

MACHINERY'S REFERENCE SERIES

EACH NUMBER IS A UNIT IN A SERIES ON ELECTRICAL AND
STEAM ENGINEERING DRAWING AND MACHINE
DESIGN AND SHOP PRACTICE

NUMBER 55

SOLUTION OF TRIANGLES

PART II

TABLES OF TRIGONOMETRIC
FUNCTIONS

From 0° to 90° by Minutes

SECOND REVISED EDITION

TABLES OF TRIGONOMETRIC FUNCTIONS

On the following pages are given tables for the natural trigonometric functions, sines, cosines, tangents and cotangents, and their logarithms, for every minute in the angle. The logarithms are printed with heavier face type so that no confusion need result from the fact that both the logarithms and the natural functions are given on the same page. The values of the secants and cosecants are not given in these tables, as they are not generally necessary for the solution of triangles, and all the rules and formulas in Part I of this treatise (MACHINERY'S Reference Series No. 54), are given in a form which does not introduce these two functions.

Should, however, the values of these functions be required, they can easily be derived from the tables. The secant is found by dividing 1 by the cosine of the angle, and the cosecant is found by dividing 1 by the sine of the angle. Written as formulas, these rules would be:

$$\sec a = \frac{1}{\cos a}$$

$$\operatorname{cosec} a = \frac{1}{\sin a}$$

Example: Find the secant and cosecant of 15 degrees 42 minutes.

$$\sec 15^\circ 42' = \frac{1}{\cos 15^\circ 42'} = \frac{1}{0.96269} = 1.0887$$

$$\operatorname{cosec} 15^\circ 42' = \frac{1}{\sin 15^\circ 42'} = \frac{1}{0.27060} = 3.6955$$

The use of the tables has been fully explained in Part I, and it is, therefore, not necessary to give any further explanations here; if the use of the tables is not thoroughly understood, the explanatory matter found in Chapter V of Part I should be carefully studied.

°	Nat. Sin Log.	d.	Nat. Cos Log.	Nat. Tan Log.	c. d.	Log. Cot Nat.	°
0	.00000	—	1.00000	0.00000	00000	—	∞
1	.029	6.46373	30103	.000	0.00000	029	6.46373
2	.058	6.70476	17609	.000	0.00000	058	6.70476
3	.087	6.94085	12494	.000	0.00000	087	6.94085
4	.116	7.06579	9691	.000	0.00000	116	7.06579
5	.00145	7.16270	7918	.00145	7.16270	9691	7.16270
6	.175	7.24188	6694	.175	7.24188	7918	7.24188
7	.204	7.30882	5800	.204	7.30882	6694	7.30882
8	.233	7.36682	5115	.233	7.36682	5800	7.36682
9	.262	7.41797	4576	.262	7.41797	5115	7.41797
10	.00291	7.46373	4139	.00291	7.46373	4576	7.46373
11	.320	7.50512	3779	.320	7.50512	4139	7.50512
12	.349	7.54291	3476	.349	7.54291	3779	7.54291
13	.378	7.57707	3218	.378	7.57707	3476	7.57707
14	.407	7.60985	2997	.407	7.60985	3218	7.60985
15	.00436	7.63982	2803	.00436	7.63982	2997	7.63982
16	.465	7.66784	2633	.465	7.66784	2803	7.66784
17	.495	7.69417	2483	.495	7.69417	2633	7.69417
18	.524	7.71900	2348	.524	7.71900	2483	7.71900
19	.553	7.74248	2228	.553	7.74248	2348	7.74248
20	.00582	7.76475	2119	.00582	7.76475	2228	7.76475
21	.611	7.78594	2020	.611	7.78594	2119	7.78594
22	.640	7.80615	1930	.640	7.80615	2020	7.80615
23	.669	7.82545	1848	.669	7.82545	1930	7.82545
24	.698	7.84393	1773	.698	7.84393	1848	7.84393
25	.00727	7.86166	1704	.00727	7.86166	1773	7.86166
26	.756	7.87870	1639	.756	7.87870	1704	7.87870
27	.785	7.89509	1579	.785	7.89509	1639	7.89509
28	.814	7.91088	1524	.814	7.91088	1579	7.91088
29	.844	7.92612	1472	.844	7.92612	1524	7.92612
30	.00873	7.94084	1424	.00873	7.94084	1472	7.94084
31	.902	7.95508	1379	.902	7.95508	1424	7.95508
32	.931	7.96887	1336	.931	7.96887	1379	7.96887
33	.960	7.98223	1297	.960	7.98223	1336	7.98223
34	.989	7.99520	1259	.989	7.99520	1297	7.99520
35	.01018	8.00779	1223	.01018	8.00779	1259	8.00779
36	.047	8.02002	1190	.047	8.02002	1223	8.02002
37	.076	8.03192	1158	.076	8.03192	1190	8.03192
38	.105	8.04350	1128	.105	8.04350	1158	8.04350
39	.134	8.05478	1100	.134	8.05478	1128	8.05478
40	.01164	8.06578	1072	.01164	8.06578	1100	8.06578
41	.193	8.07650	1047	.193	8.07650	1072	8.07650
42	.222	8.08606	1022	.222	8.08606	1047	8.08606
43	.251	8.09718	999	.251	8.09718	1022	8.09718
44	.280	8.10717	976	.280	8.10717	999	8.10717
45	.01309	8.11693	954	.01309	8.11693	976	8.11693
46	.338	8.12647	934	.338	8.12647	954	8.12647
47	.367	8.13581	914	.367	8.13581	934	8.13581
48	.396	8.14495	896	.396	8.14495	914	8.14495
49	.425	8.15391	877	.425	8.15391	896	8.15391
50	.01454	8.16268	860	.01454	8.16268	877	8.16268
51	.483	8.17128	843	.483	8.17128	860	8.17128
52	.513	8.17971	827	.513	8.17971	843	8.17971
53	.542	8.18798	812	.542	8.18798	827	8.18798
54	.571	8.19610	797	.571	8.19610	812	8.19610
55	.01600	8.20407	782	.01600	8.20407	797	8.20407
56	.629	8.21189	769	.629	8.21189	782	8.21189
57	.658	8.21958	755	.658	8.21958	769	8.21958
58	.687	8.22713	743	.687	8.22713	755	8.22713
59	.716	8.23450	730	.716	8.23450	743	8.23450
60	.745	8.24186	717	.745	8.24186	730	8.24186

'	Nat. Sin Log.	d.	Nat. Cos Log.	Nat. Tan Log.	c.d.	Log. Cot Nat.	'				
0	01745	8.24186	717	99985	0.99993	01746	8.24192	718	1.75808	57.290	60
1	774	8.24903	706	984	0.99993	775	8.24910	706	1.75990	56.351	59
2	803	8.25609	695	984	0.99993	804	8.25616	696	1.74384	55.442	58
3	832	8.26304	684	983	0.99993	833	8.26312	684	1.73688	54.561	57
4	862	8.26988	673	983	0.99992	862	8.26996	673	1.73000	53.709	56
5	01891	8.27661	663	99982	0.99992	01891	8.27669	663	1.72331	52.882	55
6	920	8.28324	653	982	0.99992	920	8.28332	654	1.71668	.081	54
7	949	8.28977	644	981	0.99992	949	8.28986	643	1.71014	51.303	53
8	978	8.29621	634	980	0.99992	978	8.29629	634	1.70371	50.549	52
9	02007	8.30255	624	980	0.99991	02007	8.30263	625	1.69737	49.816	51
10	02036	8.30879	616	99979	0.99991	02036	8.30888	617	1.69112	49.104	50
11	065	8.31495	608	979	0.99991	066	8.31505	607	1.68495	48.412	49
12	094	8.32103	599	978	0.99990	095	8.32112	599	1.67888	47.740	48
13	123	8.32702	590	977	0.99990	124	8.32711	591	1.67280	.085	47
14	152	8.33292	583	977	0.99990	153	8.33302	584	1.66668	46.449	46
15	02181	8.33875	575	99976	0.99990	02182	8.33886	575	1.66114	45.829	45
16	211	8.34450	568	976	0.99989	211	8.34461	568	1.65539	.226	44
17	240	8.35018	560	975	0.99989	240	8.35029	561	1.64971	44.639	43
18	269	8.35578	553	974	0.99989	269	8.35590	553	1.64410	.066	42
19	298	8.36133	547	974	0.99989	298	8.36143	546	1.63857	43.508	41
20	02327	8.36678	539	99973	0.99988	02328	8.36689	540	1.63311	42.964	40
21	356	8.37217	533	972	0.99988	357	8.37229	540	1.62771	-.433	39
22	385	8.37750	526	972	0.99988	386	8.37762	533	1.62238	41.916	38
23	414	8.38276	520	971	0.99987	415	8.38289	527	1.61711	.411	37
24	443	8.38796	514	970	0.99987	444	8.38809	520	1.61191	40.917	36
25	02472	8.39310	508	99969	0.99987	02473	8.39323	514	1.60677	40.436	35
26	501	8.39818	502	969	0.99986	502	8.39832	509	1.60168	39.965	34
27	530	8.40320	496	968	0.99986	531	8.40334	502	1.59666	.506	33
28	560	8.40816	491	967	0.99986	560	8.40830	496	1.59170	.057	32
29	589	8.41307	485	966	0.99985	589	8.41321	491	1.58679	38.618	31
30	02618	8.41792	480	99966	0.99985	02619	8.41807	486	1.58193	38.188	30
31	647	8.42272	474	965	0.99985	648	8.42287	480	1.57713	37.769	29
32	676	8.42746	470	964	0.99984	677	8.42762	475	1.57238	.358	28
33	705	8.43216	464	963	0.99984	706	8.43232	470	1.56768	36.956	27
34	734	8.43680	459	963	0.99984	735	8.43696	464	1.56304	.503	26
35	02763	8.44139	455	99962	0.99983	02764	8.44156	460	1.55844	36.178	25
36	792	8.44594	450	961	0.99983	793	8.44611	455	1.55389	35.801	24
37	821	8.45044	445	960	0.99983	822	8.45061	450	1.54939	.431	23
38	850	8.45484	441	959	0.99982	851	8.45507	446	1.54493	.070	22
39	879	8.45930	436	959	0.99982	881	8.45948	441	1.54052	34.715	21
40	02908	8.46366	433	99958	0.99982	02909	8.46385	437	1.53615	34.368	20
41	938	8.46799	427	957	0.99981	939	8.46817	432	1.53183	.027	19
42	967	8.47226	424	956	0.99981	968	8.47245	428	1.52755	33.694	18
43	996	8.47650	419	955	0.99981	997	8.47669	424	1.52331	.366	17
44	03025	8.48069	416	954	0.99980	03026	8.48089	420	1.51911	.045	16
45	03054	8.48485	411	99953	0.99980	03055	8.48505	416	1.51495	32.730	15
46	083	8.48890	408	952	0.99979	084	8.48917	412	1.51083	.421	14
47	112	8.49304	404	952	0.99979	114	8.49325	408	1.50675	.118	13
48	141	8.49708	400	951	0.99979	143	8.49729	404	1.50271	31.821	12
49	170	8.50108	396	950	0.99978	172	8.50130	401	1.49870	.528	11
50	03199	8.50504	393	99949	0.99978	03201	8.50527	397	1.49473	31.242	10
51	228	8.50897	390	948	0.99977	230	8.50920	393	1.49080	30.960	9
52	257	8.51287	386	947	0.99977	259	8.51310	390	1.48690	.683	8
53	286	8.51673	382	946	0.99977	288	8.51696	386	1.48304	.412	7
54	316	8.52055	379	945	0.99976	317	8.52079	383	1.47921	.145	6
55	03345	8.52434	376	99944	0.99976	03346	8.52459	380	1.47541	29.882	5
56	374	8.52810	373	943	0.99975	376	8.52835	376	1.47165	.624	4
57	403	8.53183	369	942	0.99975	405	8.53208	373	1.46792	.371	3
58	432	8.53552	366	941	0.99974	434	8.53578	370	1.46422	.122	2
59	461	8.53919	363	940	0.99974	463	8.53945	367	1.46055	28.877	1
60	490	8.54282	363	939	0.99974	492	8.54308	363	1.45692	.636	0
	Nat. Cos Log.	d.	Nat. Sin Log.	Nat. Cot Log.	c.d.	Log. Tan Nat.	'				

'	Nat. Sin Log.	d.	Nat. Cos Log.	Nat. Tan Log.	c.d.	Log. Cot Nat.	'				
0	0349	8.54282	360	99939	0.99974	0349	8.54308	361	1.45692	28.636	60
1	519	8.54642	357	938	0.99973	521	8.54669	521	1.45331	.399	59
2	548	8.54999	355	937	0.99973	550	8.55027	358	1.44973	.166	58
3	577	8.55354	351	936	0.99972	579	8.55382	355	1.44618	27.937	57
4	606	8.55705	349	935	0.99972	609	8.55734	352	1.44266	.712	56
5	03635	8.56054	346	99934	0.99971	03638	8.56083	349	1.43917	27.490	55
6	664	8.56400	343	933	0.99971	667	8.56429	346	1.43571	.271	54
7	693	8.56743	341	932	0.99970	696	8.56773	344	1.43227	.057	53
8	723	8.57084	337	931	0.99970	725	8.57114	341	1.42886	26.845	52
9	752	8.57421	336	930	0.99969	754	8.57452	338	1.42548	.637	51
10	03781	8.57757	332	99929	0.99969	03783	8.57788	336	1.42212	26.432	50
11	810	8.58089	330	927	0.99968	812	8.58121	333	1.41879	.230	49
12	839	8.58419	328	926	0.99968	842	8.58451	330	1.41549	.031	48
13	868	8.58747	325	925	0.99967	871	8.58779	328	1.41221	25.835	47
14	897	8.59072	323	924	0.99967	900	8.59108	326	1.40895	.642	46
15	03926	8.59395	320	99923	0.99967	03929	8.59428	323	1.40572	25.542	45
16	955	8.59715	318	922	0.99966	958	8.59749	321	1.40251	.264	44
17	984	8.60033	316	921	0.99966	987	8.60068	319	1.39932	.080	43
18	04013	8.60349	313	919	0.99966	04016	8.60384	316	1.39616	24.898	42
19	042	8.60662	311	918	0.99964	046	8.60699	314	1.39302	.719	41
20	04071	8.60973	309	99917	0.99964	04075	8.61009	311	1.38991	24.542	40
21	100	8.61282	307	916	0.99963	104	8.61310	310	1.38681	.368	39
22	129	8.61589	305	915	0.99963	133	8.61626	307	1.38374	.196	38
23	159	8.61894	302	913	0.99962	162	8.61931	305	1.38069	.026	37
24	188	8.62196	301	912	0.99962	191	8.62234	303	1.37766	23.859	36
25	04217	8.62497	298	99911	0.99961	04220	8.62535	301	1.37465	23.695	35
26	246	8.62795	296	910	0.99961	250	8.62834	299	1.37166	.532	34
27	275	8.63091	294	909	0.99960	279	8.63131	297	1.36869	.372	33
28	304	8.63385	293	907	0.99960	308	8.63426	295	1.36574	.214	32
29	333	8.63678	290	906	0.99959	337	8.63718	292	1.36282	.058	31
30	04362	8.63968	288	99905	0.99959	04366	8.64000	291	1.35991	22.904	30
31	391	8.64256	287	904	0.99958	395	8.64298	289	1.35702	.752	29
32	420	8.64543	284	902	0.99958	424	8.64585	287	1.35415	.602	28
33	449	8.64827	282	901	0.99957	454	8.64870	285	1.35130	.454	27
34	478	8.65110	281	900	0.99956	483	8.65154	284	1.34846	.308	26
35	04507	8.65391	279	99898	0.99956	04512	8.65435	281	1.34565	22.164	25
36	536	8.65670	277	897	0.99955	541	8.65715	280	1.34285	.022	24
37	565	8.65947	276	896	0.99955	570	8.65993	278	1.34007	21.881	23
38	594	8.66223	274	894	0.99954	599	8.66269	276	1.33731	.743	22
39	623	8.66497	272	893	0.99954	628	8.66543	274	1.33457	.606	21
40	04653	8.66769	270	99890	0.99953	04658	8.66816	273	1.33184	21.470	20
41	682	8.67039	269	890	0.99952	687	8.67087	271	1.32913	.337	19
42	711	8.67308	267	889	0.99952	716	8.67356	269	1.32644	.205	18
43	740	8.67575	266	888	0.99951	745	8.67624	268	1.32376	.075	17
44	769	8.67841	263	886	0.99951	774	8.67890	266	1.32110	20.946	16
45	04798	8.68104	263	99885	0.99950	04803	8.68154	264	1.31846	20.819	15
46	827	8.68367	260	883	0.99949	833	8.68417	263	1.31583	.693	14
47	856	8.68627	259	882	0.99949	862	8.68678	261	1.31322	.569	13
48	885	8.68886	258	881	0.99948	891	8.68938	260	1.31062	.446	12
49	914	8.69144	256	879	0.99948	920	8.69196	258	1.30804	.325	11
50	04943	8.69400	254	99878	0.99947	04949	8.69453	257	1.30547	20.206	10
51	972	8.69654	253	878	0.99946	978	8.69708	255	1.30292	.087	9
52	05001	8.69907	252	875	0.99946	05007	8.69962	254	1.30038	19.970	8
53	030	8.70159	250	873	0.99945	037	8.70214	252	1.29786	.855	7
54	059	8.70409	249	872	0.99944	066	8.70465	251	1.29535	.740	6
55	05088	8.70658	247	99870	0.99944	05095	8.70714	249	1.29286	19.627	5
56	117	8.70905	246	869	0.99943	124	8.70962	248	1.29038	.516	4
57	146	8.71151	245	867	0.99942	153	8.71208	246	1.28792	.405	3
58	175	8.71395	244	866	0.99942	182	8.71453	245	1.28547	.296	2
59	205	8.71638	243	864	0.99941	212	8.71697	244	1.28303	.188	1
60	234	8.71880	242	863	0.99940	241	8.71940	243	1.28060	.081	0
	Nat. Cos Log.	d.	Nat. Sin Log.	Nat. Cot Log.	c.d.	Log. Tan Nat.	'				

	Nat. Sin Log. d.			Nat. Cos Log.			Nat. Tan Log.			c.d.	Log. Cot Nat.		
0	05234	8.71880	240	99863	0.99940	05241	8.71940	241	1.28060	19.081	60		
1	263	8.72120	239	861	0.99940	270	8.72181	239	1.27819	18.976	59		
2	292	8.72359	238	860	0.99939	299	8.72420	239	1.27580	.871	58		
3	321	8.72597	237	858	0.99938	328	8.72659	237	1.27341	.768	57		
4	350	8.72834	235	857	0.99938	357	8.72800	236	1.27104	.666	56		
5	05379	8.73069	234	99855	0.99937	05387	8.73132	234	1.26868	18.564	55		
6	408	8.73303	232	854	0.99936	416	8.73300	234	1.26634	.464	54		
7	437	8.73535	232	852	0.99936	445	8.73600	232	1.26400	.366	53		
8	466	8.73767	230	851	0.99935	474	8.73832	231	1.26168	.268	52		
9	495	8.73997	229	849	0.99934	503	8.74063	229	1.25937	.171	51		
10	05524	8.74226	228	99847	0.99934	05533	8.74292	229	1.25708	18.075	50		
11	553	8.74454	226	846	0.99933	562	8.74521	227	1.25479	17.980	49		
12	582	8.74680	226	844	0.99932	591	8.74748	226	1.25252	.886	48		
13	611	8.74906	224	842	0.99932	620	8.74974	225	1.25026	.793	47		
14	640	8.75130	223	841	0.99931	649	8.75199	224	1.24801	.702	46		
15	05669	8.75353	222	99839	0.99930	05678	8.75423	222	1.24577	17.611	45		
16	698	8.75575	220	838	0.99929	708	8.75645	222	1.24355	.521	44		
17	727	8.75795	220	836	0.99929	737	8.75867	220	1.24133	.431	43		
18	756	8.76015	219	834	0.99928	766	8.76087	219	1.23913	.343	42		
19	785	8.76234	217	833	0.99927	795	8.76306	219	1.23694	.256	41		
20	05814	8.76451	216	99831	0.99926	05824	8.76525	217	1.23475	17.169	40		
21	844	8.76667	216	829	0.99926	854	8.76742	216	1.23258	.084	39		
22	873	8.76883	214	827	0.99925	883	8.76958	215	1.23042	16.999	38		
23	902	8.77097	213	826	0.99924	912	8.77173	214	1.22827	.915	37		
24	931	8.77310	212	824	0.99923	941	8.77387	213	1.22613	.832	36		
25	05960	8.77522	211	99822	0.99923	05970	8.77600	211	1.22400	16.750	35		
26	989	8.77733	210	821	0.99922	999	8.77811	211	1.22189	.668	34		
27	06018	8.77943	209	819	0.99921	06029	8.78022	210	1.21978	.587	33		
28	047	8.78152	208	817	0.99920	058	8.78232	209	1.21768	.507	32		
29	076	8.78360	208	815	0.99920	087	8.78441	208	1.21559	.428	31		
30	06105	8.78568	206	99813	0.99919	06116	8.78649	206	1.21351	16.350	30		
31	134	8.78774	205	812	0.99918	145	8.78855	206	1.21145	.272	29		
32	163	8.78979	205	810	0.99917	175	8.79061	205	1.20939	.195	28		
33	192	8.79183	203	808	0.99917	204	8.79266	204	1.20734	.119	27		
34	221	8.79386	202	806	0.99916	233	8.79470	203	1.20530	.043	26		
35	06250	8.79588	201	99804	0.99915	06262	8.79673	202	1.20327	15.969	25		
36	279	8.79780	201	803	0.99914	291	8.79875	201	1.20125	.895	24		
37	308	8.79990	199	801	0.99913	321	8.80070	201	1.19924	.821	23		
38	337	8.80189	199	799	0.99913	350	8.80277	199	1.19723	.748	22		
39	366	8.80388	197	797	0.99912	379	8.80470	198	1.19524	.676	21		
40	06395	8.80585	197	99795	0.99911	06408	8.80674	198	1.19326	15.605	20		
41	424	8.80782	196	793	0.99910	438	8.80872	196	1.19128	.534	19		
42	453	8.80978	195	792	0.99909	467	8.81068	196	1.18932	.464	18		
43	482	8.81173	194	790	0.99909	496	8.81264	195	1.18736	.394	17		
44	511	8.81367	193	788	0.99908	525	8.81459	194	1.18541	.325	16		
45	06540	8.81560	192	99786	0.99907	06554	8.81653	193	1.18347	15.257	15		
46	569	8.81752	192	784	0.99906	584	8.81846	192	1.18154	.189	14		
47	598	8.81944	190	782	0.99905	613	8.82038	192	1.17962	.122	13		
48	627	8.82134	190	780	0.99904	642	8.82230	190	1.17770	.056	12		
49	656	8.82324	189	778	0.99904	671	8.82420	190	1.17580	14.990	11		
50	06685	8.82513	188	99776	0.99903	06700	8.82610	189	1.17390	14.924	10		
51	714	8.82701	187	774	0.99902	730	8.82799	188	1.17201	.860	9		
52	743	8.82888	187	772	0.99901	759	8.82987	188	1.17013	.795	8		
53	773	8.83075	186	770	0.99900	788	8.83175	186	1.16825	.732	7		
54	802	8.83261	185	768	0.99899	817	8.83361	186	1.16639	.669	6		
55	06831	8.83446	184	99766	0.99898	06847	8.83547	185	1.16453	14.606	5		
56	860	8.83630	183	764	0.99898	876	8.83732	184	1.16268	.544	4		
57	889	8.83813	183	762	0.99897	905	8.83916	184	1.16084	.482	3		
58	918	8.83996	181	760	0.99896	934	8.84100	182	1.15900	.421	2		
59	947	8.84177	181	758	0.99895	963	8.84282	182	1.15718	.361	1		
60	976	8.84358	181	756	0.99894	993	8.84464	182	1.15536	.301	0		

Nat. Cos Log. d. Nat. Sin Log. Nat. Cot Log. c.d. Log. Tan Nat.

'	Nat. Sin Log. d.			Nat. Cos Log.			Nat. Tan Log.			c.d.	Log. Cot Nat.		
0	06976	8.84358	181	99756	9.99894	06993	8.84464	182	1.15536	14.301	60		
1	07005	8.84539	179	754	9.99893	07022	8.84600	180	1.15354	.241	59		
2	034	8.84718	179	752	9.99892	051	8.84826	180	1.15174	.182	58		
3	063	8.84897	178	750	9.99891	080	8.85006	179	1.14994	.124	57		
4	092	8.85075	177	748	9.99891	110	8.85185	178	1.14815	.065	56		
5	07121	8.85252	177	99746	9.99890	07139	8.85363	177	1.14637	14.008	55		
6	150	8.85429	176	744	9.99889	168	8.85540	177	1.14460	13.951	54		
7	179	8.85606	176	742	9.99888	197	8.85717	177	1.14283	.894	53		
8	208	8.85780	175	740	9.99887	227	8.85893	176	1.14107	.838	52		
9	237	8.85955	175	738	9.99886	256	8.86069	176	1.13931	.782	51		
10	07266	8.86128	173	99736	9.99885	07285	8.86243	174	1.13757	13.727	50		
11	295	8.86301	173	734	9.99884	314	8.86417	174	1.13583	.672	49		
12	324	8.86474	171	731	9.99883	344	8.86591	174	1.13409	.617	48		
13	353	8.86645	171	729	9.99882	373	8.86763	172	1.13237	.563	47		
14	382	8.86816	171	727	9.99881	402	8.86935	172	1.13065	.510	46		
15	07411	8.86987	169	99725	9.99880	07431	8.87107	171	1.12894	13.457	45		
16	440	8.87156	169	723	9.99879	461	8.87277	171	1.12723	.404	44		
17	469	8.87325	169	721	9.99879	490	8.87447	170	1.12553	.352	43		
18	498	8.87494	167	719	9.99878	519	8.87616	169	1.12384	.300	42		
19	527	8.87661	168	716	9.99877	548	8.87785	168	1.12215	.248	41		
20	07556	8.87829	166	99714	9.99876	07578	8.87953	167	1.12047	13.197	40		
21	585	8.87995	166	712	9.99875	607	8.88120	167	1.11880	.146	39		
22	614	8.88161	166	710	9.99874	636	8.88287	167	1.11713	.096	38		
23	643	8.88326	165	708	9.99873	665	8.88453	166	1.11547	.046	37		
24	672	8.88490	164	705	9.99872	695	8.88618	165	1.11382	12.996	36		
25	07701	8.88654	163	99703	9.99871	07724	8.88783	165	1.11217	12.947	35		
26	730	8.88817	163	701	9.99870	753	8.88948	165	1.11052	.898	34		
27	759	8.88980	162	699	9.99869	782	8.89111	163	1.10889	.850	33		
28	788	8.89142	162	696	9.99868	812	8.89274	163	1.10726	.801	32		
29	817	8.89304	160	694	9.99867	841	8.89437	161	1.10563	.754	31		
30	07846	8.89464	161	99692	9.99866	07870	8.89598	162	1.10402	12.706	30		
31	875	8.89625	159	689	9.99865	899	8.89760	160	1.10240	.659	29		
32	904	8.89784	159	687	9.99864	929	8.89920	160	1.10080	.612	28		
33	933	8.89943	159	685	9.99863	958	8.90080	160	1.09920	.566	27		
34	962	8.90102	158	683	9.99862	987	8.90240	160	1.09760	.520	26		
35	07991	8.90260	157	99680	9.99861	08017	8.90399	159	1.09601	12.474	25		
36	08020	8.90417	157	678	9.99860	046	8.90557	158	1.09443	.429	24		
37	049	8.90574	156	676	9.99859	075	8.90715	157	1.09285	.384	23		
38	078	8.90730	155	673	9.99858	104	8.90872	157	1.09128	.339	22		
39	107	8.90885	155	671	9.99857	134	8.91029	157	1.08971	.295	21		
40	08136	8.91040	155	99668	9.99856	08163	8.91185	156	1.08815	12.251	20		
41	165	8.91195	155	666	9.99855	192	8.91340	155	1.08660	.207	19		
42	194	8.91349	154	664	9.99854	221	8.91495	155	1.08505	.163	18		
43	223	8.91502	153	661	9.99853	251	8.91650	155	1.08350	.120	17		
44	252	8.91655	153	659	9.99852	280	8.91803	153	1.08197	.077	16		
45	08281	8.91807	152	99657	9.99851	08309	8.91957	154	1.08043	12.035	15		
46	310	8.91959	151	654	9.99850	339	8.92110	153	1.07890	11.992	14		
47	339	8.92110	151	652	9.99848	368	8.92262	152	1.07738	.950	13		
48	368	8.92261	150	649	9.99847	397	8.92414	152	1.07586	.909	12		
49	397	8.92411	150	647	9.99846	427	8.92565	151	1.07435	.867	11		
50	08426	8.92561	149	99644	9.99845	08456	8.92716	151	1.07284	11.826	10		
51	455	8.92710	149	642	9.99844	485	8.92866	150	1.07134	.785	9		
52	484	8.92859	148	639	9.99843	514	8.93016	150	1.06984	.745	8		
53	513	8.93007	147	637	9.99842	544	8.93165	149	1.06835	.705	7		
54	542	8.93154	147	635	9.99841	573	8.93313	148	1.06687	.664	6		
55	08571	8.93301	147	99632	9.99840	08602	8.93462	149	1.06538	11.625	5		
56	600	8.93448	146	630	9.99839	632	8.93609	147	1.06391	.585	4		
57	629	8.93594	146	627	9.99838	661	8.93756	147	1.06244	.546	3		
58	658	8.93740	145	625	9.99837	690	8.93903	147	1.06097	.507	2		
59	687	8.93885	145	622	9.99836	720	8.94049	146	1.05951	.468	1		
60	716	8.94030	145	619	9.99834	749	8.94195	146	1.05805	.430	0		
	Nat. Cos Log. d.			Nat. Sin Log.			Nat. Cot Log.			c.d.	Log. Tan Nat.		

°	Nat. Sin Log.	d.	Nat. Cos Log.	Nat. Tan Log.	c.d.	Log. Cot Nat.					
0	08716	8.04030	144	99619	9.99834	08749	8.04195	145	1.05805	11.430	59
1	745	8.04174	143	617	9.99833	778	8.04340	145	1.05660	.392	60
2	774	8.04317	144	614	9.99832	807	8.04485	145	1.05515	.354	58
3	803	8.04461	142	612	9.99831	837	8.04630	143	1.05370	.316	57
4	831	8.04603	143	609	9.99830	866	8.04773	144	1.05227	.279	56
5	8860	8.04746	141	99607	9.99829	08895	8.04917	143	1.05083	11.242	55
6	889	8.04887	142	604	9.99828	925	8.05060	142	1.04940	.205	53
7	918	8.05029	141	602	9.99827	954	8.05202	142	1.04798	.168	54
8	947	8.05170	140	599	9.99825	983	8.05344	142	1.04656	.132	52
9	976	8.05310	140	596	9.99824	09013	8.05486	141	1.04514	.095	51
10	09005	8.05450	139	99594	9.99823	09042	8.05627	140	1.04373	11.059	50
11	034	8.05589	139	591	9.99822	071	8.05767	141	1.04233	.024	49
12	063	8.05728	139	588	9.99821	101	8.05908	139	1.04092	10.988	48
13	092	8.05867	138	586	9.99820	130	8.06047	139	1.03953	.953	47
14	121	8.06005	138	583	9.99819	159	8.06187	138	1.03813	.918	46
15	09150	8.06143	137	99580	9.99817	09189	8.06325	139	1.03675	10.883	45
16	179	8.06280	137	578	9.99816	218	8.06464	138	1.03530	.848	44
17	208	8.06417	136	575	9.99815	247	8.06602	137	1.03398	.814	43
18	237	8.06553	136	572	9.99814	277	8.06739	137	1.03261	.780	42
19	266	8.06689	136	570	9.99813	306	8.06877	136	1.03123	.746	41
20	09295	8.06825	135	99567	9.99812	09335	8.07013	137	1.02987	10.712	40
21	324	8.06960	135	564	9.99810	365	8.07150	135	1.02850	.678	39
22	353	8.07095	134	562	9.99809	394	8.07285	136	1.02715	.645	38
23	382	8.07229	134	559	9.99808	423	8.07421	135	1.02579	.612	37
24	411	8.07363	133	556	9.99807	453	8.07556	135	1.02444	.579	36
25	09440	8.07496	133	99553	9.99806	09482	8.07691	134	1.02300	10.546	35
26	469	8.07629	133	551	9.99804	511	8.07825	134	1.02175	.514	34
27	498	8.07762	132	548	9.99803	541	8.07959	133	1.02041	.481	33
28	527	8.07894	132	545	9.99802	570	8.08092	133	1.01908	.449	32
29	556	8.08026	131	542	9.99801	600	8.08225	133	1.01775	.417	31
30	09585	8.08157	131	99540	9.99800	09629	8.08358	132	1.01642	10.385	30
31	614	8.08288	131	537	9.99798	658	8.08490	132	1.01510	.354	29
32	642	8.08419	130	534	9.99797	688	8.08622	131	1.01378	.322	28
33	671	8.08549	130	531	9.99796	717	8.08753	131	1.01247	.291	27
34	700	8.08679	129	528	9.99795	746	8.08884	131	1.01116	.260	26
35	09729	8.08808	129	99526	9.99793	09776	8.09015	130	1.00985	10.229	25
36	758	8.08937	129	523	9.99792	805	8.09145	130	1.00855	.199	24
37	787	8.09066	128	520	9.99791	834	8.09275	130	1.00725	.168	23
38	816	8.09194	128	517	9.99790	864	8.09405	129	1.00595	.138	22
39	845	8.09322	128	514	9.99788	893	8.09534	128	1.00466	.108	21
40	09874	8.09450	127	99511	9.99787	09923	8.09662	129	1.00338	10.078	20
41	903	8.09577	127	508	9.99786	952	8.09791	128	1.00209	.048	19
42	932	8.09704	126	506	9.99785	981	8.09919	127	1.00081	.019	18
43	961	8.09830	126	503	9.99783	10011	8.00046	128	0.99954	9.9893	17
44	990	8.09956	126	500	9.99782	040	8.00174	127	0.99826	601	16
45	10019	9.00082	125	99497	9.99781	10069	9.00301	126	0.99699	9.9310	15
46	048	9.00207	125	494	9.99780	099	9.00427	126	0.99573	.021	14
47	077	9.00332	124	491	9.99778	128	9.00553	126	0.99447	9.8734	13
48	106	9.00456	124	488	9.99777	158	9.00679	126	0.99321	44.8	12
49	135	9.00581	123	485	9.99776	187	9.00805	125	0.99195	164.	11
50	10164	9.00704	124	99482	9.99775	10216	9.00930	125	0.99070	9.7882	10
51	192	9.00828	123	479	9.99773	246	9.01055	124	0.98945	601	9
52	221	9.00951	123	476	9.99772	275	9.01179	124	0.98821	322	8
53	250	9.01074	122	473	9.99771	305	9.01303	124	0.98697	044	7
54	279	9.01199	122	470	9.99769	334	9.01427	123	0.98573	9.6768	6
55	10308	9.01318	122	99467	9.99768	10363	9.01550	123	0.98450	9.6493	5
56	337	9.01440	121	464	9.99767	393	9.01673	123	0.98327	220	4
57	366	9.01561	121	461	9.99765	422	9.01796	123	0.98204	9.5949	3
58	395	9.01682	121	458	9.99764	452	9.01918	122	0.98082	679	2
59	424	9.01803	120	455	9.99763	481	9.02040	122	0.97960	411	1
60	453	9.01923	120	452	9.99761	510	9.02162	122	0.97838	144	0
	Nat. Cos Log.	d.	Nat. Sin Log.	Nat. Cot Log.	c.d.	Log. Tan Nat.					

