

CIRCULAR SINES AND COSINES TO TENTHS OF A DEGREE

Table 4.10

θ	$\sin \theta$			$\cos \theta$	$90^\circ - \theta$		
0.0°	0.00000	00000	00000	1.00000	00000	90.0°	
0.1	0.00174	53283	65898	0.99999	84769	13288	89.9
0.2	0.00349	06514	15224	0.99999	39076	57790	89.8
0.3	0.00523	59638	31420	0.99998	62922	47427	89.7
0.4	0.00698	12602	97962	0.99997	56307	05395	89.6
0.5	0.00872	65354	98374	0.99996	19230	64171	89.5
0.6	0.01047	17841	16246	0.99994	51693	65512	89.4
0.7	0.01221	70008	35247	0.99992	53696	60452	89.3
0.8	0.01396	21803	39145	0.99990	25240	09304	89.2
0.9	0.01570	73173	11821	0.99987	66324	81661	89.1
1.0	0.01745	24064	37284	0.99984	76951	56391	89.0
1.1	0.01919	74423	99690	0.99981	57121	21644	88.9
1.2	0.02094	24198	83357	0.99978	06834	74845	88.8
1.3	0.02268	73335	72781	0.99974	26093	22698	88.7
1.4	0.02443	21781	52653	0.99970	14897	81183	88.6
1.5	0.02617	69483	07873	0.99965	73249	75557	88.5
1.6	0.02792	16387	23569	0.99961	01150	40354	88.4
1.7	0.02966	62440	85111	0.99955	98601	19384	88.3
1.8	0.03141	07590	78128	0.99950	65603	65732	88.2
1.9	0.03315	51783	88526	0.99945	02159	41757	88.1
2.0	0.03489	94967	02501	0.99939	08270	19096	88.0
2.1	0.03664	37087	06556	0.99932	83937	78656	87.9
2.2	0.03838	78090	87520	0.99926	29164	10621	87.8
2.3	0.04013	17925	32560	0.99919	43951	14446	87.7
2.4	0.04187	56537	29200	0.99912	28300	98858	87.6
2.5	0.04361	93873	65336	0.99904	82215	81858	87.5
2.6	0.04536	29881	29254	0.99897	05697	90715	87.4
2.7	0.04710	64507	09643	0.99888	98749	61970	87.3
2.8	0.04884	97697	95613	0.99880	61373	41434	87.2
2.9	0.05059	29400	76713	0.99871	93571	84186	87.1
3.0	0.05233	59562	42944	0.99862	95347	54574	87.0
3.1	0.05407	88129	84775	0.99853	66703	26212	86.9
3.2	0.05582	15049	93164	0.99844	07641	81981	86.8
3.3	0.05756	40269	59567	0.99834	18166	14028	86.7
3.4	0.05930	63735	75962	0.99823	98279	23765	86.6
3.5	0.06104	85395	34857	0.99813	47984	21867	86.5
3.6	0.06279	05195	29313	0.99802	67284	28272	86.4
3.7	0.06453	23082	52958	0.99791	56182	72179	86.3
3.8	0.06627	39004	00000	0.99780	14682	92050	86.2
3.9	0.06801	52906	65248	0.99768	42788	35605	86.1
4.0	0.06975	64737	44125	0.99756	40502	59824	86.0
4.1	0.07149	74443	32686	0.99744	07829	30944	85.9
4.2	0.07323	81971	27632	0.99731	44772	24458	85.8
4.3	0.07497	87268	26328	0.99718	51335	25116	85.7
4.4	0.07671	90281	26819	0.99705	27522	26920	85.6
4.5	0.07845	90957	27845	0.99691	73337	33128	85.5
4.6	0.08019	89243	28859	0.99677	88784	56247	85.4
4.7	0.08193	85086	30041	0.99663	73868	18037	85.3
4.8	0.08367	78433	32315	0.99649	28592	49504	85.2
4.9	0.08541	69231	37367	0.99634	52961	90906	85.1
5.0	0.08715	57427	47658	0.99619	46980	91746	85.0
90° - θ	$\cos \theta$			$\sin \theta$		θ	
	* $\begin{bmatrix} (-8)3 \\ 5 \end{bmatrix}$			$\begin{bmatrix} (-7)4 \\ 5 \end{bmatrix}$			

For conversion from radians to degrees see Example 14.

