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TABLE OF $\sin \theta$ AND $\sin^2 \theta$ FOR VALUES
OF θ FROM 2° TO 87°

Prepared By

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INTRODUCTION

This table of $\sin \theta$ and $\sin^2 \theta$, to five decimal places for every hundredth of a degree from 2° - 87° , has been prepared for the use of Professor W. H. Zachariasen in his X-ray diffraction studies.

The values of $\sin \theta$, rounded off to five places, were taken from Seven-Place Values of Trigonometric Functions - J. Peters - D. Van Nostrand Co., 1942.

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
2.00	0.00122	0.03490	2.50	0.00190	0.04362	3.00	0.00274	0.05234	3.50	0.00373	0.06105
.01	.00123	.03507	.51	.00192	.079	.01	.00276	.051	.51	.00375	.22
.02	.00124	.25	.52	.00193	.97	.02	.00278	.68	.52	.00377	.40
.03	.00125	.42	.53	.00195	.04414	.03	.00279	.86	.53	.00379	.57
.04	.00127	.60	.54	.00196	.32	.04	.00281	.05303	.54	.00381	.75
.05	.00128	.77	.55	.00198	.49	.05	.00283	.21	.55	.00383	.92
.06	.00129	.95	.56	.00200	.67	.06	.00285	.38	.56	.00386	.06209
.07	.00130	.03612	.57	.00201	.84	.07	.00287	.56	.57	.00388	.27
.08	.00132	.29	.58	.00203	.04501	.08	.00289	.73	.58	.00390	.44
.09	.00133	.47	.59	.00204	.19	.09	.00291	.90	.59	.00392	.62
2.10	.00134	.64	2.60	.00206	.36	3.10	.00292	.05408	3.60	.00394	.79
.11	.00136	.82	.61	.00207	.54	.11	.00294	.25	.61	.00396	.96
.12	.00137	.99	.62	.00209	.71	.12	.00296	.43	.62	.00399	.06314
.13	.00138	.03717	.63	.00211	.89	.13	.00298	.60	.63	.00401	.31
.14	.00139	.34	.64	.00212	.04606	.14	.00300	.78	.64	.00403	.49
.15	.00141	.52	.65	.00214	.23	.15	.00302	.95	.65	.00405	.66
.16	.00142	.69	.66	.00215	.41	.16	.00304	.05512	.66	.00408	.84
.17	.00143	.86	.67	.00217	.58	.17	.00306	.30	.67	.00410	.06401
.18	.00145	.03804	.68	.00219	.76	.18	.00308	.47	.68	.00412	.18
.19	.00146	.21	.69	.00220	.93	.19	.00310	.65	.69	.00414	.36
2.20	.00147	.39	2.70	.00222	.04711	3.20	.00312	.82	3.70	.00416	.53
.21	.00149	.56	.71	.00224	.28	.21	.00314	.05600	.71	.00419	.71
.22	.00150	.74	.72	.00225	.46	.22	.00316	.17	.72	.00421	.88
.23	.00151	.91	.73	.00227	.63	.23	.00317	.34	.73	.00423	.06505
.24	.00153	.03909	.74	.00228	.80	.24	.00319	.52	.74	.00425	.23
.25	.00154	.26	.75	.00230	.98	.25	.00321	.69	.75	.00428	.40
.26	.00155	.43	.76	.00232	.04815	.26	.00323	.87	.76	.00430	.58
.27	.00157	.61	.77	.00234	.33	.27	.00325	.05704	.77	.00432	.75
.28	.00158	.78	.78	.00235	.50	.28	.00327	.22	.78	.00435	.93
.29	.00160	.96	.79	.00237	.68	.29	.00329	.39	.79	.00437	.06610
2.30	.00161	.04013	2.80	.00239	.85	3.30	.00331	.56	3.80	.00439	.27
.31	.00162	.31	.81	.00240	.04902	.31	.00333	.74	.81	.00442	.45
.32	.00164	.48	.82	.00242	.20	.32	.00335	.91	.82	.00444	.62
.33	.00165	.66	.83	.00244	.37	.33	.00337	.05809	.83	.00446	.80
.34	.00167	.83	.84	.00246	.55	.34	.00339	.26	.84	.00448	.97
.35	.00168	.04100	.85	.00247	.72	.35	.00342	.44	.85	.00451	.06714
.36	.00170	.18	.86	.00249	.90	.36	.00344	.61	.86	.00453	.32
.37	.00171	.35	.87	.00251	.05007	.37	.00346	.78	.87	.00455	.49
.38	.00172	.53	.88	.00252	.24	.38	.00348	.96	.88	.00458	.67
.39	.00174	.70	.89	.00254	.42	.39	.00350	.05913	.89	.00460	.84
2.40	.00175	.88	2.90	.00256	.59	3.40	.00352	.31	3.90	.00463	.06802
.41	.00177	.04205	.91	.00258	.77	.41	.00354	.48	.91	.00465	.19
.42	.00178	.22	.92	.00259	.94	.42	.00356	.65	.92	.00467	.36
.43	.00180	.40	.93	.00261	.05112	.43	.00358	.83	.93	.00470	.54
.44	.00181	.57	.94	.00263	.29	.44	.00360	.06000	.94	.00472	.71
.45	.00183	.75	.95	.00265	.46	.45	.00362	.18	.95	.00475	.89
.46	.00184	.92	.96	.00267	.64	.46	.00364	.35	.96	.00477	.06906
.47	.00186	.04310	.97	.00268	.81	.47	.00366	.53	.97	.00479	.23
.48	.00187	.27	.98	.00270	.99	.48	.00368	.70	.98	.00482	.41
.49	.00189	.45	.99	.00272	.05216	.49	.00371	.87	.99	.00484	.58
2.50	.00190	.62	3.00	.00274	.34	3.50	.00373	.06105	4.00	.00487	.76