'	Nat. Sin Log.	d.	Nat. Cos Log.	Nat. Tan Log.	c.d.	Log. Cot Nat.					
0	10453	0.01923	99452	0.99761	10510	0.02162	121	0.97838	9.5144	60	
1	482	0.02043	120	449	0.99760	540	0.02283	121	0.97717	9.4878	59
2	511	0.02163	120	446	0.99759	569	0.02404	120	0.97596	614	58
3	540	0.02283	119	443	0.99757	599	0.02525	121	0.97475	352	57
4	569	0.02402	118	440	0.99756	628	0.02645	121	0.97355	090	56
5	10597	0.02520	119	99437	0.99755	10657	0.02766	119	0.97234	9.3831	55
6	626	0.02639	118	434	0.99753	687	0.02886	120	0.97115	572	54
7	655	0.02757	117	431	0.99752	716	0.03005	119	0.96995	315	53
8	684	0.02874	118	428	0.99751	746	0.03124	118	0.96876	060	52
9	713	0.02992	117	424	0.99749	775	0.03242	119	0.96758	9.2806	51
10	10742	0.03109	117	99421	0.99748	10805	0.03361	118	0.96639	9.2553	50
11	771	0.03226	116	418	0.99747	834	0.03479	118	0.96521	302	49
12	800	0.03342	116	415	0.99745	863	0.03597	117	0.96403	052	48
13	829	0.03458	116	412	0.99744	893	0.03714	118	0.96286	9.1803	47
14	858	0.03574	116	409	0.99742	922	0.03832	116	0.96168	555	46
15	10887	0.03690	115	99406	0.99741	10952	0.03948	117	0.96052	9.1309	45
16	916	0.03805	115	402	0.99740	981	0.04065	116	0.95935	065	44
17	945	0.03920	114	399	0.99738	11011	0.04181	116	0.95819	9.0821	43
18	973	0.04034	115	396	0.99737	040	0.04297	116	0.95703	579	42
19	11002	0.04149	113	393	0.99736	070	0.04413	115	0.95587	338	41
20	11031	0.04262	114	99390	0.99734	11099	0.04528	115	0.95472	9.0008	40
21	060	0.04376	114	386	0.99733	128	0.04643	115	0.95357	9.8600	39
22	089	0.04490	113	383	0.99731	158	0.04758	115	0.95242	623	38
23	118	0.04603	112	380	0.99730	187	0.04873	114	0.95127	387	37
24	147	0.04715	113	377	0.99728	217	0.04988	114	0.95013	152	36
25	11176	0.04828	112	99374	0.99727	11246	0.05101	113	0.94899	8.8919	35
26	205	0.04940	112	370	0.99726	276	0.05214	113	0.94786	686	34
27	234	0.05052	112	367	0.99724	305	0.05328	113	0.94672	455	33
28	263	0.05164	111	364	0.99723	335	0.05441	112	0.94559	225	32
29	291	0.05275	111	360	0.99721	364	0.05553	113	0.94447	8.7996	31
30	11320	0.05386	111	99357	0.99720	11394	0.05666	112	0.94334	8.7769	30
31	349	0.05497	110	354	0.99718	423	0.05778	112	0.94222	542	29
32	378	0.05607	110	351	0.99717	452	0.05890	112	0.94110	317	28
33	407	0.05717	110	347	0.99716	482	0.06002	111	0.93998	093	27
34	436	0.05827	110	344	0.99714	511	0.06113	111	0.93887	6.8870	26
35	11465	0.05937	109	99341	0.99713	11541	0.06224	111	0.93776	8.6648	25
36	494	0.06046	109	337	0.99711	570	0.06335	110	0.93665	427	24
37	523	0.06155	109	334	0.99710	600	0.06445	110	0.93555	208	23
38	552	0.06264	108	331	0.99708	629	0.06556	111	0.93444	8.5989	22
39	580	0.06372	109	327	0.99707	659	0.06666	109	0.93334	772	21
40	11609	0.06481	108	99324	0.99705	11688	0.06775	110	0.93225	8.5555	20
41	638	0.06589	107	320	0.99704	718	0.06885	109	0.93115	340	19
42	667	0.06696	108	317	0.99702	747	0.06994	109	0.93006	126	18
43	696	0.06804	107	314	0.99701	777	0.07103	109	0.92897	8.4913	17
44	725	0.06911	107	310	0.99699	806	0.07211	109	0.92789	701	16
45	11754	0.07018	106	99307	0.99698	11836	0.07320	108	0.92680	8.4490	15
46	783	0.07124	107	303	0.99696	865	0.07428	108	0.92572	280	14
47	812	0.07231	106	300	0.99695	895	0.07536	107	0.92464	071	13
48	840	0.07337	105	297	0.99693	924	0.07643	108	0.92357	8.3863	12
49	869	0.07442	106	293	0.99692	954	0.07751	107	0.92249	656	11
50	11898	0.07548	105	99290	0.99690	11983	0.07858	106	0.92142	8.3450	10
51	927	0.07653	105	286	0.99689	12013	0.07964	107	0.92036	245	9
52	956	0.07758	105	283	0.99687	042	0.08071	107	0.91929	041	8
53	985	0.07863	105	279	0.99686	072	0.08177	106	0.91823	8.2838	7
54	12014	0.07968	104	276	0.99684	101	0.08283	106	0.91717	636	6
55	12043	0.08072	104	99272	0.99683	12131	0.08389	106	0.91611	8.2434	5
56	071	0.08176	104	269	0.99681	160	0.08495	105	0.91505	434	4
57	100	0.08280	103	265	0.99680	190	0.08600	105	0.91400	035	3
58	129	0.08383	103	262	0.99678	219	0.08705	105	0.91295	8.1837	2
59	158	0.08486	103	258	0.99677	249	0.08810	105	0.91190	640	1
60	187	0.08589	103	255	0.99675	278	0.08914	104	0.91086	443	0
	Nat. Cos Log.	d.	Nat. Sin Log.	Nat. Cot Log.	c.d.	Log. Tan Nat.					

	Nat. Sin Log.	d.	Nat. Cos Log.	Nat. Tan Log.	c.d.	Log. Cot Nat.					
0	12187	0.08580	99255	0.90675	12278	0.08914	105	0.91086	8.1443	60	
1	216	0.08602	103	251	0.90674	308	0.90919	104	0.90981	248	59
2	245	0.08795	103	248	0.90672	338	0.90923	104	0.90877	054	58
3	274	0.08897	102	244	0.90670	367	0.90927	103	0.90773	8.0860	57
4	302	0.08999	102	240	0.90669	397	0.90930	103	0.90670	667	56
5	12331	0.09101	102	99237	0.90667	12426	0.90934	104	0.90566	8.0476	55
6	360	0.09202	101	233	0.90666	456	0.90937	103	0.90463	285	54
7	389	0.09304	102	230	0.90664	485	0.90940	103	0.90360	095	53
8	418	0.09405	101	226	0.90663	515	0.90942	102	0.90258	7.9906	52
9	447	0.09506	101	222	0.90661	544	0.90945	103	0.90155	718	51
10	12476	0.09606	100	99219	0.90659	12574	0.90947	102	0.89953	7.9530	50
11	504	0.09707	101	215	0.90658	603	0.91004	102	0.89951	344	49
12	533	0.09807	100	211	0.90656	633	0.91015	101	0.89850	158	48
13	562	0.09907	100	208	0.90655	662	0.91025	102	0.89748	7.8973	47
14	591	0.10006	99	204	0.90653	692	0.91035	101	0.89647	789	46
15	12620	0.10106	100	99200	0.90651	12722	0.91045	101	0.89546	7.8606	45
16	649	0.10205	99	197	0.90650	751	0.91055	101	0.89445	424	44
17	678	0.10304	99	193	0.90648	781	0.91065	101	0.89344	243	43
18	706	0.10402	98	189	0.90647	810	0.91075	100	0.89244	062	42
19	735	0.10501	98	186	0.90645	840	0.91085	100	0.89144	7.7882	41
20	12764	0.10599	98	99182	0.90643	12869	0.91095	100	0.89044	7.7704	40
21	793	0.10697	98	178	0.90642	899	0.91105	99	0.88944	525	39
22	822	0.10795	98	175	0.90640	929	0.91115	99	0.88845	348	38
23	851	0.10893	98	171	0.90638	958	0.91125	99	0.88746	171	37
24	880	0.10990	97	167	0.90637	988	0.91135	99	0.88647	7.6996	36
25	12908	0.11087	97	99163	0.90635	13017	0.91145	99	0.88548	7.6821	35
26	937	0.11184	97	160	0.90633	1047	0.91155	99	0.88449	647	34
27	966	0.11281	96	156	0.90632	1076	0.91164	98	0.88351	473	33
28	995	0.11377	96	152	0.90630	1106	0.91174	98	0.88253	301	32
29	13024	0.11474	97	148	0.90629	1136	0.91184	98	0.88155	129	31
30	13053	0.11570	96	99141	0.90627	13165	0.91194	97	0.88057	7.5958	30
31	081	0.11666	95	141	0.90625	195	0.91204	97	0.87956	787	29
32	110	0.11761	95	137	0.90624	224	0.91213	98	0.87856	618	28
33	139	0.11857	96	133	0.90622	254	0.91223	97	0.87756	449	27
34	168	0.11952	95	129	0.90620	284	0.91232	97	0.87658	281	26
35	13197	0.12047	95	99125	0.90618	13313	0.91242	97	0.87557	7.5113	25
36	226	0.12142	94	122	0.90617	343	0.91252	97	0.87457	7.4947	24
37	254	0.12236	94	118	0.90615	372	0.91261	96	0.87359	781	23
38	283	0.12331	95	114	0.90613	402	0.91271	96	0.87263	615	22
39	312	0.12425	94	110	0.90612	432	0.91281	96	0.87167	451	21
40	13341	0.12519	94	99106	0.90610	13461	0.91290	96	0.87071	7.4287	20
41	370	0.12612	93	102	0.90608	491	0.91300	95	0.86996	124	19
42	399	0.12706	94	98	0.90607	521	0.91309	95	0.86901	7.3962	18
43	427	0.12799	93	94	0.90605	550	0.91319	95	0.86806	800	17
44	456	0.12892	93	91	0.90603	580	0.91328	95	0.86711	639	16
45	13485	0.12985	93	99087	0.90601	13609	0.91338	95	0.86616	7.3479	15
46	514	0.13078	93	83	0.90600	639	0.91347	94	0.86522	319	14
47	543	0.13171	92	79	0.90598	669	0.91357	95	0.86427	160	13
48	572	0.13263	92	75	0.90596	698	0.91367	94	0.86333	002	12
49	600	0.13355	92	71	0.90595	728	0.91376	94	0.86239	7.2844	11
50	13629	0.13447	92	99067	0.90593	13758	0.91385	93	0.86146	7.2687	10
51	658	0.13539	91	63	0.90591	787	0.91394	94	0.86052	531	9
52	687	0.13630	92	59	0.90589	817	0.91404	93	0.85959	375	8
53	716	0.13722	92	55	0.90588	846	0.91413	93	0.85866	220	7
54	744	0.13813	91	51	0.90586	876	0.91422	93	0.85773	066	6
55	13773	0.13904	91	99047	0.90584	13906	0.914320	93	0.85680	7.1912	5
56	802	0.13994	90	43	0.90582	935	0.91441	92	0.85588	759	4
57	831	0.14085	91	39	0.90581	965	0.91450	92	0.85496	607	3
58	860	0.14175	90	35	0.90579	995	0.91459	93	0.85403	455	2
59	889	0.14266	91	31	0.90577	1024	0.91468	91	0.85312	304	1
60	917	0.14356	90	27	0.90575	1054	0.914780	92	0.85220	154	0
	Nat. Cos Log.	d.	Nat. Sin Log.	Nat. Cot Log.	c.d.	Log. Tan Nat.					

'	Nat. Sin Log.	d.	Nat. Cos Log.	Nat. Tan Log.	c.d.	Log. Cot Nat.	'				
0	13917	9.14356	89	99027	9.99575	14054	9.14780	92	0.85220	7.1154	60
1	946	9.14445	89	023	9.99574	084	9.14872	91	0.85128	004	59
2	975	9.14535	89	019	9.99572	113	9.14963	90	0.85037	7.0855	58
3	14004	9.14624	90	015	9.99570	143	9.15054	89	0.84946	7.0657	57
4	033	9.14714	89	011	9.99568	173	9.15145	91	0.84855	558	56
5	14061	9.14803	88	99006	9.99566	14202	9.15236	91	0.84764	7.0410	55
6	090	9.14891	89	002	9.99565	232	9.15327	90	0.84673	264	54
7	119	9.14980	89	98998	9.99563	262	9.15417	91	0.84583	117	53
8	148	9.15069	88	994	9.99561	291	9.15508	90	0.84492	6.9972	52
9	177	9.15157	88	990	9.99559	321	9.15598	89	0.84402	827	51
10	14205	9.15245	88	98986	9.99557	14351	9.15688	90	0.84312	6.9682	50
11	234	9.15333	88	982	9.99556	381	9.15777	90	0.84223	538	49
12	263	9.15421	87	978	9.99554	410	9.15867	89	0.84133	395	48
13	292	9.15509	88	973	9.99552	440	9.15956	90	0.84044	252	47
14	320	9.15596	87	969	9.99550	470	9.16046	89	0.83954	110	46
15	14349	9.15683	87	98965	9.99548	14499	9.16135	89	0.83865	6.8969	45
16	378	9.15770	87	961	9.99546	529	9.16224	88	0.83776	828	44
17	407	9.15857	87	957	9.99545	559	9.16312	89	0.83688	687	43
18	436	9.15944	86	953	9.99543	588	9.16401	89	0.83599	548	42
19	464	9.16030	86	948	9.99541	618	9.16489	88	0.83511	408	41
20	14493	9.16116	87	98944	9.99539	14648	9.16577	88	0.83423	6.8269	40
21	522	9.16203	86	940	9.99537	678	9.16665	88	0.83335	131	39
22	551	9.16289	85	936	9.99535	707	9.16753	87	0.83247	6.7994	38
23	580	9.16374	86	931	9.99533	737	9.16841	88	0.83159	856	37
24	608	9.16460	85	927	9.99532	767	9.16928	88	0.83072	720	36
25	14637	9.16545	86	98923	9.99530	14796	9.17016	87	0.82984	6.7584	35
26	666	9.16631	85	919	9.99528	826	9.17103	87	0.82897	448	34
27	695	9.16716	85	914	9.99526	856	9.17190	86	0.82810	313	33
28	723	9.16801	85	910	9.99524	886	9.17277	87	0.82723	179	32
29	752	9.16886	84	906	9.99522	915	9.17363	87	0.82637	045	31
30	14781	9.16970	85	98902	9.99520	14945	9.17450	86	0.82550	6.6912	30
31	810	9.17055	84	897	9.99518	975	9.17536	86	0.82464	779	29
32	838	9.17139	84	893	9.99517	15005	9.17622	86	0.82378	646	28
33	867	9.17223	84	889	9.99515	034	9.17708	86	0.82292	514	27
34	896	9.17307	84	884	9.99513	064	9.17794	86	0.82206	383	26
35	14925	9.17391	83	98880	9.99511	15094	9.17880	85	0.82120	6.6252	25
36	954	9.17474	84	876	9.99509	124	9.17965	86	0.82035	122	24
37	982	9.17558	83	871	9.99507	153	9.18051	85	0.81949	6.5992	23
38	15011	9.17641	83	867	9.99505	183	9.18136	85	0.81864	863	22
39	040	9.17724	83	863	9.99503	213	9.18221	85	0.81779	734	21
40	15069	9.17807	83	98858	9.99501	15243	9.18306	85	0.81694	6.5606	20
41	097	9.17890	83	854	9.99499	272	9.18391	84	0.81609	478	19
42	126	9.17973	82	849	9.99497	302	9.18475	85	0.81525	350	18
43	155	9.18055	82	845	9.99495	332	9.18560	84	0.81440	223	17
44	184	9.18137	83	841	9.99494	362	9.18644	84	0.81356	097	16
45	15212	9.18220	82	98836	9.99492	15391	9.18728	84	0.81272	6.4971	15
46	241	9.18302	81	832	9.99490	421	9.18812	84	0.81188	846	14
47	270	9.18383	82	827	9.99488	451	9.18896	83	0.81104	721	13
48	299	9.18465	82	823	9.99486	481	9.18979	84	0.81021	596	12
49	327	9.18547	81	818	9.99484	511	9.19063	83	0.80937	472	11
50	15356	9.18628	81	98814	9.99482	15540	9.19146	83	0.80854	6.4348	10
51	385	9.18709	81	809	9.99480	570	9.19229	83	0.80771	225	9
52	414	9.18790	81	805	9.99478	600	9.19312	83	0.80688	103	8
53	442	9.18871	81	800	9.99476	630	9.19395	83	0.80605	6.3980	7
54	471	9.18952	81	796	9.99474	660	9.19478	83	0.80522	859	6
55	15500	9.19033	80	98791	9.99472	15689	9.19561	82	0.80439	6.3737	5
56	529	9.19113	80	787	9.99470	719	9.19643	82	0.80357	617	4
57	557	9.19193	80	782	9.99468	749	9.19725	82	0.80275	496	3
58	586	9.19273	80	778	9.99466	779	9.19807	82	0.80193	376	2
59	615	9.19353	80	773	9.99464	809	9.19889	82	0.80111	257	1
60	643	9.19433	80	769	9.99462	838	9.19971	82	0.80029	138	0
	Nat. Cos Log.	d.	Nat. Sin Log.	Nat. Cot Log.	c.d.	Log. Tan Nat.	'				

	Nat. Sin Log.	d.	Nat. Cos Log.	Nat. Tan Log.	c.d.	Log. Cot Nat.					
0	15643	9.19433	80	98769	9.99462	15838	9.19971	82	0.80029	6.3138	60
1	672	9.19513	79	764	9.99460	868	9.20053	81	0.79947	019	59
2	701	9.19592	80	760	9.99458	898	9.20134	82	0.79866	6.2901	58
3	730	9.19672	79	755	9.99456	928	9.20216	81	0.79784	783	57
4	758	9.19751	79	751	9.99454	958	9.20297	81	0.79703	666	56
5	15787	9.19830	79	98746	9.99452	15988	9.20378	81	0.79622	6.2549	55
6	816	9.19909	79	741	9.99450	16017	9.20459	81	0.79541	432	54
7	845	9.19988	79	737	9.99448	047	9.20540	81	0.79460	316	53
8	873	9.20067	78	732	9.99446	077	9.20621	80	0.79379	200	52
9	902	9.20145	78	728	9.99444	107	9.20701	80	0.79299	085	51
10	15931	9.20223	78	98723	9.99442	16137	9.20782	81	0.79218	6.1970	50
11	959	9.20302	78	718	9.99440	167	9.20862	80	0.79138	856	49
12	988	9.20380	78	714	9.99438	196	9.20942	80	0.79058	742	48
13	16017	9.20458	77	709	9.99436	226	9.21022	80	0.78978	628	47
14	046	9.20535	78	704	9.99434	256	9.21102	80	0.78898	515	46
15	16074	9.20613	78	98700	9.99432	16286	9.21182	80	0.78818	6.1402	45
16	103	9.20691	77	695	9.99429	316	9.21261	79	0.78739	290	44
17	132	9.20768	77	690	9.99427	346	9.21341	81	0.78659	178	43
18	160	9.20845	77	686	9.99425	376	9.21420	79	0.78580	066	42
19	189	9.20922	77	681	9.99423	405	9.21499	79	0.78501	6.0955	41
20	16218	9.20999	77	98676	9.99421	16435	9.21578	79	0.78422	6.0284	40
21	246	9.21076	77	671	9.99419	465	9.21657	79	0.78343	734	39
22	275	9.21153	76	667	9.99417	495	9.21736	79	0.78264	624	38
23	304	9.21229	76	662	9.99415	525	9.21814	78	0.78186	514	37
24	333	9.21306	76	657	9.99413	555	9.21893	78	0.78107	405	36
25	16361	9.21382	76	98652	9.99411	16585	9.21971	78	0.78029	6.0296	35
26	390	9.21458	76	648	9.99409	615	9.22049	78	0.77951	188	34
27	419	9.21534	76	643	9.99407	645	9.22127	78	0.77873	080	33
28	447	9.21610	75	638	9.99404	674	9.22205	78	0.77795	5.9972	32
29	476	9.21685	76	633	9.99402	704	9.22283	78	0.77717	865	31
30	16505	9.21761	75	98629	9.99400	16734	9.22361	78	0.77639	5.9758	30
31	533	9.21836	76	624	9.99398	764	9.22438	77	0.77562	651	29
32	562	9.21912	75	619	9.99396	794	9.22516	77	0.77484	545	28
33	591	9.21987	75	614	9.99394	824	9.22593	77	0.77407	439	27
34	620	9.22062	75	609	9.99392	854	9.22670	77	0.77330	333	26
35	16648	9.22137	75	98604	9.99390	16884	9.22747	77	0.77253	5.9228	25
36	677	9.22211	74	600	9.99388	914	9.22824	77	0.77176	124	24
37	706	9.22286	75	595	9.99386	944	9.22901	77	0.77099	019	23
38	734	9.22361	75	590	9.99383	974	9.22977	76	0.77023	5.8915	22
39	763	9.22435	74	585	9.99381	17004	9.23054	77	0.76946	811	21
40	16792	9.22509	74	98580	9.99379	17033	9.23130	76	0.76870	5.8708	20
41	820	9.22583	74	575	9.99377	063	9.23206	76	0.76794	605	19
42	849	9.22657	74	570	9.99375	093	9.23283	77	0.76717	502	18
43	878	9.22731	74	565	9.99372	123	9.23359	76	0.76641	400	17
44	906	9.22805	74	561	9.99370	153	9.23435	76	0.76565	298	16
45	16935	9.22878	73	98556	9.99368	17183	9.23510	75	0.76490	5.8197	15
46	964	9.22952	73	551	9.99366	213	9.23586	75	0.76414	095	14
47	992	9.23025	73	546	9.99364	243	9.23661	75	0.76339	5.7994	13
48	17021	9.23098	73	541	9.99362	273	9.23737	75	0.76263	894	12
49	050	9.23171	73	536	9.99359	303	9.23812	75	0.76188	794	11
50	17078	9.23244	73	98531	9.99357	17333	9.23887	75	0.76113	5.7694	10
51	107	9.23317	73	526	9.99355	363	9.23962	75	0.76038	594	9
52	136	9.23390	73	521	9.99353	393	9.24037	75	0.75963	495	8
53	164	9.23462	73	516	9.99351	423	9.24112	75	0.75888	396	7
54	193	9.23535	73	511	9.99348	453	9.24186	74	0.75814	297	6
55	17222	9.23607	72	98506	9.99346	17483	9.24261	75	0.75739	5.7199	5
56	250	9.23679	73	501	9.99344	513	9.24335	74	0.75665	101	4
57	279	9.23752	73	496	9.99342	543	9.24410	75	0.75590	004	3
58	308	9.23823	71	491	9.99340	573	9.24484	74	0.75516	5.6906	2
59	336	9.23895	72	486	9.99337	603	9.24558	74	0.75442	809	1
60	365	9.23967	72	481	9.99335	633	9.24632	74	0.75368	713	0
	Nat. Cos Log.	d.	Nat. Sin Log.	Nat. Cot Log.	c.d.	Log. Tan Nat.					

'	Nat. Sin Log. d.	Nat. Cos Log. d.	Nat. Tan Log. c.d.	Log. Cot Nat.	'
0	17365 9.23967	98481 9.99335	17633 9.24632	0.75368 5.6713	60
1	393 9.24039	71 476 9.99333	74 663 9.24706	0.75294 617	59
2	422 9.24110	71 471 9.99331	74 693 9.24779	0.75221 521	58
3	451 9.24181	71 466 9.99328	74 723 9.24853	0.75147 495	57
4	479 9.24253	72 461 9.99326	73 753 9.24926	0.75074 399	56
5	17508 9.24324	71 98455 9.99324	74 17783 9.25000	0.75000 5.6234	55
6	537 9.24395	71 450 9.99322	73 813 9.25073	0.74927 140	54
7	565 9.24466	71 445 9.99319	73 843 9.25146	0.74854 045	53
8	594 9.24536	70 440 9.99317	73 873 9.25219	0.74781 5.5951	52
9	623 9.24607	71 435 9.99315	73 903 9.25292	0.74708 857	51
10	17651 9.24677	70 98430 9.99313	72 17793 9.25365	0.74635 5.5764	50
11	680 9.24748	71 425 9.99310	72 963 9.25437	0.74563 671	49
12	708 9.24818	70 420 9.99308	73 993 9.25510	0.74490 578	48
13	737 9.24888	70 414 9.99306	73 18023 9.25582	0.74418 485	47
14	766 9.24958	70 409 9.99304	73 053 9.25655	0.74345 393	46
15	17794 9.25028	70 98404 9.99301	72 18083 9.25727	0.74273 5.5301	45
16	823 9.25098	70 399 9.99299	72 113 9.25799	0.74201 209	44
17	852 9.25168	70 394 9.99297	72 143 9.25871	0.74129 118	43
18	880 9.25237	69 389 9.99294	72 173 9.25943	0.74057 086	42
19	909 9.25307	70 383 9.99292	72 203 9.26015	0.73985 5.4924	41
20	17937 9.25376	69 98378 9.99290	71 18233 9.26086	0.73914 5.4845	40
21	966 9.25445	69 373 9.99288	72 263 9.26158	0.73842 755	39
22	995 9.25514	69 368 9.99285	71 293 9.26229	0.73771 665	38
23	18023 9.25583	69 362 9.99283	72 323 9.26301	0.73700 575	37
24	052 9.25652	69 357 9.99281	71 353 9.26372	0.73628 486	36
25	18081 9.25721	69 98352 9.99278	71 18384 9.26443	0.73557 5.4397	35
26	109 9.25790	68 347 9.99276	71 414 9.26514	0.73486 308	34
27	138 9.25858	68 341 9.99274	71 444 9.26585	0.73415 219	33
28	166 9.25927	68 336 9.99271	70 474 9.26655	0.73345 131	32
29	195 9.25995	68 331 9.99269	71 504 9.26726	0.73274 043	31
30	18224 9.26063	68 98325 9.99267	71 18534 9.26797	0.73203 5.3955	30
31	252 9.26131	68 320 9.99264	70 564 9.26867	0.73133 868	29
32	281 9.26199	68 315 9.99262	70 594 9.26937	0.73063 781	28
33	309 9.26267	68 310 9.99260	71 624 9.27008	0.72992 694	27
34	338 9.26335	68 304 9.99257	70 654 9.27078	0.72922 607	26
35	18367 9.26403	68 98299 9.99255	70 18684 9.27148	0.72852 5.3521	25
36	395 9.26470	68 294 9.99252	70 714 9.27218	0.72782 435	24
37	424 9.26538	68 288 9.99250	69 745 9.27288	0.72712 349	23
38	452 9.26605	67 283 9.99248	69 775 9.27357	0.72643 263	22
39	481 9.26672	67 277 9.99245	70 805 9.27427	0.72573 178	21
40	18509 9.26739	67 98272 9.99243	70 18835 9.27496	0.72504 5.3093	20
41	538 9.26806	67 267 9.99241	69 865 9.27566	0.72434 008	19
42	567 9.26873	67 261 9.99238	69 895 9.27635	0.72365 5.2924	18
43	595 9.26940	67 256 9.99236	69 925 9.27704	0.72296 839	17
44	624 9.27007	66 250 9.99233	69 955 9.27773	0.72227 755	16
45	18652 9.27073	66 98245 9.99231	69 18986 9.27842	0.72158 5.2672	15
46	681 9.27140	66 240 9.99229	69 19016 9.27911	0.72089 588	14
47	710 9.27206	66 234 9.99226	69 046 9.27980	0.72020 505	13
48	738 9.27273	66 229 9.99224	69 076 9.28049	0.71951 422	12
49	767 9.27339	66 223 9.99221	68 106 9.28117	0.71883 339	11
50	18795 9.27405	66 98218 9.99219	68 19136 9.28186	0.71814 5.2257	10
51	824 9.27471	66 212 9.99217	68 166 9.28254	0.71746 174	9
52	852 9.27537	66 207 9.99214	69 197 9.28323	0.71677 092	8
53	881 9.27602	65 201 9.99212	68 227 9.28391	0.71609 011	7
54	910 9.27668	66 196 9.99209	68 257 9.28459	0.71541 5.1929	6
55	18938 9.27734	65 98190 9.99207	68 19287 9.28527	0.71473 5.1848	5
56	967 9.27799	65 185 9.99204	67 317 9.28595	0.71405 767	4
57	995 9.27864	65 179 9.99202	68 347 9.28662	0.71338 686	3
58	19024 9.27930	65 174 9.99200	68 378 9.28730	0.71270 606	2
59	052 9.27995	65 168 9.99197	68 408 9.28798	0.71202 526	1
60	081 9.28060	65 163 9.99195	67 438 9.28865	0.71135 446	0
	Nat. Cos Log. d.	Nat. Sin Log. d.	Nat. Cot Log. c.d.	Log. Tan Nat.	'