Table 4.10 CIRCULAR SINES AND COSINES TO TENTHS OF A DEGREE

θ	$\sin \theta$			$\cos \theta$			$90^\circ - \theta$
5.0°	0.08715	57427	47658	0.99619	46980	91746	85.0°
5.1	0.08889	42968	66442	0.99604	10654	10770	84.9
5.2	0.09063	25801	97780	0.99588	43986	15970	84.8
5.3	0.09237	05874	46562	0.99572	46981	84582	84.7
5.4	0.09410	83133	18514	0.99556	19646	03080	84.6
5.5	0.09584	57525	20224	0.99539	61983	67179	84.5
5.6	0.09758	28997	59149	0.99522	73999	81831	84.4
5.7	0.09931	97497	43639	0.99505	55699	61226	84.3
5.8	0.10105	62971	82946	0.99488	07088	28788	84.2
5.9	0.10279	25367	87247	0.99470	28171	17174	84.1
6.0	0.10452	84632	67653	0.99452	18953	68273	84.0
6.1	0.10626	40713	36233	0.99433	79441	33205	83.9
6.2	0.10799	93557	06023	0.99415	09639	72315	83.8
6.3	0.10973	43110	91045	0.99396	09554	55180	83.7
6.4	0.11146	89322	06325	0.99376	79191	60596	83.6
6.5	0.11320	32137	67907	0.99357	18556	76587	83.5
6.6	0.11493	71504	92867	0.99337	27656	00396	83.4
6.7	0.11667	07370	99333	0.99317	06495	38486	83.3
6.8	0.11840	39683	06501	0.99296	55081	06537	83.2
6.9	0.12013	68388	34647	0.99275	73419	29446	83.1
7.0	0.12186	93434	05147	0.99254	61516	41322	83.0
7.1	0.12360	14767	40493	0.99233	19378	85489	82.9
7.2	0.12533	32335	64304	0.99211	47013	14478	82.8
7.3	0.12706	46086	01350	0.99189	44425	90030	82.7
7.4	0.12879	55965	77563	0.99167	11623	83090	82.6
7.5	0.13052	61922	20052	0.99144	48613	73810	82.5
7.6	0.13225	63902	57122	0.99121	55402	51542	82.4
7.7	0.13398	61854	18292	0.99098	31997	14836	82.3
7.8	0.13571	55724	34304	0.99074	78404	71444	82.2
7.9	0.13744	45460	37147	0.99050	94632	38309	82.1
8.0	0.13917	31009	60065	0.99026	80687	41570	82.0
8.1	0.14090	12319	37583	0.99002	36577	16558	81.9
8.2	0.14262	89337	05512	0.98977	62309	07789	81.8
8.3	0.14435	62010	00973	0.98952	57890	68969	81.7
8.4	0.14608	30285	62412	0.98927	23329	62988	81.6
8.5	0.14780	94111	29611	0.98901	58633	61917	81.5
8.6	0.14953	53434	43710	0.98875	63810	47006	81.4
8.7	0.15126	08202	47219	0.98849	38868	08684	81.3
8.8	0.15298	58362	84038	0.98822	83814	46553	81.2
8.9	0.15471	03862	99468	0.98795	98657	69389	81.1
9.0	0.15643	44650	40231	0.98768	83405	95138	81.0
9.1	0.15815	80672	54484	0.98741	38067	50911	80.9
9.2	0.15988	11876	91835	0.98713	62650	72988	80.8
9.3	0.16160	38211	03361	0.98685	57164	06807	80.7
9.4	0.16332	59622	41622	0.98657	21616	06969	80.6
9.5	0.16504	76058	60678	0.98628	56015	37231	80.5
9.6	0.16676	87467	16102	0.98599	60370	70505	80.4
9.7	0.16848	93795	65003	0.98570	34690	88854	80.3
9.8	0.17020	94991	66033	0.98540	78984	83490	80.2
9.9	0.17192	91002	79410	0.98510	93261	54774	80.1
10.0	0.17364	81776	66930	0.98480	77530	12208	80.0
$90^\circ - \theta$	$\cos \theta$			$\sin \theta$			θ
	* $\begin{bmatrix} (-8)7 \\ 5 \end{bmatrix}$			$\begin{bmatrix} (-7)4 \\ 5 \end{bmatrix}$			

