

NATURAL TRIGONOMETRIC VALUES

Angle °	SIN	TAN	SEC	CSC	COT	COS	Angle °
0	0.00000	0.00000	1.00000	∞	∞	1.00000	90
10	0.00291	0.00291	1.00000	343.775	343.774	1.00000	50
20	0.00582	0.00582	1.00002	171.888	171.885	0.99998	40
30	0.00873	0.00873	1.00004	114.593	114.589	0.99996	30
40	0.01164	0.01164	1.00007	85.9456	85.9398	0.99993	20
50	0.01454	0.01455	1.00011	68.7574	68.7501	0.99989	10
1	0.01745	0.01746	1.00015	57.2987	57.2900	0.99985	89
10	0.02036	0.02036	1.00021	49.1141	49.1039	0.99979	50
20	0.02327	0.02328	1.00027	42.9757	42.9641	0.99973	40
30	0.02618	0.02619	1.00034	38.2016	38.1885	0.99966	30
40	0.02908	0.02910	1.00042	34.3823	34.3678	0.99958	20
50	0.03199	0.03201	1.00051	31.2576	31.2416	0.99949	10
2	0.03490	0.03492	1.00061	28.6537	28.6363	0.99939	88
10	0.03781	0.03783	1.00072	26.4505	26.4316	0.99929	50
20	0.04071	0.04075	1.00083	24.5621	24.5418	0.99917	40
30	0.04362	0.04366	1.00095	22.9256	22.9038	0.99905	30
40	0.04653	0.04658	1.00108	21.4937	21.4704	0.99892	20
50	0.04943	0.04949	1.00122	20.2303	20.2056	0.99878	10
3	0.05234	0.05241	1.00137	19.1073	19.0811	0.99863	87
10	0.05524	0.05533	1.00153	18.1026	18.0750	0.99847	50
20	0.05814	0.05824	1.00169	17.1984	17.1693	0.99831	40
30	0.06105	0.06116	1.00187	16.3804	16.3499	0.99813	30
40	0.06395	0.06408	1.00205	15.6368	15.6048	0.99795	20
50	0.06685	0.06700	1.00224	14.9579	14.9244	0.99776	10
4	0.06976	0.06993	1.00244	14.3356	14.3007	0.99756	86
10	0.07266	0.07285	1.00265	13.7631	13.7267	0.99736	50
20	0.07556	0.07578	1.00287	13.2347	13.1969	0.99714	40
30	0.07846	0.07870	1.00309	12.7455	12.7062	0.99692	30
40	0.08136	0.08163	1.00333	12.2913	12.2505	0.99668	20
50	0.08426	0.08456	1.00357	11.8684	11.8262	0.99644	10
5	0.08716	0.08749	1.00382	11.4737	11.4301	0.99619	85
10	0.09005	0.09042	1.00408	11.1045	11.0594	0.99594	50
20	0.09295	0.09335	1.00435	10.7585	10.7119	0.99567	40
30	0.09585	0.09629	1.00463	10.4334	10.3854	0.99540	30
40	0.09874	0.09923	1.00491	10.1275	10.0780	0.99511	20
50	0.10164	0.10216	1.00521	9.83912	9.78817	0.99482	10
6	0.10453	0.10510	1.00551	9.56677	9.51436	0.99452	84
10	0.10742	0.10805	1.00582	9.30917	9.25530	0.99421	50
20	0.11031	0.11099	1.00614	9.06515	9.00983	0.99390	40
30	0.11320	0.11394	1.00647	8.83367	8.77689	0.99357	30
40	0.11609	0.11688	1.00681	8.61379	8.55555	0.99324	20
50	0.11898	0.11983	1.00715	8.40466	8.34496	0.99290	10
7	0.12187	0.12278	1.00751	8.20551	8.14435	0.99255	83
10	0.12476	0.12574	1.00787	8.01565	7.95302	0.99219	50
20	0.12764	0.12869	1.00825	7.83443	7.77035	0.99182	40
30	0.13053	0.13165	1.00863	7.66130	7.59575	0.99144	30
