

CIRCULAR TANGENTS, COTANGENTS, SECANTS AND COSECANTS Table 4.11
TO FIVE TENTHS OF A DEGREE

θ	tan θ			cot θ			sec θ		csc θ		$90^\circ - \theta$
22.5 ^o	0.41421	35623	73095	2.41421	35623	73095	1.08239	220	2.61312	593	67.5 ^o
23.0	0.42447	48162	09604	2.35585	23658	23753	1.08636	038	2.55930	467	67.0
23.5	0.43481	23749	60933	2.29984	25472	36257	1.09044	110	2.50784	285	66.5
24.0	0.44522	86853	08536	2.24603	67739	04216	1.09463	628	2.45859	334	66.0
24.5	0.45572	62555	32584	2.19429	97311	65038	1.09894	787	2.41142	102	65.5
25.0	0.46630	76581	54998	2.14450	69205	09558	1.10337	792	2.36620	158	65.0
25.5	0.47697	55326	98160	2.09654	35990	88174	1.10792	854	2.32282	050	64.5
26.0	0.48773	25885	65861	2.05030	38415	79296	1.11260	194	2.28117	203	64.0
26.5	0.49858	16080	53431	2.00568	97082	59020	1.11740	038	2.24115	845	63.5
27.0	0.50952	54494	94429	1.96261	05055	05150	1.12232	624	2.20268	926	63.0
27.5	0.52056	70505	51746	1.92098	21269	71166	1.12738	195	2.16568	057	62.5
28.0	0.53170	94316	61479	1.88072	64653	46332	1.13257	005	2.13005	447	62.0
28.5	0.54295	56996	38437	1.84177	08860	33458	1.13789	318	2.09573	853	61.5
29.0	0.55430	90514	52769	1.80404	77552	71424	1.14335	407	2.06266	534	61.0
29.5	0.56577	27781	87770	1.76749	40162	42891	1.14895	554	2.03077	204	60.5
30.0	0.57735	02691	89626	1.73205	08075	68877	1.15470	054	2.00000	000	60.0
30.5	0.58904	50164	20551	1.69766	31193	26089	1.16059	210	1.97029	441	59.5
31.0	0.60086	06190	27560	1.66427	94823	50518	1.16663	340	1.94160	403	59.0
31.5	0.61280	07881	39932	1.63185	16871	28789	1.17282	770	1.91388	086	58.5
32.0	0.62486	93519	09327	1.60033	45290	41050	1.17917	840	1.88707	991	58.0
32.5	0.63707	02608	07493	1.56968	55771	17490	1.18568	905	1.86115	900	57.5
33.0	0.64940	75931	97510	1.53986	49638	14583	1.19236	329	1.83607	846	57.0
33.5	0.66188	55611	95691	1.51083	51936	14901	1.19920	494	1.81180	103	56.5
34.0	0.67450	85168	42426	1.48256	09685	12740	1.20621	795	1.78829	165	56.0
34.5	0.68728	09586	01613	1.45500	90286	72445	1.21340	641	1.76551	728	55.5
35.0	0.70020	75382	09710	1.42814	80067	42114	1.22077	459	1.74344	680	55.0
35.5	0.71329	30678	97005	1.40194	82944	76336	1.22832	691	1.72205	082	54.5
36.0	0.72654	25280	05361	1.37638	19204	71173	1.23606	798	1.70130	162	54.0
36.5	0.73996	10750	28487	1.35142	24379	45808	1.24400	257	1.68117	299	53.5
37.0	0.75355	40501	02794	1.32704	48216	20410	1.25213	566	1.66164	014	53.0
37.5	0.76732	69879	78960	1.30322	53728	41206	1.26047	241	1.64267	963	52.5
38.0	0.78128	56265	06717	1.27994	16321	93079	1.26901	822	1.62426	925	52.0
38.5	0.79543	59166	67828	1.25717	22989	18954	1.27777	866	1.60638	793	51.5
39.0	0.80978	40331	95007	1.23489	71565	35051	1.28675	957	1.58901	573	51.0
39.5	0.82433	63858	17495	1.21309	70040	92932	1.29596	700	1.57213	369	50.5
40.0	0.83909	96311	77280	1.19175	35925	94210	1.30540	729	1.55572	383	50.0
40.5	0.85408	06854	63466	1.17084	95661	12539	1.31508	700	1.53976	904	49.5
41.0	0.86928	67378	16226	1.15036	84072	21009	1.32501	299	1.52425	309	49.0
41.5	0.88472	52645	55944	1.13029	43863	61753	1.33519	242	1.50916	050	48.5
42.0	0.90040	40442	97840	1.11061	25148	29193	1.34563	273	1.49447	655	48.0
42.5	0.91633	11740	17423	1.09130	85010	69271	1.35634	170	1.48018	723	47.5
43.0	0.93251	50861	37661	1.07236	87100	24682	1.36732	746	1.46627	919	47.0
43.5	0.94896	45667	14880	1.05378	01252	80962	1.37859	847	1.45273	967	46.5
44.0	0.96568	87748	07074	1.03553	03137	90569	1.39016	359	1.43955	654	46.0
44.5	0.98269	72631	15690	1.01760	73929	72125	1.40203	206	1.42671	819	45.5
45.0	1.00000	00000	00000	1.00000	00000	00000	1.41421	356	1.41421	356	45.0
90 ^o - θ	cot θ			tan θ			csc θ		sec θ		θ
	$\left[\begin{smallmatrix} (-5)4 \\ 9 \end{smallmatrix} \right]$			$\left[\begin{smallmatrix} (-4)3 \end{smallmatrix} \right]$			$\left[\begin{smallmatrix} (-5)4 \\ 5 \end{smallmatrix} \right]$		$\left[\begin{smallmatrix} (-4)3 \\ 6 \end{smallmatrix} \right]$		