CIRCULAR SINES AND COSINES TO TENTHS OF A DEGREE

Table 4.10

θ	$\sin \theta$			$\cos \theta$			$90^\circ - \theta$
10.0°	0.17364	81776	66930	0.98480	77530	12208	80.0°
10.1	0.17536	67260	91987	0.98450	31799	74437	79.9
10.2	0.17708	47403	19583	0.98419	56079	69242	79.8
10.3	0.17880	22151	16350	0.98388	50379	33542	79.7
10.4	0.18051	91452	50560	0.98357	14708	13386	79.6
10.5	0.18223	55254	92147	0.98325	49075	63955	79.5
10.6	0.18395	13506	12720	0.98293	53491	49554	79.4
10.7	0.18566	66153	85577	0.98261	27965	43615	79.3
10.8	0.18738	13145	85725	0.98228	72507	28689	79.2
10.9	0.18909	54429	89891	0.98195	87126	96444	79.1
11.0	0.19080	89953	76545	0.98162	71834	47664	79.0
11.1	0.19252	19665	25907	0.98129	26639	92245	78.9
11.2	0.19423	43512	19972	0.98095	51553	49192	78.8
11.3	0.19594	61442	42518	0.98061	46585	46613	78.7
11.4	0.19765	73403	79126	0.98027	11746	21722	78.6
11.5	0.19936	79344	17197	0.97992	47046	20830	78.5
11.6	0.20107	79211	45965	0.97957	52495	99344	78.4
11.7	0.20278	72953	56512	0.97922	28106	21766	78.3
11.8	0.20449	60518	41790	0.97886	73887	61685	78.2
11.9	0.20620	41853	96630	0.97850	89851	01778	78.1
12.0	0.20791	16908	17759	0.97814	76007	33806	78.0
12.1	0.20961	85629	03822	0.97778	32367	58606	77.9
12.2	0.21132	47964	55389	0.97741	58942	86096	77.8
12.3	0.21303	03862	74977	0.97704	55744	35264	77.7
12.4	0.21473	53271	67063	0.97667	22783	34168	77.6
12.5	0.21643	96139	38103	0.97629	60071	19933	77.5
12.6	0.21814	32413	96543	0.97591	67619	38747	77.4
12.7	0.21984	62043	52838	0.97553	45439	45857	77.3
12.8	0.22154	84976	19467	0.97514	93543	05563	77.2
12.9	0.22325	01160	10951	0.97476	11941	91222	77.1
13.0	0.22495	10543	43865	0.97437	00647	85235	77.0
13.1	0.22665	13074	36855	0.97397	59672	79052	76.9
13.2	0.22835	08701	10656	0.97357	89028	73160	76.8
13.3	0.23004	97371	88104	0.97317	88727	77088	76.7
13.4	0.23174	79034	94157	0.97277	58782	09397	76.6
13.5	0.23344	53638	55905	0.97236	99203	97677	76.5
13.6	0.23514	21131	02590	0.97196	10005	78546	76.4
13.7	0.23683	81460	65619	0.97154	91199	97646	76.3
13.8	0.23853	34575	78581	0.97113	42799	09636	76.2
13.9	0.24022	80424	77264	0.97071	64815	78191	76.1
14.0	0.24192	18955	99668	0.97029	57262	75996	76.0
14.1	0.24361	50117	86023	0.96987	20152	84747	75.9
14.2	0.24530	73858	78803	0.96944	53498	95139	75.8
14.3	0.24699	90127	22743	0.96901	57314	06870	75.7
14.4	0.24868	98871	64855	0.96858	31611	28631	75.6
14.5	0.25038	00040	54441	0.96814	76403	78108	75.5
14.6	0.25206	93582	43114	0.96770	91704	81971	75.4
14.7	0.25375	79445	84806	0.96726	77527	75877	75.3
14.8	0.25544	57579	35791	0.96682	33886	04459	75.2
14.9	0.25713	27931	54696	0.96637	60793	21329	75.1
15.0	0.25881	90451	02521	0.96592	58262	89068	75.0
90° - θ	$\cos \theta$			$\sin \theta$			θ
	* $\begin{bmatrix} (-7)1 \\ 5 \end{bmatrix}$			$\begin{bmatrix} (-7)4 \\ 5 \end{bmatrix}$			