40	0.13341	0.13461	1.00902	7.49571	7.42871	0.99106	20
50	0.13629	0.13758	1.00942	7.33719	7.26873	0.99067	10
8	0.13917	0.14054	1.00983	7.18530	7.11537	0.99027	82
	COS	COT	CSC	SEC	TAN	SIN	Angle

Angle °	SIN	TAN	SEC	CSC	COT	COS	Angle °
8	0.13917	0.14054	1.00983	7.18530	7.11537	0.99027	82
10	0.14205	0.14351	1.01024	7.03962	6.96823	0.98986	50
20	0.14493	0.14648	1.01067	6.89979	6.82694	0.98944	40
30	0.14781	0.14945	1.01111	6.76547	6.69116	0.98902	30
40	0.15069	0.15243	1.01155	6.63633	6.56055	0.98858	20
50	0.15356	0.15540	1.01200	6.51208	6.43484	0.98814	10
9	0.15643	0.15838	1.01247	6.39245	6.31375	0.98769	81
10	0.15931	0.16137	1.01294	6.27719	6.19703	0.98723	50
20	0.16218	0.16435	1.01342	6.16607	6.08444	0.98676	40
30	0.16505	0.16734	1.01391	6.05886	5.97576	0.98629	30
40	0.16792	0.17033	1.01440	5.95536	5.87080	0.98580	20
50	0.17078	0.17333	1.01491	5.85539	5.76937	0.98531	10
10	0.17365	0.17633	1.01543	5.75877	5.67128	0.98481	80
10	0.17651	0.17933	1.01595	5.66533	5.57638	0.98430	50
20	0.17937	0.18233	1.01649	5.57493	5.48451	0.98378	40
30	0.18224	0.18534	1.01703	5.48740	5.39552	0.98325	30
40	0.18509	0.18835	1.01758	5.40263	5.30928	0.98272	20
50	0.18795	0.19136	1.01815	5.32049	5.22566	0.98218	10
11	0.19081	0.19438	1.01872	5.24084	5.14455	0.98163	79
10	0.19366	0.19740	1.01930	5.16359	5.06584	0.98107	50
20	0.19652	0.20042	1.01989	5.08863	4.98940	0.98050	40
30	0.19937	0.20345	1.02049	5.01585	4.91516	0.97992	30
40	0.20222	0.20648	1.02110	4.94517	4.84300	0.97934	20
50	0.20507	0.20952	1.02171	4.87649	4.77286	0.97875	10
12	0.20791	0.21256	1.02234	4.80973	4.70463	0.97815	78
10	0.21076	0.21560	1.02298	4.74482	4.63825	0.97754	50
20	0.21360	0.21864	1.02362	4.68167	4.57363	0.97692	40
30	0.21644	0.22169	1.02428	4.62023	4.51071	0.97630	30
40	0.21928	0.22475	1.02494	4.56041	4.44942	0.97566	20
50	0.22212	0.22781	1.02562	4.50216	4.38969	0.97502	10
13	0.22495	0.23087	1.02630	4.44541	4.33148	0.97437	77
10	0.22778	0.23393	1.02700	4.39012	4.27471	0.97371	50
20	0.23062	0.23700	1.02770	4.33622	4.21933	0.97304	40
30	0.23345	0.24008	1.02842	4.28366	4.16530	0.97237	30
40	0.23627	0.24316	1.02914	4.23239	4.11256	0.97169	20
50	0.23910	0.24624	1.02987	4.18238	4.06107	0.97100	10
14	0.24192	0.24933	1.03061	4.13357	4.01078	0.97030	76
10	0.24474	0.25242	1.03137	4.08591	3.96165	0.96959	50
20	0.24756	0.25552	1.03213	4.03938	3.91364	0.96887	40
30	0.25038	0.25862	1.03290	3.99393	3.86671	0.96815	30
40	0.25320	0.26172	1.03368	3.94952	3.82083	0.96742	20
50	0.25601	0.26483	1.03447	3.90613	3.77595	0.96667	10
15	0.25882	0.26795	1.03528	3.86370	3.73205	0.96593	75
10	0.26163	0.27107	1.03609	3.82223	3.68909	0.96517	50