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
4.00	0.00487	0.06976	4.50	0.00616	0.07846	5.00	0.00760	0.08716	5.50	0.00919	0.09585
.01	.00489	93	.51	.00618	63	.01	.00763	.08733	.51	.00922	.09602
.02	.00491	.07010	.52	.00621	81	.02	.00766	50	.52	.00925	19
.03	.00494	28	.53	.00624	98	.03	.00769	68	.53	.00929	37
.04	.00496	45	.54	.00627	.07916	.04	.00772	85	.54	.00932	54
.05	.00499	63	.55	.00629	33	.05	.00775	.08803	.55	.00935	71
.06	.00501	80	.56	.00632	50	.06	.00778	20	.56	.00939	89
.07	.00504	98	.57	.00635	68	.07	.00781	37	.57	.00942	.09706
.08	.00506	.07115	.58	.00638	85	.08	.00784	55	.58	.00946	24
.09	.00509	32	.59	.00640	.08003	.09	.00787	72	.59	.00949	41
4.10	.00511	50	4.60	.00643	20	5.10	.00790	89	5.60	.00952	58
.11	.00514	67	.61	.00646	37	.11	.00793	.08907	.61	.00956	76
.12	.00516	85	.62	.00649	55	.12	.00796	24	.62	.00959	93
.13	.00519	.07202	.63	.00652	72	.13	.00800	42	.63	.00962	.09810
.14	.00521	19	.64	.00654	89	.14	.00803	59	.64	.00966	28
.15	.00524	37	.65	.00657	.08107	.15	.00806	76	.65	.00969	45
.16	.00526	54	.66	.00660	24	.16	.00809	94	.66	.00973	63
.17	.00529	72	.67	.00663	42	.17	.00812	.09011	.67	.00976	80
.18	.00531	89	.68	.00666	59	.18	.00815	28	.68	.00980	97
.19	.00534	.07306	.69	.00668	76	.19	.00818	46	.69	.00983	.09915
4.20	.00536	24	4.70	.00671	94	5.20	.00821	63	5.70	.00986	32
.21	.00539	41	.71	.00674	.08211	.21	.00825	81	.71	.00990	49
.22	.00542	59	.72	.00677	29	.22	.00828	98	.72	.00993	67
.23	.00544	76	.73	.00680	46	.23	.00831	.09115	.73	.00997	84
.24	.00547	93	.74	.00683	63	.24	.00834	33	.74	.01000	.10001
.25	.00549	.07411	.75	.00686	81	.25	.00837	50	.75	.01004	19
.26	.00551	28	.76	.00689	98	.26	.00841	68	.76	.01007	36
.27	.00554	46	.77	.00692	.08316	.27	.00844	85	.77	.01011	54
.28	.00557	63	.78	.00694	33	.28	.00847	.09202	.78	.01014	71
.29	.00560	80	.79	.00697	50	.29	.00850	20	.79	.01018	88
4.30	.00562	98	4.80	.00700	68	5.30	.00853	37	5.80	.01021	.10106