Table 4.10 CIRCULAR SINES AND COSINES TO TENTHS OF A DEGREE

θ	$\sin \theta$			$\cos \theta$			$90^\circ - \theta$
15.0°	0.25881	90451	02521	0.96592	58262	89068	75.0°
15.1	0.26050	45086	42648	0.96547	26308	79225	74.9
15.2	0.26218	91786	40865	0.96501	64944	72311	74.8
15.3	0.26387	30499	65373	0.96455	74184	57798	74.7
15.4	0.26555	61174	86809	0.96409	54042	34110	74.6
15.5	0.26723	83760	78257	0.96363	04532	08623	74.5
15.6	0.26891	98206	15266	0.96316	25667	97658	74.4
15.7	0.27060	04459	75864	0.96269	17464	26479	74.3
15.8	0.27228	02470	40574	0.96221	79935	29285	74.2
15.9	0.27395	92186	92432	0.96174	13095	49211	74.1
16.0	0.27563	73558	16999	0.96126	16959	38319	74.0
16.1	0.27731	46533	02378	0.96077	91541	57594	73.9
16.2	0.27899	11060	39229	0.96029	36856	76943	73.8
16.3	0.28066	67089	20788	0.95980	52919	75187	73.7
16.4	0.28234	14568	42876	0.95931	39745	40058	73.6
16.5	0.28401	53447	03923	0.95881	97348	68193	73.5
16.6	0.28568	83674	04974	0.95832	25744	65133	73.4
16.7	0.28736	05198	49712	0.95782	24948	45315	73.3
16.8	0.28903	17969	44472	0.95731	94975	32067	73.2
16.9	0.29070	21935	98252	0.95681	35840	57607	73.1
17.0	0.29237	17047	22737	0.95630	47559	63035	73.0
17.1	0.29404	03252	32304	0.95579	30147	98330	72.9
17.2	0.29570	80500	44047	0.95527	83621	22344	72.8
17.3	0.29737	48740	77786	0.95476	07995	02797	72.7
17.4	0.29904	07922	56087	0.95424	03285	16277	72.6
17.5	0.30070	57995	04273	0.95371	69507	48227	72.5
17.6	0.30236	98907	50445	0.95319	06677	92947	72.4
17.7	0.30403	30609	25490	0.95266	14812	53586	72.3
17.8	0.30569	53049	63106	0.95212	93927	42139	72.2
17.9	0.30735	66177	99807	0.95159	44038	79438	72.1
18.0	0.30901	69943	74947	0.95105	65162	95154	72.0
18.1	0.31067	64296	30732	0.95051	57316	27784	71.9
18.2	0.31233	49185	12233	0.94997	20515	24653	71.8
18.3	0.31399	24559	67405	0.94942	54776	41904	71.7
18.4	0.31564	90369	47102	0.94887	60116	44497	71.6
18.5	0.31730	46564	05092	0.94832	36552	06199	71.5
18.6	0.31895	93092	98070	0.94776	84100	09586	71.4
18.7	0.32061	29905	85676	0.94721	02777	46029	71.3
18.8	0.32226	56952	30511	0.94664	92601	15696	71.2
18.9	0.32391	74181	98149	0.94608	53588	27545	71.1
19.0	0.32556	81544	57157	0.94551	85755	99317	71.0
19.1	0.32721	78989	79104	0.94494	89121	57531	70.9
19.2	0.32886	66467	38583	0.94437	63702	37481	70.8
19.3	0.33051	43927	13223	0.94380	09515	83229	70.7
19.4	0.33216	11318	83703	0.94322	26579	47601	70.6
19.5	0.33380	68592	33771	0.94264	14910	92178	70.5
19.6	0.33545	15697	50255	0.94205	74527	87297	70.4
19.7	0.33709	52584	23082	0.94147	05448	12038	70.3
19.8	0.33873	79202	45291	0.94088	07689	54225	70.2
19.9	0.34037	95502	13050	0.94028	81270	10419	70.1
20.0	0.34202	01433	25669	0.93969	26207	85908	70.0
90° - θ	$\cos \theta$			$\sin \theta$			θ
	* $\begin{bmatrix} (-7)1 \\ 5 \end{bmatrix}$			$\begin{bmatrix} (-7)4 \\ 5 \end{bmatrix}$			