	Nat. Sin Log. d.		Nat. Cos Log. d.		Nat. Tan Log. c.d.		Log. Cot Nat.	
0	19081 0.28060	65	98163 9.99195	3	19438 0.28865	68	0.71135 5.1446	60
1	109 0.28125	65	157 9.99192	3	468 0.28933	67	0.71007 366	59
2	138 0.28190	64	152 9.99190	2	498 0.29000	67	0.71000 286	58
3	167 0.28254	64	146 9.99187	3	529 0.29067	67	0.70933 207	57
4	195 0.28319	65	140 9.99185	2	559 0.29134	67	0.70866 128	56
5	19224 0.28384	65	98135 9.99182	3	19589 0.29201	67	0.70799 5.1049	55
6	252 0.28448	64	129 9.99180	3	619 0.29268	67	0.70732 5.0970	54
7	281 0.28512	64	124 9.99177	2	649 0.29335	67	0.70665 892	53
8	309 0.28577	65	118 9.99175	3	680 0.29402	66	0.70598 814	52
9	338 0.28641	64	112 9.99172	2	710 0.29468	67	0.70532 736	51
10	19366 0.28705	64	98107 9.99170	3	19740 0.29535	66	0.70465 5.0658	50
11	395 0.28769	64	101 9.99167	3	770 0.29601	67	0.70399 581	49
12	423 0.28833	63	096 9.99165	2	801 0.29668	66	0.70332 504	48
13	452 0.28896	63	090 9.99162	3	831 0.29734	66	0.70266 427	47
14	481 0.28960	64	084 9.99160	2	861 0.29800	66	0.70200 350	46
15	19509 0.29024	63	98079 9.99157	3	19891 0.29866	66	0.70134 5.0273	45
16	538 0.29087	63	073 9.99155	2	921 0.29932	66	0.70068 197	44
17	566 0.29150	63	067 9.99152	3	952 0.29998	66	0.70002 121	43
18	595 0.29214	64	061 9.99150	2	982 0.30064	66	0.69936 045	42
19	623 0.29277	63	056 9.99147	3	20012 0.30130	66	0.69870 4.9969	41
20	19652 0.29340	63	98050 9.99145	3	20042 0.30195	65	0.69805 4.9894	40
21	680 0.29403	63	044 9.99142	2	073 0.30261	66	0.69739 819	39
22	709 0.29466	63	039 9.99140	3	103 0.30326	65	0.69674 744	38
23	737 0.29529	63	033 9.99137	2	133 0.30391	65	0.69609 669	37
24	766 0.29591	62	027 9.99135	2	164 0.30457	66	0.69543 594	36
25	19794 0.29655	62	98021 9.99132	3	20194 0.30522	65	0.69478 4.9520	35
26	823 0.29716	62	016 9.99130	2	224 0.30587	65	0.69413 446	34
27	851 0.29779	63	010 9.99127	3	254 0.30652	65	0.69348 372	33
28	880 0.29841	62	004 9.99124	2	285 0.30717	65	0.69283 298	32
29	908 0.29903	62	97998 9.99122	3	315 0.30782	65	0.69218 225	31
30	19937 0.29966	63	97992 9.99119	3	20345 0.30846	64	0.69154 4.9152	30
31	905 0.30028	62	987 9.99117	2	376 0.30911	64	0.69089 078	29
32	994 0.30090	61	981 9.99114	3	406 0.30975	64	0.69025 006	28
33	20022 0.30151	62	975 9.99112	2	436 0.31040	65	0.68960 4.8933	27
34	051 0.30213	62	969 9.99109	3	466 0.31104	64	0.68896 866	26
35	20079 0.30275	61	97963 9.99106	3	20497 0.31168	64	0.68832 4.8788	25
36	108 0.30336	62	958 9.99104	2	527 0.31233	65	0.68767 716	24
37	136 0.30398	62	952 9.99101	3	557 0.31297	64	0.68703 644	23
38	165 0.30459	61	946 9.99099	2	588 0.31361	64	0.68639 573	22
39	193 0.30521	62	940 9.99096	3	618 0.31425	64	0.68575 501	21
40	20222 0.30582	61	97934 9.99093	3	20648 0.31489	63	0.68511 4.8430	20
41	250 0.30643	61	928 9.99091	2	679 0.31552	64	0.68448 359	19
42	279 0.30704	61	922 9.99088	3	709 0.31616	64	0.68384 288	18
43	307 0.30765	61	916 9.99086	2	739 0.31679	63	0.68321 218	17
44	336 0.30826	61	910 9.99083	3	770 0.31743	64	0.68257 147	16
45	20364 0.30887	61	97905 9.99080	3	20800 0.31806	63	0.68194 4.8077	15
46	393 0.30947	60	899 9.99078	2	830 0.31870	64	0.68130 007	14
47	421 0.31008	60	893 9.99075	3	861 0.31933	63	0.68067 4.7937	13
48	450 0.31068	60	887 9.99072	2	891 0.31996	63	0.68004 867	12
49	478 0.31129	61	881 9.99070	3	921 0.32059	63	0.67941 798	11
50	20507 0.31189	60	97875 9.99067	3	20952 0.32122	63	0.67878 4.7729	10
51	535 0.31250	61	869 9.99064	2	982 0.32185	63	0.67815 659	9
52	563 0.31310	60	863 9.99062	3	21013 0.32248	63	0.67752 591	8
53	592 0.31370	60	857 9.99059	2	043 0.32311	63	0.67689 522	7
54	620 0.31430	60	851 9.99056	3	073 0.32373	62	0.67627 453	6
55	20649 0.31490	59	97845 9.99054	3	21104 0.32436	63	0.67564 4.7385	5
56	677 0.31549	59	839 9.99051	2	134 0.32498	62	0.67502 317	4
57	706 0.31609	60	833 9.99048	3	164 0.32561	63	0.67439 249	3
58	734 0.31669	60	827 9.99046	2	195 0.32623	62	0.67377 181	2
59	763 0.31728	59	821 9.99043	3	225 0.32685	62	0.67315 114	1
60	791 0.31788	60	815 9.99040	3	256 0.32747	62	0.67253 046	0

	Nat. Cos Log. d.	Nat. Sin Log. d.	Nat. Cot Log. c.d.	Log. Tan Nat.	
--	------------------	------------------	--------------------	---------------	--

	Nat. Sin Log. d.		Nat. Cos Log. d.		Nat. Tan Log. c.d.		Log. Cot Nat.					
0	20791	0.31788	59	97815	0.90040	2	21256	0.32747	63	0.67253	4.7046	60
1	820	0.31847	60	809	0.99038	3	286	0.32810	62	0.67190	4.6979	59
2	848	0.31907	59	803	0.99035	3	316	0.32872	61	0.67128	912	58
3	877	0.31966	59	797	0.99032	2	347	0.32933	62	0.67067	845	57
4	905	0.32025	59	791	0.99030	3	377	0.32995	62	0.67005	779	56
5	20933	0.32084	59	97784	0.99027	3	21408	0.33057	62	0.66943	4.6712	55
6	962	0.32143	59	778	0.99024	2	438	0.33119	61	0.66881	646	54
7	990	0.32202	59	772	0.99022	2	469	0.33180	61	0.66820	580	53
8	21019	0.32261	59	766	0.99019	3	499	0.33242	61	0.66758	514	52
9	047	0.32319	58	760	0.99016	3	529	0.33303	61	0.66697	448	51
10	21076	0.32378	59	97754	0.99013	2	21560	0.33365	62	0.66635	4.6382	50
11	104	0.32437	59	748	0.99011	3	590	0.33426	61	0.66574	317	49
12	132	0.32495	58	742	0.99008	3	621	0.33487	61	0.66513	252	48
13	161	0.32553	58	735	0.99005	3	651	0.33548	61	0.66452	187	47
14	189	0.32612	59	729	0.99002	2	682	0.33609	61	0.66391	122	46
15	21218	0.32670	58	97723	0.99000	3	21712	0.33670	61	0.66330	4.6057	45
16	246	0.32728	58	717	0.98997	3	743	0.33731	61	0.66269	4.5993	44
17	275	0.32786	58	711	0.98994	3	773	0.33792	61	0.66208	928	43
18	303	0.32844	58	705	0.98991	2	804	0.33853	61	0.66147	864	42
19	331	0.32902	58	698	0.98989	3	834	0.33913	61	0.66087	800	41
20	21360	0.32960	58	97692	0.98986	3	21864	0.33974	60	0.66026	4.5736	40
21	388	0.33018	58	686	0.98983	3	895	0.34034	61	0.65966	673	39
22	417	0.33075	58	680	0.98980	2	925	0.34095	60	0.65905	609	38
23	445	0.33133	58	673	0.98978	3	956	0.34155	60	0.65845	546	37
24	474	0.33190	58	667	0.98975	3	986	0.34215	61	0.65785	483	36
25	21502	0.33248	57	97661	0.98972	2	22017	0.34270	60	0.65724	4.5420	35
26	530	0.33305	57	655	0.98969	3	047	0.34330	60	0.65664	357	34
27	559	0.33362	58	648	0.98967	3	078	0.34390	60	0.65604	294	33
28	587	0.33420	57	642	0.98964	3	108	0.34450	60	0.65544	232	32
29	616	0.33477	57	636	0.98961	3	139	0.34510	60	0.65484	169	31
30	21644	0.33534	57	97630	0.98958	3	22169	0.34570	59	0.65424	4.5107	30
31	672	0.33591	56	623	0.98955	3	200	0.34635	60	0.65365	045	29
32	701	0.33647	56	617	0.98953	2	231	0.34695	60	0.65305	4.4983	28
33	729	0.33704	57	611	0.98950	3	261	0.34755	60	0.65245	922	27
34	758	0.33761	57	604	0.98947	3	292	0.34814	59	0.65186	860	26
35	21786	0.33818	56	97598	0.98944	3	22322	0.34874	59	0.65126	4.4799	25
36	814	0.33874	57	592	0.98941	3	353	0.34933	59	0.65067	737	24
37	843	0.33931	56	585	0.98938	2	383	0.34992	59	0.65008	676	23
38	871	0.33987	56	579	0.98936	3	414	0.35051	60	0.64949	615	22
39	899	0.34043	57	573	0.98933	3	444	0.35111	60	0.64889	555	21
40	21928	0.34100	56	97566	0.98930	3	22475	0.35170	59	0.64830	4.4494	20
41	956	0.34156	56	560	0.98927	3	505	0.35229	59	0.64771	434	19
42	985	0.34212	56	553	0.98924	3	536	0.35288	59	0.64712	373	18
43	22013	0.34268	56	547	0.98921	2	567	0.35347	58	0.64653	313	17
44	041	0.34324	56	541	0.98919	3	597	0.35405	58	0.64595	253	16
45	22070	0.34380	56	97534	0.98916	3	22628	0.35464	59	0.64536	4.4194	15
46	098	0.34436	55	528	0.98913	3	658	0.35523	58	0.64477	134	14
47	126	0.34491	55	521	0.98910	3	689	0.35581	58	0.64419	075	13
48	155	0.34547	55	515	0.98907	3	719	0.35640	59	0.64360	015	12
49	183	0.34602	55	508	0.98904	3	750	0.35698	58	0.64302	4.3956	11
50	22212	0.34658	56	97502	0.98901	3	22781	0.35757	59	0.64243	4.3897	10
51	240	0.34713	55	496	0.98898	2	811	0.35815	58	0.64185	838	9
52	268	0.34769	55	489	0.98896	3	842	0.35873	58	0.64127	771	8
53	297	0.34824	55	483	0.98893	3	872	0.35931	58	0.64069	721	7
54	325	0.34879	55	476	0.98890	3	903	0.35989	58	0.64011	662	6
55	22353	0.34934	55	97470	0.98887	3	22934	0.36047	58	0.63953	4.3604	5
56	382	0.34989	55	463	0.98884	3	964	0.36105	58	0.63895	546	4
57	410	0.35044	55	457	0.98881	3	995	0.36163	58	0.63837	488	3
58	438	0.35099	55	450	0.98878	3	23026	0.36221	58	0.63779	430	2
59	467	0.35154	55	444	0.98875	3	056	0.36279	57	0.63721	372	1
60	495	0.35209	55	437	0.98872	3	087	0.36336	57	0.63664	315	0
	Nat. Cos Log. d.		Nat. Sin Log. d.		Nat. Cot Log. c.d.		Log. Tan Nat.					

	Nat. Sin Log. d.		Nat. Cos Log. d.		Nat. Tan Log. c.d.		Log. Cot Nat.					
0	22495	9.35209	54	97437	9.98872	3	23087	9.36336	58	0.63664	4.3315	60
1	523	9.35203	55	430	9.98869	3	117	9.36394	58	0.63660	257	59
2	552	9.35318	55	424	9.98867	3	148	9.36452	57	0.63548	200	58
3	580	9.35373	54	417	9.98864	3	179	9.36509	57	0.63491	143	57
4	608	9.35427	54	411	9.98861	3	209	9.36566	57	0.63434	086	56
5	22637	9.35481	54	97404	9.98858	3	23240	9.36624	58	0.63376	4.3029	55
6	665	9.35536	55	398	9.98855	3	271	9.36681	57	0.63319	4.2972	54
7	693	9.35590	54	391	9.98852	3	301	9.36738	57	0.63262	916	53
8	722	9.35644	54	384	9.98849	3	332	9.36795	57	0.63205	859	52
9	750	9.35698	54	378	9.98846	3	363	9.36852	57	0.63148	803	51
10	22778	9.35752	54	97371	9.98843	3	23393	9.36909	57	0.63091	4.2747	50
11	807	9.35806	54	365	9.98840	3	424	9.36966	57	0.63034	601	49
12	835	9.35860	54	358	9.98837	3	455	9.37023	57	0.62977	635	48
13	863	9.35914	54	351	9.98834	3	485	9.37080	57	0.62920	580	47
14	892	9.35968	54	345	9.98831	3	516	9.37137	57	0.62863	524	46
15	22920	9.36022	53	97338	9.98828	3	23547	9.37193	57	0.62807	4.2468	45
16	948	9.36075	53	331	9.98825	3	578	9.37250	56	0.62750	413	44
17	977	9.36129	53	325	9.98822	3	608	9.37306	56	0.62694	358	43
18	23005	9.36182	53	318	9.98819	3	639	9.37363	56	0.62637	303	42
19	033	9.36236	53	311	9.98816	3	670	9.37419	56	0.62581	248	41
20	23062	9.36289	53	97304	9.98813	3	23700	9.37476	56	0.62524	4.2193	40
21	090	9.36342	53	298	9.98810	3	731	9.37532	56	0.62468	139	39
22	118	9.36395	53	291	9.98807	3	762	9.37588	56	0.62412	084	38
23	146	9.36449	54	284	9.98804	3	793	9.37644	56	0.62356	030	37
24	175	9.36502	53	278	9.98801	3	823	9.37700	56	0.62300	4.1976	36
25	23203	9.36555	53	97271	9.98798	3	23854	9.37756	56	0.62244	4.1922	35
26	231	9.36608	53	264	9.98795	3	885	9.37812	56	0.62188	868	34
27	260	9.36660	52	257	9.98792	3	916	9.37868	56	0.62132	814	33
28	288	9.36713	53	251	9.98789	3	946	9.37924	56	0.62076	760	32
29	316	9.36766	53	244	9.98786	3	977	9.37980	56	0.62020	706	31
30	23345	9.36819	53	97237	9.98783	3	24008	9.38035	55	0.61965	4.1653	30
31	373	9.36871	52	230	9.98780	3	039	9.38091	56	0.61909	600	29
32	401	9.36924	52	223	9.98777	3	069	9.38147	56	0.61853	547	28
33	429	9.36976	52	217	9.98774	3	100	9.38202	55	0.61798	493	27
34	458	9.37028	52	210	9.98771	3	131	9.38257	55	0.61743	441	26
35	23486	9.37081	52	97203	9.98768	3	24162	9.38313	56	0.61687	4.1388	25
36	514	9.37133	52	196	9.98765	3	193	9.38368	55	0.61632	335	24
37	542	9.37185	52	189	9.98762	3	223	9.38423	55	0.61577	282	23
38	571	9.37237	52	182	9.98759	3	254	9.38479	55	0.61521	230	22
39	599	9.37289	52	176	9.98756	3	285	9.38534	55	0.61466	178	21
40	23627	9.37341	52	97169	9.98753	3	24316	9.38589	55	0.61411	4.1126	20
41	656	9.37393	52	162	9.98750	4	347	9.38644	55	0.61356	074	19
42	684	9.37445	52	155	9.98746	3	377	9.38699	55	0.61301	022	18
43	712	9.37497	52	148	9.98743	3	408	9.38754	55	0.61246	4.0970	17
44	740	9.37549	52	141	9.98740	3	439	9.38808	54	0.61192	918	16
45	23769	9.37600	51	97134	9.98737	3	24470	9.38863	55	0.61137	4.0867	15
46	797	9.37652	51	127	9.98734	3	501	9.38918	55	0.61082	815	14
47	825	9.37703	51	120	9.98731	3	532	9.38972	55	0.61028	764	13
48	853	9.37755	52	113	9.98728	3	562	9.39027	55	0.60973	713	12
49	882	9.37806	52	106	9.98725	3	593	9.39082	55	0.60918	662	11
50	23910	9.37858	51	97100	9.98722	3	24624	9.39136	54	0.60864	4.0611	10
51	938	9.37909	51	093	9.98719	3	655	9.39190	55	0.60810	560	9
52	966	9.37960	51	086	9.98715	4	686	9.39245	55	0.60755	509	8
53	995	9.38011	51	079	9.98712	3	717	9.39299	55	0.60701	459	7
54	24023	9.38062	51	072	9.98709	3	747	9.39353	54	0.60647	408	6
55	24051	9.38113	51	97065	9.98706	3	24778	9.39407	54	0.60593	4.0358	5
56	079	9.38164	51	058	9.98703	3	809	9.39461	54	0.60539	308	4
57	108	9.38215	51	051	9.98700	3	840	9.39515	54	0.60485	257	3
58	136	9.38266	51	044	9.98697	3	871	9.39569	54	0.60431	207	2
59	164	9.38317	51	037	9.98694	3	902	9.39623	54	0.60377	158	1
60	192	9.38368	51	030	9.98690	4	933	9.39677	54	0.60323	108	0

Nat. Cos Log. d. Nat. Sin Log. d. Nat. Cot Log. c.d. Log. Tan Nat.

'	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	'			
0	24192	9.38368	50	97030	9.98690	3	24933	9.39077	54	0.60323	4.0108	60
1	220	9.38418	51	023	9.98687	3	964	9.39731	54	0.60269	058	59
2	249	9.38469	50	015	9.98684	3	995	9.39785	53	0.60215	009	58
3	277	9.38519	51	008	9.98681	3	25026	9.39838	54	0.60162	3.9959	57
4	305	9.38570	50	001	9.98678	3	056	9.39892	54	0.60108	910	56
5	24333	9.38620	50	96994	9.98675	4	25087	9.39945	53	0.60055	3.9861	55
6	362	9.38670	51	987	9.98671	3	118	9.39999	53	0.60001	812	54
7	390	9.38721	50	980	9.98668	3	149	9.40052	53	0.59948	763	53
8	418	9.38771	50	973	9.98665	3	180	9.40106	54	0.59894	714	52
9	446	9.38821	50	966	9.98662	3	211	9.40159	53	0.59841	665	51
10	24474	9.38871	50	96959	9.98659	3	25242	9.40212	54	0.59788	3.9617	50
11	503	9.38921	50	952	9.98656	3	273	9.40266	53	0.59734	568	49
12	531	9.38971	50	945	9.98652	4	304	9.40319	53	0.59681	520	48
13	559	9.39021	50	937	9.98649	3	335	9.40372	53	0.59628	471	47
14	587	9.39071	50	930	9.98646	3	366	9.40425	53	0.59575	423	46
15	24615	9.39121	49	96923	9.98643	3	25397	9.40478	53	0.59522	3.9375	45
16	644	9.39170	49	916	9.98640	4	428	9.40531	53	0.59469	327	44
17	672	9.39220	50	909	9.98636	3	459	9.40584	53	0.59416	279	43
18	700	9.39270	50	902	9.98633	3	490	9.40636	53	0.59364	232	42
19	728	9.39319	49	894	9.98630	3	521	9.40689	53	0.59311	184	41
20	24756	9.39369	49	96887	9.98627	4	25552	9.40742	53	0.59258	3.9136	40
21	784	9.39418	49	880	9.98623	3	583	9.40795	53	0.59205	089	39
22	813	9.39467	49	873	9.98620	3	614	9.40847	53	0.59153	042	38
23	841	9.39517	50	866	9.98617	3	645	9.40900	52	0.59100	3.8995	37
24	869	9.39566	49	858	9.98614	3	676	9.40952	52	0.59048	947	36
25	24897	9.39615	49	96811	9.98610	4	25707	9.41005	53	0.58995	3.8900	35
26	925	9.39664	49	844	9.98607	3	738	9.41057	52	0.58943	854	34
27	954	9.39713	49	837	9.98604	3	769	9.41109	52	0.58891	807	33
28	982	9.39762	49	829	9.98601	3	800	9.41161	52	0.58839	760	32
29	25010	9.39811	49	822	9.98597	4	831	9.41214	53	0.58786	714	31
30	25038	9.39860	49	96815	9.98594	3	25862	9.41266	52	0.58734	3.8667	30
31	066	9.39909	49	807	9.98591	3	893	9.41318	52	0.58682	621	29
32	094	9.39958	49	800	9.98588	3	924	9.41370	52	0.58630	575	28
33	122	9.40006	48	793	9.98584	4	955	9.41422	52	0.58578	528	27
34	151	9.40055	48	786	9.98581	3	986	9.41474	52	0.58526	482	26
35	25179	9.40103	48	96778	9.98578	3	26017	9.41526	52	0.58474	3.8436	25
36	207	9.40152	49	771	9.98574	4	048	9.41578	51	0.58422	391	24
37	235	9.40200	48	764	9.98571	3	079	9.41629	52	0.58371	345	23
38	263	9.40249	48	756	9.98568	3	110	9.41681	52	0.58319	299	22
39	291	9.40297	48	749	9.98565	3	141	9.41733	52	0.58267	254	21
40	25320	9.40346	48	96742	9.98561	4	26172	9.41784	51	0.58216	3.8208	20
41	348	9.40394	48	734	9.98558	3	203	9.41836	51	0.58164	163	19
42	376	9.40442	48	727	9.98555	3	235	9.41887	51	0.58113	118	18
43	404	9.40490	48	719	9.98551	4	266	9.41939	52	0.58061	073	17
44	432	9.40538	48	712	9.98548	3	297	9.41990	51	0.58010	028	16
45	25460	9.40586	48	96705	9.98545	3	26328	9.42041	51	0.57959	3.7983	15
46	488	9.40634	48	697	9.98541	4	359	9.42093	51	0.57907	938	14
47	516	9.40682	48	690	9.98538	3	390	9.42144	51	0.57856	893	13
48	545	9.40730	48	682	9.98535	3	421	9.42195	51	0.57805	848	12
49	573	9.40778	48	675	9.98531	4	452	9.42246	51	0.57754	804	11
50	25601	9.40825	47	96667	9.98528	3	26483	9.42297	51	0.57703	3.7760	10
51	629	9.40873	48	660	9.98525	3	515	9.42348	51	0.57652	715	9
52	657	9.40921	47	653	9.98521	4	546	9.42399	51	0.57601	671	8
53	685	9.40968	48	645	9.98518	3	577	9.42450	51	0.57550	627	7
54	713	9.41016	48	638	9.98515	3	608	9.42501	51	0.57499	583	6
55	25741	9.41063	47	96630	9.98511	4	26639	9.42552	51	0.57448	3.7539	5
56	769	9.41111	48	623	9.98508	3	670	9.42603	50	0.57397	495	4
57	798	9.41158	47	615	9.98505	3	701	9.42653	50	0.57347	451	3
58	826	9.41205	47	608	9.98501	4	733	9.42704	51	0.57296	408	2
59	854	9.41252	47	600	9.98498	3	764	9.42755	51	0.57245	364	1
60	882	9.41300	48	593	9.98494	4	795	9.42805	50	0.57195	321	0

Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	'
----------	---------	----------	---------	----------	-----------	----------	------	---

'	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	'			
0	25882	9.41300	47	96593	9.08494	3	26795	9.42805	51	0.57195	3.7321	60
1	910	9.41347	47	585	9.08491	3	826	9.42856	50	0.57144	277	59
2	938	9.41394	47	578	9.08488	3	857	9.42906	51	0.57094	234	58
3	966	9.41441	47	570	9.08484	4	888	9.42957	50	0.57043	191	57
4	994	9.41488	47	562	9.08481	3	920	9.43007	51	0.56993	148	56
5	26022	9.41535	47	96555	9.08477	4	26951	9.43057	50	0.56943	3.7105	55
6	050	9.41582	47	547	9.08474	3	982	9.43108	51	0.56892	062	54
7	079	9.41628	47	540	9.08471	4	27013	9.43158	50	0.56842	019	53
8	107	9.41675	47	532	9.08467	3	044	9.43208	50	0.56792	3.6976	52
9	135	9.41722	47	524	9.08464	4	076	9.43258	51	0.56742	933	51
10	26163	9.41768	46	96517	9.08460	4	27107	9.43308	50	0.56692	3.6891	50
11	191	9.41815	47	509	9.08457	3	138	9.43358	50	0.56642	848	49
12	219	9.41861	47	502	9.08453	3	169	9.43408	50	0.56592	806	48
13	247	9.41908	47	494	9.08450	3	201	9.43458	50	0.56542	764	47
14	275	9.41954	47	486	9.08447	4	232	9.43508	50	0.56492	722	46
15	26303	9.42001	46	96479	9.08443	3	27263	9.43558	49	0.56442	3.6680	45
16	331	9.42047	46	471	9.08440	4	294	9.43607	49	0.56393	638	44
17	359	9.42093	46	463	9.08436	3	326	9.43657	50	0.56343	596	43
18	387	9.42140	46	456	9.08433	3	357	9.43707	50	0.56293	554	42
19	415	9.42186	46	448	9.08429	4	388	9.43756	49	0.56244	512	41
20	26443	9.42232	46	96440	9.08426	4	27419	9.43806	49	0.56194	3.6470	40
21	471	9.42278	46	433	9.08422	4	451	9.43855	49	0.56145	429	39
22	500	9.42324	46	425	9.08419	3	482	9.43905	50	0.56095	387	38
23	528	9.42370	46	417	9.08415	3	513	9.43954	49	0.56046	346	37
24	556	9.42416	46	410	9.08412	3	545	9.44004	50	0.55996	305	36
25	26584	9.42461	46	96402	9.08409	4	27576	9.44053	49	0.55947	3.6264	35
26	612	9.42507	46	394	9.08405	4	607	9.44102	49	0.55898	222	34
27	640	9.42553	46	386	9.08402	4	638	9.44151	50	0.55849	181	33
28	668	9.42599	46	379	9.08398	3	670	9.44201	49	0.55799	140	32
29	696	9.42644	46	371	9.08395	3	701	9.44250	49	0.55750	100	31
30	26724	9.42690	45	96363	9.08391	4	27732	9.44299	49	0.55701	3.6059	30
31	752	9.42735	45	355	9.08388	3	764	9.44348	49	0.55652	018	29
32	780	9.42781	45	347	9.08384	4	795	9.44397	49	0.55603	3.5978	28
33	808	9.42826	45	340	9.08381	4	826	9.44446	49	0.55554	937	27
34	836	9.42872	45	332	9.08377	4	858	9.44495	49	0.55505	897	26
35	26864	9.42917	45	96324	9.08373	3	27889	9.44544	48	0.55456	3.5856	25
36	892	9.42962	45	316	9.08370	4	921	9.44592	49	0.55408	816	24
37	920	9.43008	45	308	9.08366	4	952	9.44641	49	0.55359	776	23
38	948	9.43053	45	301	9.08363	3	983	9.44690	49	0.55310	736	22
39	976	9.43098	45	293	9.08359	3	28015	9.44738	48	0.55262	696	21
40	27004	9.43143	45	96285	9.08356	4	28046	9.44787	49	0.55213	3.5656	20
41	032	9.43188	45	277	9.08352	4	077	9.44836	48	0.55164	616	19
42	060	9.43233	45	269	9.08349	4	109	9.44884	48	0.55116	576	18
43	088	9.43278	45	261	9.08345	4	140	9.44933	49	0.55067	536	17
44	116	9.43323	45	253	9.08342	4	172	9.44981	48	0.55019	497	16
45	27144	9.43367	44	96246	9.08338	4	28203	9.45029	49	0.54971	3.5457	15
46	172	9.43412	45	238	9.08334	3	234	9.45078	48	0.54922	418	14
47	200	9.43457	45	230	9.08331	4	266	9.45126	48	0.54874	379	13
48	228	9.43502	44	222	9.08327	3	297	9.45174	48	0.54826	339	12
49	256	9.43546	44	214	9.08324	4	329	9.45222	49	0.54778	300	11
50	27284	9.43591	44	96206	9.08320	4	28360	9.45271	49	0.54729	3.5261	10
51	312	9.43635	44	198	9.08317	3	391	9.45319	48	0.54681	222	9
52	340	9.43680	44	190	9.08313	4	423	9.45367	48	0.54633	183	8
53	368	9.43724	44	182	9.08309	4	454	9.45415	48	0.54585	144	7
54	396	9.43769	44	174	9.08306	3	486	9.45463	48	0.54537	105	6
55	27424	9.43813	44	96166	9.08302	4	28517	9.45511	48	0.54489	3.5067	5
56	452	9.43857	44	158	9.08299	3	549	9.45559	47	0.54441	028	4
57	480	9.43901	44	150	9.08295	4	580	9.45606	48	0.54394	3.4989	3
58	508	9.43946	44	142	9.08291	4	612	9.45654	47	0.54346	951	2
59	536	9.43990	44	134	9.08288	3	643	9.45702	48	0.54298	912	1
60	564	9.44034	44	126	9.08284	4	675	9.45750	48	0.54250	874	0

Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	'
----------	---------	----------	---------	----------	-----------	----------	------	---

'	Nat. Sin Log. d.	Nat. Cos Log. d.	Nat. Tan Log. c.d.	Log. Cot Nat.	'
0	27564 0.44034	96126 0.98284	28675 0.45750	0.54250 3.4874	60
1	592 0.44078	118 0.98281	706 0.45797	0.54203 836	59
2	620 0.44123	110 0.98277	738 0.45845	0.54155 798	58
3	648 0.44166	102 0.98273	769 0.45892	0.54108 760	57
4	676 0.44210	94 0.98270	801 0.45940	0.54060 722	56
5	27704 0.44253	96086 0.98266	28832 0.45987	0.54013 3.4884	55
6	731 0.44297	44 078 0.98262	864 0.46035	0.53965 646	54
7	759 0.44341	44 070 0.98259	895 0.46082	0.53918 608	53
8	787 0.44385	44 062 0.98255	927 0.46130	0.53870 570	52
9	815 0.44428	44 054 0.98251	958 0.46177	0.53823 533	51
10	27843 0.44472	96046 0.98248	28990 0.46224	0.53776 3.4495	50
11	871 0.44516	44 037 0.98244	29021 0.46271	0.53729 458	49
12	899 0.44559	43 029 0.98240	953 0.46319	0.53681 420	48
13	927 0.44603	43 021 0.98237	984 0.46366	0.53634 383	47
14	955 0.44646	44 013 0.98233	116 0.46413	0.53587 346	46
15	27983 0.44689	96005 0.98230	29147 0.46460	0.53540 3.4308	45
16	28011 0.44733	43 95997 0.98226	179 0.46507	0.53493 271	44
17	939 0.44776	43 989 0.98222	210 0.46554	0.53446 234	43
18	967 0.44819	43 981 0.98218	242 0.46601	0.53399 197	42
19	995 0.44862	43 972 0.98215	274 0.46648	0.53352 160	41
20	28123 0.44905	43 95964 0.98211	29305 0.46694	0.53306 3.4124	40
21	150 0.44948	44 956 0.98207	337 0.46741	0.53259 87	39
22	178 0.44992	44 948 0.98204	368 0.46788	0.53212 050	38
23	206 0.45035	44 940 0.98200	400 0.46835	0.53165 014	37
24	234 0.45077	44 931 0.98196	432 0.46881	0.53119 3.3977	36
25	28262 0.45120	43 95923 0.98192	29463 0.46928	0.53072 3.3941	35
26	290 0.45163	43 915 0.98189	495 0.46975	0.53025 904	34
27	318 0.45206	43 907 0.98185	526 0.47021	0.52979 868	33
28	346 0.45249	43 898 0.98181	558 0.47068	0.52932 832	32
29	374 0.45292	44 890 0.98177	590 0.47114	0.52886 796	31
30	28402 0.45334	43 95882 0.98174	29621 0.47160	0.52840 3.3759	30
31	429 0.45377	44 874 0.98170	653 0.47207	0.52793 723	29
32	457 0.45419	44 865 0.98166	685 0.47253	0.52747 687	28
33	485 0.45462	44 857 0.98162	716 0.47299	0.52701 652	27
34	513 0.45504	44 849 0.98159	748 0.47346	0.52654 616	26
35	28541 0.45547	43 95841 0.98155	29780 0.47392	0.52608 3.3580	25
36	569 0.45589	44 832 0.98151	811 0.47438	0.52562 544	24
37	597 0.45632	44 824 0.98147	843 0.47484	0.52516 509	23
38	625 0.45674	44 816 0.98144	875 0.47530	0.52470 473	22
39	652 0.45716	44 807 0.98140	906 0.47576	0.52424 438	21
40	28680 0.45758	43 95799 0.98136	29938 0.47622	0.52378 3.3408	20
41	708 0.45801	44 791 0.98132	970 0.47668	0.52332 367	19
42	736 0.45843	44 782 0.98129	30001 0.47714	0.52286 332	18
43	764 0.45885	44 774 0.98125	933 0.47760	0.52240 297	17
44	792 0.45927	44 766 0.98121	965 0.47806	0.52194 261	16
45	28820 0.45969	43 95757 0.98117	30097 0.47852	0.52148 3.3226	15
46	847 0.46011	44 749 0.98113	128 0.47897	0.52103 191	14
47	875 0.46053	44 740 0.98110	160 0.47943	0.52057 156	13
48	903 0.46095	44 732 0.98106	192 0.47989	0.52011 122	12
49	931 0.46136	44 724 0.98102	224 0.48035	0.51965 87	11
50	28959 0.46178	43 95715 0.98098	30255 0.48080	0.51920 3.3052	10
51	987 0.46220	44 707 0.98094	287 0.48126	0.51874 017	9
52	29015 0.46262	42 698 0.98090	319 0.48171	0.51829 3.2983	8
53	942 0.46303	44 690 0.98087	351 0.48217	0.51783 948	7
54	970 0.46345	44 681 0.98083	382 0.48262	0.51737 914	6
55	29098 0.46386	43 95673 0.98079	30414 0.48307	0.51693 3.2879	5
56	126 0.46428	44 664 0.98075	446 0.48353	0.51647 845	4
57	154 0.46469	44 656 0.98071	478 0.48398	0.51602 811	3
58	182 0.46511	44 647 0.98067	509 0.48443	0.51557 777	2
59	209 0.46552	44 639 0.98063	541 0.48489	0.51511 743	1
60	237 0.46594	44 630 0.98060	573 0.48534	0.51466 709	0

