

Table 4.7

RADIX TABLE OF CIRCULAR SINES AND COSINES

x	n	$\sin x10^{-n}$						$\cos x10^{-n}$					
1	10	0.00000	00001	00000	00000	00000		0.99999	99999	99999	99999	50000	
2	10	0.00000	00002	00000	00000	00000		0.99999	99999	99999	99998	00000	
3	10	0.00000	00003	00000	00000	00000		0.99999	99999	99999	99995	50000	
4	10	0.00000	00004	00000	00000	00000		0.99999	99999	99999	99992	00000	
5	10	0.00000	00005	00000	00000	00000		0.99999	99999	99999	99987	50000	
6	10	0.00000	00006	00000	00000	00000		0.99999	99999	99999	99982	00000	
7	10	0.00000	00007	00000	00000	00000		0.99999	99999	99999	99975	50000	
8	10	0.00000	00008	00000	00000	00000		0.99999	99999	99999	99968	00000	
9	10	0.00000	00009	00000	00000	00000		0.99999	99999	99999	99959	50000	
1	9	0.00000	00010	00000	00000	00000		0.99999	99999	99999	99950	00000	
2	9	0.00000	00020	00000	00000	00000		0.99999	99999	99999	99800	00000	
3	9	0.00000	00030	00000	00000	00000		0.99999	99999	99999	99550	00000	
4	9	0.00000	00040	00000	00000	00000		0.99999	99999	99999	99200	00000	
5	9	0.00000	00050	00000	00000	00000		0.99999	99999	99999	98750	00000	
6	9	0.00000	00060	00000	00000	00000		0.99999	99999	99999	98200	00000	
7	9	0.00000	00069	99999	99999	99999		0.99999	99999	99999	97550	00000	
8	9	0.00000	00079	99999	99999	99999		0.99999	99999	99999	96800	00000	
9	9	0.00000	00089	99999	99999	99999		0.99999	99999	99999	95950	00000	
1	8	0.00000	00099	99999	99999	99998		0.99999	99999	99999	95000	00000	
2	8	0.00000	00199	99999	99999	99987		0.99999	99999	99999	80000	00000	
3	8	0.00000	00299	99999	99999	99955		0.99999	99999	99999	55000	00000	
4	8	0.00000	00399	99999	99999	99893		0.99999	99999	99999	20000	00000	
5	8	0.00000	00499	99999	99999	99792		0.99999	99999	99998	75000	00000	
6	8	0.00000	00599	99999	99999	99640		0.99999	99999	99998	20000	00000	
7	8	0.00000	00699	99999	99999	99428		0.99999	99999	99997	55000	00000	
8	8	0.00000	00799	99999	99999	99147		0.99999	99999	99996	80000	00000	
9	8	0.00000	00899	99999	99999	98785		0.99999	99999	99995	95000	00000	
1	7	0.00000	00999	99999	99999	98333		0.99999	99999	99995	00000	00000	
2	7	0.00000	01999	99999	99999	86667		0.99999	99999	99980	00000	00000	
3	7	0.00000	02999	99999	99999	55000		0.99999	99999	99955	00000	00000	
4	7	0.00000	03999	99999	99998	93333		0.99999	99999	99920	00000	00000	
5	7	0.00000	04999	99999	99997	91667		0.99999	99999	99875	00000	00000	
6	7	0.00000	05999	99999	99996	40000		0.99999	99999	99820	00000	00000	
7	7	0.00000	06999	99999	99994	28333		0.99999	99999	99755	00000	00000	
8	7	0.00000	07999	99999	99991	46667		0.99999	99999	99680	00000	00000	
9	7	0.00000	08999	99999	99987	85000		0.99999	99999	99595	00000	00000	
1	6	0.00000	09999	99999	99983	33333		0.99999	99999	99500	00000	00000	
2	6	0.00000	19999	99999	99866	66667		0.99999	99999	98000	00000	00007	
3	6	0.00000	29999	99999	99550	00000		0.99999	99999	95500	00000	00034	
4	6	0.00000	39999	99999	98933	33333		0.99999	99999	92000	00000	00107	
5	6	0.00000	49999	99999	97916	66667		0.99999	99999	87500	00000	00260	
6	6	0.00000	59999	99999	96400	00000		0.99999	99999	82000	00000	00540	
7	6	0.00000	69999	99999	94283	33333		0.99999	99999	75500	00000	01000	
8	6	0.00000	79999	99999	91466	66667		0.99999	99999	68000	00000	01707	
9	6	0.00000	89999	99999	87850	00000		0.99999	99999	59500	00000	02734	
1	5	0.00000	99999	99999	83333	33333		0.99999	99999	50000	00000	04167	
2	5	0.00001	99999	99998	66666	66667		0.99999	99998	00000	00000	66667	
3	5	0.00002	99999	99995	50000	00002		0.99999	99995	50000	00003	37500	
4	5	0.00003	99999	99989	33333	33342		0.99999	99992	00000	00010	66667	
5	5	0.00004	99999	99979	16666	66693		0.99999	99987	50000	00026	04167	
6	5	0.00005	99999	99964	00000	00065		0.99999	99982	00000	00054	00000	
7	5	0.00006	99999	99942	83333	33473		0.99999	99975	50000	00100	04167	
8	5	0.00007	99999	99914	66666	66940		0.99999	99968	00000	00170	66667	
9	5	0.00008	99999	99878	50000	00492		0.99999	99959	50000	00273	37500	
1	4	0.00009	99999	99833	33333	34167		0.99999	99950	00000	00416	66667	
2	4	0.00019	99999	98666	66666	93333		0.99999	99800	00000	00666	66666	
3	4	0.00029	99999	95500	00002	02500		0.99999	99550	00000	03749	99990	
4	4	0.00039	99999	89333	33341	86667		0.99999	99200	00001	06666	66610	
5	4	0.00049	99999	79166	66692	70833		0.99999	98750	00002	60416	66450	
6	4	0.00059	99999	64000	00064	80000		0.99999	98200	00005	99999	99352	
7	4	0.00069	99999	42833	33473	39167		0.99999	97550	00010	00416	65033	
8	4	0.00079	99999	14666	66939	73333		0.99999	96800	00017	06666	63026	
9	4	0.00089	99998	78500	00492	07499		0.99999	95950	00027	33749	92619	
1	3	0.00099	99998	33333	34166	66665		0.99999	95000	00041	66666	52778	

For $n > 10$, $\sin x10^{-n} = x10^{-n}$; $\cos x10^{-n} = 1 - \frac{1}{2}x^210^{-2n}$; to 25D.

From C. E. Van Orstrand, Tables of the exponential function and of the circular sine and cosine to radian arguments, Memoirs of the National Academy of Sciences, vol. 14, Fifth Memoir. U.S. Government Printing Office, Washington, D.C., 1921 (with permission).