268.0	269.6	271.2	272.8	274.4	276.0	277.6	8
9	221.4	223.2	225.0	226.8	228.6	230.4	258.3	260.1	261.9	263.7	265.5	301.5	303.3	305.1	306.9	308.7	310.5	312.3	9

52g

48g

c	sin		tang		sec		cosec		cotg		cos		
00	0.684547	115	0.939063	295	1.371801	203	1.460820	244	1.064892	335	0.728969	108	**100**
01	4662	114	9358	296	2004	202	0576	245	4557	335	8861	107	99
02	4776	115	9654	296	2206	203	0331	244	4222	335	8754	108	98
03	4891	114	0.939950	296	2409	202	1.460087	244	3887	335	8646	108	97
04	5005	114	0.940246	296	2611	203	1.459843	243	3552	335	8538	107	96
05	5119	115	0542	296	2814	203	9600	244	3217	334	8431	108	95
06	5234	114	0838	296	3017	203	9356	244	2883	335	8323	108	94
07	5348	115	1134	296	3220	203	9112	243	2548	334	8215	107	93
08	5463	114	1430	296	3423	203	8869	244	2214	334	8108	108	92
09	5577	114	1726	297	3626	203	8625	243	1880	335	8000	108	91
10	0.685691	115	0.942023	296	1.373829	204	1.458382	243	1.061545	334	0.727892	107	**90**
11	5806	114	2319	297	4033	203	8139	243	1211	334	7785	108	89
12	5920	114	2616	297	4236	204	7896	243	0877	333	7677	108	88
13	6034	115	2913	296	4440	203	7653	243	0544	334	7569	108	87
14	6149	114	3209	297	4643	204	7410	242	1.060210	334	7461	107	86
15	6263	114	3506	297	4847	204	7168	243	1.059876	333	7354	108	85
16	6377	114	3803	297	5051	204	6925	242	9543	334	7246	108	84
17	6491	114	4100	297	5255	204	6683	243	9209	333	7138	108	83
18	6605	115	4397	298	5459	204	6440	242	8876	333	7030	108	82
19	6720	114	4695	297	5663	204	6198	242	8543	333	6922	108	81
20	0.686834	114	0.944992	297	1.375867	204	1.455956	242	1.058210	333	0.726814	107	**80**
21	6948	114	5289	298	6071	205	5714	242	7877	333	6707	108	79
22	7062	114	5587	297	6276	204	5472	241	7544	332	6599	108	78
23	7176	114	5884	298	6480	205	5231	242	7212	333	6491	108	77
24	7290	114	6182	298	6685	204	4989	241	6879	332	6383	108	76
25	7404	115	6480	298	6889	205	4748	242	6547	333	6275	108	75
26	7519	114	6778	298	7094	205	4506	241	6214	332	6167	108	74
27	7633	114	7076	298	7299	205	4265	241	5882	332	6059	108	73
28	7747	114	7374	298	7504	205	4024	241	5550	332	5951	108	72
29	7861	114	7672	298	7709	205	3783	241	5218	332	5843	108	71
30	0.687975	114	0.947970	298	1.377914	205	1.453542	241	1.054886	332	0.725735	108	**70**
31	8089	114	8268	299	8119	206	3301	241	4554	332	5627	108	69
32	8203	114	8567	298	8325	205	3060	240	4222	331	5519	109	68
33	8317	114	8865	299	8530	205	2820	241	3891	332	5410	108	67
34	8431	113	9164	298	8735	206	2579	240	3559	331	5302	108	66
35	8544	114	9462	299	8941	206	2339	240	3228	332	5194	108	65
36	8658	114	0.949761	299	9147	206	2099	240	2896	331	5086	108	64
37	8772	114	0.950060	299	9353	206	1859	240	2565	331	4978	108	63
38	8886	114	0359	299	9559	205	1619	240	2234	331	4870	109	62
39	9000	114	0658	299	9764	207	1379	240	1903	331	4761	108	61
40	0.689114	114	0.950957	299	1.379971	206	1.451139	240	1.051572	330	0.724653	108	**60**
41	9228	113	1256	299	1.380177	206	0899	239	1242	331	4545	108	59
42	9341	114	1555	300	0383	206	0660	239	0911	330	4437	109	58
43	9455	114	1855	299	0589	207	0421	240	0581	331	4328	108	57
44	9569	114	2154	300	0796	206	1.450181	239	1.050250	330	4220	108	56
45	9683	113	2454	299	1002	207	1.449942	239	1.049920	330	4112	109	55
46	9796	114	2753	300	1209	207	9703	239	9590	330	4003	108	54
47	0.689910	114	3053	300	1416	207	9464	239	9260	330	3895	108	53
48	0.690024	114	3353	300	1623	207	9225	239	8930	330	3787	109	52
49	0138	113	3653	300	1830	207	8986	238	8600	330	3678	108	51
50	0.690251		0.953953		1.382037		1.448748		1.048270		0.723570		**50**
	cos		cotg		cosec		sec		tang		sin		c