20	0.26443	0.27419	1.03691	3.78166	3.64705	0.96440	40
30	0.26724	0.27732	1.03774	3.74198	3.60588	0.96363	30
40	0.27004	0.28046	1.03858	3.70315	3.56557	0.96285	20
50	0.27284	0.28360	1.03944	3.66515	3.52609	0.96206	10
16	0.27564	0.28675	1.04030	3.62796	3.48741	0.96126	74
	COS	COT	CSC	SEC	TAN	SIN	Angle

NATURAL TRIGONOMETRIC VALUES

Angle °	SIN	TAN	SEC	CSC	COT	COS	
16	0.27564	0.28675	1.04030	3.62796	3.48741	0.96126	74
10	0.27843	0.28990	1.04117	3.59154	3.44951	0.96046	50
20	0.28123	0.29305	1.04206	3.55587	3.41236	0.95964	40
30	0.28402	0.29621	1.04295	3.52094	3.37594	0.95882	30
40	0.28680	0.29938	1.04385	3.48671	3.34023	0.95799	20
50	0.28959	0.30255	1.04477	3.45317	3.30521	0.95715	10
17	0.29237	0.30573	1.04569	3.42030	3.27085	0.95630	73
10	0.29515	0.30891	1.04663	3.38808	3.23714	0.95545	50
20	0.29793	0.31210	1.04757	3.35649	3.20406	0.95459	40
30	0.30071	0.31530	1.04853	3.32551	3.17159	0.95372	30
40	0.30348	0.31850	1.04950	3.29512	3.13972	0.95284	20
50	0.30625	0.32171	1.05047	3.26531	3.10842	0.95195	10
18	0.30902	0.32492	1.05146	3.23607	3.07768	0.95106	72
10	0.31178	0.32814	1.05246	3.20737	3.04749	0.95015	50
20	0.31454	0.33136	1.05347	3.17920	3.01783	0.94924	40
30	0.31730	0.33460	1.05449	3.15155	2.98868	0.94832	30
40	0.32006	0.33783	1.05552	3.12440	2.96004	0.94740	20
50	0.32282	0.34108	1.05657	3.09774	2.93189	0.94646	10
19	0.32557	0.34433	1.05762	3.07155	2.90421	0.94552	71
10	0.32832	0.34758	1.05869	3.04584	2.87700	0.94457	50
20	0.33106	0.35085	1.05976	3.02057	2.85023	0.94361	40
30	0.33381	0.35412	1.06085	2.99574	2.82391	0.94264	30
40	0.33655	0.35740	1.06195	2.97135	2.79802	0.94167	20
50	0.33929	0.36068	1.06306	2.94737	2.77254	0.94068	10
20	0.34202	0.36397	1.06418	2.92380	2.74748	0.93969	70
10	0.34475	0.36727	1.06531	2.90063	2.72281	0.93869	50
20	0.34748	0.37057	1.06645	2.87785	2.69853	0.93769	40
30	0.35021	0.37388	1.06761	2.85545	2.67462	0.93667	30
40	0.35293	0.37720	1.06878	2.83342	2.65109	0.93565	20
50	0.35565	0.38053	1.06995	2.81175	2.62791	0.93462	10
21	0.35837	0.38386	1.07114	2.79043	2.60509	0.93358	69
10	0.36108	0.38721	1.07235	2.76945	2.58261	0.93253	50
20	0.36379	0.39055	1.07356	2.74881	2.56046	0.93148	40
30	0.36650	0.39391	1.07479	2.72850	2.53865	0.93042	30
40	0.36921	0.39727	1.07602	2.70851	2.51715	0.92935	20
50	0.37191	0.40065	1.07727	2.68884	2.49597	0.92827	10
22	0.37461	0.40403	1.07853	2.66947	2.47509	0.92718	68
10	0.37730	0.40741	1.07981	2.65040	2.45451	0.92609	50
20	0.37999	0.41081	1.08109	2.63162	2.43422	0.92499	40
30	0.38268	0.41421	1.08239	2.61313	2.41421	0.92388	30