Nat. Cos Log. d. Nat. Sin Log. d. Nat. Cot Log. c.d. Log. Tan Nat. '

	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.				
0	29237	9.46504	41	95630	9.98060	4	30573	9.48534	45	0.51466	3.2709	60
1	265	9.46035	41	622	9.98056	4	605	9.48579	45	0.51421	675	59
2	293	9.46070	41	613	9.98052	4	637	9.48624	45	0.51376	641	58
3	321	9.46117	41	605	9.98048	4	669	9.48669	45	0.51331	607	57
4	348	9.461758	41	596	9.98044	4	700	9.48714	45	0.51286	573	56
5	29376	9.46800	42	95588	9.98040	4	30732	9.48759	45	0.51241	3.2539	65
6	404	9.46841	41	579	9.98036	4	764	9.48804	45	0.51196	506	54
7	432	9.46882	41	571	9.98032	4	796	9.48849	45	0.51151	472	53
8	460	9.46923	41	562	9.98029	3	828	9.48894	45	0.51106	438	52
9	487	9.46964	41	554	9.98025	4	860	9.48939	45	0.51061	405	51
10	29515	9.47005	41	95545	9.98021	4	30891	9.48984	45	0.51016	3.2371	60
11	543	9.47045	40	536	9.98017	4	923	9.49029	44	0.50971	338	49
12	571	9.47086	40	528	9.98013	4	955	9.49073	44	0.50927	305	48
13	599	9.47127	40	519	9.98009	4	987	9.49118	45	0.50882	272	47
14	626	9.47168	40	511	9.98005	4	31019	9.49163	44	0.50837	238	46
15	29654	9.47209	40	95502	9.98001	4	31051	9.49207	44	0.50793	3.2205	65
16	682	9.47249	40	493	9.97997	4	083	9.49252	44	0.50748	172	44
17	710	9.47290	40	485	9.97993	4	115	9.49296	45	0.50704	139	43
18	737	9.47330	40	476	9.97989	3	147	9.49341	45	0.50659	106	42
19	765	9.47371	40	467	9.97986	3	178	9.49385	44	0.50615	073	41
20	29793	9.47411	40	95459	9.97982	4	31210	9.49430	44	0.50570	3.2041	40
21	821	9.47452	40	450	9.97978	4	242	9.49474	44	0.50526	008	39
22	849	9.47492	40	441	9.97974	4	274	9.49519	44	0.50481	3.1975	38
23	876	9.47533	40	433	9.97970	4	306	9.49563	45	0.50437	943	37
24	904	9.47573	40	424	9.97966	4	338	9.49607	45	0.50393	910	36
25	29932	9.47613	40	95415	9.97962	4	31370	9.49652	44	0.50348	3.1878	65
26	960	9.47654	40	407	9.97958	4	402	9.49696	44	0.50304	845	34
27	987	9.47694	40	398	9.97954	4	434	9.49740	44	0.50260	813	33
28	30015	9.47734	40	389	9.97950	4	466	9.49784	44	0.50216	780	32
29	043	9.47774	40	380	9.97946	4	498	9.49828	44	0.50172	748	31
30	30071	9.47814	40	95372	9.97942	4	31530	9.49872	44	0.50128	3.1716	60
31	008	9.47854	40	363	9.97938	4	562	9.49916	44	0.50084	684	29
32	126	9.47894	40	354	9.97934	4	594	9.49960	44	0.50040	652	28
33	154	9.47934	40	345	9.97930	4	626	9.50004	44	0.49996	620	27
34	182	9.47974	40	337	9.97926	4	658	9.50048	44	0.49952	588	26
35	30209	9.48014	40	95328	9.97922	4	31690	9.50092	44	0.49908	3.1556	65
36	237	9.48054	40	319	9.97918	4	722	9.50136	44	0.49864	524	24
37	265	9.48094	39	310	9.97914	4	754	9.50180	43	0.49820	492	23
38	292	9.48133	40	301	9.97910	4	786	9.50223	44	0.49777	460	22
39	320	9.48173	40	293	9.97906	4	818	9.50267	44	0.49733	429	21
40	30348	9.48213	39	95284	9.97902	4	31850	9.50311	44	0.49689	3.1397	60
41	376	9.48252	40	275	9.97898	4	882	9.50355	43	0.49645	366	19
42	403	9.48292	40	266	9.97894	4	914	9.50398	43	0.49602	334	18
43	431	9.48332	39	257	9.97890	4	946	9.50442	43	0.49558	303	17
44	459	9.48371	40	248	9.97886	4	978	9.50485	43	0.49515	271	16
45	30486	9.48411	39	95240	9.97882	4	32010	9.50529	43	0.49471	3.1240	65
46	514	9.48450	39	231	9.97878	4	042	9.50572	43	0.49428	209	14
47	542	9.48490	40	222	9.97874	4	074	9.50616	43	0.49384	178	13
48	570	9.48529	39	213	9.97870	4	106	9.50659	43	0.49341	146	12
49	597	9.48568	39	204	9.97866	4	139	9.50703	43	0.49297	115	11
50	30625	9.48607	39	95195	9.97861	5	32171	9.50746	43	0.49254	3.1084	60
51	653	9.48647	39	186	9.97857	4	203	9.50789	43	0.49211	053	9
52	680	9.48686	39	177	9.97853	4	235	9.50833	43	0.49167	022	8
53	708	9.48725	39	168	9.97849	4	267	9.50876	43	0.49124	3.0991	7
54	736	9.48764	39	159	9.97845	4	299	9.50919	43	0.49081	961	6
55	30763	9.48803	39	95150	9.97841	4	32331	9.50962	43	0.49038	3.0930	6
56	791	9.48842	39	142	9.97837	4	363	9.51005	43	0.48995	899	4
57	819	9.48881	39	133	9.97833	4	396	9.51048	43	0.48952	868	3
58	846	9.48920	39	124	9.97829	4	428	9.51092	43	0.48908	838	2
59	874	9.48959	39	115	9.97825	4	460	9.51135	43	0.48865	807	1
60	902	9.48998	39	106	9.97821	4	492	9.51178	43	0.48822	777	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.				

°	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	
0	30902	9.48908	95106	9.97821	34294	9.51178	0.48822	3.0777	60
1	929	9.49037	097	9.97817	524	9.51221	0.48779	746	59
2	957	9.49070	088	9.97812	556	9.51264	0.48736	716	58
3	985	9.49115	079	9.97808	588	9.51300	0.48694	686	57
4	31012	9.49153	070	9.97804	621	9.51349	0.48651	655	56
5	31040	9.49192	95061	9.97800	32653	9.51392	0.48608	3.0625	55
6	068	9.49231	052	9.97796	685	9.51435	0.48565	595	54
7	095	9.49269	043	9.97792	717	9.51478	0.48522	565	53
8	123	9.49308	033	9.97788	749	9.51520	0.48480	535	52
9	151	9.49347	024	9.97784	782	9.51563	0.48437	505	51
10	31178	9.49385	95015	9.97779	32814	9.51606	0.48394	3.0475	50
11	206	9.49424	006	9.97775	846	9.51648	0.48352	445	49
12	233	9.49462	94997	9.97771	878	9.51691	0.48309	415	48
13	261	9.49500	988	9.97767	911	9.51734	0.48266	385	47
14	289	9.49539	979	9.97763	943	9.51776	0.48224	356	46
15	31316	9.49577	94970	9.97759	32975	9.51819	0.48181	3.0326	45
16	344	9.49615	961	9.97754	33007	9.51861	0.48139	296	44
17	372	9.49654	952	9.97750	040	9.51903	0.48097	267	43
18	399	9.49692	943	9.97746	072	9.51946	0.48054	237	42
19	427	9.49730	933	9.97742	104	9.51988	0.48012	208	41
20	31454	9.49768	94924	9.97738	33136	9.52031	0.47969	3.0178	40
21	482	9.49806	915	9.97734	169	9.52073	0.47927	149	39
22	510	9.49844	906	9.97729	201	9.52115	0.47885	120	38
23	537	9.49882	897	9.97725	233	9.52157	0.47843	990	37
24	565	9.49920	888	9.97721	266	9.52200	0.47800	061	36
25	31593	9.49958	94878	9.97717	33298	9.52242	0.47758	3.0032	35
26	620	9.49996	869	9.97713	330	9.52284	0.47716	003	34
27	648	9.50034	860	9.97708	363	9.52326	0.47674	2.9974	33
28	675	9.50072	851	9.97704	395	9.52368	0.47632	945	32
29	703	9.50110	842	9.97700	427	9.52410	0.47590	916	31
30	31730	9.50148	94832	9.97696	33460	9.52452	0.47548	2.9887	30
31	758	9.50185	823	9.97691	492	9.52494	0.47506	858	29
32	786	9.50223	814	9.97687	524	9.52536	0.47464	829	28
33	813	9.50261	805	9.97683	557	9.52578	0.47422	800	27
34	841	9.50298	795	9.97679	589	9.52620	0.47380	772	26
35	31868	9.50336	94786	9.97674	33621	9.52661	0.47339	2.9743	25
36	896	9.50374	777	9.97670	654	9.52703	0.47297	714	24
37	923	9.50411	768	9.97666	686	9.52745	0.47255	686	23
38	951	9.50449	758	9.97662	718	9.52787	0.47213	657	22
39	979	9.50486	749	9.97657	751	9.52829	0.47171	629	21
40	32006	9.50523	94740	9.97653	33783	9.52870	0.47130	2.9600	20
41	034	9.50561	730	9.97649	816	9.52912	0.47088	572	19
42	061	9.50598	721	9.97645	848	9.52953	0.47047	544	18
43	089	9.50635	712	9.97640	881	9.52995	0.47005	515	17
44	116	9.50673	702	9.97636	913	9.53037	0.46963	487	16
45	32144	9.50710	94693	9.97632	33945	9.53078	0.46922	2.9459	15
46	171	9.50747	684	9.97628	978	9.53120	0.46880	431	14
47	199	9.50784	674	9.97623	34010	9.53161	0.46839	403	13
48	227	9.50821	665	9.97619	043	9.53202	0.46798	375	12
49	254	9.50858	656	9.97615	075	9.53244	0.46756	347	11
50	32282	9.50896	94646	9.97610	34108	9.53285	0.46715	2.9319	10
51	309	9.50933	637	9.97606	140	9.53327	0.46673	291	9
52	337	9.50970	627	9.97602	173	9.53368	0.46632	263	8
53	364	9.51007	618	9.97597	205	9.53409	0.46591	235	7
54	392	9.51043	609	9.97593	238	9.53450	0.46550	208	6
55	32419	9.51080	94599	9.97589	34270	9.53492	0.46508	2.9180	5
56	447	9.51117	590	9.97584	303	9.53533	0.46467	152	4
57	474	9.51154	580	9.97580	335	9.53574	0.46426	125	3
58	502	9.51191	571	9.97576	368	9.53615	0.46385	97	2
59	529	9.51227	561	9.97571	400	9.53656	0.46344	070	1
60	557	9.51264	552	9.97567	433	9.53697	0.46303	042	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	°

'	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.:	
0	32557	9.51264	94552	9.97567	34433	9.53697	4.06303	2.9042	80
1	584	9.51301	542	9.97563	465	9.53738	4.06202	0.15	59
2	612	9.51338	533	9.97558	498	9.53779	4.06221	2.8987	58
3	639	9.51374	523	9.97554	530	9.53820	4.06180	960	57
4	667	9.51411	514	9.97550	563	9.53861	4.06139	933	56
5	32694	9.51447	94504	9.97545	34596	9.53902	4.06098	2.8905	55
6	722	9.51484	495	9.97541	628	9.53943	4.06057	878	54
7	749	9.51520	485	9.97536	661	9.53984	4.06016	851	53
8	777	9.51557	476	9.97532	693	9.54025	4.05975	824	52
9	804	9.51593	466	9.97528	726	9.54065	4.05935	797	51
10	32832	9.51629	94457	9.97523	34758	9.54106	4.05894	2.8770	50
11	859	9.51666	447	9.97519	791	9.54147	4.05853	743	49
12	887	9.51702	438	9.97515	824	9.54187	4.05813	716	48
13	914	9.51738	428	9.97510	856	9.54228	4.05772	689	47
14	942	9.51774	418	9.97506	889	9.54269	4.05731	662	46
15	32969	9.51811	94409	9.97501	34922	9.54309	4.05690	2.8636	45
16	997	9.51847	399	9.97497	954	9.54350	4.05650	609	44
17	33024	9.51883	390	9.97492	987	9.54390	4.05610	582	43
18	051	9.51919	380	9.97488	35020	9.54431	4.05569	556	42
19	079	9.51955	370	9.97484	052	9.54471	4.05529	529	41
20	33106	9.51991	94361	9.97479	35085	9.54512	4.05488	2.8502	40
21	134	9.52027	351	9.97475	118	9.54552	4.05448	476	39
22	161	9.52063	342	9.97470	150	9.54593	4.05407	449	38
23	189	9.52099	332	9.97466	183	9.54633	4.05367	423	37
24	216	9.52135	322	9.97461	216	9.54673	4.05327	397	36
25	33244	9.52171	94313	9.97457	35248	9.54714	4.05286	2.8370	35
26	271	9.52207	303	9.97453	281	9.54754	4.05246	344	34
27	298	9.52242	293	9.97448	314	9.54794	4.05206	318	33
28	326	9.52278	284	9.97444	346	9.54835	4.05165	291	32
29	353	9.52314	274	9.97439	379	9.54875	4.05125	265	31
30	33381	9.52350	94264	9.97435	35412	9.54915	4.05085	2.8239	30
31	408	9.52385	254	9.97430	445	9.54955	4.05045	213	29
32	436	9.52421	245	9.97426	477	9.54995	4.05005	187	28
33	463	9.52456	235	9.97421	510	9.55035	4.04965	161	27
34	490	9.52492	225	9.97417	543	9.55075	4.04925	135	26
35	33518	9.52527	94215	9.97412	35576	9.55115	4.04885	2.8109	25
36	545	9.52563	206	9.97408	608	9.55155	4.04845	083	24
37	573	9.52598	196	9.97403	641	9.55195	4.04805	057	23
38	600	9.52634	186	9.97399	674	9.55235	4.04765	032	22
39	627	9.52669	176	9.97394	707	9.55275	4.04725	006	21
40	33655	9.52705	94167	9.97390	35740	9.55315	4.04685	2.7980	20
41	682	9.52740	157	9.97385	772	9.55355	4.04645	955	19
42	710	9.52775	147	9.97381	805	9.55395	4.04605	929	18
43	737	9.52811	137	9.97376	838	9.55434	4.04565	903	17
44	764	9.52846	127	9.97372	871	9.55474	4.04525	878	16
45	33792	9.52881	94118	9.97367	35904	9.55514	4.04485	2.7852	15
46	819	9.52916	108	9.97363	937	9.55554	4.04445	827	14
47	846	9.52951	98	9.97358	969	9.55593	4.04405	801	13
48	874	9.52986	88	9.97353	36002	9.55633	4.04365	776	12
49	901	9.53021	78	9.97349	035	9.55673	4.04325	751	11
50	33929	9.53056	94068	9.97344	36068	9.55712	4.04285	2.7725	10
51	956	9.53092	058	9.97340	101	9.55752	4.04245	700	9
52	983	9.53126	049	9.97335	134	9.55791	4.04205	675	8
53	34011	9.53161	039	9.97331	167	9.55831	4.04165	650	7
54	038	9.53196	029	9.97326	199	9.55870	4.04125	625	6
55	34065	9.53231	94019	9.97322	36232	9.55910	4.04085	2.7600	5
56	093	9.53266	009	9.97317	265	9.55949	4.04045	575	4
57	120	9.53301	93999	9.97312	298	9.55989	4.04011	550	3
58	147	9.53336	989	9.97308	331	9.56028	4.03972	525	2
59	175	9.53370	979	9.97303	364	9.56067	4.03933	500	1
60	202	9.53405	969	9.97299	397	9.56107	4.03893	475	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	'

'	Nat. Sin Log. d.	Nat. Cos Log. d.	Nat. Tan Log. c.d.	Log. Cot Nat.	'
0	34202 9.53405	93969 9.97209	36397 9.56107	0.43893 2.7475	60
1	229 9.53440	959 9.97204	430 9.56146	0.43854 450	59
2	257 9.53475	949 9.97209	463 9.56185	0.43815 425	58
3	284 9.53509	939 9.97215	496 9.56224	0.43776 400	57
4	311 9.53544	929 9.97280	529 9.56264	0.43737 376	56
5	34339 9.53578	93919 9.97276	36562 9.56303	0.43697 2.7351	55
6	366 9.53613	909 9.97271	595 9.56342	0.43658 326	54
7	393 9.53647	899 9.97266	628 9.56381	0.43619 302	53
8	421 9.53682	889 9.97262	661 9.56420	0.43580 277	52
9	448 9.53716	879 9.97257	694 9.56459	0.43541 253	51
10	34475 9.53751	93869 9.97252	36727 9.56498	0.43502 2.7228	50
11	503 9.53785	859 9.97248	760 9.56537	0.43463 204	49
12	530 9.53819	849 9.97243	793 9.56576	0.43424 179	48
13	557 9.53854	839 9.97238	826 9.56615	0.43385 155	47
14	584 9.53888	829 9.97234	859 9.56654	0.43346 130	46
15	34612 9.53922	93819 9.97229	36892 9.56693	0.43307 2.7106	45
16	639 9.53957	809 9.97224	925 9.56732	0.43268 082	44
17	666 9.53991	799 9.97220	958 9.56771	0.43229 058	43
18	694 9.54025	789 9.97215	991 9.56810	0.43190 034	42
19	721 9.54059	779 9.97210	37024 9.56849	0.43151 009	41
20	34748 9.54093	93769 9.97206	37057 9.56887	0.43113 2.6985	40
21	775 9.54127	759 9.97201	090 9.56926	0.43074 961	39
22	803 9.54161	748 9.97196	123 9.56965	0.43035 937	38
23	830 9.54195	738 9.97192	157 9.57004	0.42996 913	37
24	857 9.54229	728 9.97187	190 9.57042	0.42958 889	36
25	34884 9.54263	93718 9.97182	37223 9.57081	0.42919 2.6865	35
26	912 9.54297	708 9.97178	256 9.57120	0.42880 841	34
27	939 9.54331	698 9.97173	289 9.57158	0.42842 818	33
28	966 9.54365	688 9.97168	322 9.57197	0.42803 794	32
29	993 9.54399	677 9.97163	355 9.57235	0.42765 770	31
30	35021 9.54433	93667 9.97159	37388 9.57274	0.42726 2.6746	30
31	048 9.54466	657 9.97154	422 9.57312	0.42688 723	29
32	075 9.54500	647 9.97149	455 9.57351	0.42649 699	28
33	102 9.54534	637 9.97145	488 9.57389	0.42611 675	27
34	130 9.54567	626 9.97140	521 9.57428	0.42572 652	26
35	35157 9.54601	93616 9.97135	37554 9.57466	0.42534 2.6628	25
36	184 9.54635	606 9.97130	588 9.57504	0.42496 605	24
37	211 9.54668	596 9.97126	621 9.57543	0.42457 581	23
38	239 9.54702	585 9.97121	654 9.57581	0.42419 558	22
39	266 9.54735	575 9.97116	687 9.57619	0.42381 534	21
40	35293 9.54769	93565 9.97111	37720 9.57658	0.42342 2.6511	20
41	320 9.54802	555 9.97107	754 9.57696	0.42304 488	19
42	347 9.54836	544 9.97102	787 9.57734	0.42266 464	18
43	375 9.54869	534 9.97097	820 9.57772	0.42228 441	17
44	402 9.54903	524 9.97092	853 9.57810	0.42190 418	16
45	35249 9.54937	93514 9.97087	37887 9.57849	0.42151 2.6395	15
46	456 9.54969	503 9.97083	920 9.57887	0.42113 371	14
47	484 9.55003	493 9.97078	953 9.57925	0.42075 348	13
48	511 9.55036	483 9.97073	986 9.57963	0.42037 325	12
49	538 9.55069	472 9.97068	38020 9.58001	0.41999 302	11
50	35565 9.55102	93462 9.97063	38053 9.58039	0.41961 2.6279	10
51	592 9.55136	452 9.97059	086 9.58077	0.41923 256	9
52	619 9.55169	441 9.97054	120 9.58115	0.41885 233	8
53	647 9.55202	431 9.97049	153 9.58153	0.41847 210	7
54	674 9.55235	420 9.97044	186 9.58191	0.41809 187	6
55	35701 9.55268	93410 9.97039	38220 9.58229	0.41771 2.6165	5
56	728 9.55301	400 9.97035	253 9.58267	0.41733 142	4
57	755 9.55334	389 9.97030	286 9.58304	0.41695 119	3
58	782 9.55367	379 9.97025	320 9.58342	0.41658 096	2
59	810 9.55400	368 9.97020	353 9.58380	0.41620 074	1
60	837 9.55433	358 9.97015	386 9.58418	0.41582 051	0
	Nat. Cos Log. d.	Nat. Sin Log. d.	Nat. Cot Log. c.d.	Log. Tan Nat.	'

°	Nat. Sin Log.	d.	Nat. Cos Log.	d.	Nat. Tan Log.	c.d.	Log. Cot Nat.		
0	35837	0.55433	93358	0.97015	38386	0.58418	0.41582	2.6051	80
1	864	0.55466	348	0.97010	420	0.58455	0.41545	0.028	59
2	891	0.55499	337	0.97005	453	0.58493	0.41507	0.006	58
3	918	0.55532	327	0.97001	487	0.58531	0.41469	2.5983	57
4	945	0.55564	316	0.96996	520	0.58569	0.41431	961	56
5	35973	0.55597	93306	0.96991	38553	0.58606	0.41394	2.5938	55
6	36000	0.55630	295	0.96986	597	0.58644	0.41356	916	54
7	027	0.55663	285	0.96981	620	0.58681	0.41319	893	53
8	054	0.55695	274	0.96976	654	0.58719	0.41281	871	52
9	081	0.55728	264	0.96971	687	0.58757	0.41243	848	51
10	36108	0.55761	93253	0.96966	38721	0.58794	0.41206	2.5826	50
11	135	0.55793	243	0.96962	754	0.58832	0.41168	804	49
12	162	0.55826	232	0.96957	787	0.58869	0.41131	782	48
13	190	0.55858	222	0.96952	821	0.58907	0.41093	759	47
14	217	0.55891	211	0.96947	854	0.58944	0.41056	737	46
15	36244	0.55923	93201	0.96942	38888	0.58981	0.41019	2.5715	45
16	271	0.55956	190	0.96937	921	0.59019	0.40981	693	44
17	298	0.55988	180	0.96932	955	0.59056	0.40944	671	43
18	325	0.56021	169	0.96927	988	0.59094	0.40906	649	42
19	352	0.56053	159	0.96922	39022	0.59131	0.40869	627	41
20	36379	0.56086	93148	0.96917	39055	0.59168	0.40832	2.5605	40
21	406	0.56118	137	0.96912	089	0.59205	0.40795	583	39
22	434	0.56150	127	0.96907	122	0.59243	0.40757	561	38
23	461	0.56182	116	0.96903	156	0.59280	0.40720	539	37
24	488	0.56215	106	0.96898	190	0.59317	0.40683	517	36
25	36515	0.56247	93095	0.96893	39223	0.59354	0.40646	2.5495	35
26	542	0.56279	084	0.96888	257	0.59391	0.40609	473	34
27	569	0.56311	074	0.96883	290	0.59429	0.40571	451	33
28	596	0.56343	063	0.96878	324	0.59466	0.40534	430	32
29	623	0.56375	052	0.96873	357	0.59503	0.40497	408	31
30	36650	0.56408	93042	0.96868	39391	0.59540	0.40460	2.5386	30
31	677	0.56440	031	0.96863	425	0.59577	0.40423	365	29
32	704	0.56472	020	0.96858	458	0.59614	0.40386	343	28
33	731	0.56504	010	0.96853	492	0.59651	0.40349	322	27
34	758	0.56536	9999	0.96848	526	0.59688	0.40312	300	26
35	36785	0.56568	92988	0.96843	39559	0.59725	0.40275	2.5279	25
36	812	0.56599	978	0.96838	593	0.59762	0.40238	257	24
37	839	0.56631	967	0.96833	626	0.59799	0.40201	236	23
38	867	0.56663	956	0.96828	660	0.59835	0.40165	214	22
39	894	0.56695	945	0.96823	694	0.59872	0.40128	193	21
40	36921	0.56727	92935	0.96818	39727	0.59909	0.40091	2.5172	20
41	948	0.56759	924	0.96813	761	0.59946	0.40054	150	19
42	9.5	0.56790	913	0.96808	795	0.59983	0.40017	129	18
43	37002	0.56822	902	0.96803	829	0.60019	0.39981	108	17
44	029	0.56854	892	0.96798	862	0.60056	0.39944	086	16
45	37056	0.56886	92881	0.96793	39896	0.60093	0.39907	2.5065	15
46	083	0.56917	870	0.96788	930	0.60130	0.39870	044	14
47	110	0.56949	859	0.96783	963	0.60166	0.39834	023	13
48	137	0.56980	849	0.96778	997	0.60203	0.39797	002	12
49	164	0.57012	838	0.96772	40031	0.60240	0.39760	2.4981	11
50	37191	0.57044	92827	0.96767	40065	0.60276	0.39724	2.4960	10
51	218	0.57075	816	0.96762	098	0.60313	0.39687	939	9
52	245	0.57107	805	0.96757	132	0.60349	0.39651	918	8
53	272	0.57138	794	0.96752	166	0.60386	0.39614	897	7
54	299	0.57169	784	0.96747	200	0.60422	0.39578	876	6
55	37326	0.57201	92773	0.96742	40234	0.60459	0.39541	2.4855	5
56	353	0.57232	762	0.96737	267	0.60495	0.39505	834	4
57	380	0.57264	751	0.96732	301	0.60532	0.39468	813	3
58	407	0.57295	740	0.96727	335	0.60568	0.39432	792	2
59	434	0.57326	729	0.96722	369	0.60605	0.39395	772	1
60	461	0.57358	718	0.96717	403	0.60641	0.39359	751	0
	Nat. Cos Log.	d.	Nat. Sin Log.	d.	Nat. Cot Log.	c.d.	Log. Tan Nat.		

'	Nat. Sin Log. d.	Nat. Cos Log. d.	Nat. Tan Log. c.d.	Log. Cot Nat.	'
0	37461 9.57358	92718 9.96717	6 40403 9.60641	36 0.39359 2.4751	60
1	488 9.57380	31 707 9.96711	5 436 9.60677	36 0.39323 730	59
2	515 9.57420	31 697 9.96706	5 470 9.60714	36 0.39286 709	58
3	542 9.57451	31 686 9.96701	5 504 9.60750	36 0.39250 689	57
4	569 9.57482	31 675 9.96696	5 538 9.60786	36 0.39214 668	56
5	37595 9.57514	32 92664 9.96691	5 40572 9.60823	37 0.39177 2.4648	55
6	622 9.57545	31 653 9.96686	5 606 9.60859	36 0.39141 627	54
7	649 9.57577	31 642 9.96681	5 640 9.60895	36 0.39105 606	53
8	676 9.57607	31 631 9.96676	5 674 9.60931	36 0.39069 586	52
9	703 9.57638	31 620 9.96670	5 707 9.60967	36 0.39033 566	51
10	37730 9.57669	31 92609 9.96665	5 40741 9.61004	37 0.38996 2.4545	50
11	757 9.57700	31 598 9.96660	5 436 9.61040	36 0.38960 525	49
12	784 9.57731	31 587 9.96655	5 809 9.61076	36 0.38924 504	48
13	811 9.57762	31 576 9.96650	5 843 9.61112	36 0.38888 484	47
14	838 9.57793	31 565 9.96645	5 877 9.61148	36 0.38852 464	46
15	37865 9.57824	31 92554 9.96640	5 40911 9.61184	36 0.38816 2.4443	45
16	892 9.57855	31 543 9.96634	5 945 9.61220	36 0.38780 423	44
17	919 9.57885	30 532 9.96629	5 979 9.61256	36 0.38744 403	43
18	946 9.57916	31 521 9.96624	5 41013 9.61292	36 0.38708 383	42
19	973 9.57947	31 510 9.96619	5 047 9.61328	36 0.38672 362	41
20	37999 9.57978	30 92499 9.96614	5 41081 9.61364	36 0.38636 2.4342	40
21	38026 9.58008	31 488 9.96608	5 115 9.61400	36 0.38600 322	39
22	053 9.58039	31 477 9.96603	5 149 9.61436	36 0.38564 302	38
23	080 9.58070	31 466 9.96598	5 183 9.61472	36 0.38528 282	37
24	107 9.58101	31 455 9.96593	5 217 9.61508	36 0.38492 262	36
25	38134 9.58131	30 92444 9.96588	5 41251 9.61544	36 0.38456 2.4242	35
26	161 9.58162	30 432 9.96582	5 285 9.61579	35 0.38421 222	34
27	188 9.58192	30 421 9.96577	5 319 9.61615	36 0.38385 202	33
28	215 9.58223	30 410 9.96572	5 353 9.61651	36 0.38349 182	32
29	241 9.58253	31 399 9.96567	5 387 9.61687	36 0.38313 162	31
30	38268 9.58284	31 92388 9.96562	5 41421 9.61722	35 0.38278 2.4142	30
31	295 9.58314	31 377 9.96556	5 455 9.61758	36 0.38242 122	29
32	322 9.58345	31 366 9.96551	5 490 9.61794	36 0.38206 102	28
33	349 9.58375	31 355 9.96546	5 524 9.61830	36 0.38170 83	27
34	376 9.58406	31 343 9.96541	5 558 9.61865	35 0.38135 63	26
35	38403 9.58436	30 92337 9.96535	5 41592 9.61901	36 0.38099 2.4043	25
36	430 9.58467	31 321 9.96530	5 626 9.61936	35 0.38064 023	24
37	456 9.58497	30 310 9.96525	5 660 9.61972	36 0.38028 004	23
38	483 9.58527	30 299 9.96520	5 694 9.62008	36 0.37992 2.3984	22
39	510 9.58557	31 287 9.96514	5 728 9.62043	35 0.37957 964	21
40	38537 9.58588	31 92276 9.96509	5 41763 9.62079	36 0.37921 2.3945	20
41	504 9.58618	30 265 9.96504	5 797 9.62114	35 0.37886 925	19
42	591 9.58648	30 254 9.96498	5 831 9.62150	36 0.37850 906	18
43	617 9.58678	31 243 9.96493	5 865 9.62185	35 0.37815 886	17
44	644 9.58709	31 231 9.96488	5 899 9.62221	36 0.37779 867	16
45	38671 9.58739	30 92220 9.96483	5 41933 9.62256	35 0.37744 2.3847	15
46	698 9.58769	30 209 9.96477	5 968 9.62292	36 0.37708 828	14
47	725 9.58799	30 198 9.96472	5 42002 9.62327	35 0.37673 808	13
48	752 9.58829	30 186 9.96467	5 036 9.62362	35 0.37638 789	12
49	778 9.58859	30 175 9.96461	5 070 9.62398	36 0.37602 770	11
50	38805 9.58889	30 92164 9.96456	5 42105 9.62433	35 0.37567 2.3750	10
51	832 9.58919	30 152 9.96451	5 139 9.62468	35 0.37532 731	9
52	859 9.58949	30 141 9.96445	5 173 9.62504	35 0.37496 712	8
53	886 9.58979	30 130 9.96440	5 207 9.62539	35 0.37461 693	7
54	912 9.59009	30 119 9.96435	5 242 9.62574	35 0.37426 673	6
55	38939 9.59039	30 92107 9.96429	5 42276 9.62609	35 0.37391 2.3654	5
56	966 9.59069	29 006 9.96424	5 310 9.62645	36 0.37355 635	4
57	993 9.59098	29 085 9.96419	5 345 9.62680	35 0.37320 616	3
58	39020 9.59128	30 073 9.96413	5 379 9.62715	35 0.37285 597	2
59	046 9.59158	30 062 9.96408	5 413 9.62750	35 0.37250 578	1
60	073 9.59188	30 050 9.96403	5 447 9.62785	35 0.37215 559	0

Nat. Cos Log. d. Nat. Sin Log. d. Nat. Cot Log. c.d. Log. Tan Nat.