	107	**108**	**109**	**110**	**112**	**113**	**114**	**115**	**202**	**203**	**204**	**205**	**206**	**207**	**208**	**210**	**212**	**233**	
1	10.7	10.8	10.9	11.0	11.2	11.3	11.4	11.5	20.2	20.3	20.4	20.5	20.6	20.7	20.8	21.0	21.2	23.3	1
2	21.4	21.6	21.8	22.0	22.4	22.6	22.8	23.0	40.4	40.6	40.8	41.0	41.2	41.4	41.6	42.0	42.4	46.6	2
3	32.1	32.4	32.7	33.0	33.6	33.9	34.2	34.5	60.6	60.9	61.2	61.5	61.8	62.1	62.4	63.0	63.6	69.9	3
4	42.8	43.2	43.6	44.0	44.8	45.2	45.6	46.0	80.8	81.2	81.6	82.0	82.4	82.8	83.2	84.0	84.8	93.2	4
5	53.5	54.0	54.5	55.0	56.0	56.5	57.0	57.5	101.0	101.5	102.0	102.5	103.0	103.5	104.0	105.0	106.0	116.5	5
6	64.2	64.8	65.4	66.0	67.2	67.8	68.4	69.0	121.2	121.8	122.4	123.0	123.6	124.2	124.8	126.0	127.2	139.8	6
7	74.9	75.6	76.3	77.0	78.4	79.1	79.8	80.5	141.4	142.1	142.8	143.5	144.2	144.9	145.6	147.0	148.4	163.1	7
8	85.6	86.4	87.2	88.0	89.6	90.4	91.2	92.0	161.6	162.4	163.2	164.0	164.8	165.6	166.4	168.0	169.6	186.4	8
9	96.3	97.2	98.1	99.0	100.8	101.7	102.6	103.5	181.8	182.7	183.6	184.5	185.4	186.3	187.2	189.0	190.8	209.7	9