40	0.38537	0.41763	1.08370	2.59491	2.39449	0.92276	20
50	0.38805	0.42105	1.08503	2.57698	2.37504	0.92164	10
23	0.39073	0.42447	1.08636	2.55930	2.35585	0.92050	67
10	0.39341	0.42791	1.08771	2.54190	2.33693	0.91936	50
20	0.39608	0.43136	1.08907	2.52474	2.31826	0.91822	40
30	0.39875	0.43481	1.09044	2.50784	2.29984	0.91706	30
40	0.40141	0.43828	1.09183	2.49119	2.28167	0.91590	20
50	0.40408	0.44175	1.09323	2.47477	2.26374	0.91472	10
24	0.40674	0.44523	1.09464	2.45859	2.24604	0.91355	66
	COS	COT	CSC	SEC	TAN	SIN	Angle

Angle °	SIN	TAN	SEC	CSC	COT	COS	
24	0.40674	0.44523	1.09464	2.45859	2.24604	0.91355	66
10	0.40939	0.44872	1.09606	2.44264	2.22857	0.91236	50
20	0.41204	0.45222	1.09750	2.42692	2.21132	0.91116	40
30	0.41469	0.45573	1.09895	2.41142	2.19430	0.90996	30
40	0.41734	0.45924	1.10041	2.39614	2.17749	0.90875	20
50	0.41998	0.46277	1.10189	2.38106	2.16090	0.90753	10
25	0.42262	0.46631	1.10338	2.36620	2.14451	0.90631	65
10	0.42525	0.46985	1.10488	2.35154	2.12832	0.90507	50
20	0.42788	0.47341	1.10640	2.33708	2.11233	0.90383	40
30	0.43051	0.47698	1.10793	2.32282	2.09654	0.90259	30
40	0.43313	0.48055	1.10947	2.30875	2.08094	0.90133	20
50	0.43575	0.48414	1.11103	2.29487	2.06553	0.90007	10
26	0.43837	0.48773	1.11260	2.28117	2.05030	0.89879	64
10	0.44098	0.49134	1.11419	2.26766	2.03526	0.89752	50
20	0.44359	0.49495	1.11579	2.25432	2.02039	0.89623	40
30	0.44620	0.49858	1.11740	2.24116	2.00569	0.89493	30
40	0.44880	0.50222	1.11903	2.22817	1.99116	0.89363	20
50	0.45140	0.50587	1.12067	2.21535	1.97681	0.89232	10
27	0.45399	0.50953	1.12233	2.20269	1.96261	0.89101	63
10	0.45658	0.51319	1.12400	2.19019	1.94858	0.88968	50
20	0.45917	0.51688	1.12568	2.17786	1.93470	0.88835	40
30	0.46175	0.52057	1.12738	2.16568	1.92098	0.88701	30
40	0.46433	0.52427	1.12910	2.15366	1.90741	0.88566	20
50	0.46690	0.52798	1.13083	2.14178	1.89400	0.88431	10
28	0.46947	0.53171	1.13257	2.13005	1.88073	0.88295	62
10	0.47204	0.53545	1.13433	2.11847	1.86760	0.88158	50
20	0.47460	0.53920	1.13610	2.10704	1.85462	0.88020	40
30	0.47716	0.54296	1.13789	2.09574	1.84177	0.87882	30
40	0.47971	0.54673	1.13970	2.08458	1.82906	0.87743	20
50	0.48226	0.55051	1.14152	2.07356	1.81649	0.87603	10
29	0.48481	0.55431	1.14335	2.06267	1.80405	0.87462	61
10	0.48735	0.55812	1.14521	2.05191	1.79174	0.87321	50
20	0.48989	0.56194	1.14707	2.04128	1.77955	0.87178	40
30	0.49242	0.56577	1.14896	2.03077	1.76749	0.87036	30
40	0.49495	0.56962	1.15085	2.02039	1.75556	0.86892	20
50	0.49748	0.57348	1.15277	2.01014	1.74375	0.86748	10
30	0.50000	0.57735	1.15470	2.00000	1.73205	0.86603	60
10	0.50252	0.58124	1.15665	1.98998	1.72047	0.86457	50