'	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat Tan	Log. c.d.	Log. Cot	Nat.	'
0	39073	9.59188	92050	9.96403	42447	9.62785	3.37215	2.3559	60
1	100	9.59218	039	9.96397	482	9.62820	3.37180	539	59
2	127	9.59247	028	9.96392	516	9.62855	3.37145	501	58
3	153	9.59277	016	9.96387	551	9.62890	3.37110	520	57
4	180	9.59307	005	9.96381	585	9.62926	3.37074	483	56
5	39207	9.59336	91994	9.96376	42619	9.62961	3.37039	2.3464	55
6	234	9.59366	982	9.96370	654	9.62996	3.37004	445	54
7	260	9.59396	971	9.96365	688	9.63031	3.36969	426	53
8	287	9.59425	959	9.96360	722	9.63066	3.36934	407	52
9	314	9.59455	948	9.96354	757	9.63101	3.36899	388	51
10	39341	9.59484	91936	9.96349	42791	9.63135	3.36865	2.3369	50
11	367	9.59514	925	9.96343	826	9.63170	3.36830	351	49
12	394	9.59543	914	9.96338	860	9.63205	3.36795	332	48
13	421	9.59573	902	9.96333	894	9.63240	3.36760	313	47
14	448	9.59602	891	9.96327	929	9.63275	3.36725	294	46
15	39474	9.59632	91879	9.96322	42963	9.63310	3.36690	2.3276	45
16	501	9.59661	868	9.96316	998	9.63345	3.36655	257	44
17	528	9.59690	856	9.96311	43032	9.63379	3.36621	238	43
18	555	9.59720	845	9.96305	067	9.63414	3.36586	220	42
19	581	9.59749	833	9.96300	101	9.63449	3.36551	201	41
20	39608	9.59778	91822	9.96294	43136	9.63484	3.36516	2.3183	40
21	635	9.59808	810	9.96289	170	9.63519	3.36481	164	39
22	661	9.59837	799	9.96284	205	9.63553	3.36447	146	38
23	688	9.59866	787	9.96278	239	9.63588	3.36412	127	37
24	715	9.59895	775	9.96273	274	9.63623	3.36377	109	36
25	39741	9.59924	91764	9.96267	43308	9.63657	3.36343	2.3090	35
26	768	9.59954	752	9.96262	343	9.63692	3.36308	072	34
27	795	9.59983	741	9.96256	378	9.63726	3.36274	053	33
28	822	9.60012	729	9.96251	412	9.63761	3.36239	035	32
29	848	9.60041	718	9.96245	447	9.63796	3.36204	017	31
30	39875	9.60070	91706	9.96240	43481	9.63830	3.36170	2.2998	30
31	902	9.60099	694	9.96234	516	9.63865	3.36135	080	29
32	928	9.60128	683	9.96229	550	9.63899	3.36101	962	28
33	955	9.60157	671	9.96223	585	9.63934	3.36066	944	27
34	982	9.60186	660	9.96218	620	9.63968	3.36032	925	26
35	40008	9.60215	91648	9.96212	43654	9.64003	3.35997	2.2907	25
36	035	9.60244	636	9.96207	689	9.64037	3.35963	889	24
37	062	9.60273	625	9.96201	724	9.64072	3.35928	871	23
38	088	9.60302	613	9.96196	758	9.64106	3.35894	853	22
39	115	9.60331	601	9.96190	793	9.64140	3.35860	835	21
40	40141	9.60359	91590	9.96185	43828	9.64175	3.35825	2.2817	20
41	168	9.60388	578	9.96179	862	9.64209	3.35791	799	19
42	195	9.60417	566	9.96174	897	9.64243	3.35757	781	18
43	221	9.60446	555	9.96168	932	9.64278	3.35722	763	17
44	248	9.60474	543	9.96162	966	9.64312	3.35688	745	16
45	40275	9.60503	91531	9.96157	44001	9.64346	3.35654	2.2727	15
46	301	9.60532	036	9.96151	036	9.64381	3.35619	709	14
47	328	9.60561	508	9.96146	071	9.64415	3.35585	691	13
48	355	9.60589	496	9.96140	105	9.64449	3.35551	673	12
49	381	9.60618	484	9.96135	140	9.64483	3.35517	655	11
50	40408	9.60646	91472	9.96129	44175	9.64517	3.35483	2.2637	10
51	434	9.60675	461	9.96123	210	9.64552	3.35448	620	9
52	461	9.60704	449	9.96118	244	9.64586	3.35414	602	8
53	488	9.60732	437	9.96112	279	9.64620	3.35380	584	7
54	514	9.60761	425	9.96107	314	9.64654	3.35346	566	6
55	40541	9.60789	91414	9.96101	44349	9.64688	3.35312	2.2549	5
56	567	9.60818	402	9.96095	384	9.64722	3.35278	531	4
57	594	9.60846	390	9.96090	418	9.64756	3.35244	513	3
58	621	9.60875	378	9.96084	453	9.64790	3.35210	496	2
59	647	9.60903	366	9.96079	488	9.64824	3.35176	478	1
60	674	9.60931	355	9.96073	523	9.64858	3.35142	460	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	'

°	Nat. Sin Log. d.			Nat. Cos Log. d.			Nat. Tan Log. c.d.			Log. Cot Nat.		
0	40674	0.600931		91355	0.960973		44523	0.64858		0.35142	2.2460	80
1	700	0.60960	29	343	0.96067	6	558	0.64892	34	0.35108	443	59
2	727	0.60988	28	331	0.96062	6	593	0.64926	34	0.35074	425	58
3	753	0.61016	29	319	0.96056	6	627	0.64960	34	0.35040	408	57
4	780	0.61045	28	307	0.96050	6	662	0.64994	34	0.35006	390	56
5			28			5			34			
6	40806	0.61073		91295	0.96045		44697	0.65028		0.34972	2.2373	55
8	833	0.61101	28	283	0.96039	6	732	0.65062	34	0.34938	355	54
7	860	0.61129	28	272	0.96034	6	767	0.65096	34	0.34904	338	53
8	886	0.61158	29	260	0.96028	6	802	0.65130	34	0.34870	320	52
9	913	0.61186	28	248	0.96022	6	837	0.65164	34	0.34836	303	51
10			28			5			33			
10	40939	0.61214		91236	0.96017		44872	0.65197		0.34803	2.2286	50
11	966	0.61242	28	224	0.96011	6	907	0.65231	34	0.34769	268	49
12	992	0.61270	28	212	0.96005	6	942	0.65265	34	0.34735	251	48
13	41019	0.61298	28	200	0.96000	6	977	0.65299	34	0.34701	234	47
14	045	0.61326	28	188	0.95994	6	45012	0.65333	34	0.34667	216	46
15			28			6			33			
15	41072	0.61354		91176	0.95988		45047	0.65366		0.34634	2.2199	45
16	098	0.61382	29	164	0.95982	6	082	0.65400	34	0.34600	182	44
17	125	0.61411	29	152	0.95977	6	117	0.65434	34	0.34566	165	43
18	151	0.61438	27	140	0.95971	6	152	0.65467	33	0.34533	148	42
19	178	0.61466	28	128	0.95965	6	187	0.65501	34	0.34499	130	41
20			28			5			34			
20	41204	0.61494		91116	0.95960		45222	0.65535		0.34465	2.2113	40
21	231	0.61522	28	104	0.95954	6	257	0.65568	33	0.34432	096	39
22	257	0.61550	28	092	0.95948	6	292	0.65602	34	0.34398	079	38
23	284	0.61578	28	080	0.95942	6	327	0.65636	33	0.34364	062	37
24	310	0.61606	28	068	0.95937	6	362	0.65669	34	0.34331	045	36
25			28			6			34			
25	41337	0.61634		91056	0.95931		45397	0.65703		0.34297	2.2028	35
26	363	0.61662	27	044	0.95925	6	432	0.65736	33	0.34264	011	34
27	390	0.61689	28	032	0.95920	6	467	0.65770	33	0.34230	2.1994	33
28	416	0.61717	28	020	0.95914	6	502	0.65803	33	0.34197	977	32
29	443	0.61745	28	008	0.95908	6	538	0.65837	34	0.34163	960	31
30			28			6			33			
30	41469	0.61773		90996	0.95902		45573	0.65870		0.34130	2.1943	30
31	496	0.61800	27	984	0.95897	6	608	0.65904	34	0.34096	926	29
32	522	0.61828	28	972	0.95891	6	643	0.65937	33	0.34063	909	28
33	549	0.61856	28	960	0.95885	6	678	0.65971	34	0.34029	892	27
34	575	0.61883	28	948	0.95879	6	713	0.66004	33	0.33996	876	26
35			28			5			34			
35	41602	0.61911		90936	0.95873		45748	0.66038		0.33962	2.1859	25
36	628	0.61939	28	924	0.95868	6	784	0.66071	33	0.33929	842	24
37	655	0.61966	28	911	0.95862	6	819	0.66104	33	0.33896	825	23
38	681	0.61994	27	899	0.95856	6	854	0.66138	34	0.33862	808	22
39	707	0.62021	27	887	0.95850	6	889	0.66171	33	0.33829	792	21
40			28			6			33			
40	41734	0.62049		90875	0.95844		45924	0.66204		0.33796	2.1775	20
41	760	0.62076	28	863	0.95839	6	900	0.66238	34	0.33762	758	19
42	787	0.62104	28	851	0.95833	6	995	0.66271	33	0.33729	742	18
43	813	0.62131	28	839	0.95827	6	46030	0.66304	33	0.33696	725	17
44	840	0.62159	27	826	0.95821	6	065	0.66337	33	0.33663	708	16
45			27			6			34			
45	41866	0.62186		90814	0.95815		46101	0.66371		0.33629	2.1692	15
46	892	0.62214	28	802	0.95810	6	136	0.66404	33	0.33596	675	14
47	919	0.62241	27	790	0.95804	6	171	0.66437	33	0.33563	659	13
48	945	0.62268	28	778	0.95798	6	206	0.66470	33	0.33530	642	12
49	972	0.62296	27	766	0.95792	6	242	0.66503	33	0.33497	625	11
50			27			6			34			
50	41998	0.62323		90753	0.95786		46277	0.66537		0.33463	2.1609	10
51	42024	0.62350	27	741	0.95780	6	312	0.66570	33	0.33430	592	9
52	051	0.62377	28	729	0.95775	6	348	0.66603	33	0.33397	576	8
53	077	0.62405	28	717	0.95769	6	383	0.66636	33	0.33364	560	7
54	104	0.62432	27	704	0.95763	6	418	0.66669	33	0.33331	543	6
55			27			6			33			
55	42130	0.62459		90692	0.95757		46454	0.66702		0.33298	2.1527	5
56	156	0.62486	27	680	0.95751	6	489	0.66735	33	0.33265	510	4
57	183	0.62513	27	668	0.95745	6	525	0.66768	33	0.33232	494	3
58	209	0.62541	28	655	0.95739	6	560	0.66801	33	0.33199	478	2
59	235	0.62568	27	643	0.95733	6	595	0.66834	33	0.33166	461	1
60	262	0.62595	27	631	0.95728	6	631	0.66867	33	0.33133	445	0
	Nat. Cos Log. d.			Nat. Sin Log. d.			Nat. Cot Log. c.d.			Log. Tan Nat.		

'	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	'		
0	42262	0.62505	90631	0.95728	6	46631	0.66807	33	0.33133	2.1445	60
1	288	0.62022	618	0.95722	6	666	0.66900	33	0.33100	429	59
2	315	0.62049	606	0.95716	6	702	0.66933	33	0.33067	413	58
3	341	0.62076	594	0.95710	6	737	0.66966	33	0.33034	396	57
4	367	0.62070	582	0.95704	6	772	0.66999	33	0.33001	380	56
5	42394	0.62730	90569	0.95608	6	46808	0.67032	33	0.32968	2.1364	55
6	420	0.62757	557	0.95602	6	843	0.67065	33	0.32935	348	54
7	446	0.62784	545	0.95596	6	879	0.67098	33	0.32902	332	53
8	473	0.62811	532	0.95590	6	914	0.67131	33	0.32869	315	52
9	499	0.62838	520	0.95584	6	950	0.67163	33	0.32837	299	51
10	42525	0.62865	90507	0.95668	5	46985	0.67196	33	0.32804	2.1283	50
11	552	0.62892	495	0.95663	6	47021	0.67229	33	0.32771	267	49
12	578	0.62918	483	0.95657	6	056	0.67262	33	0.32738	251	48
13	604	0.62945	470	0.95651	6	092	0.67295	33	0.32705	235	47
14	631	0.62972	458	0.95645	6	128	0.67327	33	0.32673	219	46
15	42657	0.62999	90446	0.95639	6	47163	0.67360	33	0.32640	2.1203	45
16	683	0.63026	433	0.95633	6	199	0.67393	33	0.32607	187	44
17	709	0.63052	421	0.95627	6	234	0.67426	33	0.32574	171	43
18	736	0.63079	408	0.95621	6	270	0.67458	33	0.32542	155	42
19	762	0.63106	396	0.95615	6	305	0.67491	33	0.32509	139	41
20	42788	0.63133	90383	0.95609	6	47341	0.67524	33	0.32476	2.1123	40
21	815	0.63159	371	0.95603	6	377	0.67556	33	0.32444	107	39
22	841	0.63186	358	0.95597	6	412	0.67589	33	0.32411	092	38
23	867	0.63213	346	0.95591	6	448	0.67622	33	0.32378	076	37
24	894	0.63239	334	0.95585	6	483	0.67654	33	0.32346	060	36
25	42920	0.63266	90321	0.95579	6	47519	0.67687	33	0.32313	2.1044	35
26	946	0.63292	309	0.95573	6	555	0.67719	33	0.32281	028	34
27	972	0.63319	296	0.95567	6	590	0.67752	33	0.32248	013	33
28	999	0.63345	284	0.95561	6	626	0.67785	33	0.32215	2.0997	32
29	43025	0.63372	271	0.95555	6	662	0.67817	33	0.32183	981	31
30	43051	0.63398	90259	0.95549	6	47698	0.67850	33	0.32150	2.0965	30
31	077	0.63425	246	0.95543	6	733	0.67882	33	0.32118	950	29
32	104	0.63451	233	0.95537	6	769	0.67915	33	0.32085	934	28
33	130	0.63478	221	0.95531	6	805	0.67947	33	0.32053	918	27
34	156	0.63504	208	0.95525	6	840	0.67980	33	0.32020	903	26
35	43182	0.63531	90196	0.95519	6	47876	0.68012	33	0.31988	2.0887	25
36	209	0.63557	183	0.95513	6	912	0.68044	33	0.31956	872	24
37	235	0.63583	171	0.95507	6	948	0.68077	33	0.31923	856	23
38	261	0.63610	158	0.95500	7	984	0.68109	33	0.31891	840	22
39	287	0.63636	146	0.95494	6	48019	0.68142	33	0.31858	825	21
40	43313	0.63662	90133	0.95488	6	48055	0.68174	33	0.31826	2.0809	20
41	340	0.63689	120	0.95482	6	091	0.68206	33	0.31794	794	19
42	366	0.63715	108	0.95476	6	127	0.68239	33	0.31761	778	18
43	392	0.63741	095	0.95470	6	163	0.68271	33	0.31729	763	17
44	418	0.63767	082	0.95464	6	198	0.68303	33	0.31697	748	16
45	43445	0.63794	90070	0.95458	6	48234	0.68336	33	0.31664	2.0732	15
46	471	0.63820	057	0.95452	6	270	0.68368	33	0.31632	717	14
47	497	0.63846	045	0.95446	6	306	0.68400	33	0.31600	701	13
48	523	0.63872	032	0.95440	6	342	0.68432	33	0.31568	686	12
49	549	0.63898	019	0.95434	7	378	0.68465	33	0.31535	671	11
50	43575	0.63924	90007	0.95427	6	48414	0.68497	33	0.31503	2.0655	10
51	602	0.63950	89994	0.95421	6	450	0.68529	33	0.31471	640	9
52	628	0.63976	981	0.95415	6	486	0.68561	33	0.31439	625	8
53	654	0.64002	968	0.95409	6	521	0.68593	33	0.31407	609	7
54	680	0.64028	956	0.95403	6	557	0.68626	33	0.31374	594	6
55	43706	0.64054	89943	0.95397	6	48593	0.68658	33	0.31342	2.0579	5
56	733	0.64080	930	0.95391	6	629	0.68690	33	0.31310	564	4
57	759	0.64106	918	0.95384	7	665	0.68722	33	0.31278	549	3
58	785	0.64132	905	0.95378	6	701	0.68754	33	0.31246	533	2
59	811	0.64158	892	0.95372	6	737	0.68786	33	0.31214	518	1
60	837	0.64184	879	0.95366	6	773	0.68818	33	0.31182	503	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.			

	Nat. Sin Log.	d.	Nat. Cos Log.	d.	Nat. Tan Log.	c.d.	Log. Cot Nat.					
0	43837	0.64184	26	89879	0.95366	6	48773	0.68818	32	0.31182	2.0503	60
1	863	0.64210	26	867	0.95360	6	809	0.68850	32	0.31150	488	59
2	869	0.64236	26	854	0.95354	6	845	0.68882	32	0.31118	473	58
3	916	0.64262	26	841	0.95348	7	881	0.68914	32	0.31086	458	57
4	942	0.64288	26	828	0.95341	7	917	0.68946	32	0.31054	443	56
5	43968	0.64313	25	89816	0.95335	6	48953	0.68978	32	0.31022	2.0428	55
6	994	0.64339	26	803	0.95329	6	989	0.69010	32	0.30990	413	54
7	44020	0.64365	26	790	0.95323	6	49026	0.69042	32	0.30958	398	53
8	046	0.64391	26	777	0.95317	7	062	0.69074	32	0.30926	383	52
9	072	0.64417	26	764	0.95310	7	098	0.69106	32	0.30894	368	51
10	44098	0.64442	25	89752	0.95304	6	49134	0.69138	32	0.30862	2.0353	50
11	124	0.64468	26	739	0.95298	6	170	0.69170	32	0.30830	338	49
12	151	0.64494	26	726	0.95292	6	206	0.69202	32	0.30798	323	48
13	177	0.64519	25	713	0.95286	6	242	0.69234	32	0.30766	308	47
14	203	0.64545	26	700	0.95279	7	278	0.69266	32	0.30734	293	46
15	44229	0.64571	25	89687	0.95273	6	49315	0.69298	31	0.30702	2.0278	45
16	255	0.64596	26	674	0.95267	6	351	0.69330	32	0.30671	263	44
17	281	0.64622	25	662	0.95261	7	387	0.69361	32	0.30639	248	43
18	307	0.64647	25	649	0.95254	7	423	0.69393	32	0.30607	233	42
19	333	0.64673	26	636	0.95248	6	459	0.69425	32	0.30575	219	41
20	44359	0.64698	25	89623	0.95242	6	49495	0.69457	31	0.30543	2.0204	40
21	385	0.64724	26	610	0.95236	6	532	0.69488	32	0.30512	189	39
22	411	0.64749	25	597	0.95229	7	568	0.69520	32	0.30480	174	38
23	437	0.64775	26	584	0.95223	6	604	0.69552	32	0.30448	160	37
24	464	0.64800	25	571	0.95217	6	640	0.69584	32	0.30416	145	36
25	44490	0.64826	26	89558	0.95211	7	49677	0.69615	31	0.30385	2.0130	35
26	516	0.64851	26	545	0.95204	6	713	0.69647	32	0.30353	115	34
27	542	0.64877	25	532	0.95198	6	749	0.69679	32	0.30321	101	33
28	568	0.64902	25	519	0.95192	7	786	0.69710	31	0.30290	086	32
29	594	0.64927	26	506	0.95185	7	822	0.69742	32	0.30258	072	31
30	44020	0.64953	25	89493	0.95179	6	49858	0.69774	31	0.30226	2.0057	30
31	646	0.64978	26	480	0.95173	6	894	0.69805	32	0.30195	042	29
32	672	0.65003	26	467	0.95167	6	931	0.69837	31	0.30163	028	28
33	698	0.65029	25	454	0.95160	7	967	0.69868	32	0.30132	013	27
34	724	0.65054	25	441	0.95154	6	50004	0.69900	31	0.30100	1.9999	26
35	44750	0.65079	25	89428	0.95148	6	50040	0.69932	32	0.30068	1.9984	25
36	776	0.65104	26	415	0.95141	7	076	0.69963	31	0.30037	970	24
37	802	0.65130	25	402	0.95135	6	113	0.69995	32	0.30005	955	23
38	828	0.65155	25	389	0.95129	6	149	0.70026	31	0.29974	941	22
39	854	0.65180	25	376	0.95122	7	185	0.70058	32	0.29942	926	21
40	44880	0.65205	25	89363	0.95116	6	50222	0.70089	31	0.29911	1.9912	20
41	906	0.65230	26	350	0.95110	6	258	0.70121	32	0.29879	897	19
42	932	0.65255	25	337	0.95103	7	295	0.70152	31	0.29848	883	18
43	958	0.65281	26	324	0.95097	6	331	0.70184	32	0.29816	868	17
44	984	0.65306	25	311	0.95090	7	368	0.70215	31	0.29785	854	16
45	45010	0.65331	25	89298	0.95084	6	50404	0.70247	31	0.29753	1.9840	15
46	036	0.65356	25	285	0.95078	6	441	0.70278	32	0.29722	825	14
47	062	0.65381	25	272	0.95071	7	477	0.70309	31	0.29691	811	13
48	088	0.65406	25	259	0.95065	6	514	0.70341	32	0.29659	797	12
49	114	0.65431	25	245	0.95059	6	550	0.70372	31	0.29628	782	11
50	45140	0.65456	25	89232	0.95052	7	50587	0.70404	32	0.29596	1.9768	10
51	166	0.65481	25	219	0.95046	6	623	0.70435	31	0.29565	754	9
52	192	0.65506	25	206	0.95039	7	660	0.70466	32	0.29534	740	8
53	218	0.65531	25	193	0.95033	6	696	0.70498	31	0.29502	725	7
54	243	0.65556	24	180	0.95027	6	733	0.70529	32	0.29471	711	6
55	45269	0.65580	25	89167	0.95020	7	50769	0.70560	31	0.29440	1.9697	5
56	295	0.65605	25	153	0.95014	7	806	0.70592	32	0.29408	683	4
57	321	0.65630	25	140	0.95007	6	843	0.70623	31	0.29377	669	3
58	347	0.65655	25	127	0.95001	6	879	0.70654	32	0.29346	654	2
59	373	0.65680	25	114	0.94995	7	916	0.70685	31	0.29315	640	1
60	399	0.65705	25	101	0.94988	7	953	0.70717	32	0.29283	626	0
	Nat. Cos Log.	d.	Nat. Sin Log.	d.	Nat. Cot Log.	c.d.	Log. Tan Nat.					

	Nat. Sin Log. d.	Nat. Cos Log. d.	Nat Tan Log. c.d.	Log. Cot Nat.	
0	45399 0.65705	89101 0.94988	50953 9.70717	0.29283 1.9666	60
1	425 0.65729	087 0.94982	989 9.70748	0.29252 612	59
2	451 0.65754	074 0.94975	51026 9.70779	0.29221 598	58
3	477 0.65779	061 0.94969	063 9.70810	0.29190 584	57
4	503 0.65804	048 0.94962	099 9.70841	0.29159 570	56
5	45529 0.65828	89035 0.94956	51136 9.70873	0.29127 1.9556	55
6	554 0.65853	021 0.94949	173 9.70904	0.29096 542	54
7	580 0.65878	008 0.94943	209 9.70935	0.29065 528	53
8	606 0.65902	88995 0.94936	246 9.70966	0.29034 514	52
9	632 0.65927	981 0.94930	283 9.70997	0.29003 500	51
10	45658 0.65952	88968 0.94923	51319 9.71028	0.28972 1.9486	50
11	684 0.65976	955 0.94917	356 9.71059	0.28941 472	49
12	710 0.66001	942 0.94911	393 9.71090	0.28910 458	48
13	736 0.66025	928 0.94904	430 9.71121	0.28879 444	47
14	762 0.66050	915 0.94898	467 9.71153	0.28847 430	46
15	45787 0.66075	88902 0.94891	51503 9.71184	0.28816 1.9416	45
16	813 0.66099	888 0.94885	540 9.71215	0.28785 402	44
17	839 0.66124	875 0.94878	577 9.71246	0.28754 388	43
18	865 0.66148	862 0.94871	614 9.71277	0.28723 375	42
19	891 0.66173	848 0.94865	651 9.71308	0.28692 361	41
20	45917 0.66197	88835 0.94858	51688 9.71339	0.28661 1.9347	40
21	942 0.66221	822 0.94852	724 9.71370	0.28630 333	39
22	968 0.66246	808 0.94845	761 9.71401	0.28599 319	38
23	994 0.66270	795 0.94839	798 9.71431	0.28569 306	37
24	46020 0.66295	782 0.94832	835 9.71462	0.28538 292	36
25	46046 0.66319	88768 0.94826	51872 9.71493	0.28507 1.9278	35
26	072 0.66343	755 0.94819	909 9.71524	0.28476 265	34
27	097 0.66368	741 0.94813	946 9.71555	0.28445 251	33
28	123 0.66392	728 0.94806	983 9.71586	0.28414 237	32
29	149 0.66416	715 0.94799	52020 9.71617	0.28383 223	31
30	46175 0.66441	88701 0.94793	52057 9.71648	0.28352 1.9201	30
31	201 0.66465	688 0.94786	094 9.71679	0.28321 196	29
32	226 0.66489	674 0.94780	131 9.71709	0.28291 183	28
33	252 0.66513	661 0.94773	168 9.71740	0.28260 169	27
34	278 0.66537	647 0.94767	205 9.71771	0.28229 155	26
35	46304 0.66562	88634 0.94760	52242 9.71802	0.28198 1.9142	25
36	330 0.66586	620 0.94753	279 9.71833	0.28167 128	24
37	355 0.66610	607 0.94747	316 9.71863	0.28137 115	23
38	381 0.66634	593 0.94740	353 9.71894	0.28106 101	22
39	407 0.66658	580 0.94734	390 9.71925	0.28075 88	21
40	46433 0.66682	88566 0.94727	52427 9.71955	0.28045 1.9074	20
41	458 0.66706	553 0.94720	464 9.71986	0.28014 661	19
42	484 0.66731	539 0.94714	501 9.72017	0.27983 647	18
43	510 0.66755	526 0.94707	538 9.72048	0.27952 634	17
44	536 0.66779	512 0.94700	575 9.72078	0.27922 620	16
45	46561 0.66803	88499 0.94694	52613 9.72109	0.27891 1.9007	15
46	587 0.66827	485 0.94687	650 9.72140	0.27860 1.8993	14
47	613 0.66851	472 0.94680	687 9.72170	0.27830 980	13
48	639 0.66875	458 0.94674	724 9.72201	0.27799 967	12
49	664 0.66899	445 0.94667	761 9.72231	0.27769 953	11
50	46690 0.66922	88431 0.94660	52798 9.72262	0.27738 1.8940	10
51	716 0.66946	417 0.94654	836 9.72293	0.27707 927	9
52	742 0.66970	404 0.94647	873 9.72323	0.27677 913	8
53	767 0.66994	390 0.94640	910 9.72354	0.27646 900	7
54	793 0.67018	377 0.94634	947 9.72384	0.27616 887	6
55	46819 0.67042	88363 0.94627	52985 9.72415	0.27585 1.8873	5
56	844 0.67066	349 0.94620	53022 9.72445	0.27555 860	4
57	870 0.67090	336 0.94614	059 9.72476	0.27524 847	3
58	896 0.67113	322 0.94607	096 9.72506	0.27494 834	2
59	921 0.67137	308 0.94600	134 9.72537	0.27463 820	1
60	947 0.67161	295 0.94593	171 9.72567	0.27433 807	0
	Nat. Cos Log. d.	Nat. Sin Log. d.	Nat. Cot Log. c.d.	Log. Tan Nat.	