51g

48g

c	sin		tang		sec		cosec		cotg		cos		
50	0.690251	114	0.953953	300	1.382037	207	1.448748	239	1.048270	329	0.723570	109	**50**
51	0365	114	4253	300	2244	207	8509	238	7941	330	3461	108	49
52	0479	113	4553	300	2451	207	8271	238	7611	329	3353	109	48
53	0592	114	4853	300	2658	208	8033	238	7282	330	3244	108	47
54	0706	113	5153	301	2866	207	7795	238	6952	329	3136	109	46
55	0819	114	5454	300	3073	208	7557	238	6623	329	3027	108	45
56	0933	113	5754	301	3281	208	7319	238	6294	329	2919	109	44
57	1046	114	6055	301	3489	208	7081	238	5965	329	2810	108	43
58	1160	113	6356	300	3697	207	6843	238	5636	329	2702	109	42
59	1273	114	6656	301	3904	208	6605	237	5307	328	2593	108	41
60	0.691387	113	0.956957	301	1.384112	209	1.446368	237	1.044979	329	0.722485	109	**40**
61	1500	114	7258	301	4321	208	6131	238	4650	328	2376	109	39
62	1614	113	7559	302	4529	208	5893	237	4322	329	2267	108	38
63	1727	114	7861	301	4737	208	5656	237	3993	328	2159	109	37
64	1841	113	8162	301	4945	209	5419	237	3665	328	2050	109	36
65	1954	114	8463	302	5154	209	5182	236	3337	328	1941	108	35
66	2068	113	8765	301	5363	208	4946	237	3009	328	1833	109	34
67	2181	113	9066	302	5571	209	4709	237	2681	328	1724	109	33
68	2294	114	9368	301	5780	209	4472	236	2353	327	1615	109	32
69	2408	113	9669	302	5989	209	4236	236	2026	328	1506	108	31
70	0.692521	113	0.959971	302	1.386198	209	1.444000	237	1.041698	327	0.721398	109	**30**
71	2634	114	0.960273	302	6407	209	3763	236	1371	328	1289	109	29
72	2748	113	0575	302	6616	209	3527	236	1043	327	1180	109	28
73	2861	113	0877	302	6825	210	3291	236	0716	327	1071	109	27
74	2974	113	1179	302	7035	209	3055	235	0389	327	0962	108	26
75	3087	114	1481	303	7244	210	2820	236	1.040062	327	0854	109	25
76	3201	113	1784	302	7454	209	2584	236	1.039735	327	0745	109	24
77	3314	113	2086	303	7663	210	2348	235	9408	327	0636	109	23
78	3427	113	2389	302	7873	210	2113	235	9081	326	0527	109	22
79	3540	113	2691	303	8083	210	1878	236	8755	327	0418	109	21
80	0.693653	113	0.962994	303	1.388293	210	1.441642	235	1.038428	326	0.720309	109	**20**
81	3766	114	3297	303	8503	210	1407	235	8102	327	0200	109	19
82	3880	113	3600	303	8713	210	1172	235	7775	326	0.720091	109	18
83	3993	113	3903	303	8923	211	0937	234	7449	326	0.719982	109	17
84	4106	113	4206	303	9134	210	0703	235	7123	326	9873	109	16
85	4219	113	4509	303	9344	211	0468	235	6797	326	9764	109	15
86	4332	113	4812	304	9555	210	1.440233	234	6471	326	9655	109	14
87	4445	113	5116	303	9765	211	1.439999	234	6145	325	9546	109	13
88	4558	113	5419	304	1.389976	211	9765	234	5820	326	9437	109	12
89	4671	113	5723	303	1.390187	211	9531	235	5494	325	9328	109	11
90	0.694784	113	0.966026	304	1.390398	211	1.439296	234	1.035169	326	0.719219	110	**10**
91	4897	113	6330	304	0609	211	9062	233	4843	325	9109	109	09
92	5010	113	6634	304	0820	211	8829	234	4518	325	9000	109	08
93	5123	113	6938	304	1031	212	8595	234	4193	325	8891	109	07
94	5236	113	7242	304	1243	211	8361	233	3868	325	8782	109	06
95	5349	112	7546	304	1454	212	8128	234	3543	325	8673	110	05
96	5461	113	7850	304	1666	211	7894	233	3218	325	8563	109	04
97	5574	113	8154	304	1877	212	7661	233	2893	324	8454	109	03
98	5687	113	8458	305	2089	212	7428	233	2569	325	8345	109	02
99	5800	113	8763	304	2301	212	7195	233	2244	324	8236	110	01
100	0.695913		0.969067		1.392513		1.436962		1.031920		0.718126		**00**
	cos		cotg		cosec		sec		tang		sin		c

	235	**237**	**239**	**241**	**243**	**245**	**295**	**297**	**299**	**301**	**303**	**305**	**324**	**326**	**328**	**330**	**332**	**334**	
1	23.5	23.7	23.9	24.1	24.3	24.5	29.5	29.7	29.9	30.1	30.3	30.5	32.4	32.6	32.8	33.0	33.2	33.4	1
2	47.0	47.4	47.8	48.2	48.6	49.0	59.0	59.4	59.8	60.2	60.6	61.0	64.8	65.2	65.6	66.0	66.4	66.8	2
3	70.5	71.1	71.7	72.3	72.9	73.5	88.5	89.1	89.7	90.3	90.9	91.5	97.2	97.8	98.4	99.0	99.6	100.2	3
4	94.0	94.8	95.6	96.4	97.2	98.0	118.0	118.8	119.6	120.4	121.2	122.0	129.6	130.4	131.2	132.0	132.8	133.6	4
5	117.5	118.5	119.5	120.5	121.5	122.5	147.5	148.5	149.5	150.5	151.5	152.5	162.0	163.0	164.0	165.0	166.0	167.0	5
6	141.0	142.2	143.4	144.6	145.8	147.0	177.0	178.2	179.4	180.6	181.8	183.0	194.4	195.6	196.8	198.0	199.2	200.4	6
7	164.5	165.9	167.3	168.7	170.1	171.5	206.5	207.9	209.3	210.7	212.1	213.5	226.8	228.2	229.6	231.0	232.4	233.8	7
8	188.0	189.6	191.2	192.8	194.4	196.0	236.0	237.6	239.2	240.8	242.4	244.0	259.2	260.8	262.4	264.0	265.6	267.2	8
9	211.5	213.3	215.1	216.9	218.7	220.5	265.5	267.3	269.1	270.9	272.7	274.5	291.6	293.4	295.2	297.0	298.8	300.6	9