20	0.50503	0.58513	1.15861	1.98008	1.70901	0.86310	40
30	0.50754	0.58905	1.16059	1.97029	1.69766	0.86163	30
40	0.51004	0.59297	1.16259	1.96062	1.68643	0.86015	20
50	0.51254	0.59691	1.16460	1.95106	1.67530	0.85866	10
31	0.51504	0.60086	1.16663	1.94160	1.66428	0.85717	59
10	0.51753	0.60483	1.16868	1.93226	1.65337	0.85567	50
20	0.52002	0.60881	1.17075	1.92302	1.64256	0.85416	40
30	0.52250	0.61280	1.17283	1.91388	1.63185	0.85264	30
40	0.52498	0.61681	1.17493	1.90485	1.62125	0.85112	20
50	0.52745	0.62083	1.17704	1.89591	1.61074	0.84959	10
32	0.52992	0.62487	1.17918	1.88708	1.60033	0.84805	58
	COS	COT	CSC	SEC	TAN	SIN	Angle

NATURAL TRIGONOMETRIC VALUES

Angle °	SIN	TAN	SEC	CSC	COT	COS	
32	0.52992	0.62487	1.17918	1.88708	1.60033	0.84805	58
10	0.53238	0.62892	1.18133	1.87834	1.59002	0.84650	50
20	0.53484	0.63299	1.18350	1.86970	1.57981	0.84495	40
30	0.53730	0.63707	1.18569	1.86116	1.56969	0.84339	30
40	0.53975	0.64117	1.18790	1.85271	1.55966	0.84182	20
50	0.54220	0.64528	1.19012	1.84435	1.54972	0.84025	10
33	0.54464	0.64941	1.19236	1.83608	1.53986	0.83867	57
10	0.54708	0.65355	1.19463	1.82790	1.53010	0.83708	50
20	0.54951	0.65771	1.19691	1.81981	1.52043	0.83549	40
30	0.55194	0.66189	1.19920	1.81180	1.51084	0.83389	30
40	0.55436	0.66608	1.20152	1.80388	1.50133	0.83228	20
50	0.55678	0.67028	1.20386	1.79604	1.49190	0.83066	10
34	0.55919	0.67451	1.20622	1.78829	1.48256	0.82904	56
10	0.56160	0.67875	1.20859	1.78062	1.47330	0.82741	50
20	0.56401	0.68301	1.21099	1.77303	1.46411	0.82577	40
30	0.56641	0.68728	1.21341	1.76552	1.45501	0.82413	30
40	0.56880	0.69157	1.21584	1.75808	1.44598	0.82248	20
50	0.57119	0.69588	1.21830	1.75073	1.43703	0.82082	10
35	0.57358	0.70021	1.22077	1.74345	1.42815	0.81915	55
10	0.57596	0.70455	1.22327	1.73624	1.41934	0.81748	50
20	0.57833	0.70891	1.22579	1.72911	1.41061	0.81580	40
30	0.58070	0.71329	1.22833	1.72205	1.40195	0.81412	30
40	0.58307	0.71769	1.23089	1.71506	1.39336	0.81242	20
50	0.58543	0.72211	1.23347	1.70815	1.38484	0.81072	10
36	0.58779	0.72654	1.23607	1.70130	1.37638	0.80902	54
10	0.59014	0.73100	1.23869	1.69452	1.36800	0.80730	50
20	0.59248	0.73547	1.24134	1.68782	1.35968	0.80558	40
30	0.59482	0.73996	1.24400	1.68117	1.35142	0.80386	30
40	0.59716	0.74447	1.24669	1.67460	1.34323	0.80212	20
50	0.59949	0.74900	1.24940	1.66809	1.33511	0.80038	10
37	0.60182	0.75355	1.25214	1.66164	1.32704	0.79864	53
10	0.60414	0.75812	1.25489	1.65526	1.31904	0.79688	50
20	0.60645	0.76272	1.25767	1.64894	1.31110	0.79512	40
30	0.60876	0.76733	1.26047	1.64268	1.30323	0.79335	30