CIRCULAR SINES AND COSINES TO TENTHS OF A DEGREE

Table 4.10

θ	$\sin \theta$			$\cos \theta$			$90^\circ - \theta$
20.0°	0.34202	01433	25669	0.93969	26207	85908	70.0°
20.1	0.34365	96945	85616	0.93909	42520	94709	69.9
20.2	0.34529	81989	98535	0.93849	30227	59556	69.8
20.3	0.34693	56515	73256	0.93788	89346	11898	69.7
20.4	0.34857	20473	21815	0.93728	19894	91892	69.6
20.5	0.35020	73812	59467	0.93667	21892	48398	69.5
20.6	0.35184	16484	04702	0.93605	95357	38973	69.4
20.7	0.35347	48437	79257	0.93544	40308	29867	69.3
20.8	0.35510	69624	08137	0.93482	56763	96014	69.2
20.9	0.35673	79993	19625	0.93420	44743	21030	69.1
21.0	0.35836	79495	45300	0.93358	04264	97202	69.0
21.1	0.35999	68081	20051	0.93295	35348	25489	68.9
21.2	0.36162	45700	82092	0.93232	38012	15512	68.8
21.3	0.36325	12304	72978	0.93169	12275	85549	68.7
21.4	0.36487	67843	37620	0.93105	58158	62528	68.6
21.5	0.36650	12267	24297	0.93041	75679	82025	68.5
21.6	0.36812	45526	84678	0.92977	64858	88251	68.4
21.7	0.36974	67572	73829	0.92913	25715	34056	68.3
21.8	0.37136	78355	50235	0.92848	58268	80914	68.2
21.9	0.37298	77825	75809	0.92783	62538	98920	68.1
22.0	0.37460	65934	15912	0.92718	38545	66787	68.0
22.1	0.37622	42631	39366	0.92652	86308	71837	67.9
22.2	0.37784	07868	18467	0.92587	05848	09995	67.8
22.3	0.37945	61595	29005	0.92520	97183	85782	67.7
22.4	0.38107	03763	50274	0.92454	60336	12313	67.6
22.5	0.38268	34323	65090	0.92387	95325	11287	67.5
22.6	0.38429	53226	59804	0.92321	02171	12981	67.4
22.7	0.38590	60423	24319	0.92253	80894	56246	67.3
22.8	0.38751	55864	52103	0.92186	31515	88501	67.2
22.9	0.38912	39501	40206	0.92118	54055	65721	67.1
23.0	0.39073	11284	89274	0.92050	48534	52440	67.0
23.1	0.39233	71166	03561	0.91982	14973	21738	66.9
23.2	0.39394	19095	90951	0.91913	53392	55234	66.8
23.3	0.39554	55025	62965	0.91844	63813	43087	66.7
23.4	0.39714	78906	34781	0.91775	46256	83981	66.6
23.5	0.39874	90689	25246	0.91706	00743	85124	66.5
23.6	0.40034	90325	56895	0.91636	27295	62240	66.4
23.7	0.40194	77766	55960	0.91566	25933	39561	66.3
23.8	0.40354	52963	52390	0.91495	96678	49825	66.2
23.9	0.40514	15867	79863	0.91425	39552	34264	66.1
24.0	0.40673	66430	75800	0.91354	54576	42601	66.0
24.1	0.40833	04603	81385	0.91283	41772	33043	65.9
24.2	0.40992	30338	41573	0.91212	01161	72273	65.8
24.3	0.41151	43586	05109	0.91140	32766	35445	65.7
24.4	0.41310	44298	24542	0.91068	36608	06177	65.6
24.5	0.41469	32426	56239	0.90996	12708	76543	65.5
24.6	0.41628	07922	60401	0.90923	61090	47069	65.4
24.7	0.41786	70738	01077	0.90850	81775	26722	65.3
24.8	0.41945	20824	46177	0.90777	74785	32909	65.2
24.9	0.42103	58133	67491	0.90704	40142	91465	65.1
25.0	0.42261	82617	40699	0.90630	77870	36650	65.0
$90^\circ - \theta$	$\cos \theta$			$\sin \theta$			θ
	* $\begin{bmatrix} (-7)2 \\ 5 \end{bmatrix}$			$\begin{bmatrix} (-7)4 \\ 5 \end{bmatrix}$			

*See page II.

Table 4.10 CIRCULAR SINES AND COSINES TO TENTHS OF A DEGREE

θ	$\sin \theta$			$\cos \theta$			$90^\circ - \theta$
25.0°	0.42261	82617	40699	0.90630	77870	36650	65.0°
25.1	0.42419	94227	45390	0.90556	87990	11140	64.9
25.2	0.42577	92915	65073	0.90482	70524	66020	64.8
25.3	0.42735	78633	87192	0.90408	25496	60778	64.7
25.4	0.42893	51334	03146	0.90333	52928	63301	64.6
25.5	0.43051	10968	08295	0.90258	52843	49861	64.5
25.6	0.43208	57488	01982	0.90183	25264	05114	64.4
25.7	0.43365	90845	87544	0.90107	70213	22092	64.3
25.8	0.43523	10993	72328	0.90031	87714	02194	64.2
25.9	0.43680	17883	67702	0.89955	77789	55180	64.1
26.0	0.43837	11467	89077	0.89879	40462	99167	64.0
26.1	0.43993	91698	55915	0.89802	75757	60616	63.9
26.2	0.44150	58527	91745	0.89725	83696	74328	63.8
26.3	0.44307	11908	24180	0.89648	64303	83441	63.7
26.4	0.44463	51791	84927	0.89571	17602	39413	63.6
26.5	0.44619	78131	09809	0.89493	43616	02025	63.5
26.6	0.44775	90878	38770	0.89415	42368	39368	63.4
26.7	0.44931	89986	15897	0.89337	13883	27838	63.3
26.8	0.45087	75406	89431	0.89258	58184	52125	63.2
26.9	0.45243	47093	11783	0.89179	75296	05214	63.1
27.0	0.45399	04997	39547	0.89100	65241	88368	63.0
27.1	0.45554	49072	33516	0.89021	28046	11127	62.9
27.2	0.45709	79270	58694	0.88941	63732	91298	62.8
27.3	0.45864	95544	84315	0.88861	72326	54949	62.7
27.4	0.46019	97847	83852	0.88781	53851	36401	62.6
27.5	0.46174	86132	35034	0.88701	08331	78222	62.5
27.6	0.46329	60351	19862	0.88620	35792	31215	62.4
27.7	0.46484	20457	24620	0.88539	36257	54416	62.3
27.8	0.46638	66403	39891	0.88458	09752	15084	62.2
27.9	0.46792	98142	60573	0.88376	56300	88693	62.1
28.0	0.46947	15627	85891	0.88294	75928	58927	62.0
28.1	0.47101	18812	19410	0.88212	68660	17668	61.9
28.2	0.47255	07648	69054	0.88130	34520	64992	61.8
28.3	0.47408	82090	47116	0.88047	73535	09162	61.7
28.4	0.47562	42090	70275	0.87964	85728	66617	61.6
28.5	0.47715	87602	59608	0.87881	71126	61965	61.5
28.6	0.47869	18579	40607	0.87798	29754	27981	61.4
28.7	0.48022	34974	43189	0.87714	61637	05589	61.3
28.8	0.48175	36741	01715	0.87630	66800	43864	61.2
28.9	0.48328	23832	55002	0.87546	45270	00018	61.1
29.0	0.48480	96202	46337	0.87461	97071	39396	61.0
29.1	0.48633	53804	23490	0.87377	22230	35465	60.9
29.2	0.48785	96591	38733	0.87292	20772	69810	60.8
29.3	0.48938	24517	48846	0.87206	92724	32121	60.7
29.4	0.49090	37536	15141	0.87121	38111	20189	60.6
29.5	0.49242	35601	03467	0.87035	56959	39900	60.5
29.6	0.49394	18665	84231	0.86949	49295	05219	60.4
29.7	0.49545	86684	32408	0.86863	15144	38191	60.3
29.8	0.49697	39610	27555	0.86776	54533	68928	60.2
29.9	0.49848	77397	53830	0.86689	67489	35603	60.1
30.0	0.50000	00000	00000	0.86602	54037	84439	60.0
90° - θ	$\cos \theta$			$\sin \theta$			θ
	* $\begin{bmatrix} (-7)2 \\ 5 \end{bmatrix}$			$\begin{bmatrix} (-7)4 \\ 5 \end{bmatrix}$			