'	Nat. Sin Log.	d.	Nat. Cos Log.	d.	Nat. Tan Log.	c.d.	Log. Cot Nat.	'				
0	46947	0.67161	24	88295	0.94593	6	53171	0.72567	31	0.27433	1.8807	60
1	973	0.67185	23	281	0.94587	7	208	0.72568	30	0.27402	794	59
2	999	0.67208	24	267	0.94580	7	246	0.72628	31	0.27372	781	58
3	47204	0.67232	24	254	0.94573	6	283	0.72699	30	0.27341	768	57
4	050	0.67256	24	240	0.94567	7	320	0.72789	30	0.27311	755	56
5	47076	0.67280	23	88226	0.94560	7	53358	0.72720	30	0.27280	1.8741	55
6	101	0.67303	24	213	0.94553	7	395	0.72750	30	0.27250	728	54
7	127	0.67327	24	199	0.94546	6	432	0.72780	30	0.27220	715	53
8	153	0.67350	23	185	0.94540	6	470	0.72811	31	0.27189	702	52
9	178	0.67374	24	172	0.94533	7	507	0.72841	30	0.27159	689	51
10	47204	0.67398	24	88158	0.94526	7	53545	0.72872	31	0.27128	1.8676	50
11	229	0.67421	23	144	0.94519	6	582	0.72902	30	0.27098	663	49
12	255	0.67445	23	130	0.94513	7	620	0.72932	30	0.27068	650	48
13	281	0.67468	24	117	0.94506	7	657	0.72963	31	0.27037	637	47
14	306	0.67492	23	103	0.94499	7	694	0.72993	30	0.27007	624	46
15	47332	0.67515	23	88089	0.94492	7	53732	0.73023	30	0.26977	1.8611	45
16	358	0.67539	24	075	0.94485	6	769	0.73054	31	0.26946	598	44
17	383	0.67562	23	062	0.94479	7	807	0.73084	30	0.26916	585	43
18	409	0.67586	24	048	0.94472	7	844	0.73114	30	0.26886	572	42
19	434	0.67609	23	034	0.94465	7	882	0.73144	31	0.26856	559	41
20	47460	0.67633	23	88020	0.94458	7	53920	0.73175	30	0.26825	1.8546	40
21	486	0.67656	24	006	0.94451	6	957	0.73205	30	0.26795	533	39
22	511	0.67680	24	87993	0.94445	7	995	0.73235	30	0.26765	520	38
23	537	0.67703	23	979	0.94438	7	54032	0.73265	30	0.26735	507	37
24	562	0.67726	23	965	0.94431	7	070	0.73295	30	0.26705	495	36
25	47588	0.67750	23	87951	0.94424	7	54107	0.73326	31	0.26674	1.8482	35
26	614	0.67773	23	937	0.94417	7	145	0.73356	30	0.26644	469	34
27	639	0.67796	23	923	0.94410	7	183	0.73386	30	0.26614	456	33
28	665	0.67820	24	909	0.94404	6	220	0.73416	30	0.26584	443	32
29	690	0.67843	23	896	0.94397	7	258	0.73446	30	0.26554	430	31
30	47716	0.67866	24	87882	0.94390	7	54296	0.73476	31	0.26524	1.8418	30
31	741	0.67890	23	868	0.94383	7	333	0.73507	30	0.26493	405	29
32	767	0.67913	23	854	0.94376	7	371	0.73537	30	0.26463	392	28
33	793	0.67936	23	840	0.94369	7	409	0.73567	30	0.26433	379	27
34	818	0.67959	23	826	0.94362	7	446	0.73597	30	0.26403	367	26
35	47844	0.67982	23	87812	0.94355	7	54484	0.73627	30	0.26373	1.8354	25
36	869	0.68006	23	798	0.94349	6	522	0.73657	30	0.26343	341	24
37	895	0.68029	23	784	0.94342	7	560	0.73687	30	0.26313	329	23
38	920	0.68052	23	770	0.94335	7	597	0.73717	30	0.26283	316	22
39	946	0.68075	23	756	0.94328	7	635	0.73747	30	0.26253	303	21
40	47971	0.68098	23	87743	0.94321	7	54673	0.73777	30	0.26223	1.8291	20
41	997	0.68121	23	729	0.94314	7	711	0.73807	30	0.26193	278	19
42	48022	0.68144	23	715	0.94307	7	748	0.73837	30	0.26163	265	18
43	048	0.68167	23	701	0.94300	7	786	0.73867	30	0.26133	253	17
44	073	0.68190	23	687	0.94293	7	824	0.73897	30	0.26103	240	16
45	48099	0.68213	23	87673	0.94286	7	54862	0.73927	30	0.26073	1.8228	15
46	124	0.68237	24	659	0.94279	6	900	0.73957	30	0.26043	215	14
47	150	0.68260	23	645	0.94273	7	938	0.73987	30	0.26013	202	13
48	175	0.68283	23	631	0.94266	7	975	0.74017	30	0.25983	190	12
49	201	0.68306	22	617	0.94259	7	111	0.74047	30	0.25953	177	11
50	48226	0.68328	23	87603	0.94252	7	55051	0.74077	30	0.25923	1.8165	10
51	252	0.68351	23	589	0.94245	7	089	0.74107	30	0.25893	152	9
52	277	0.68374	23	575	0.94238	7	127	0.74137	30	0.25863	140	8
53	303	0.68397	23	561	0.94231	7	165	0.74166	29	0.25834	127	7
54	328	0.68420	23	546	0.94224	7	203	0.74196	30	0.25804	115	6
55	48354	0.68443	23	87532	0.94217	7	55241	0.74226	30	0.25774	1.8103	5
56	379	0.68466	23	518	0.94210	7	279	0.74256	30	0.25744	090	4
57	405	0.68489	23	504	0.94203	7	317	0.74286	30	0.25714	078	3
58	430	0.68512	22	490	0.94196	7	355	0.74316	29	0.25684	065	2
59	456	0.68534	23	476	0.94189	7	393	0.74345	30	0.25655	053	1
60	481	0.68557	23	462	0.94182	7	431	0.74375	30	0.25625	040	0

Nat. Cos Log. d. Nat. Sin Log. d. Nat. Cot Log. c.d. Log. Tan Nat. '

'	Nat. Sin Log. d.	Nat. Cos Log. d.	Nat. Tan Log. c.d.	Log. Cot Nat.	'
0	48481 0.68557	87462 0.94182	55431 9.74375	0.25625 1.8040	60
1	506 0.68580	448 0.94175	469 9.74405	0.25595 018	59
2	532 0.68603	434 0.94168	507 9.74435	0.25565 026	58
3	557 0.68626	420 0.94161	545 9.74465	0.25535 003	57
4	583 0.68648	406 0.94154	583 9.74494	0.25505 1.7991	56
5	608 0.68671	391 0.94147	55621 9.74524	0.25476 1.7979	55
6	634 0.68694	377 0.94140	659 9.74554	0.25446 966	54
7	659 0.68716	363 0.94133	697 9.74583	0.25417 954	53
8	684 0.68739	349 0.94126	736 9.74613	0.25387 942	52
9	710 0.68762	335 0.94119	774 9.74643	0.25357 930	51
10	48735 0.68784	87321 0.94112	55812 9.74673	0.25327 1.7917	50
11	761 0.68807	306 0.94105	850 9.74702	0.25298 905	49
12	786 0.68829	292 0.94098	888 9.74732	0.25268 893	48
13	811 0.68852	278 0.94090	926 9.74762	0.25238 881	47
14	837 0.68875	264 0.94083	964 9.74791	0.25209 868	46
15	48862 0.68897	87250 0.94076	56003 9.74821	0.25179 1.7856	45
16	888 0.68920	235 0.94069	041 9.74851	0.25149 844	44
17	913 0.68942	221 0.94062	079 9.74880	0.25120 832	43
18	938 0.68965	207 0.94055	117 9.74910	0.25090 820	42
19	964 0.68987	193 0.94048	156 9.74939	0.25061 808	41
20	48989 0.69010	87178 0.94041	56194 9.74969	0.25031 1.7796	40
21	49014 0.69032	164 0.94034	232 9.74998	0.25002 783	39
22	040 0.69055	150 0.94027	270 9.75028	0.24972 771	38
23	065 0.69077	136 0.94020	309 9.75058	0.24942 759	37
24	090 0.69100	121 0.94012	347 9.75087	0.24913 747	36
25	49116 0.69122	87107 0.94005	56385 9.75117	0.24883 1.7735	35
26	141 0.69144	093 0.93998	424 9.75146	0.24854 733	34
27	166 0.69167	079 0.93991	462 9.75176	0.24824 711	33
28	192 0.69189	064 0.93984	501 9.75205	0.24795 699	32
29	217 0.69212	050 0.93977	539 9.75235	0.24765 687	31
30	49242 0.69234	87036 0.93970	56577 9.75264	0.24736 1.7675	30
31	268 0.69256	021 0.93963	616 9.75294	0.24706 663	29
32	293 0.69279	007 0.93955	654 9.75323	0.24677 651	28
33	318 0.69301	86993 0.93948	693 9.75353	0.24647 639	27
34	344 0.69323	778 0.93941	731 9.75382	0.24618 627	26
35	49369 0.69345	86964 0.93934	56769 9.75411	0.24589 1.7615	25
36	394 0.69368	949 0.93927	808 9.75441	0.24559 603	24
37	419 0.69390	935 0.93920	846 9.75470	0.24530 591	23
38	445 0.69412	921 0.93912	885 9.75500	0.24500 579	22
39	470 0.69434	906 0.93905	923 9.75529	0.24471 567	21
40	49495 0.69456	86892 0.93898	56962 9.75558	0.24442 1.7556	20
41	521 0.69479	878 0.93891	57000 9.75588	0.24412 544	19
42	546 0.69501	863 0.93884	039 9.75617	0.24383 532	18
43	571 0.69523	849 0.93876	078 9.75647	0.24353 520	17
44	596 0.69545	834 0.93869	116 9.75676	0.24324 508	16
45	49622 0.69567	86820 0.93862	57155 9.75705	0.24295 1.7496	15
46	647 0.69589	805 0.93855	193 9.75735	0.24265 485	14
47	672 0.69611	791 0.93847	232 9.75764	0.24236 473	13
48	697 0.69633	777 0.93840	271 9.75793	0.24207 461	12
49	723 0.69655	762 0.93833	309 9.75822	0.24178 449	11
50	49748 0.69677	86748 0.93826	57348 9.75852	0.24148 1.7437	10
51	773 0.69699	733 0.93819	386 9.75881	0.24119 426	9
52	798 0.69721	719 0.93811	425 9.75910	0.24090 414	8
53	824 0.69743	704 0.93804	464 9.75939	0.24061 402	7
54	849 0.69765	690 0.93797	503 9.75969	0.24031 391	6
55	49874 0.69787	86675 0.93789	57541 9.75998	0.24002 1.7379	5
56	899 0.69809	661 0.93782	580 9.76027	0.23973 367	4
57	924 0.69831	646 0.93775	619 9.76056	0.23944 355	3
58	950 0.69853	632 0.93768	657 9.76086	0.23914 344	2
59	975 0.69875	617 0.93760	696 9.76115	0.23885 332	1
60	50000 0.69897	603 0.93753	735 9.76144	0.23856 321	0
	Nat. Cos Log. d.	Nat. Sin Log. d.	Nat. Cot Log. c.d.	Log. Tan Nat.	'

	Nat. Sin Log. d.		Nat. Cos Log. d.		Nat. Tan Log. c.d.		Log. Cot Nat.					
0	5000	0.69897	22	86603	0.93753	7	57735	0.76144	29	0.23856	1.7321	60
1	025	0.69919	22	588	0.93746	7	774	0.76173	29	0.23827	309	59
2	050	0.69941	22	573	0.93738	7	813	0.76202	29	0.23798	297	58
3	076	0.69963	21	559	0.93731	7	851	0.76231	30	0.23769	286	57
4	101	0.69984	22	544	0.93724	7	890	0.76261	29	0.23739	274	56
5	50126	0.70006	22	86530	0.93717	7	57929	0.76290	29	0.23710	1.7262	55
6	151	0.70028	22	515	0.93709	7	968	0.76319	29	0.23681	251	54
7	176	0.70050	22	501	0.93702	7	58007	0.76348	29	0.23652	239	53
8	201	0.70072	21	486	0.93695	7	046	0.76377	29	0.23623	228	52
9	227	0.70093	22	471	0.93687	7	085	0.76406	29	0.23594	216	51
10	50252	0.70115	22	86457	0.93680	7	58124	0.76435	29	0.23565	1.7205	50
11	277	0.70137	22	442	0.93673	7	162	0.76464	29	0.23536	193	49
12	302	0.70159	21	427	0.93665	7	201	0.76493	29	0.23507	182	48
13	327	0.70180	22	413	0.93658	7	240	0.76522	29	0.23478	170	47
14	352	0.70202	22	398	0.93650	7	279	0.76551	29	0.23449	159	46
15	50377	0.70224	21	86384	0.93643	7	58318	0.76580	29	0.23420	1.7147	45
16	403	0.70245	22	369	0.93636	7	357	0.76609	29	0.23391	136	44
17	428	0.70267	21	354	0.93628	7	396	0.76639	30	0.23361	124	43
18	453	0.70288	22	340	0.93621	7	435	0.76668	29	0.23332	113	42
19	478	0.70310	22	325	0.93614	7	474	0.76697	29	0.23303	102	41
20	50503	0.70332	21	86310	0.93606	7	58513	0.76725	29	0.23275	1.7090	40
21	528	0.70353	22	295	0.93599	7	552	0.76754	29	0.23246	079	39
22	553	0.70375	22	281	0.93591	7	591	0.76783	29	0.23217	067	38
23	578	0.70396	21	266	0.93584	7	631	0.76812	29	0.23188	056	37
24	603	0.70418	22	251	0.93577	7	670	0.76841	29	0.23159	045	36
25	50628	0.70439	22	86237	0.93569	7	58709	0.76870	29	0.23130	1.7033	35
26	654	0.70461	21	222	0.93562	7	748	0.76899	29	0.23101	022	34
27	679	0.70482	22	207	0.93554	7	787	0.76928	29	0.23072	011	33
28	704	0.70504	21	192	0.93547	7	826	0.76957	29	0.23043	1.6999	32
29	729	0.70525	22	178	0.93539	7	865	0.76986	29	0.23014	988	31
30	50754	0.70547	22	86163	0.93532	7	58905	0.77015	29	0.22985	1.6977	30
31	779	0.70568	22	148	0.93525	7	944	0.77044	29	0.22956	965	29
32	804	0.70590	21	133	0.93517	7	983	0.77073	28	0.22927	954	28
33	829	0.70611	22	119	0.93510	7	59022	0.77101	29	0.22899	943	27
34	854	0.70633	21	104	0.93502	7	061	0.77130	29	0.22870	932	26
35	50879	0.70654	21	86089	0.93495	7	59101	0.77159	29	0.22841	1.6920	25
36	904	0.70675	22	074	0.93487	7	140	0.77188	29	0.22812	909	24
37	929	0.70697	22	059	0.93480	7	179	0.77217	29	0.22783	898	23
38	954	0.70718	21	045	0.93472	7	218	0.77246	28	0.22754	887	22
39	979	0.70739	22	030	0.93465	7	258	0.77274	28	0.22726	875	21
40	51004	0.70761	21	86015	0.93457	7	59297	0.77303	29	0.22697	1.6864	20
41	029	0.70782	21	000	0.93450	7	336	0.77332	29	0.22668	853	19
42	054	0.70803	21	85985	0.93442	7	376	0.77361	29	0.22639	842	18
43	079	0.70824	22	970	0.93435	7	415	0.77390	28	0.22610	831	17
44	104	0.70846	21	956	0.93427	7	454	0.77418	28	0.22582	820	16
45	51129	0.70867	21	85941	0.93420	7	59494	0.77447	29	0.22553	1.6808	15
46	154	0.70888	21	926	0.93412	7	533	0.77476	29	0.22524	797	14
47	179	0.70909	22	911	0.93405	7	573	0.77505	29	0.22495	786	13
48	204	0.70931	21	896	0.93397	7	612	0.77533	28	0.22467	775	12
49	229	0.70952	21	881	0.93390	7	651	0.77562	29	0.22438	764	11
50	51254	0.70973	21	85866	0.93382	7	59691	0.77591	29	0.22409	1.6753	10
51	279	0.70994	21	851	0.93375	7	730	0.77619	28	0.22381	742	9
52	304	0.71015	21	836	0.93367	7	770	0.77648	29	0.22352	731	8
53	329	0.71036	22	821	0.93360	7	809	0.77677	29	0.22323	720	7
54	354	0.71058	21	806	0.93352	7	849	0.77706	28	0.22294	709	6
55	51379	0.71079	21	85792	0.93344	7	59888	0.77734	29	0.22266	1.6668	5
56	404	0.71100	21	777	0.93337	7	928	0.77763	29	0.22237	687	4
57	429	0.71121	21	762	0.93329	7	967	0.77791	29	0.22209	676	3
58	454	0.71142	21	747	0.93322	7	60007	0.77820	29	0.22180	665	2
59	479	0.71163	21	732	0.93314	7	046	0.77849	29	0.22151	654	1
60	504	0.71184	21	717	0.93307	7	086	0.77877	28	0.22123	643	0
	Nat. Cos Log. d.		Nat. Sin Log. d.		Nat. Cot Log. c.d.		Log. Tan Nat.					

	Nat. Sin Log. d.		Nat. Cos Log. d.		Nat. Tan Log. c.d.		Log. Cot Nat.					
0	51504	9.71184	21	85717	9.93307	8	60086	9.77877	29	0.22123	1.6643	60
1	529	9.71205	21	702	9.93299	8	126	9.77906	29	0.22094	632	59
2	554	9.71226	21	687	9.93291	8	165	9.77935	29	0.22065	621	58
3	579	9.71247	21	672	9.93284	7	205	9.77963	29	0.22037	610	57
4	604	9.71268	21	657	9.93276	8	245	9.77992	29	0.22008	599	56
5	51628	9.71289	21	85642	9.93269	7	60284	9.78020	29	0.21980	1.6588	55
6	653	9.71310	21	627	9.93261	8	324	9.78049	29	0.21951	577	54
7	678	9.71331	21	612	9.93253	8	364	9.78077	29	0.21923	566	53
8	703	9.71352	21	597	9.93246	7	403	9.78106	29	0.21894	555	52
9	728	9.71373	21	582	9.93238	8	443	9.78135	29	0.21865	545	51
10	51753	9.71393	21	85567	9.93230	7	60483	9.78163	29	0.21837	1.6534	50
11	778	9.71414	21	551	9.93223	7	522	9.78192	29	0.21808	523	49
12	803	9.71435	21	536	9.93215	8	562	9.78220	29	0.21780	512	48
13	828	9.71456	21	521	9.93207	7	602	9.78249	29	0.21751	501	47
14	852	9.71477	21	506	9.93200	8	642	9.78277	29	0.21723	490	46
15	51877	9.71498	21	85491	9.93192	7	60681	9.78306	29	0.21694	1.6479	45
16	902	9.71519	21	476	9.93184	8	721	9.78334	29	0.21666	469	44
17	927	9.71539	21	461	9.93177	7	761	9.78363	29	0.21637	458	43
18	952	9.71560	21	446	9.93169	8	801	9.78391	29	0.21609	447	42
19	977	9.71581	21	431	9.93161	7	841	9.78419	29	0.21581	436	41
20	52002	9.71602	21	85416	9.93154	7	60881	9.78448	29	0.21552	1.6426	40
21	026	9.71622	21	401	9.93146	8	921	9.78476	29	0.21524	415	39
22	051	9.71643	21	385	9.93138	8	960	9.78505	29	0.21496	404	38
23	076	9.71664	21	370	9.93131	7	61000	9.78533	29	0.21467	393	37
24	101	9.71685	21	355	9.93123	8	040	9.78562	29	0.21438	383	36
25	52126	9.71705	21	85340	9.93115	7	61080	9.78590	29	0.21410	1.6372	35
26	151	9.71726	21	325	9.93108	8	120	9.78618	29	0.21382	361	34
27	175	9.71747	21	310	9.93100	8	160	9.78647	29	0.21353	351	33
28	200	9.71767	21	294	9.93092	8	200	9.78675	29	0.21325	340	32
29	225	9.71788	21	279	9.93084	8	240	9.78704	29	0.21296	329	31
30	52250	9.71809	21	85264	9.93077	7	61280	9.78732	29	0.21268	1.6319	30
31	275	9.71829	21	249	9.93069	8	320	9.78760	29	0.21240	308	29
32	299	9.71850	21	234	9.93061	8	360	9.78789	29	0.21211	297	28
33	324	9.71870	21	218	9.93053	7	400	9.78817	29	0.21183	287	27
34	349	9.71891	21	203	9.93046	8	440	9.78845	29	0.21155	276	26
35	52374	9.71911	21	85188	9.93038	7	61480	9.78874	29	0.21126	1.6265	25
36	399	9.71932	21	173	9.93030	8	520	9.78902	29	0.21098	255	24
37	423	9.71952	21	157	9.93022	8	561	9.78930	29	0.21070	244	23
38	448	9.71973	21	142	9.93014	7	601	9.78959	29	0.21041	234	22
39	473	9.71994	21	127	9.93007	8	641	9.78987	29	0.21013	223	21
40	52498	9.72014	21	85112	9.92999	7	61681	9.79015	29	0.20985	1.6212	20
41	522	9.72034	21	096	9.92991	8	721	9.79043	29	0.20957	202	19
42	547	9.72055	21	081	9.92983	8	761	9.79072	29	0.20928	191	18
43	572	9.72075	21	066	9.92976	7	801	9.79100	29	0.20900	181	17
44	597	9.72096	21	051	9.92968	8	842	9.79128	29	0.20872	170	16
45	52621	9.72116	21	85035	9.92960	7	61882	9.79156	29	0.20844	1.6160	15
46	646	9.72137	21	020	9.92952	8	922	9.79185	29	0.20815	149	14
47	671	9.72157	21	005	9.92944	8	962	9.79213	29	0.20787	139	13
48	696	9.72177	21	84989	9.92936	7	62003	9.79241	29	0.20759	128	12
49	720	9.72198	21	974	9.92929	8	043	9.79269	29	0.20731	118	11
50	52745	9.72218	21	84959	9.92921	7	62083	9.79297	29	0.20703	1.6107	10
51	770	9.72238	21	943	9.92913	8	124	9.79326	29	0.20674	097	9
52	794	9.72259	21	928	9.92905	8	164	9.79354	29	0.20646	087	8
53	819	9.72279	21	913	9.92897	8	204	9.79382	29	0.20618	076	7
54	844	9.72299	21	897	9.92889	8	245	9.79410	29	0.20590	066	6
55	52869	9.72320	21	84882	9.92881	7	62285	9.79438	29	0.20562	1.6055	5
56	893	9.72340	21	866	9.92874	8	325	9.79466	29	0.20534	045	4
57	918	9.72360	21	851	9.92866	8	366	9.79495	29	0.20505	034	3
58	943	9.72381	21	836	9.92858	8	406	9.79523	29	0.20477	024	2
59	967	9.72401	21	820	9.92850	8	446	9.79551	29	0.20449	014	1
60	992	9.72421	21	805	9.92842	8	487	9.79579	29	0.20421	003	0
	Nat. Cos Log. d.		Nat. Sin Log. d.		Nat. Cot Log. c.d.		Log. Tan Nat.					

	Nat. Sin Log.	d.	Nat. Cos Log.	d.	Nat. Tan Log.	c.d.	Log. Cot Nat.		
0	52992	9.72421	84805	9.92842	62487	9.79579	0.20021	1.6003	60
1	53017	9.72441	789	9.92834	527	9.79607	0.20039	1.5993	59
2	041	9.72461	774	9.92826	568	9.79635	0.20056	983	58
3	066	9.72482	759	9.92818	608	9.79663	0.20073	972	57
4	091	9.72502	743	9.92810	649	9.79691	0.20090	962	56
5	53115	9.72522	84728	9.92803	62689	9.79719	0.20281	1.5952	55
6	140	9.72542	712	9.92795	730	9.79747	0.20253	941	54
7	164	9.72562	697	9.92787	770	9.79776	0.20224	931	53
8	189	9.72582	681	9.92779	811	9.79804	0.20196	921	52
9	214	9.72602	666	9.92771	852	9.79832	0.20168	911	51
10	53228	9.72622	84650	9.92763	62892	9.79860	0.20140	1.5900	50
11	263	9.72643	635	9.92755	933	9.79888	0.20112	890	49
12	288	9.72663	619	9.92747	973	9.79916	0.20084	880	48
13	312	9.72683	604	9.92739	63014	9.79944	0.20056	869	47
14	337	9.72703	588	9.92731	055	9.79972	0.20028	859	46
15	53351	9.72723	84573	9.92723	63095	9.80000	0.20000	1.5849	45
16	386	9.72743	557	9.92715	136	9.80028	0.19972	839	44
17	411	9.72763	542	9.92707	177	9.80056	0.19944	829	43
18	435	9.72783	526	9.92699	217	9.80084	0.19916	818	42
19	460	9.72803	511	9.92691	258	9.80112	0.19888	808	41
20	53484	9.72823	84495	9.92683	63299	9.80140	0.19860	1.5798	40
21	509	9.72843	480	9.92675	340	9.80168	0.19832	788	39
22	534	9.72863	464	9.92667	380	9.80195	0.19805	778	38
23	558	9.72883	448	9.92659	421	9.80223	0.19777	768	37
24	583	9.72902	433	9.92651	462	9.80251	0.19749	757	36
25	53607	9.72922	84417	9.92643	63503	9.80279	0.19721	1.5747	35
26	632	9.72942	402	9.92635	544	9.80307	0.19693	737	34
27	656	9.72962	386	9.92627	584	9.80335	0.19665	727	33
28	681	9.72982	370	9.92619	625	9.80363	0.19637	717	32
29	705	9.73002	355	9.92611	666	9.80391	0.19609	707	31
30	53730	9.73022	84339	9.92603	63707	9.80419	0.19581	1.5697	30
31	754	9.73041	324	9.92595	748	9.80447	0.19553	687	29
32	779	9.73061	308	9.92587	789	9.80474	0.19526	677	28
33	804	9.73081	292	9.92579	830	9.80502	0.19498	667	27
34	828	9.73101	277	9.92571	871	9.80530	0.19470	657	26
35	53853	9.73121	84261	9.92563	63912	9.80558	0.19442	1.5647	25
36	877	9.73140	245	9.92555	953	9.80586	0.19414	637	24
37	902	9.73160	230	9.92546	994	9.80614	0.19386	627	23
38	926	9.73180	214	9.92538	64035	9.80642	0.19358	617	22
39	951	9.73200	198	9.92530	076	9.80669	0.19331	607	21
40	53975	9.73219	84182	9.92522	64117	9.80697	0.19303	1.5597	20
41	54000	9.73239	167	9.92514	158	9.80725	0.19275	587	19
42	024	9.73259	151	9.92506	199	9.80753	0.19247	577	18
43	049	9.73278	135	9.92498	240	9.80781	0.19219	567	17
44	073	9.73298	120	9.92490	281	9.80808	0.19192	557	16
45	54097	9.73318	84104	9.92482	64322	9.80836	0.19164	1.5547	15
46	122	9.73337	088	9.92473	363	9.80864	0.19136	537	14
47	146	9.73357	072	9.92465	404	9.80892	0.19108	527	13
48	171	9.73377	057	9.92457	446	9.80919	0.19081	517	12
49	195	9.73396	041	9.92449	487	9.80947	0.19053	507	11
50	54220	9.73416	84025	9.92441	64528	9.80975	0.19025	1.5497	10
51	244	9.73435	009	9.92433	569	9.81003	0.18997	487	9
52	269	9.73455	83994	9.92425	610	9.81030	0.18970	477	8
53	293	9.73474	978	9.92416	652	9.81058	0.18942	468	7
54	317	9.73494	962	9.92408	693	9.81086	0.18914	458	6
55	54342	9.73513	83946	9.92400	64734	9.81113	0.18887	1.5448	5
56	366	9.73533	930	9.92392	775	9.81141	0.18859	438	4
57	391	9.73552	915	9.92384	817	9.81169	0.18831	428	3
58	415	9.73572	899	9.92376	858	9.81196	0.18804	418	2
59	440	9.73591	883	9.92367	899	9.81224	0.18776	408	1
60	464	9.73611	867	9.92359	941	9.81252	0.18748	399	0
	Nat. Cos Log.	d.	Nat. Sin Log.	d.	Nat. Cot Log.	c.d.	Log. Tan Nat.		

'	Nat. Sin Log. d.	Nat. Cos Log. d.	Nat. Tan Log. c.d.	Log. Cot Nat.	'					
0	54464	9.73611	83867	9.92359	64941	9.81252	27	0.18748	1.5399	60
1	488	9.73630	851	9.92351	982	9.81279	28	0.18721	389	59
2	513	9.73650	835	9.92343	65024	9.81307	28	0.18693	379	58
3	532	9.73669	819	9.92335	065	9.81335	28	0.18665	369	57
4	561	9.73689	804	9.92326	106	9.81362	27	0.18638	359	56
5	54586	9.73708	83788	9.92318	65148	9.81390	28	0.18610	1.5350	55
6	610	9.73727	772	9.92310	189	9.81418	28	0.18582	340	54
7	635	9.73747	756	9.92302	231	9.81445	27	0.18555	330	53
8	659	9.73766	740	9.92293	272	9.81473	28	0.18527	320	52
9	683	9.73785	724	9.92285	314	9.81500	27	0.18500	311	51
10	54708	9.73805	83708	9.92277	65355	9.81528	28	0.18472	1.5301	50
11	732	9.73824	692	9.92269	397	9.81556	28	0.18444	291	49
12	756	9.73843	676	9.92260	438	9.81583	27	0.18417	282	48
13	781	9.73863	660	9.92252	480	9.81611	28	0.18389	272	47
14	805	9.73882	645	9.92244	521	9.81638	27	0.18362	262	46
15	54829	9.73901	83629	9.92235	65563	9.81666	28	0.18334	1.5253	45
16	854	9.73921	613	9.92227	604	9.81693	27	0.18307	243	44
17	878	9.73940	597	9.92219	646	9.81721	28	0.18279	233	43
18	902	9.73959	581	9.92211	688	9.81748	27	0.18252	224	42
19	927	9.73978	565	9.92202	729	9.81776	28	0.18224	214	41
20	54951	9.73997	83549	9.92194	65771	9.81803	28	0.18197	1.5204	40
21	975	9.74017	533	9.92186	813	9.81831	27	0.18169	195	39
22	999	9.74036	517	9.92177	854	9.81858	28	0.18142	185	38
23	55024	9.74055	501	9.92169	896	9.81886	27	0.18114	175	37
24	048	9.74074	485	9.92161	938	9.81913	28	0.18087	166	36
25	55072	9.74093	83469	9.92152	65980	9.81941	27	0.18059	1.5156	35
26	097	9.74113	453	9.92144	66021	9.81968	28	0.18032	147	34
27	121	9.74132	437	9.92136	063	9.81996	27	0.18004	137	33
28	145	9.74151	421	9.92127	105	9.82023	28	0.17977	127	32
29	169	9.74170	405	9.92119	147	9.82051	27	0.17949	118	31
30	55194	9.74189	83389	9.92111	66189	9.82078	27	0.17922	1.5108	30
31	218	9.74208	373	9.92102	230	9.82106	28	0.17894	099	29
32	242	9.74227	356	9.92094	272	9.82133	27	0.17867	089	28
33	266	9.74246	340	9.92086	314	9.82161	28	0.17839	080	27
34	291	9.74265	324	9.92077	356	9.82188	27	0.17812	070	26
35	55315	9.74284	83308	9.92069	66398	9.82215	28	0.17785	1.5061	25
36	339	9.74303	292	9.92060	440	9.82243	27	0.17757	051	24
37	363	9.74322	276	9.92052	482	9.82270	28	0.17730	042	23
38	388	9.74341	260	9.92044	524	9.82298	27	0.17702	032	22
39	412	9.74360	244	9.92035	566	9.82325	28	0.17675	023	21
40	55436	9.74379	83228	9.92027	66608	9.82352	27	0.17648	1.5013	20
41	460	9.74398	212	9.92018	650	9.82380	28	0.17620	004	19
42	484	9.74417	195	9.92010	692	9.82407	27	0.17593	1.4994	18
43	509	9.74436	179	9.92002	734	9.82435	28	0.17565	985	17
44	533	9.74455	163	9.91993	776	9.82462	27	0.17538	975	16
45	55557	9.74474	83147	9.91985	66818	9.82489	28	0.17511	1.4966	15
46	581	9.74493	131	9.91976	860	9.82517	27	0.17483	957	14
47	605	9.74512	115	9.91968	902	9.82544	28	0.17455	947	13
48	630	9.74531	098	9.91959	944	9.82571	27	0.17429	938	12
49	654	9.74550	082	9.91951	986	9.82599	28	0.17401	928	11
50	55678	9.74568	83066	9.91942	67028	9.82626	27	0.17374	1.4919	10
51	702	9.74587	050	9.91934	071	9.82653	28	0.17347	910	9
52	726	9.74606	034	9.91925	113	9.82681	27	0.17319	900	8
53	750	9.74625	017	9.91917	155	9.82708	28	0.17292	891	7
54	775	9.74644	001	9.91908	197	9.82735	27	0.17265	882	6
55	55799	9.74662	82985	9.91900	67239	9.82762	28	0.17238	1.4872	5
56	823	9.74681	909	9.91891	282	9.82790	27	0.17210	863	4
57	847	9.74700	953	9.91883	324	9.82817	28	0.17183	853	3
58	871	9.74719	936	9.91874	366	9.82844	27	0.17155	844	2
59	895	9.74737	920	9.91866	409	9.82871	28	0.17129	835	1
60	919	9.74756	904	9.91857	451	9.82899	27	0.17101	826	0
	Nat. Cos Log. d.	Nat. Sin Log. d.	Nat. Cot Log. c.d.	Log. Tan Nat.						