51g

49g

c	sin		tang		sec		cosec		cotg		cos		
00	0.695913	113	0.969067	305	1.392513	212	1.436962	233	1.031920	324	0.718126	109	**100**
01	6026	112	9372	305	2725	212	6729	233	1596	325	8017	109	99
02	6138	113	9677	305	2937	212	6496	233	1271	324	7908	110	98
03	6251	113	0.969982	305	3149	212	6263	232	0947	324	7798	109	97
04	6364	113	0.970287	305	3361	213	6031	233	0623	323	7689	109	96
05	6477	112	0592	305	3574	212	5798	232	1.030300	324	7580	110	95
06	6589	113	0897	305	3786	213	5566	232	1.029976	324	7470	109	94
07	6702	113	1202	305	3999	213	5334	232	9652	323	7361	110	93
08	6815	112	1507	306	4212	212	5102	232	9329	324	7251	109	92
09	6927	113	1813	305	4424	213	4870	232	9005	323	7142	110	91
10	0.697040	113	0.972118	306	1.394637	213	1.434638	232	1.028682	324	0.717032	109	**90**
11	7153	112	2424	305	4850	213	4406	231	8358	323	6923	110	89
12	7265	113	2729	306	5063	214	4175	232	8035	323	6813	109	88
13	7378	112	3035	306	5277	213	3943	231	7712	323	6704	110	87
14	7490	113	3341	306	5490	213	3712	232	7389	322	6594	109	86
15	7603	112	3647	306	5703	214	3480	231	7067	323	6485	110	85
16	7715	113	3953	306	5917	214	3249	231	6744	323	6375	110	84
17	7828	112	4259	306	6131	213	3018	231	6421	322	6265	109	83
18	7940	113	4565	306	6344	214	2787	231	6099	323	6156	110	82
19	8053	112	4871	307	6558	214	2556	231	5776	322	6046	110	81
20	0.698165	113	0.975178	306	1.396772	214	1.432325	230	1.025454	322	0.715936	109	**80**
21	8278	112	5484	307	6986	214	2095	231	5132	322	5827	110	79
22	8390	113	5791	307	7200	214	1864	230	4810	322	5717	110	78
23	8503	112	6098	306	7414	215	1634	231	4488	322	5607	109	77
24	8615	112	6404	307	7629	214	1403	230	4166	322	5498	110	76
25	8727	113	6711	307	7843	215	1173	230	3844	322	5388	110	75
26	8840	112	7018	307	8058	214	0943	230	3522	321	5278	110	74
27	8952	113	7325	308	8272	215	0713	230	3201	322	5168	109	73
28	9065	112	7633	307	8487	215	0483	230	2879	321	5059	110	72
29	9177	112	7940	307	8702	215	0253	229	2558	321	4949	110	71
30	0.699289	112	0.978247	308	1.398917	215	1.430024	230	1.022237	322	0.714839	110	**70**
31	9401	113	8555	307	9132	215	1.429794	229	1915	321	4729	110	69
32	9514	112	8862	308	9347	215	9565	230	1594	321	4619	110	68
33	9626	112	9170	308	9562	215	9335	229	1273	321	4509	110	67
34	9738	112	9478	307	9777	216	9106	229	0952	320	4399	110	66
35	9850	113	0.979785	308	1.399993	215	8877	229	0632	321	4289	109	65
36	0.699963	112	0.980093	308	1.400208	216	8648	229	1.020311	320	4180	110	64
37	0.700075	112	0401	308	0424	215	8419	229	1.019991	321	4070	110	63
38	0187	112	0709	309	0639	216	8190	229	9670	320	3960	110	62
39	0299	112	1018	308	0855	216	7961	228	9350	321	3850	110	61
40	0.700411	112	0.981326	308	1.401071	216	1.427733	229	1.019029	320	0.713740	110	**60**
41	0523	112	1634	309	1287	216	7504	228	8709	320	3630	110	59
42	0635	112	1943	308	1503	217	7276	228	8389	320	3520	111	58
43	0747	112	2251	309	1720	216	7048	228	8069	319	3409	110	57
44	0859	113	2560	309	1936	216	6820	228	7750	320	3299	110	56
45	0972	112	2869	309	2152	217	6592	228	7430	320	3189	110	55
46	1084	112	3178	309	2369	216	6364	228	7110	319	3079	110	54
47	1196	112	3487	309	2585	217	6136	228	6791	320	2969	110	53
48	1308	111	3796	309	2802	217	5908	228	6471	319	2859	110	52
49	1419	112	4105	309	3019	217	5680	227	6152	319	2749	110	51
50	0.701531		0.984414		1.403236		1.425453		1.015833		0.712639		**50**
	cos		cotg		cosec		sec		tang		sin		c