CIRCULAR SINES AND COSINES TO TENTHS OF A DEGREE

Table 4.10

θ	$\sin \theta$			$\cos \theta$			$90^\circ - \theta$
30.0°	0.50000	00000	00000	0.86602	54037	84439	60.0°
30.1	0.50151	07371	59457	0.86515	14205	69704	59.9
30.2	0.50301	99466	30235	0.86427	48019	53705	59.8
30.3	0.50452	76238	15019	0.86339	55506	06772	59.7
30.4	0.50603	37641	21164	0.86251	36692	07257	59.6
30.5	0.50753	83629	60704	0.86162	91604	41526	59.5
30.6	0.50904	14157	50371	0.86074	20270	03944	59.4
30.7	0.51054	29179	11606	0.85985	22715	96873	59.3
30.8	0.51204	28648	70572	0.85895	98969	30664	59.2
30.9	0.51354	12520	58170	0.85806	49057	23645	59.1
31.0	0.51503	80749	10054	0.85716	73007	02112	59.0
31.1	0.51653	33288	66642	0.85626	70846	00328	58.9
31.2	0.51802	70093	73130	0.85536	42601	60507	58.8
31.3	0.51951	91118	79509	0.85445	88301	32807	58.7
31.4	0.52100	96318	40576	0.85355	07972	75327	58.6
31.5	0.52249	85647	15949	0.85264	01643	54092	58.5
31.6	0.52398	59059	70079	0.85172	69341	43048	58.4
31.7	0.52547	16510	72268	0.85081	11094	24051	58.3
31.8	0.52695	57954	96678	0.84989	26929	86864	58.2
31.9	0.52843	83347	22347	0.84897	16876	29141	58.1
32.0	0.52991	92642	33205	0.84804	80961	56426	58.0
32.1	0.53139	85795	18083	0.84712	19213	82137	57.9
32.2	0.53287	62760	70730	0.84619	31661	27564	57.8
32.3	0.53435	23493	89826	0.84526	18332	21856	57.7
32.4	0.53582	67949	78997	0.84432	79255	02015	57.6
32.5	0.53729	96083	46824	0.84339	14458	12886	57.5
32.6	0.53877	07850	06863	0.84245	23970	07148	57.4
32.7	0.54024	03204	77655	0.84151	07819	45306	57.3
32.8	0.54170	82102	82740	0.84056	66034	95684	57.2
32.9	0.54317	44499	50671	0.83961	98645	34413	57.1
33.0	0.54463	90350	15027	0.83867	05679	45424	57.0
33.1	0.54610	19610	14429	0.83771	87166	20439	56.9
33.2	0.54756	32234	92550	0.83676	43134	58962	56.8
33.3	0.54902	28179	98132	0.83580	73613	68270	56.7
33.4	0.55048	07400	84996	0.83484	78632	63407	56.6
33.5	0.55193	69853	12058	0.83388	58220	67168	56.5
33.6	0.55339	15492	43344	0.83292	12407	10099	56.4
33.7	0.55484	44274	47999	0.83195	41221	30483	56.3
33.8	0.55629	56155	00305	0.83098	44692	74328	56.2
33.9	0.55774	51089	79690	0.83001	22850	95367	56.1
34.0	0.55919	29034	70747	0.82903	75725	55042	56.0
34.1	0.56063	89945	63242	0.82806	03346	22494	55.9
34.2	0.56208	33778	52131	0.82708	05742	74562	55.8
34.3	0.56352	60489	37571	0.82609	82944	95764	55.7
34.4	0.56496	70034	24938	0.82511	34982	78295	55.6
34.5	0.56640	62369	24833	0.82412	61886	22016	55.5
34.6	0.56784	37450	53101	0.82313	63685	34442	55.4
34.7	0.56927	95234	30844	0.82214	40410	30737	55.3
34.8	0.57071	35676	84432	0.82114	92091	33704	55.2
34.9	0.57214	58734	45516	0.82015	18758	73772	55.1
35.0	0.57357	64363	51046	0.81915	20442	88992	55.0
90° - θ	$\cos \theta$			$\sin \theta$			θ
	* $\begin{bmatrix} (-7)2 \\ 5 \end{bmatrix}$			$\begin{bmatrix} (-7)3 \\ 5 \end{bmatrix}$			