'	Nat. Sin Log. d.	Nat. Cos Log. d.	Nat. Tan Log. c.d.	Log. Cot Nat.	'
0	55919 9.74756	82904 9.91857	67451 9.82809	0.17101 1.4826	60
1	943 9.74775	887 9.91849	493 9.82926	0.17074 816	59
2	968 9.74794	871 9.91840	536 9.82953	0.17047 807	58
3	992 9.74812	855 9.91832	578 9.82980	0.17020 798	57
4	50016 9.74831	839 9.91823	620 9.83008	0.16992 788	56
5	56040 9.74850	82822 9.91815	67663 9.83035	0.16965 1.4779	55
6	664 9.74868	806 9.91806	705 9.83062	0.16938 770	54
7	688 9.74887	790 9.91798	748 9.83089	0.16911 761	53
8	112 9.74906	773 9.91789	790 9.83117	0.16883 751	52
9	136 9.74924	757 9.91781	832 9.83144	0.16856 742	51
10	56160 9.74943	82741 9.91772	67875 9.83171	0.16829 1.4733	50
11	184 9.74961	724 9.91763	917 9.83198	0.16802 724	49
12	208 9.74980	708 9.91755	960 9.83225	0.16775 715	48
13	232 9.74999	692 9.91746	68002 9.83252	0.16748 705	47
14	256 9.75017	675 9.91738	645 9.83280	0.16720 696	46
15	56280 9.75036	82859 9.91729	68088 9.83307	0.16693 1.4687	45
16	305 9.75054	643 9.91720	130 9.83334	0.16666 678	44
17	329 9.75073	626 9.91712	173 9.83361	0.16639 669	43
18	353 9.75091	610 9.91703	215 9.83388	0.16612 659	42
19	377 9.75110	593 9.91695	258 9.83415	0.16585 650	41
20	56401 9.75128	82577 9.91686	68301 9.83442	0.16558 1.4641	40
21	425 9.75147	561 9.91677	343 9.83470	0.16530 632	39
22	449 9.75165	544 9.91669	386 9.83497	0.16503 623	38
23	473 9.75184	528 9.91660	429 9.83524	0.16476 614	37
24	497 9.75202	511 9.91651	471 9.83551	0.16449 605	36
25	56521 9.75221	82495 9.91643	68514 9.83578	0.16422 1.4595	35
26	545 9.75239	478 9.91634	557 9.83605	0.16395 586	34
27	569 9.75258	462 9.91625	600 9.83632	0.16368 577	33
28	593 9.75276	446 9.91617	642 9.83659	0.16341 568	32
29	617 9.75294	429 9.91608	685 9.83686	0.16314 559	31
30	56641 9.75313	82413 9.91599	68728 9.83713	0.16287 1.4550	30
31	665 9.75331	396 9.91591	771 9.83740	0.16260 541	29
32	689 9.75350	380 9.91582	814 9.83768	0.16232 532	28
33	713 9.75368	363 9.91573	857 9.83795	0.16205 523	27
34	736 9.75386	347 9.91565	900 9.83822	0.16178 514	26
35	56760 9.75405	82330 9.91556	68942 9.83849	0.16151 1.4505	25
36	784 9.75423	314 9.91547	985 9.83876	0.16124 496	24
37	808 9.75441	297 9.91538	69028 9.83903	0.16097 487	23
38	832 9.75459	281 9.91530	771 9.83930	0.16070 478	22
39	856 9.75478	264 9.91521	114 9.83957	0.16043 469	21
40	56880 9.75496	82248 9.91512	69157 9.83984	0.16016 1.4460	20
41	904 9.75514	231 9.91504	200 9.84011	0.15989 451	19
42	928 9.75533	214 9.91495	243 9.84038	0.15962 442	18
43	952 9.75551	198 9.91486	286 9.84065	0.15935 433	17
44	976 9.75569	181 9.91477	329 9.84092	0.15908 424	16
45	57000 9.75587	82165 9.91469	69372 9.84119	0.15881 1.4415	15
46	024 9.75605	148 9.91460	416 9.84146	0.15854 406	14
47	047 9.75624	132 9.91451	459 9.84173	0.15827 397	13
48	071 9.75642	115 9.91442	502 9.84200	0.15800 388	12
49	095 9.75660	098 9.91433	545 9.84227	0.15773 379	11
50	57119 9.75678	82082 9.91425	69588 9.84254	0.15746 1.4370	10
51	143 9.75696	065 9.91416	631 9.84280	0.15720 361	9
52	167 9.75714	048 9.91407	675 9.84307	0.15693 352	8
53	191 9.75733	032 9.91398	718 9.84334	0.15666 344	7
54	215 9.75751	015 9.91389	761 9.84361	0.15639 335	6
55	57238 9.75769	81999 9.91381	69804 9.84388	0.15612 1.4326	5
56	262 9.75787	982 9.91372	847 9.84415	0.15585 317	4
57	286 9.75805	965 9.91363	891 9.84442	0.15558 308	3
58	310 9.75823	949 9.91354	934 9.84469	0.15531 299	2
59	334 9.75841	932 9.91345	977 9.84496	0.15504 290	1
60	358 9.75859	915 9.91336	70021 9.84523	0.15477 281	0

Nat. Cos Log. d.	Nat. Sin Log. d.	Nat. Cot Log. c.d.	Log. Tan Nat.	'
------------------	------------------	--------------------	---------------	---

°	Nat. Sin Log.	d.	Nat. Cos Log.	d.	Nat. Tan Log.	c.d.	Log. Cot Nat.					
0	57358	9.75859	18	81915	9.91336	8	70021	9.84523	27	0.15477	1.4281	80
1	381	9.75877	18	899	9.91328	8	064	9.84550	27	0.15450	273	59
2	405	9.75895	18	882	9.91319	9	107	9.84576	26	0.15424	264	58
3	429	9.75913	18	865	9.91310	9	151	9.84603	26	0.15397	255	57
4	453	9.75931	18	848	9.91301	9	194	9.84630	27	0.15370	246	56
5	57477	9.75949	18	81832	9.91292	9	70238	9.84657	27	0.15343	1.4237	55
6	501	9.75967	18	815	9.91283	9	281	9.84684	27	0.15316	239	54
7	524	9.75985	18	798	9.91274	8	325	9.84711	27	0.15289	220	53
8	548	9.76003	18	782	9.91266	9	368	9.84738	27	0.15262	211	52
9	572	9.76021	18	765	9.91257	9	412	9.84764	26	0.15236	202	51
10	57596	9.76039	18	81748	9.91248	9	70455	9.84791	27	0.15209	1.4193	50
11	619	9.76057	18	731	9.91239	9	499	9.84818	27	0.15182	185	49
12	643	9.76075	18	714	9.91230	9	542	9.84845	27	0.15155	176	48
13	667	9.76093	18	698	9.91221	9	586	9.84872	27	0.15128	167	47
14	691	9.76111	18	681	9.91212	9	629	9.84899	27	0.15101	158	46
15	57715	9.76129	17	81664	9.91203	9	70673	9.84925	27	0.15075	1.4150	45
16	738	9.76146	18	647	9.91194	9	717	9.84952	27	0.15048	141	44
17	752	9.76164	18	631	9.91185	9	760	9.84979	27	0.15021	132	43
18	786	9.76182	18	614	9.91176	9	804	9.85006	27	0.14994	124	42
19	810	9.76200	18	597	9.91167	9	848	9.85033	27	0.14967	115	41
20	57833	9.76218	18	81580	9.91158	9	70891	9.85059	27	0.14941	1.4106	40
21	857	9.76236	17	563	9.91149	8	935	9.85086	27	0.14914	097	39
22	881	9.76253	17	546	9.91141	9	979	9.85113	27	0.14887	089	38
23	904	9.76271	18	530	9.91132	9	71023	9.85140	26	0.14860	080	37
24	928	9.76289	18	513	9.91123	9	066	9.85166	26	0.14834	071	36
25	57952	9.76307	17	81496	9.91114	9	71110	9.85193	27	0.14807	1.4063	35
26	976	9.76324	17	479	9.91105	9	154	9.85220	27	0.14780	054	34
27	999	9.76342	18	462	9.91096	9	198	9.85247	27	0.14753	045	33
28	58023	9.76360	18	445	9.91087	9	242	9.85273	26	0.14727	037	32
29	047	9.76378	17	428	9.91078	9	285	9.85300	27	0.14700	028	31
30	58070	9.76395	18	81412	9.91069	9	71329	9.85327	27	0.14673	1.4019	30
31	094	9.76413	18	395	9.91060	9	373	9.85354	26	0.14646	011	29
32	118	9.76431	17	378	9.91051	9	417	9.85380	27	0.14620	002	28
33	141	9.76448	18	361	9.91042	9	461	9.85407	27	0.14593	1.3994	27
34	165	9.76466	18	344	9.91033	10	505	9.85434	26	0.14566	985	26
35	58189	9.76484	18	81327	9.91023	9	71549	9.85460	27	0.14540	1.3976	25
36	212	9.76501	17	310	9.91014	9	593	9.85487	27	0.14513	968	24
37	236	9.76519	18	293	9.91005	9	637	9.85514	26	0.14486	959	23
38	260	9.76537	17	276	9.90996	9	681	9.85540	26	0.14460	951	22
39	283	9.76554	17	259	9.90987	9	725	9.85567	27	0.14433	942	21
40	58307	9.76572	18	81242	9.90978	9	71769	9.85594	26	0.14406	1.3934	20
41	330	9.76590	17	225	9.90969	9	813	9.85620	26	0.14380	925	19
42	354	9.76607	17	208	9.90960	9	857	9.85646	27	0.14353	916	18
43	378	9.76625	17	191	9.90951	9	901	9.85674	27	0.14326	908	17
44	401	9.76642	18	174	9.90942	9	946	9.85700	26	0.14300	899	16
45	58425	9.76660	17	81157	9.90933	9	71990	9.85727	27	0.14273	1.3891	15
46	449	9.76677	17	140	9.90924	9	72034	9.85754	27	0.14246	882	14
47	472	9.76695	18	123	9.90915	9	078	9.85780	26	0.14220	874	13
48	496	9.76712	18	106	9.90906	10	122	9.85807	27	0.14193	865	12
49	519	9.76730	17	089	9.90896	9	167	9.85834	26	0.14166	857	11
50	58543	9.76747	17	81072	9.90887	9	72211	9.85860	27	0.14140	1.3848	10
51	567	9.76765	17	055	9.90878	9	255	9.85887	26	0.14113	840	9
52	590	9.76782	18	038	9.90869	9	299	9.85913	26	0.14087	831	8
53	614	9.76800	17	021	9.90860	9	344	9.85940	27	0.14060	823	7
54	637	9.76817	18	004	9.90851	9	388	9.85967	27	0.14033	814	6
55	58661	9.76835	17	80987	9.90842	10	72432	9.85993	26	0.14007	1.3806	5
56	684	9.76852	18	970	9.90832	9	477	9.86020	26	0.13980	798	4
57	708	9.76870	17	953	9.90823	9	521	9.86046	26	0.13954	779	3
58	731	9.76887	17	936	9.90814	9	565	9.86073	27	0.13927	781	2
59	755	9.76904	17	919	9.90805	9	610	9.86100	27	0.13900	772	1
60	779	9.76922	18	902	9.90796	9	654	9.86126	26	0.13874	764	0
	Nat. Cos Log.	d.	Nat. Sin Log.	d.	Nat. Cot Log.	c.d.	Log. Tan Nat.					

'	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	'
0	58779	9.76022	80902	9.00796	72654	9.86126	0.13874	1.3764	60
1	802	9.76939	885	9.90787	699	9.86153	0.13847	755	59
2	826	9.76957	867	9.90777	743	9.86179	0.13821	747	58
3	849	9.76974	850	9.90768	788	9.86206	0.13794	739	57
4	873	9.76991	833	9.90759	832	9.86232	0.13768	730	56
5	58806	9.77009	80816	9.90750	72877	9.86259	0.13741	1.3722	55
6	920	9.77026	799	9.90741	921	9.86285	0.13715	713	54
7	943	9.77043	782	9.90731	966	9.86312	0.13688	705	53
8	967	9.77061	765	9.90722	73010	9.86338	0.13662	697	52
9	990	9.77078	748	9.90713	955	9.86365	0.13635	688	51
10	59014	9.77095	80730	9.90704	73100	9.86392	0.13608	1.3680	50
11	037	9.77112	713	9.90694	144	9.86418	0.13582	672	49
12	061	9.77130	696	9.90685	189	9.86445	0.13555	663	48
13	084	9.77147	679	9.90676	234	9.86471	0.13529	655	47
14	108	9.77164	662	9.90667	278	9.86498	0.13502	647	46
15	59131	9.77181	80644	9.90657	73323	9.86524	0.13476	1.3638	45
16	154	9.77199	627	9.90648	368	9.86551	0.13449	630	44
17	178	9.77216	610	9.90639	413	9.86577	0.13423	622	43
18	201	9.77233	593	9.90630	457	9.86603	0.13397	613	42
19	225	9.77250	576	9.90620	502	9.86630	0.13370	605	41
20	59248	9.77268	80558	9.90611	73547	9.86656	0.13344	1.3597	40
21	272	9.77285	541	9.90602	592	9.86683	0.13317	588	39
22	295	9.77302	524	9.90592	637	9.86709	0.13291	580	38
23	318	9.77319	507	9.90583	681	9.86736	0.13264	572	37
24	342	9.77336	489	9.90574	726	9.86762	0.13238	564	36
25	59365	9.77353	80472	9.90565	73771	9.86789	0.13211	1.3555	35
26	389	9.77370	455	9.90555	816	9.86815	0.13185	547	34
27	412	9.77387	438	9.90546	861	9.86842	0.13158	539	33
28	436	9.77405	420	9.90537	906	9.86868	0.13132	531	32
29	459	9.77422	403	9.90527	951	9.86894	0.13106	522	31
30	59482	9.77439	80386	9.90518	73996	9.86921	0.13079	1.3514	30
31	506	9.77456	368	9.90509	74041	9.86947	0.13053	506	29
32	529	9.77473	351	9.90499	086	9.86974	0.13026	498	28
33	552	9.77490	334	9.90490	131	9.87000	0.13000	490	27
34	576	9.77507	316	9.90480	176	9.87027	0.12973	481	26
35	59599	9.77524	80299	9.90471	74221	9.87053	0.12947	1.3473	25
36	622	9.77541	282	9.90462	267	9.87079	0.12921	465	24
37	646	9.77558	264	9.90452	312	9.87106	0.12894	457	23
38	669	9.77575	247	9.90443	357	9.87132	0.12868	449	22
39	693	9.77592	230	9.90434	402	9.87158	0.12842	440	21
40	59716	9.77609	80212	9.90424	74447	9.87185	0.12815	1.3432	20
41	739	9.77626	195	9.90415	492	9.87211	0.12789	424	19
42	763	9.77643	178	9.90405	538	9.87238	0.12762	416	18
43	786	9.77660	160	9.90396	583	9.87264	0.12736	408	17
44	809	9.77677	143	9.90386	628	9.87290	0.12710	400	16
45	59832	9.77694	80125	9.90377	74674	9.87317	0.12683	1.3392	15
46	856	9.77711	108	9.90368	719	9.87343	0.12657	384	14
47	879	9.77728	99	9.90358	764	9.87369	0.12631	375	13
48	902	9.77744	93	9.90349	810	9.87396	0.12604	367	12
49	926	9.77761	95	9.90339	855	9.87422	0.12578	359	11
50	59949	9.77778	80038	9.90330	74900	9.87448	0.12552	1.3351	10
51	972	9.77795	021	9.90320	946	9.87475	0.12525	343	9
52	995	9.77812	003	9.90311	991	9.87501	0.12499	335	8
53	60019	9.77829	79986	9.90301	75037	9.87527	0.12473	327	7
54	042	9.77846	968	9.90292	082	9.87554	0.12446	319	6
55	60065	9.77862	79951	9.90282	75128	9.87580	0.12420	1.3311	5
56	089	9.77879	934	9.90273	173	9.87606	0.12394	303	4
57	112	9.77896	916	9.90263	219	9.87633	0.12367	295	3
58	135	9.77913	899	9.90254	264	9.87659	0.12341	287	2
59	158	9.77930	881	9.90244	310	9.87685	0.12315	278	1
60	182	9.77946	864	9.90235	355	9.87711	0.12289	270	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	'

	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	
0	60182	9.77946	79864	9.90235	75355	9.87711	0.12289	1.3270	60
1	205	9.77903	846	9.90225	401	9.87738	0.12262	262	59
2	228	9.77980	829	9.90216	447	9.87764	0.12236	254	58
3	251	9.77997	811	9.90206	492	9.87790	0.12210	246	57
4	274	9.78013	793	9.90197	538	9.87817	0.12183	238	56
5	60298	9.78030	79776	9.90187	75584	9.87843	0.12157	1.3230	55
6	321	9.78047	758	9.90178	629	9.87869	0.12131	222	54
7	344	9.78063	741	9.90168	675	9.87895	0.12105	214	53
8	367	9.78080	723	9.90159	721	9.87922	0.12078	206	52
9	390	9.78097	706	9.90149	767	9.87948	0.12052	198	51
10	60414	9.78113	79688	9.90139	75812	9.87974	0.12026	1.3190	50
11	437	9.78130	671	9.90130	858	9.88000	0.12000	182	49
12	460	9.78147	653	9.90120	904	9.88027	0.11973	175	48
13	483	9.78163	635	9.90111	950	9.88053	0.11947	167	47
14	506	9.78180	618	9.90101	996	9.88079	0.11921	159	46
15	60529	9.78197	79600	9.90091	76042	9.88105	0.11895	1.3151	45
16	553	9.78213	583	9.90082	088	9.88131	0.11869	143	44
17	576	9.78230	565	9.90072	134	9.88158	0.11842	135	43
18	599	9.78246	547	9.90063	180	9.88184	0.11816	127	42
19	622	9.78263	530	9.90053	226	9.88210	0.11790	119	41
20	60645	9.78280	79512	9.90043	76272	9.88236	0.11764	1.3111	40
21	668	9.78296	494	9.90034	318	9.88262	0.11738	103	39
22	691	9.78313	477	9.90024	364	9.88288	0.11711	095	38
23	714	9.78329	459	9.90014	410	9.88315	0.11685	087	37
24	738	9.78346	441	9.90005	456	9.88341	0.11659	079	36
25	60761	9.78362	79424	9.89995	76502	9.88367	0.11633	1.3072	35
26	784	9.78379	406	9.89985	548	9.88393	0.11607	064	34
27	807	9.78395	388	9.89976	594	9.88420	0.11580	056	33
28	830	9.78412	371	9.89966	640	9.88446	0.11554	048	32
29	853	9.78428	353	9.89956	686	9.88472	0.11528	040	31
30	60876	9.78445	79335	9.89947	76733	9.88498	0.11502	1.3032	30
31	899	9.78461	318	9.89937	779	9.88524	0.11476	024	29
32	922	9.78478	300	9.89927	825	9.88550	0.11450	017	28
33	945	9.78494	282	9.89918	871	9.88577	0.11423	009	27
34	968	9.78510	264	9.89908	918	9.88603	0.11397	001	26
35	60991	9.78527	79247	9.89898	76964	9.88629	0.11371	1.2993	25
36	61015	9.78543	229	9.89888	77010	9.88655	0.11345	985	24
37	038	9.78560	211	9.89879	057	9.88681	0.11319	977	23
38	061	9.78576	193	9.89869	103	9.88707	0.11293	970	22
39	084	9.78592	176	9.89859	149	9.88733	0.11267	962	21
40	61107	9.78609	79158	9.89849	77466	9.88759	0.11241	1.2954	20
41	130	9.78625	140	9.89840	242	9.88786	0.11214	946	19
42	153	9.78642	122	9.89830	289	9.88812	0.11188	938	18
43	176	9.78658	105	9.89820	335	9.88838	0.11162	931	17
44	199	9.78674	87	9.89810	382	9.88864	0.11136	923	16
45	61222	9.78691	79069	9.89801	77428	9.88890	0.11110	1.2915	15
46	245	9.78707	051	9.89791	475	9.88916	0.11084	907	14
47	268	9.78723	033	9.89781	521	9.88942	0.11058	900	13
48	291	9.78739	016	9.89771	568	9.88968	0.11032	892	12
49	314	9.78755	78998	9.89761	615	9.88994	0.11006	884	11
50	61337	9.78772	78980	9.89752	77661	9.89020	0.10980	1.2876	10
51	360	9.78788	062	9.89742	708	9.89046	0.10954	869	9
52	383	9.78805	17	9.89732	754	9.89073	0.10927	861	8
53	406	9.78821	926	9.89722	801	9.89099	0.10901	853	7
54	429	9.78837	908	9.89712	848	9.89125	0.10875	846	6
55	61451	9.78853	78891	9.89702	77895	9.89151	0.10849	1.2838	5
56	474	9.78869	873	9.89693	941	9.89177	0.10823	830	4
57	497	9.78886	855	9.89683	988	9.89203	0.10797	822	3
58	520	9.78902	837	9.89673	78035	9.89229	0.10771	815	2
59	543	9.78918	819	9.89663	082	9.89255	0.10745	807	1
60	566	9.78934	801	9.89653	129	9.89281	0.10719	799	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	

	Nat. Sin Log. d.	Nat. Cos Log. d.	Nat. Tan Log. c.d.	Log. Cot Nat.	
0	61566 9.78934	78801 9.89653	78129 9.89281	0.10719 1.2799	60
1	589 9.78950	783 9.89643	175 9.89307	0.10693 792	59
2	612 9.78967	765 9.89633	222 9.89333	0.10667 784	58
3	635 9.78983	747 9.89624	269 9.89359	0.10641 776	57
4	658 9.78999	729 9.89614	316 9.89385	0.10615 769	56
5	61681 9.79015	78711 9.89604	78363 9.89411	0.10589 1.2761	55
6	704 9.79031	694 9.89594	410 9.89437	0.10563 753	54
7	726 9.79047	676 9.89584	457 9.89463	0.10537 745	53
8	749 9.79063	658 9.89574	504 9.89489	0.10511 738	52
9	772 9.79079	640 9.89564	551 9.89515	0.10485 731	51
10	61795 9.79095	78622 9.89554	78598 9.89541	0.10459 1.2733	50
11	818 9.79111	604 9.89544	645 9.89567	0.10433 715	49
12	841 9.79128	586 9.89534	692 9.89593	0.10407 708	48
13	864 9.79144	568 9.89524	739 9.89619	0.10381 700	47
14	887 9.79160	550 9.89514	786 9.89645	0.10355 693	46
15	61909 9.79176	78532 9.89504	78834 9.89671	0.10329 1.2685	45
16	932 9.79192	514 9.89495	881 9.89697	0.10303 677	44
17	955 9.79208	496 9.89485	928 9.89723	0.10277 670	43
18	978 9.79224	478 9.89475	975 9.89749	0.10251 662	42
19	62001 9.79240	460 9.89465	79022 9.89775	0.10225 655	41
20	62024 9.79256	78442 9.89455	79070 9.89801	0.10199 1.2647	40
21	046 9.79272	424 9.89445	117 9.89827	0.10173 640	39
22	069 9.79288	405 9.89435	164 9.89853	0.10147 632	38
23	092 9.79304	387 9.89425	212 9.89879	0.10121 624	37
24	115 9.79319	369 9.89415	259 9.89905	0.10095 617	36
25	62138 9.79335	78351 9.89405	79306 9.89931	0.10069 1.2609	35
26	160 9.79351	333 9.89395	354 9.89957	0.10043 602	34
27	183 9.79367	315 9.89385	401 9.89983	0.10017 594	33
28	206 9.79383	297 9.89375	449 9.90009	0.09991 587	32
29	229 9.79399	279 9.89364	496 9.90035	0.09965 579	31
30	62251 9.79415	78261 9.89354	79544 9.90061	0.09939 1.2572	30
31	274 9.79431	243 9.89344	591 9.90086	0.09914 564	29
32	297 9.79447	225 9.89334	639 9.90112	0.09888 557	28
33	320 9.79463	206 9.89324	686 9.90138	0.09862 549	27
34	342 9.79478	188 9.89314	734 9.90164	0.09836 542	26
35	62365 9.79494	78170 9.89304	79781 9.90190	0.09810 1.2534	25
36	388 9.79510	152 9.89294	829 9.90216	0.09784 527	24
37	411 9.79526	134 9.89284	877 9.90242	0.09758 519	23
38	433 9.79542	116 9.89274	924 9.90268	0.09732 512	22
39	456 9.79558	098 9.89264	972 9.90294	0.09706 504	21
40	62479 9.79573	78079 9.89254	80020 9.90320	0.09680 1.2497	20
41	502 9.79589	061 9.89244	067 9.90346	0.09654 489	19
42	524 9.79605	043 9.89233	115 9.90371	0.09629 482	18
43	547 9.79621	025 9.89223	163 9.90397	0.09603 475	17
44	570 9.79636	007 9.89213	211 9.90423	0.09577 467	16
45	62592 9.79652	77988 9.89203	80258 9.90449	0.09551 1.2460	15
46	615 9.79668	970 9.89193	306 9.90475	0.09525 452	14
47	638 9.79684	952 9.89183	354 9.90501	0.09499 445	13
48	660 9.79700	934 9.89173	402 9.90527	0.09473 437	12
49	683 9.79715	916 9.89162	450 9.90553	0.09447 430	11
50	62706 9.79731	77897 9.89152	80498 9.90578	0.09422 1.2423	10
51	728 9.79746	879 9.89142	546 9.90604	0.09396 415	9
52	751 9.79762	861 9.89132	594 9.90630	0.09370 408	8
53	774 9.79778	843 9.89122	642 9.90656	0.09344 401	7
54	796 9.79793	824 9.89112	690 9.90682	0.09318 393	6
55	62819 9.79809	77806 9.89101	80738 9.90708	0.09292 1.2386	5
56	842 9.79825	788 9.89091	786 9.90734	0.09266 378	4
57	864 9.79840	769 9.89081	834 9.90759	0.09241 371	3
58	887 9.79856	751 9.89071	882 9.90785	0.09215 364	2
59	909 9.79872	733 9.89060	930 9.90811	0.09189 356	1
60	932 9.79887	715 9.89050	978 9.90837	0.09163 349	0
	Nat. Cos Log. d.	Nat. Sin Log. d.	Nat. Cot Log. c.d.	Log. Tan Nat.	

°	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	°	
0	62932	9.79887	77715	9.89050	80978	9.90837	0.09163	1.2349	80	
1	955	9.79903	696	9.89040	81027	9.90863	0.09137	342	59	
2	977	9.79918	678	9.89030	075	9.90889	0.09111	334	58	
3	63000	9.79934	660	9.89020	123	9.90914	0.09086	327	57	
4	022	9.79950	641	9.89009	171	9.90940	0.09060	320	56	
5	63045	9.79965	77623	9.88999	81220	9.90966	0.09034	1.2312	55	
6	068	9.79981	605	9.88989	268	9.90992	0.09008	305	54	
7	090	9.79996	586	9.88978	316	9.91018	0.08982	298	53	
8	113	9.80012	568	9.88968	364	9.91043	0.08957	290	52	
9	135	9.80027	550	9.88958	413	9.91069	0.08931	283	51	
10	63158	9.80043	77531	9.88948	81461	9.91095	0.08905	1.2276	50	
11	180	9.80058	51	9.88937	510	9.91121	0.08879	268	49	
12	203	9.80074	494	9.88927	558	9.91147	0.08853	261	48	
13	225	9.80089	476	9.88917	606	9.91172	0.08828	254	47	
14	248	9.80105	458	9.88906	655	9.91198	0.08802	247	46	
15	63271	9.80120	77439	9.88896	81703	9.91224	0.08776	1.2239	45	
16	293	9.80136	421	9.88886	752	9.91250	0.08750	232	44	
17	316	9.80151	402	9.88875	800	9.91276	0.08724	225	43	
18	338	9.80166	384	9.88865	849	9.91301	0.08699	218	42	
19	361	9.80182	366	9.88855	898	9.91327	0.08673	210	41	
20	63383	9.80197	77347	9.88844	81946	9.91353	0.08647	1.2203	40	
21	406	9.80213	329	9.88834	995	9.91379	0.08621	196	39	
22	428	9.80228	310	9.88824	82044	9.91404	0.08596	189	38	
23	451	9.80244	292	9.88813	092	9.91430	0.08570	181	37	
24	473	9.80259	273	9.88803	141	9.91456	0.08544	174	36	
25	63496	9.80274	77255	9.88793	82190	9.91482	0.08518	1.2167	35	
26	518	9.80290	236	9.88782	238	9.91507	0.08493	160	34	
27	540	9.80305	218	9.88772	287	9.91533	0.08467	153	33	
28	563	9.80320	199	9.88761	336	9.91559	0.08441	145	32	
29	585	9.80336	181	9.88751	385	9.91585	0.08415	138	31	
30	63608	9.80351	77162	9.88741	82434	9.91610	0.08390	1.2131	30	
31	630	9.80366	144	9.88730	483	9.91636	0.08364	124	29	
32	653	9.80382	125	9.88720	531	9.91662	0.08338	117	28	
33	675	9.80397	107	9.88709	580	9.91688	0.08312	109	27	
34	698	9.80412	088	9.88699	629	9.91713	0.08287	102	26	
35	63720	9.80428	77070	9.88688	82678	9.91739	0.08261	1.2095	25	
36	742	9.80443	051	9.88678	727	9.91765	0.08235	088	24	
37	765	9.80458	033	9.88668	776	9.91791	0.08209	081	23	
38	787	9.80473	014	9.88657	825	9.91816	0.08184	074	22	
39	810	9.80489	76996	9.88647	874	9.91842	0.08158	066	21	
40	63832	9.80504	76977	9.88636	82923	9.91868	0.08132	1.2059	20	
41	854	9.80519	959	9.88626	972	9.91893	0.08107	052	19	
42	877	9.80534	940	9.88615	83022	9.91919	0.08081	045	18	
43	899	9.80550	921	9.88605	071	9.91945	0.08055	038	17	
44	922	9.80565	903	9.88594	120	9.91971	0.08029	031	16	
45	63944	9.80580	76884	9.88584	83169	9.91996	0.08004	1.2024	15	
46	966	9.80595	866	9.88573	218	9.92022	0.07978	017	14	
47	989	9.80610	847	9.88563	268	9.92048	0.07952	009	13	
48	64011	9.80625	828	9.88552	317	9.92073	0.07927	002	12	
49	033	9.80641	810	9.88542	366	9.92099	0.07901	1.1995	11	
50	64056	9.80656	76791	9.88531	83415	9.92125	0.07875	1.1988	10	
51	078	9.80671	772	9.88521	405	9.92150	0.07850	981	9	
52	100	9.80686	754	9.88510	514	9.92176	0.07824	974	8	
53	123	9.80701	735	9.88499	564	9.92202	0.07798	967	7	
54	145	9.80716	717	9.88489	613	9.92227	0.07773	960	6	
55	64167	9.80731	76698	9.88478	83662	9.92253	0.07747	1.1953	5	
56	190	9.80746	679	9.88468	712	9.92279	0.07721	946	4	
57	212	9.80762	661	9.88457	761	9.92304	0.07696	939	3	
58	234	9.80777	642	9.88447	811	9.92330	0.07670	932	2	
59	256	9.80792	623	9.88436	860	9.92356	0.07644	925	1	
60	279	9.80807	604	9.88425	910	9.92381	0.07619	918	0	
		Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	°

l	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	
0	64279	0.80807	76604	0.88425	83910	0.92381	0.07610	1.1918	60
1	301	0.80822	586	0.88415	960	0.92407	0.07593	910	59
2	323	0.80837	567	0.88404	84009	0.92433	0.07577	903	58
3	346	0.80852	548	0.88394	059	0.92458	0.07542	896	57
4	368	0.80867	530	0.88383	108	0.92484	0.07516	889	56
5	64390	0.80882	76511	0.88372	84158	0.92510	0.07490	1.1882	55
6	412	0.80897	492	0.88362	208	0.92535	0.07465	875	54
7	435	0.80912	473	0.88351	258	0.92561	0.07439	868	53
8	457	0.80927	455	0.88340	307	0.92587	0.07413	861	52
9	479	0.80942	436	0.88330	357	0.92612	0.07388	854	51
10	64501	0.80957	76417	0.88319	84407	0.92638	0.07362	1.1847	50
11	524	0.80972	398	0.88308	457	0.92663	0.07337	840	49
12	546	0.80987	380	0.88298	507	0.92689	0.07311	833	48
13	568	0.81002	361	0.88287	556	0.92715	0.07285	826	47
14	590	0.81017	342	0.88276	606	0.92740	0.07260	819	46
15	64612	0.81032	76323	0.88266	84656	0.92766	0.07234	1.1812	45
16	635	0.81047	304	0.88255	706	0.92792	0.07208	806	44
17	657	0.81061	286	0.88244	756	0.92817	0.07183	799	43
18	679	0.81076	267	0.88234	806	0.92843	0.07157	792	42
19	701	0.81091	248	0.88223	856	0.92868	0.07132	785	41
20	64723	0.81106	76229	0.88212	84906	0.92894	0.07106	1.1778	40
21	746	0.81121	210	0.88201	956	0.92920	0.07080	771	39
22	768	0.81136	192	0.88191	85006	0.92945	0.07055	764	38
23	790	0.81151	173	0.88180	057	0.92971	0.07029	757	37
24	812	0.81166	154	0.88169	107	0.92996	0.07004	750	36
25	64834	0.81180	76135	0.88158	85157	0.93022	0.06978	1.1743	35
26	856	0.81195	116	0.88148	207	0.93048	0.06952	736	34
27	878	0.81210	097	0.88137	257	0.93073	0.06927	729	33
28	901	0.81225	078	0.88126	308	0.93099	0.06901	722	32
29	923	0.81240	059	0.88115	358	0.93124	0.06876	715	31
30	64945	0.81254	76041	0.88105	85408	0.93150	0.06850	1.1708	30
31	967	0.81269	022	0.88094	458	0.93175	0.06825	702	29
32	989	0.81284	003	0.88083	509	0.93201	0.06799	695	28
33	65011	0.81299	75984	0.88072	559	0.93227	0.06773	688	27
34	033	0.81314	965	0.88061	609	0.93252	0.06748	681	26
35	65055	0.81328	75946	0.88051	85660	0.93278	0.06722	1.1674	25
36	077	0.81343	927	0.88040	710	0.93303	0.06697	667	24
37	100	0.81358	908	0.88029	761	0.93329	0.06671	660	23
38	122	0.81372	889	0.88018	811	0.93354	0.06646	653	22
39	144	0.81387	870	0.88007	862	0.93380	0.06620	647	21
40	65166	0.81402	75851	0.87996	85912	0.93406	0.06594	1.1640	20
41	188	0.81417	832	0.87985	963	0.93431	0.06569	633	19
42	210	0.81431	813	0.87975	86014	0.93457	0.06543	626	18
43	232	0.81446	794	0.87964	064	0.93482	0.06518	619	17
44	254	0.81461	775	0.87953	115	0.93508	0.06492	612	16
45	65276	0.81475	75756	0.87942	86166	0.93533	0.06467	1.1606	15
46	298	0.81490	738	0.87931	216	0.93559	0.06441	599	14
47	320	0.81505	719	0.87920	267	0.93584	0.06416	592	13
48	342	0.81519	700	0.87909	318	0.93610	0.06390	585	12
49	364	0.81534	680	0.87898	368	0.93636	0.06364	578	11
50	65386	0.81549	75661	0.87887	86419	0.93661	0.06339	1.1571	10
51	408	0.81563	642	0.87877	470	0.93687	0.06313	565	9
52	430	0.81578	623	0.87866	521	0.93712	0.06288	558	8
53	452	0.81592	604	0.87855	572	0.93738	0.06262	551	7
54	474	0.81607	585	0.87844	623	0.93763	0.06237	544	6
55	65496	0.81622	75566	0.87833	86674	0.93789	0.06211	1.1538	5
56	518	0.81636	547	0.87822	725	0.93814	0.06186	531	4
57	540	0.81651	528	0.87811	776	0.93840	0.06160	524	3
58	562	0.81665	509	0.87800	827	0.93865	0.06135	517	2
59	584	0.81680	490	0.87789	878	0.93891	0.06109	510	1
60	606	0.81694	471	0.87778	929	0.93916	0.06084	504	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	l