	109	**110**	**111**	**112**	**113**	**212**	**213**	**214**	**215**	**216**	**217**	**218**	**219**	**220**	**221**	**222**	**223**	**224**	
1	10.9	11.0	11.1	11.2	11.3	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	22.0	22.1	22.2	22.3	22.4	1
2	21.8	22.0	22.2	22.4	22.6	42.4	42.6	42.8	43.0	43.2	43.4	43.6	43.8	44.0	44.2	44.4	44.6	44.8	2
3	32.7	33.0	33.3	33.6	33.9	63.6	63.9	64.2	64.5	64.8	65.1	65.4	65.7	66.0	66.3	66.6	66.9	67.2	3
4	43.6	44.0	44.4	44.8	45.2	84.8	85.2	85.6	86.0	86.4	86.8	87.2	87.6	88.0	88.4	88.8	89.2	89.6	4
5	54.5	55.0	55.5	56.0	56.5	106.0	106.5	107.0	107.5	108.0	108.5	109.0	109.5	110.0	110.5	111.0	111.5	112.0	5
6	65.4	66.0	66.6	67.2	67.8	127.2	127.8	128.4	129.0	129.6	130.2	130.8	131.4	132.0	132.6	133.2	133.8	134.4	6
7	76.3	77.0	77.7	78.4	79.1	148.4	149.1	149.8	150.5	151.2	151.9	152.6	153.3	154.0	154.7	155.4	156.1	156.8	7
8	87.2	88.0	88.8	89.6	90.4	169.6	170.4	171.2	172.0	172.8	173.6	174.4	175.2	176.0	176.8	177.6	178.4	179.2	8
9	98.1	99.0	99.9	100.8	101.7	190.8	191.7	192.6	193.5	194.4	195.3	196.2	197.1	198.0	198.9	199.8	200.7	201.6	9