40	0.61107	0.77196	1.26330	1.63648	1.29541	0.79158	20
50	0.61337	0.77661	1.26615	1.63035	1.28764	0.78980	10
38	0.61566	0.78129	1.26902	1.62427	1.27994	0.78801	52
10	0.61795	0.78598	1.27191	1.61825	1.27230	0.78622	50
20	0.62024	0.79070	1.27483	1.61229	1.26471	0.78442	40
30	0.62251	0.79544	1.27778	1.60639	1.25717	0.78261	30
40	0.62479	0.80020	1.28075	1.60054	1.24969	0.78079	20
50	0.62706	0.80498	1.28374	1.59475	1.24227	0.77897	10
39	0.62932	0.80978	1.28676	1.58902	1.23490	0.77715	51
10	0.63158	0.81461	1.28980	1.58333	1.22758	0.77531	50
20	0.63383	0.81946	1.29287	1.57771	1.22031	0.77347	40
30	0.63608	0.82434	1.29597	1.57213	1.21310	0.77162	30
40	0.63832	0.82923	1.29909	1.56661	1.20593	0.76977	20
50	0.64056	0.83415	1.30223	1.56114	1.19882	0.76791	10
40	0.64279	0.83910	1.30541	1.55572	1.19175	0.76604	50
	COS	COT	CSC	SEC	TAN	SIN	Angle

Angle °	SIN	TAN	SEC	CSC	COT	COS	
40	0.64279	0.83910	1.30541	1.55572	1.19175	0.76604	50
10	0.64501	0.84407	1.30861	1.55036	1.18474	0.76417	50
20	0.64723	0.84906	1.31183	1.54504	1.17777	0.76229	40
30	0.64945	0.85408	1.31509	1.53977	1.17085	0.76041	30
40	0.65166	0.85912	1.31837	1.53455	1.16398	0.75851	20
50	0.65386	0.86419	1.32168	1.52938	1.15715	0.75661	10
41	0.65606	0.86929	1.32501	1.52425	1.15037	0.75471	49
10	0.65825	0.87441	1.32838	1.51918	1.14363	0.75280	50
20	0.66044	0.87955	1.33177	1.51415	1.13694	0.75088	40
30	0.66262	0.88473	1.33519	1.50916	1.13029	0.74896	30
40	0.66480	0.88992	1.33864	1.50422	1.12369	0.74703	20
50	0.66697	0.89515	1.34212	1.49933	1.11713	0.74509	10
42	0.66913	0.90040	1.34563	1.49448	1.11061	0.74314	48
10	0.67129	0.90569	1.34917	1.48967	1.10414	0.74120	50
20	0.67344	0.91099	1.35274	1.48491	1.09770	0.73924	40
30	0.67559	0.91633	1.35634	1.48019	1.09131	0.73728	30
40	0.67773	0.92170	1.35997	1.47551	1.08496	0.73531	20
50	0.67987	0.92709	1.36363	1.47087	1.07864	0.73333	10
43	0.68200	0.93252	1.36733	1.46628	1.07237	0.73135	47
10	0.68412	0.93797	1.37105	1.46173	1.06613	0.72937	50
20	0.68624	0.94345	1.37481	1.45721	1.05994	0.72737	40
30	0.68835	0.94896	1.37860	1.45274	1.05378	0.72537	30
40	0.69046	0.95451	1.38242	1.44831	1.04766	0.72337	20
50	0.69256	0.96008	1.38628	1.44391	1.04158	0.72136	10
44	0.69466	0.96569	1.39016	1.43956	1.03553	0.71934	46
10	0.69675	0.97133	1.39409	1.43524	1.02952	0.71732	50
20	0.69883	0.97700	1.39804	1.43096	1.02355	0.71529	40
30	0.70091	0.98270	1.40203	1.42672	1.01761	0.71325	30
40	0.70298	0.98843	1.40606	1.42251	1.01170	0.71121	20
50	0.70505	0.99420	1.41012	1.41835	1.00583	0.70916	10
45	0.70711	1.00000	1.41421	1.41421	1.00000	0.70711	45
	COS	COT	CSC	SEC	TAN	SIN	Angle