*See page II.

Table 4.10 CIRCULAR SINES AND COSINES TO TENTHS OF A DEGREE

θ	$\sin \theta$			$\cos \theta$			$90^\circ - \theta$
35.0°	0.57357	64363	51046	0.81915	20442	88992	55.0°
35.1	0.57500	52520	43279	0.81814	97174	25023	54.9
35.2	0.57643	23161	69793	0.81714	48983	35129	54.8
35.3	0.57785	76243	83505	0.81613	75900	80160	54.7
35.4	0.57928	11723	42679	0.81512	77957	28554	54.6
35.5	0.58070	29557	10940	0.81411	55183	56319	54.5
35.6	0.58212	29701	57289	0.81310	07610	47028	54.4
35.7	0.58354	12113	56118	0.81208	35268	91806	54.3
35.8	0.58495	76749	87215	0.81106	38189	89327	54.2
35.9	0.58637	23567	35789	0.81004	16404	45796	54.1
36.0	0.58778	52522	92473	0.80901	69943	74947	54.0
36.1	0.58919	63573	53342	0.80798	98838	98031	53.9
36.2	0.59060	56676	19925	0.80696	03121	43802	53.8
36.3	0.59201	31787	99220	0.80592	82822	48516	53.7
36.4	0.59341	88866	03701	0.80489	37973	55914	53.6
36.5	0.59482	27867	51341	0.80385	68606	17217	53.5
36.6	0.59622	48749	65616	0.80281	74751	91115	53.4
36.7	0.59762	51469	75521	0.80177	56442	43754	53.3
36.8	0.59902	35985	15586	0.80073	13709	48733	53.2
36.9	0.60042	02253	25884	0.79968	46584	87091	53.1
37.0	0.60181	50231	52048	0.79863	55100	47293	53.0
37.1	0.60320	79877	45282	0.79758	39288	25229	52.9
37.2	0.60459	91148	62375	0.79652	99180	24196	52.8
37.3	0.60598	84002	65711	0.79547	34808	54896	52.7
37.4	0.60737	58397	23287	0.79441	46205	35418	52.6
37.5	0.60876	14290	08721	0.79335	33402	91235	52.5
37.6	0.61014	51639	01268	0.79228	96433	55191	52.4
37.7	0.61152	70401	85831	0.79122	35329	67490	52.3
37.8	0.61290	70536	52976	0.79015	50123	75690	52.2
37.9	0.61428	52000	98943	0.78908	40848	34691	52.1
38.0	0.61566	14753	25658	0.78801	07536	06722	52.0
38.1	0.61703	58751	40749	0.78693	50219	61337	51.9
38.2	0.61840	83953	57554	0.78585	68931	75402	51.8
38.3	0.61977	90317	95140	0.78477	63705	33083	51.7
38.4	0.62114	77802	78310	0.78369	34573	25840	51.6
38.5	0.62251	46366	37620	0.78260	81568	52414	51.5
38.6	0.62387	95967	09386	0.78152	04724	18819	51.4
38.7	0.62524	26563	35705	0.78043	04073	38330	51.3
38.8	0.62660	38113	64461	0.77933	79649	31474	51.2
38.9	0.62796	30576	49338	0.77824	31485	26021	51.1
39.0	0.62932	03910	49837	0.77714	59614	56971	51.0
39.1	0.63067	58074	31286	0.77604	64070	66546	50.9
39.2	0.63202	93026	64851	0.77494	44887	04180	50.8
39.3	0.63338	08726	27550	0.77384	02097	26506	50.7
39.4	0.63473	05132	02268	0.77273	35734	97351	50.6
39.5	0.63607	82202	77764	0.77162	45833	87720	50.5
39.6	0.63742	39897	48690	0.77051	32427	75789	50.4
39.7	0.63876	78175	15598	0.76939	95550	46895	50.3
39.8	0.64010	96994	84955	0.76828	35235	93523	50.2
39.9	0.64144	96315	69158	0.76716	51518	15300	50.1
40.0	0.64278	76096	86539	0.76604	44431	18978	50.0
$90^\circ - \theta$	$\cos \theta$			$\sin \theta$			θ
	* $\begin{bmatrix} (-7)2 \\ 5 \end{bmatrix}$			$\begin{bmatrix} (-7)3 \\ 5 \end{bmatrix}$			