°	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	°
0	65606	9.81694	75471	9.87778	86929	9.93916	0.06084	I.1504	60
1	628	9.81709	452	9.87767	980	9.93942	0.06058	497	59
2	650	9.81723	433	9.87756	87031	9.93967	0.06033	490	58
3	672	9.81738	414	9.87745	082	9.93993	0.06007	483	57
4	694	9.81752	395	9.87734	133	9.94018	0.05982	477	56
5	65716	9.81767	75375	9.87723	87184	9.94044	0.05956	I.1470	55
6	738	9.81781	356	9.87712	236	9.94069	0.05931	463	54
7	759	9.81796	337	9.87701	287	9.94095	0.05905	456	53
8	781	9.81810	318	9.87690	338	9.94120	0.05880	450	52
9	803	9.81825	299	9.87679	389	9.94146	0.05854	443	51
10	65825	9.81839	75280	9.87668	87441	9.94171	0.05829	I.1436	50
11	847	9.81854	261	9.87657	492	9.94197	0.05803	396	49
12	869	9.81868	241	9.87646	543	9.94222	0.05778	423	48
13	891	9.81882	222	9.87635	595	9.94248	0.05752	416	47
14	913	9.81897	203	9.87624	646	9.94273	0.05727	410	46
15	65935	9.81911	75184	9.87613	87698	9.94299	0.05701	I.1403	45
16	956	9.81926	165	9.87601	749	9.94324	0.05676	396	44
17	978	9.81940	146	9.87590	801	9.94350	0.05650	389	43
18	66000	9.81955	126	9.87579	852	9.94375	0.05625	383	42
19	022	9.81969	107	9.87568	904	9.94401	0.05599	376	41
20	66044	9.81983	75088	9.87557	87955	9.94426	0.05574	I.1369	40
21	066	9.81998	069	9.87546	88007	9.94452	0.05548	363	39
22	088	9.82012	050	9.87535	059	9.94477	0.05523	356	38
23	109	9.82026	030	9.87524	110	9.94503	0.05497	349	37
24	131	9.82041	011	9.87513	162	9.94528	0.05472	343	36
25	66153	9.82055	74992	9.87501	88214	9.94554	0.05446	I.1336	35
26	175	9.82069	973	9.87490	265	9.94579	0.05421	329	34
27	197	9.82084	953	9.87479	317	9.94604	0.05396	323	33
28	218	9.82098	934	9.87468	369	9.94630	0.05370	316	32
29	240	9.82112	915	9.87457	421	9.94655	0.05345	310	31
30	66262	9.82126	74896	9.87446	88473	9.94681	0.05319	I.1303	30
31	284	9.82141	876	9.87434	524	9.94706	0.05294	296	29
32	306	9.82155	857	9.87423	576	9.94732	0.05268	290	28
33	327	9.82169	838	9.87412	628	9.94757	0.05243	283	27
34	349	9.82184	818	9.87401	680	9.94783	0.05217	276	26
35	66371	9.82198	74799	9.87390	88732	9.94808	0.05192	I.1270	25
36	393	9.82212	780	9.87378	784	9.94834	0.05166	263	24
37	414	9.82226	760	9.87367	836	9.94859	0.05141	257	23
38	436	9.82240	741	9.87356	888	9.94884	0.05116	250	22
39	458	9.82255	722	9.87345	940	9.94910	0.05090	243	21
40	66480	9.82269	74703	9.87334	88992	9.94935	0.05065	I.1237	20
41	501	9.82283	683	9.87322	89045	9.94961	0.05039	230	19
42	523	9.82297	664	9.87311	097	9.94986	0.05014	224	18
43	545	9.82311	644	9.87300	149	9.95012	0.04988	217	17
44	566	9.82326	625	9.87288	201	9.95037	0.04963	211	16
45	66588	9.82340	74606	9.87277	89253	9.95062	0.04938	I.1204	15
46	610	9.82354	586	9.87266	306	9.95088	0.04912	197	14
47	632	9.82368	567	9.87255	358	9.95113	0.04887	191	13
48	653	9.82382	548	9.87243	410	9.95139	0.04861	184	12
49	675	9.82396	528	9.87232	463	9.95164	0.04836	178	11
50	66697	9.82410	74509	9.87221	89515	9.95190	0.04810	I.1171	10
51	718	9.82424	489	9.87209	567	9.95215	0.04785	165	9
52	740	9.82439	470	9.87198	620	9.95240	0.04760	158	8
53	762	9.82453	451	9.87187	672	9.95266	0.04734	152	7
54	783	9.82467	431	9.87175	725	9.95291	0.04709	145	6
55	66805	9.82481	74412	9.87164	89777	9.95317	0.04683	I.1139	5
56	827	9.82495	392	9.87153	830	9.95342	0.04658	132	4
57	848	9.82509	373	9.87141	883	9.95368	0.04632	126	3
58	870	9.82523	353	9.87130	935	9.95393	0.04607	119	2
59	891	9.82537	334	9.87119	988	9.95418	0.04582	113	1
60	913	9.82551	314	9.87107	90040	9.95444	0.04556	106	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	°

	Nat. Sin Log. d.		Nat. Cos Log. d.		Nat. Tan Log. c.d.		Log. Cot Nat.					
0	66913	9.82551	14	74314	9.87107	II	90040	9.95444	25	0.04556	I.1106	80
1	935	9.82565	14	295	9.87066	II	093	9.95460	25	0.04531	I.100	59
2	956	9.82579	14	276	9.87088	II	146	9.95468	25	0.04505	093	58
3	978	9.82593	14	256	9.87073	II	199	9.95520	25	0.04480	087	57
4	999	9.82607	14	237	9.87062	II	251	9.95545	25	0.04455	080	56
5	67021	9.82621	14	74217	9.87050	II	90904	9.95571	25	0.04429	I.1074	55
6	043	9.82635	14	198	9.87039	II	357	9.95596	25	0.04404	067	54
7	064	9.82649	14	178	9.87028	II	410	9.95622	25	0.04378	061	53
8	086	9.82663	14	159	9.87016	II	463	9.95647	25	0.04353	054	52
9	107	9.82677	14	139	9.87005	II	516	9.95672	25	0.04328	048	51
10	67129	9.82691	14	74120	9.86993	II	90569	9.95698	25	0.04302	I.1041	50
11	151	9.82705	14	100	9.86982	II	621	9.95723	25	0.04277	035	49
12	172	9.82719	14	080	9.86970	II	674	9.95748	25	0.04252	028	48
13	194	9.82733	14	061	9.86959	II	727	9.95774	25	0.04226	022	47
14	215	9.82747	14	041	9.86947	II	781	9.95799	25	0.04201	016	46
15	67237	9.82761	14	74022	9.86936	II	90834	9.95825	25	0.04175	I.1009	45
16	258	9.82775	14	002	9.86924	II	887	9.95850	25	0.04150	003	44
17	280	9.82788	13	73983	9.86913	II	940	9.95875	25	0.04125	I.0996	43
18	301	9.82802	14	963	9.86902	II	993	9.95901	25	0.04100	990	42
19	323	9.82816	14	944	9.86890	II	91046	9.95926	25	0.04074	983	41
20	67344	9.82830	14	73924	9.86879	II	91009	9.95952	25	0.04048	I.0977	40
21	366	9.82844	14	904	9.86867	II	153	9.95977	25	0.04023	971	39
22	387	9.82858	14	885	9.86855	II	206	9.96002	25	0.03998	964	38
23	409	9.82872	14	865	9.86844	II	259	9.96028	25	0.03972	958	37
24	430	9.82885	13	846	9.86832	II	313	9.96053	25	0.03947	951	36
25	67452	9.82899	14	73826	9.86821	II	91366	9.96078	25	0.03922	I.0945	35
26	473	9.82913	14	806	9.86809	II	419	9.96104	25	0.03896	939	34
27	495	9.82927	14	787	9.86798	II	473	9.96129	25	0.03871	932	33
28	516	9.82941	14	767	9.86786	II	526	9.96155	25	0.03845	926	32
29	538	9.82955	14	747	9.86775	II	580	9.96180	25	0.03820	919	31
30	67559	9.82968	13	73728	9.86763	II	91633	9.96205	25	0.03795	I.0913	30
31	580	9.82982	14	708	9.86752	II	687	9.96231	25	0.03769	907	29
32	602	9.82996	14	688	9.86740	II	740	9.96256	25	0.03744	900	28
33	623	9.83010	14	669	9.86728	II	794	9.96281	25	0.03719	894	27
34	645	9.83023	13	649	9.86717	II	847	9.96307	25	0.03693	888	26
35	67666	9.83037	14	73629	9.86705	II	91901	9.96332	25	0.03668	I.0881	25
36	688	9.83051	14	610	9.86694	II	955	9.96357	25	0.03643	875	24
37	709	9.83065	14	590	9.86682	II	92008	9.96383	25	0.03617	869	23
38	730	9.83078	14	570	9.86670	II	062	9.96408	25	0.03592	862	22
39	752	9.83092	14	551	9.86659	II	116	9.96433	25	0.03567	856	21
40	67773	9.83106	14	73531	9.86647	II	92170	9.96459	25	0.03541	I.0850	20
41	795	9.83120	13	511	9.86635	II	224	9.96484	25	0.03516	843	19
42	816	9.83133	13	491	9.86624	II	277	9.96510	25	0.03490	837	18
43	837	9.83147	14	472	9.86612	II	331	9.96535	25	0.03465	831	17
44	859	9.83161	13	452	9.86600	II	385	9.96560	25	0.03440	824	16
45	67880	9.83174	14	73432	9.86589	II	92439	9.96586	25	0.03414	I.0818	15
46	901	9.83188	14	413	9.86577	II	493	9.96611	25	0.03389	812	14
47	923	9.83202	13	393	9.86565	II	547	9.96636	25	0.03364	805	13
48	944	9.83215	13	373	9.86554	II	601	9.96662	25	0.03338	799	12
49	965	9.83229	14	353	9.86542	II	655	9.96687	25	0.03313	793	11
50	67987	9.83242	13	73333	9.86530	II	92790	9.96712	25	0.03288	I.0786	10
51	68008	9.83256	14	314	9.86518	II	763	9.96738	25	0.03262	780	9
52	029	9.83270	14	294	9.86507	II	817	9.96763	25	0.03237	774	8
53	051	9.83283	14	274	9.86495	II	872	9.96788	25	0.03212	768	7
54	072	9.83297	13	254	9.86483	II	926	9.96814	25	0.03186	761	6
55	68093	9.83310	13	73234	9.86472	II	92980	9.96839	25	0.03161	I.0755	5
56	115	9.83324	14	215	9.86460	II	93034	9.96864	25	0.03136	749	4
57	136	9.83338	14	195	9.86448	II	088	9.96890	25	0.03110	742	3
58	157	9.83351	13	175	9.86436	II	143	9.96915	25	0.03085	736	2
59	179	9.83365	14	155	9.86425	II	197	9.96940	25	0.03060	730	1
60	200	9.83378	13	135	9.86413	II	252	9.96966	25	0.03034	724	0
	Nat. Cos Log. d.		Nat. Sin Log. d.		Nat. Cot Log. c.d.		Log. Tan Nat.					

/'	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.	/'
0	68200	9.83378	73135	9.86413	93252	9.96066	0.03034	1.0724	60
1	221	9.83392	116	9.86401	306	9.96991	0.03009	717	59
2	242	9.83405	096	9.86389	360	9.97016	0.02984	711	58
3	264	9.83419	076	9.86377	415	9.97042	0.02958	705	57
4	285	9.83432	056	9.86366	469	9.97067	0.02933	699	56
5	68306	9.83446	73036	9.86354	93524	9.97092	0.02908	1.0692	55
6	327	9.83459	016	9.86342	578	9.97118	0.02882	686	54
7	349	9.83473	72996	9.86330	633	9.97143	0.02857	680	53
8	370	9.83486	976	9.86318	688	9.97168	0.02832	674	52
9	391	9.83500	957	9.86306	742	9.97193	0.02807	668	51
10	68412	9.83513	72937	9.86295	93797	9.97219	0.02781	1.0661	50
11	434	9.83527	917	9.86283	852	9.97244	0.02756	655	49
12	455	9.83540	897	9.86271	906	9.97269	0.02731	649	48
13	476	9.83554	877	9.86259	961	9.97295	0.02705	643	47
14	497	9.83567	857	9.86247	94016	9.97320	0.02680	637	46
15	68518	9.83581	72837	9.86235	94071	9.97345	0.02655	1.0630	45
16	539	9.83594	817	9.86223	125	9.97371	0.02629	624	44
17	551	9.83608	797	9.86211	180	9.97396	0.02604	618	43
18	582	9.83621	777	9.86200	235	9.97421	0.02579	612	42
19	603	9.83634	757	9.86188	290	9.97447	0.02553	606	41
20	68624	9.83648	72737	9.86176	94345	9.97472	0.02528	1.0599	40
21	645	9.83661	717	9.86164	400	9.97497	0.02503	593	39
22	666	9.83674	697	9.86152	455	9.97523	0.02477	587	38
23	688	9.83688	677	9.86140	510	9.97548	0.02452	581	37
24	709	9.83701	657	9.86128	565	9.97573	0.02427	575	36
25	68730	9.83715	72637	9.86116	94620	9.97598	0.02402	1.0569	35
26	751	9.83728	617	9.86104	676	9.97624	0.02376	562	34
27	772	9.83741	597	9.86092	731	9.97649	0.02351	556	33
28	793	9.83755	577	9.86080	786	9.97674	0.02326	550	32
29	814	9.83768	557	9.86068	841	9.97700	0.02300	544	31
30	68835	9.83781	72537	9.86056	94896	9.97725	0.02275	1.0538	30
31	857	9.83795	517	9.86044	952	9.97750	0.02250	532	29
32	878	9.83808	497	9.86032	95007	9.97776	0.02224	526	28
33	899	9.83821	477	9.86020	062	9.97801	0.02199	519	27
34	920	9.83834	457	9.86008	118	9.97826	0.02174	513	26
35	68941	9.83848	72437	9.85996	95173	9.97851	0.02149	1.0507	25
36	962	9.83861	417	9.85984	229	9.97877	0.02123	501	24
37	983	9.83874	397	9.85972	284	9.97902	0.02098	495	23
38	69004	9.83887	377	9.85960	340	9.97927	0.02073	489	22
39	025	9.83901	357	9.85948	395	9.97953	0.02047	483	21
40	69046	9.83914	72337	9.85936	95451	9.97978	0.02022	1.0477	20
41	067	9.83927	317	9.85924	506	9.98003	0.01997	470	19
42	088	9.83940	297	9.85912	562	9.98029	0.01971	464	18
43	109	9.83954	277	9.85900	618	9.98054	0.01946	458	17
44	130	9.83967	257	9.85888	673	9.98079	0.01921	452	16
45	69151	9.83980	72236	9.85876	95729	9.98104	0.01896	1.0446	15
46	172	9.83993	216	9.85864	785	9.98130	0.01870	440	14
47	193	9.84006	196	9.85851	841	9.98155	0.01845	434	13
48	214	9.84020	176	9.85839	897	9.98180	0.01820	428	12
49	235	9.84033	156	9.85827	952	9.98206	0.01794	422	11
50	69256	9.84046	72136	9.85815	96008	9.98231	0.01769	1.0416	10
51	277	9.84059	116	9.85803	064	9.98256	0.01744	410	9
52	298	9.84072	095	9.85791	120	9.98281	0.01719	404	8
53	319	9.84085	075	9.85779	176	9.98307	0.01693	398	7
54	340	9.84098	055	9.85766	232	9.98332	0.01668	392	6
55	69361	9.84112	72035	9.85754	96288	9.98357	0.01643	1.0385	5
56	382	9.84125	015	9.85742	344	9.98383	0.01617	379	4
57	403	9.84138	71995	9.85730	400	9.98408	0.01592	373	3
58	424	9.84151	974	9.85718	457	9.98433	0.01567	367	2
59	445	9.84164	954	9.85706	513	9.98458	0.01542	361	1
60	466	9.84177	934	9.85693	569	9.98484	0.01516	355	0
	Nat. Cos	Log. d.	Nat. Sin	Log. d.	Nat. Cot	Log. c.d.	Log. Tan	Nat.	/'

	Nat. Sin	Log. d.	Nat. Cos	Log. d.	Nat. Tan	Log. c.d.	Log. Cot	Nat.				
0	69466	9.84177	13	71934	9.85693	12	96569	9.98484	25	0.01516	I.0355	60
1	487	9.84190	13	914	9.85681	12	625	9.98509	25	0.01491	349	59
2	508	9.84203	13	894	9.85669	12	681	9.98534	25	0.01466	343	58
3	529	9.84216	13	873	9.85657	12	738	9.98560	25	0.01440	337	57
4	549	9.84229	13	853	9.85645	12	794	9.98585	25	0.01415	331	56
5	69570	9.84242	13	71833	9.85632	13	96850	9.98610	25	0.01390	I.0325	55
6	591	9.84255	13	813	9.85620	12	907	9.98635	25	0.01365	319	54
7	612	9.84269	14	792	9.85608	12	963	9.98661	25	0.01339	313	53
8	633	9.84282	13	772	9.85596	12	97020	9.98686	25	0.01314	307	52
9	654	9.84295	13	752	9.85583	13	076	9.98711	25	0.01289	301	51
10	69675	9.84308	13	71732	9.85571	12	97133	9.98737	25	0.01263	I.0295	50
11	696	9.84321	13	711	9.85559	12	189	9.98762	25	0.01238	289	49
12	717	9.84334	13	691	9.85547	13	246	9.98787	25	0.01213	283	48
13	737	9.84347	13	671	9.85534	12	302	9.98812	25	0.01188	277	47
14	758	9.84360	13	650	9.85522	12	359	9.98832	25	0.01162	271	46
15	69779	9.84373	13	71630	9.85510	12	97416	9.98863	25	0.01137	I.0265	45
16	800	9.84385	13	610	9.85497	13	472	9.98888	25	0.01112	259	44
17	821	9.84398	13	590	9.85485	12	529	9.98913	25	0.01087	253	43
18	842	9.84411	13	569	9.85473	13	586	9.98939	25	0.01061	247	42
19	862	9.84424	13	549	9.85460	13	643	9.98964	25	0.01036	241	41
20	69883	9.84437	13	71529	9.85448	12	97700	9.98989	25	0.01011	I.0235	40
21	904	9.84450	13	508	9.85436	13	756	9.99015	25	0.00985	230	39
22	925	9.84463	13	488	9.85423	12	813	9.99040	25	0.00960	224	38
23	946	9.84476	13	468	9.85411	12	870	9.99065	25	0.00935	218	37
24	966	9.84489	13	447	9.85399	12	927	9.99090	25	0.00910	212	36
25	69987	9.84502	13	71427	9.85386	12	97984	9.99116	25	0.00884	I.0206	35
26	70008	9.84515	13	407	9.85374	13	98041	9.99141	25	0.00859	200	34
27	029	9.84528	12	386	9.85361	12	098	9.99166	25	0.00834	194	33
28	049	9.84540	13	366	9.85349	12	155	9.99191	25	0.00809	188	32
29	070	9.84553	13	345	9.85337	13	213	9.99217	25	0.00783	182	31
30	70091	9.84566	13	71325	9.85324	12	98270	9.99242	25	0.00758	I.0176	30
31	112	9.84579	13	305	9.85312	13	327	9.99267	25	0.00733	170	29
32	132	9.84592	13	284	9.85299	12	384	9.99293	25	0.00707	164	28
33	153	9.84605	13	264	9.85287	12	441	9.99318	25	0.00682	158	27
34	174	9.84618	13	243	9.85274	12	499	9.99343	25	0.00657	152	26
35	70195	9.84630	13	71223	9.85262	12	98556	9.99368	25	0.00632	I.0147	25
36	215	9.84643	13	203	9.85250	13	613	9.99394	25	0.00606	141	24
37	236	9.84656	13	182	9.85237	12	671	9.99419	25	0.00581	135	23
38	257	9.84669	13	162	9.85225	12	728	9.99444	25	0.00556	129	22
39	277	9.84682	12	141	9.85212	12	786	9.99469	25	0.00531	123	21
40	70298	9.84694	13	71121	9.85200	12	98843	9.99495	25	0.00505	I.0117	20
41	319	9.84707	13	100	9.85187	13	901	9.99520	25	0.00480	111	19
42	339	9.84720	13	080	9.85175	12	958	9.99545	25	0.00455	105	18
43	360	9.84733	13	059	9.85162	12	99016	9.99570	25	0.00430	99	17
44	381	9.84745	13	039	9.85150	13	073	9.99595	25	0.00404	94	16
45	70401	9.84758	13	71019	9.85137	12	99131	9.99621	25	0.00379	I.0088	15
46	422	9.84771	13	70998	9.85125	12	189	9.99646	25	0.00354	082	14
47	443	9.84784	12	978	9.85112	13	247	9.99672	25	0.00328	076	13
48	463	9.84796	13	957	9.85100	12	304	9.99697	25	0.00303	070	12
49	484	9.84809	13	937	9.85087	13	362	9.99722	25	0.00277	064	11
50	70505	9.84822	13	70916	9.85074	12	99420	9.99747	25	0.00253	I.0058	10
51	525	9.84835	12	896	9.85062	13	478	9.99773	25	0.00227	052	9
52	546	9.84847	13	875	9.85049	12	536	9.99798	25	0.00202	047	8
53	567	9.84860	13	855	9.85037	12	594	9.99823	25	0.00177	041	7
54	587	9.84873	12	834	9.85024	12	652	9.99848	25	0.00152	035	6
55	70608	9.84885	13	70813	9.85012	12	99710	9.99874	25	0.00126	I.0029	5
56	628	9.84898	13	793	9.84999	13	768	9.99899	25	0.00101	023	4
57	649	9.84911	12	772	9.84986	12	826	9.99924	25	0.00076	017	3
58	670	9.84923	13	752	9.84974	12	884	9.99949	25	0.00051	012	2
59	690	9.84936	13	731	9.84961	13	942	9.99975	25	0.00025	006	1
60	711	9.84949	13	711	9.84949	12	I.0000	I.00000	25	0.00000	000	0

- No. 39. Fans, Ventilation and Heating.**—Fans; Heaters; Shop Heating.
- No. 40. Fly-Wheels.**—Their Purpose, Calculation and Design.
- No. 41. Jigs and Fixtures, Part I.**—Principles of Jig and Fixture Design; Drill and Boring Jig Bushings; Locating Points; Clamping Devices.
- No. 42. Jigs and Fixtures, Part II.**—Open and Closed Drill Jigs.
- No. 43. Jigs and Fixtures, Part III.**—Boring and Milling Fixtures.
- No. 44. Machine Blacksmithing.**—Systems, Tools and Machines used.
- No. 45. Drop Forging.**—Lay-out of Plant; Methods of Drop Forging; Dies.
- No. 46. Hardening and Tempering.**—Hardening Plants; Treating High-Speed Steel; Hardening Gages.
- No. 47. Electric Overhead Cranes.**—Design and Calculation.
- No. 48. Files and Filing.**—Types of Files; Using and Making Files.
- No. 49. Girders for Electric Overhead Cranes.**
- No. 50. Principles and Practice of Assembling Machine Tools, Part I.**
- No. 51. Principles and Practice of Assembling Machine Tools, Part II.**
- No. 52. Advanced Shop Arithmetic for the Machinist.**
- No. 53. Use of Logarithms and Logarithmic Tables.**
- No. 54. Solution of Triangles, Part I.**—Methods, Rules and Examples.
- No. 55. Solution of Triangles, Part II.**—Tables of Natural Functions.
- No. 56. Ball Bearings.**—Principles of Design and Construction.
- No. 57. Metal Spinning.**—Machines, Tools and Methods Used.
- No. 58. Helical and Elliptic Springs.**—Calculation and Design.
- No. 59. Machines, Tools and Methods of Automobile Manufacture.**
- No. 60. Construction and Manufacture of Automobiles.**
- No. 61. Blacksmith Shop Practice.**—Model Blacksmith Shop; Welding; Forging of Hooks and Chains; Miscellaneous Appliances and Methods.
- No. 62. Hardness and Durability Testing of Metals.**
- No. 63. Heat Treatment of Steel.**—Hardening, Tempering, Case-Hardening.
- No. 64. Gage Making and Lapping.**
- No. 65. Formulas and Constants for Gas Engine Design.**
- No. 66. Heating and Ventilation of Shops and Offices.**
- No. 67. Boilers.**
- No. 68. Boiler Furnaces and Chimneys.**
- No. 69. Feed Water Appliances.**
- No. 70. Steam Engines.**
- No. 71. Steam Turbines.**
- No. 72. Pumps, Condensers, Steam and Water Piping.**
- No. 73. Principles and Applications of Electricity, Part I.**—Static Electricity; Electrical Measurements; Batteries.
- No. 74. Principles and Applications of Electricity, Part II.**—Magnetism; Electro-Magnetism; Electro-Plating.
- No. 75. Principles and Applications of Electricity, Part III.**—Dynamoes; Motors; Electric Railways.
- No. 76. Principles and Applications of Electricity, Part IV.**—Electric Lighting.
- No. 77. Principles and Applications of Electricity, Part V.**—Telegraph and Telephone.
- No. 78. Principles and Applications of Electricity, Part VI.**—Transmission of Power.
- No. 79. Locomotive Building, Part I.**—Main and Side Rods.
- No. 80. Locomotive Building, Part II.**—Wheels; Axles; Driving Boxes.
- No. 81. Locomotive Building, Part III.**—Cylinders and Frames.
- No. 82. Locomotive Building, Part IV.**—Valve Motion.
- No. 83. Locomotive Building, Part V.**—Boiler Shop Practice.
- No. 84. Locomotive Building, Part VI.**—Erecting.
- No. 85. Mechanical Drawing, Part I.**—Instruments; Materials; Geometrical Problems.
- No. 86. Mechanical Drawing, Part II.**—Projection.
- No. 87. Mechanical Drawing, Part III.**—Machine Details.
- No. 88. Mechanical Drawing, Part IV.**—Machine Details.
- No. 89. The Theory of Shrinkage and Forced Fits.**
- No. 90. Railway Repair Shop Practice.**
- No. 91. Operation of Machine Tools.**—The Lathe, Part I.
- No. 92. Operation of Machine Tools.**—The Lathe, Part II.
- No. 93. Operation of Machine Tools.**—Planer, Shaper and Slotter.
- No. 94. Operation of Machine Tools.**—Drilling Machines.
- No. 95. Operation of Machine Tools.**—Vertical and Horizontal Boring Machines.

ADDITIONAL TITLES WILL BE ANNOUNCED IN MACHINERY FROM TIME TO TIME

MACHINERY'S DATA SHEET SERIES

MACHINERY'S Data Sheet Books include the well-known series of Data Sheets originated by MACHINERY, and issued monthly as supplements to the publication; of these Data Sheets over 500 have been published, and 6,000,000 copies sold. Revised and greatly amplified, they are now presented in book form, kindred subjects being grouped together. The purchaser may secure either the books on those subjects in which he is specially interested, or, if he pleases, the whole set at one time. The price of each book is 25 cents (one shilling) delivered anywhere in the world.

TITLES AND CONTENTS ON BACK COVER

CONTENTS OF DATA SHEET BOOKS

No. 1. Screw Threads.—United States, Whitworth, Sharp V- and British Association Standard Threads; Briggs Pipe Thread; Oil Well Casing Gages; Fire Hose Connections; Acme Thread; Worm Threads; Metric Threads; Machine, Wood, and Lag Screw Threads; Carriage Bolt Threads, etc.

No. 2. Screws, Bolts and Nuts.—Fillister-head, Square-head, Headless, Collar-head and Hexagon-head Screws; Standard and Special Nuts; T-nuts, T-bolts and Washers; Thumb Screws and Nuts; A. L. A. M. Standard Screws and Nuts; Machine Screw Heads; Wood Screws; Tap Drills; Lock Nuts; Eye-bolts, etc.

No. 3. Taps and Dies.—Hand, Machine, Tapper and Machine Screw Taps; Taper Die Taps; Sellers Hobbs; Screw Machine Taps; Straight and Taper Boiler Taps; Stay-bolt, Washout, and Patch-bolt Taps; Pipe Taps and Hobbs; Solid Square, Round Adjustable and Spring Screw Threading Dies.

No. 4. Reamers, Sockets, Drills and Milling Cutters.—Hand Reamers; Shell Reamers and Arbors; Pipe Reamers; Taper Pins and Reamers; Brown & Sharpe, Morse and Jarno Taper Sockets and Reamers; Drills; Wire Gages; Milling Cutters; Setting Angles for Milling Teeth in End Mills and Angular Cutters, etc.

No. 5. Spur Gearing.—Diametral and Circular Pitch; Dimensions of Spur Gears; Tables of Pitch Diameters; Odontograph Tables; Rolling Mill Gearing; Strength of Spur Gears; Horsepower Transmitted by Cast-iron and Rawhide Pinions; Design of Spur Gears; Weight of Cast-iron Gears; Epicyclic Gearing.

No. 6. Bevel, Spiral and Worm Gearing.—Rules and Formulas for Bevel Gears; Strength of Bevel Gears; Design of Bevel Gears; Rules and Formulas for Spiral Gearing; Tables Facilitating Calculations; Diagram for Cutters for Spiral Gears; Rules and Formulas for Worm Gearing, etc.

No. 7. Shafting, Keys and Keyways.—Horsepower of Shafting; Diagrams and Tables for the Strength of Shafting; Forcing, Driving, Shrinking and Running Fits; Woodruff Keys; United States Navy Standard Keys; Gib Keys; Milling Keyways; Duplex Keys.

No. 8. Bearings, Couplings, Clutches, Crane Chain and Hooks.—Pillow Blocks; Babbitted Bearings; Ball and Roller Bearings; Clamp Couplings; Plate Couplings; Flange Couplings; Tooth Clutches; Crab Couplings; Cone Clutches; Universal Joints; Crane Chain; Chain Friction; Crane Hooks; Drum Scores.

No. 9. Springs, Slides and Machine Details.—Formulas and Tables for Spring Calculations; Machine Slides; Machine Handles and Levers; Collars; Hand Wheels; Pins and Cotter; Turn-buckles, etc.

No. 10. Motor Drive, Speeds and Feeds, Change Gearing, and Boring Bars.—Power required for Machine Tools; Cutting Speeds and Feeds for Carbon and High-speed Steel; Screw Machine Speeds and Feeds; Heat Treatment of High-speed

Steel Tools; Taper Turning; Change Gearing for the Lathe; Boring Bars and Tools, etc.

No. 11. Milling Machine Indexing, Clamping Devices and Planer Jacks.—Tables for Milling Machine Indexing; Change Gears for Milling Spirals; Angles for setting Indexing Head when Milling Clutches; Jig Clamping Devices; Straps and Clamps; Planer Jacks.

No. 12. Pipe and Pipe Fittings.—Pipe Threads and Gages; Cast-iron Fittings; Bronze Fittings; Pipe Flanges; Pipe Bends; Pipe Clamps and Hangers; Dimensions of Pipe for Various Services, etc.

No. 13. Boilers and Chimneys.—Flue Spacing and Bracing for Boilers; Strength of Boiler Joints; Riveting; Boiler Setting; Chimneys.

No. 14. Locomotive and Railway Data.—Locomotive Boilers; Bearing Pressures for Locomotive Journals; Locomotive Classifications; Rail Sections; Frogs, Switches and Cross-overs; Tires; Tractive Force; Inertia of Trains; Brake Levers; Brake Rods, etc.

No. 15. Steam and Gas Engines.—Saturated Steam; Steam Pipe Sizes; Steam Engine Design; Volume of Cylinders; Stuffing Boxes; Setting Corliss Engine Valve Gears; Condenser and Air Pump Data; Horsepower of Gasoline Engines; Automobile Engine Crankshafts, etc.

No. 16. Mathematical Tables.—Squares of Mixed Numbers; Functions of Fractions; Circumference and Diameters of Circles; Tables for Spacing off Circles; Solution of Triangles; Formulas for Solving Regular Polygons; Geometrical Progression, etc.

No. 17. Mechanics and Strength of Materials.—Work; Energy; Centrifugal Force; Center of Gravity; Motion; Friction; Pendulum; Falling Bodies; Strength of Materials; Strength of Flat Plates; Ratio of Outside and Inside Radii of Thick Cylinders, etc.

No. 18. Beam Formulas and Structural Design.—Beam Formulas; Sectional Moduli of Structural Shapes; Beam Charts; Net Areas of Structural Angles; Rivet Spacing; Splices for Channels and I-beams; Stresses in Roof Trusses, etc.

No. 19. Belt, Rope and Chain Drives.—Dimensions of Pulleys; Weights of Pulleys; Horsepower of Belting; Belt Velocity; Angular Belt Drives; Horsepower transmitted by Ropes; Sheaves for Rope Drive; Bending Stresses in Wire Ropes; Sprockets for Link Chains; Formulas and Tables for Various Classes of Driving Chain.

No. 20. Wiring Diagrams, Heating and Ventilation, and Miscellaneous Tables.—Typical Motor Wiring Diagrams; Resistance of Round Copper Wire; Rubber Covered Cables; Current Densities for Various Contacts and Materials; Centrifugal Fan and Blower Capacities; Hot Water Main Capacities; Miscellaneous Tables: Decimal Equivalents, Metric Conversion Tables, Weights and Specific Gravity of Metals, Weights of Fillets, Drafting-room Conventions, etc.

MACHINERY, the monthly mechanical journal, originator of the Reference and Data Sheet Series, is published in four editions—the *Shop Edition*, \$1.00 a year; the *Engineering Edition*, \$2.00 a year; the *Railway Edition*, \$2.00 a year, and the *Foreign Edition*, \$3.00 a year.

The Industrial Press, Publishers of MACHINERY,
49-55 Lafayette Street, New York City, U. S. A.