50g

49g

c	sin		tang		sec		cosec		cotg		cos		
50	0.701531	112	0.984414	309	1.403236	217	1.425453	228	1.015833	319	0.712639	111	**50**
51	1643	112	4723	310	3453	217	5225	227	5514	320	2528	110	49
52	1755	112	5033	309	3670	217	4998	227	5194	318	2418	110	48
53	1867	112	5342	310	3887	218	4771	227	4876	319	2308	110	47
54	1979	112	5652	310	4105	217	4544	227	4557	319	2198	111	46
55	2091	112	5962	310	4322	218	4317	227	4238	319	2087	110	45
56	2203	112	6272	310	4540	217	4090	227	3919	318	1977	110	44
57	2315	111	6582	310	4757	218	3863	226	3601	318	1867	111	43
58	2426	112	6892	310	4975	218	3637	227	3283	319	1756	110	42
59	2538	112	7202	310	5193	218	3410	226	2964	318	1646	110	41
60	0.702650	112	0.987512	310	1.405411	218	1.423184	227	1.012646	318	0.711536	111	**40**
61	2762	111	7822	311	5629	218	2957	226	2328	318	1425	110	39
62	2873	112	8133	310	5847	218	2731	226	2010	318	1315	111	38
63	2985	112	8443	311	6065	219	2505	226	1692	318	1204	110	37
64	3097	112	8754	310	6284	218	2279	226	1374	318	1094	110	36
65	3209	111	9064	311	6502	219	2053	226	1056	317	0984	111	35
66	3320	112	9375	311	6721	218	1827	225	0739	318	0873	110	34
67	3432	112	9686	311	6939	219	1602	226	0421	317	0763	111	33
68	3544	111	0.989997	311	7158	219	1376	225	1.010104	317	0652	110	32
69	3655	112	0.990308	311	7377	219	1151	226	1.009787	318	0542	111	31
70	0.703767	111	0.990619	312	1.407596	219	1.420925	225	1.009469	317	0.710431	110	**30**
71	3878	112	0931	311	7815	219	0700	225	9152	317	0321	111	29
72	3990	111	1242	311	8034	220	0475	225	8835	317	0210	111	28
73	4101	112	1553	312	8254	219	0250	225	8518	316	0.710099	110	27
74	4213	112	1865	312	8473	220	1.420025	225	8202	317	0.709989	111	26
75	4325	111	2177	311	8693	219	1.419800	225	7885	317	9878	111	25
76	4436	112	2488	312	8912	220	9575	224	7568	316	9767	110	24
77	4548	111	2800	312	9132	220	9351	225	7252	317	9657	111	23
78	4659	111	3112	312	9352	220	9126	224	6935	316	9546	111	22
79	4770	112	3424	312	9572	220	8902	225	6619	316	9435	110	21
80	0.704882	111	0.993736	313	1.409792	220	1.418677	224	1.006303	316	0.709325	111	**20**
81	4993	112	4049	312	1.410012	220	8453	224	5987	316	9214	111	19
82	5105	111	4361	313	0232	220	8229	224	5671	316	9103	111	18
83	5216	111	4674	312	0452	221	8005	224	5355	316	8992	110	17
84	5327	112	4986	313	0673	220	7781	223	5039	315	8882	111	16
85	5439	111	5299	312	0893	221	7558	224	4724	316	8771	111	15
86	5550	111	5611	313	1114	221	7334	224	4408	316	8660	111	14
87	5661	112	5924	313	1335	220	7110	223	4092	315	8549	111	13
88	5773	111	6237	313	1555	221	6887	224	3777	315	8438	110	12
89	5884	111	6550	313	1776	221	6663	223	3462	315	8328	111	11
90	0.705995	111	0.996863	314	1.411997	221	1.416440	223	1.003147	316	0.708217	111	**10**
91	6106	112	7177	313	2218	222	6217	223	2831	315	8106	111	09
92	6218	111	7490	313	2440	221	5994	223	2516	314	7995	111	08
93	6329	111	7803	314	2661	222	5771	223	2202	315	7884	111	07
94	6440	111	8117	313	2883	221	5548	222	1887	315	7773	111	06
95	6551	111	8430	314	3104	222	5326	223	1572	315	7662	111	05
96	6662	111	8744	314	3326	222	5103	223	1257	314	7551	111	04
97	6773	112	9058	314	3548	221	4880	222	0943	314	7440	111	03
98	6885	111	9372	314	3769	222	4658	222	0629	315	7329	111	02
99	6996	111	0.999686	314	3991	223	4436	222	0314	314	7218	111	01
100	0.707107		1.000000		1.414214		1.414214		1.000000		0.707107		**00**
	cos		cotg		cosec		sec		tang		sin		c

	225	**226**	**227**	**228**	**229**	**231**	**233**	**305**	**307**	**309**	**311**	**313**	**315**	**317**	**319**	**321**	**323**	**325**	
1	22.5	22.6	22.7	22.8	22.9	23.1	23.3	30.5	30.7	30.9	31.1	31.3	31.5	31.7	31.9	32.1	32.3	32.5	1
2	45.0	45.2	45.4	45.6	45.8	46.2	46.6	61.0	61.4	61.8	62.2	62.6	63.0	63.4	63.8	64.2	64.6	65.0	2
3	67.5	67.8	68.1	68.4	68.7	69.3	69.9	91.5	92.1	92.7	93.3	93.9	94.5	95.1	95.7	96.3	96.9	97.5	3
4	90.0	90.4	90.8	91.2	91.6	92.4	93.2	122.0	122.8	123.6	124.4	125.2	126.0	126.8	127.6	128.4	129.2	130.0	4
5	112.5	113.0	113.5	114.0	114.5	115.5	116.5	152.5	153.5	154.5	155.5	156.5	157.5	158.5	159.5	160.5	161.5	162.5	5
6	135.0	135.6	136.2	136.8	137.4	138.6	139.8	183.0	184.2	185.4	186.6	187.8	189.0	190.2	191.4	192.6	193.8	195.0	6
7	157.5	158.2	158.9	159.6	160.3	161.7	163.1	213.5	214.9	216.3	217.7	219.1	220.5	221.9	223.3	224.7	226.1	227.5	7
8	180.0	180.8	181.6	182.4	183.2	184.8	186.4	244.0	245.6	247.2	248.8	250.4	252.0	253.6	255.2	256.8	258.4	260.0	8
9	202.5	203.4	204.3	205.2	206.1	207.9	209.7	274.5	276.3	278.1	279.9	281.7	283.5	285.3	287.1	288.9	290.7	292.5	9

50g