CIRCULAR SINES AND COSINES TO TENTHS OF A DEGREE

Table 4.10

θ	$\sin \theta$			$\cos \theta$			$90^\circ - \theta$
40.0°	0.64278	76096	86539	0.76604	44431	18978	50.0°
40.1	0.64412	36297	61387	0.76492	14009	18432	49.9
40.2	0.64545	76877	23951	0.76379	60286	34642	49.8
40.3	0.64678	97795	10460	0.76266	83296	95688	49.7
40.4	0.64811	99010	63131	0.76153	83075	36737	49.6
40.5	0.64944	80483	30184	0.76040	59656	00031	49.5
40.6	0.65077	42172	65851	0.75927	13073	34881	49.4
40.7	0.65209	84038	30392	0.75813	43361	97652	49.3
40.8	0.65342	06039	90105	0.75699	50556	51756	49.2
40.9	0.65474	08137	17340	0.75585	34691	67640	49.1
41.0	0.65605	90289	90507	0.75470	95802	22772	49.0
41.1	0.65737	52457	94096	0.75356	33923	01638	48.9
41.2	0.65868	94601	18680	0.75241	49088	95724	48.8
41.3	0.66000	16679	60937	0.75126	41335	03511	48.7
41.4	0.66131	18653	23652	0.75011	10696	30460	48.6
41.5	0.66262	00482	15737	0.74895	57207	89002	48.5
41.6	0.66392	62126	52242	0.74779	80904	98532	48.4
41.7	0.66523	03546	54361	0.74663	81822	85391	48.3
41.8	0.66653	24702	49452	0.74547	59996	82862	48.2
41.9	0.66783	25554	71047	0.74431	15462	31154	48.1
42.0	0.66913	06063	58858	0.74314	48254	77394	48.0
42.1	0.67042	66189	58799	0.74197	58409	75616	47.9
42.2	0.67172	05893	22990	0.74080	45962	86750	47.8
42.3	0.67301	25135	09773	0.73963	10949	78610	47.7
42.4	0.67430	23875	83723	0.73845	53406	25884	47.6
42.5	0.67559	02076	15660	0.73727	73368	10124	47.5
42.6	0.67687	59696	82661	0.73609	70871	19734	47.4
42.7	0.67815	96698	68071	0.73491	45951	49960	47.3
42.8	0.67944	13042	61517	0.73372	98645	02876	47.2
42.9	0.68072	08689	58918	0.73254	28987	87379	47.1
43.0	0.68199	83600	62499	0.73135	37016	19170	47.0
43.1	0.68327	37736	80799	0.73016	22766	20752	46.9
43.2	0.68454	71059	28689	0.72896	86274	21412	46.8
43.3	0.68581	83529	27376	0.72777	27576	57210	46.7
43.4	0.68708	75108	04423	0.72657	46709	70976	46.6
43.5	0.68835	45756	93754	0.72537	43710	12288	46.5
43.6	0.68961	95437	35670	0.72417	18614	37468	46.4
43.7	0.69088	24110	76858	0.72296	71459	09568	46.3
43.8	0.69214	31738	70407	0.72176	02280	98362	46.2
43.9	0.69340	18282	75813	0.72055	11116	80330	46.1
44.0	0.69465	83704	58997	0.71933	98003	38651	46.0
44.1	0.69591	27965	92314	0.71812	62977	63189	45.9
44.2	0.69716	51028	54565	0.71691	06076	50483	45.8
44.3	0.69841	52854	31006	0.71569	27337	03736	45.7
44.4	0.69966	33405	13365	0.71447	26796	32803	45.6
44.5	0.70090	92642	99851	0.71325	04491	54182	45.5
44.6	0.70215	30529	95162	0.71202	60459	90996	45.4
44.7	0.70339	47028	10504	0.71079	94738	72992	45.3
44.8	0.70463	42099	63595	0.70957	07365	36521	45.2
44.9	0.70587	15706	78681	0.70833	98377	24529	45.1
45.0	0.70710	67811	86548	0.70710	67811	86548	45.0
90° - θ	$\cos \theta$			$\sin \theta$			θ
	* $\begin{bmatrix} (-7)3 \\ 5 \end{bmatrix}$			$\begin{bmatrix} (-7)3 \\ 5 \end{bmatrix}$			

*See page II.