.31	.00565	.07515	.81	.00703	85	.31	.00856	54	.81	.01025	23
.32	.00567	33	.82	.00706	.08403	.32	.00860	72	.82	.01028	40
.33	.00570	50	.83	.00709	20	.33	.00863	89	.83	.01032	58
.34	.00573	67	.84	.00712	37	.34	.00866	.09307	.84	.01035	75
.35	.00575	85	.85	.00715	55	.35	.00869	24	.85	.01039	92
.36	.00578	.07602	.86	.00718	72	.36	.00873	41	.86	.01042	.10210
.37	.00581	20	.87	.00721	90	.37	.00876	59	.87	.01046	27
.38	.00583	37	.88	.00724	.08507	.38	.00879	76	.88	.01050	45
.39	.00586	55	.89	.00727	24	.39	.00882	93	.89	.01053	62
4.40	.00589	72	4.90	.00730	42	5.40	.00886	.09411	5.90	.01057	79
.41	.00591	89	.91	.00733	59	.41	.00889	28	.91	.01060	97
.42	.00594	.07707	.92	.00735	76	.42	.00892	46	.92	.01064	.10314
.43	.00597	24	.93	.00739	94	.43	.00895	63	.93	.01067	31
.44	.00599	42	.94	.00741	.08611	.44	.00899	80	.94	.01071	49
.45	.00602	59	.95	.00745	29	.45	.00902	98	.95	.01075	66
.46	.00605	76	.96	.00748	46	.46	.00905	.09515	.96	.01078	83
.47	.00607	94	.97	.00750	63	.47	.00909	32	.97	.01082	.10401
.48	.00610	.07811	.98	.00754	81	.48	.00912	50	.98	.01085	18
.49	.00613	29	.99	.00757	98	.49	.00915	67	.99	.01089	35
4.50	.00616	46	5.00	.00760	.08716	5.50	.00919	85	6.00	.01093	.10453

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
6.00	0.01093	0.10453	6.50	0.01281	0.11320	7.00	0.01485	0.12187	7.50	0.01704	0.13053
.01	.01096	70	.51	.01286	38	.01	.01489	.12204	.51	.01708	70
.02	.01100	88	.52	.01289	55	.02	.01494	22	.52	.01713	87
.03	.01104	.10505	.53	.01293	72	.03	.01498	39	.53	.01717	.13105
.04	.01107	22	.54	.01297	90	.04	.01502	56	.54	.01722	22
.05	.01111	40	.55	.01301	.11407	.05	.01507	74	.55	.01726	39
.06	.01115	57	.56	.01305	24	.06	.01511	91	.56	.01731	56
.07	.01118	74	.57	.01309	42	.07	.01515	.12308	.57	.01736	74
.08	.01122	92	.58	.01313	59	.08	.01519	26	.58	.01740	91
.09	.01126	.10609	.59	.01317	76	.09	.01523	43	.59	.01745	.13208
6.10	.01129	26	6.60	.01321	94	7.10	.01528	60	7.60	.01749	26
.11	.01133	44	.61	.01325	.11511	.11	.01532	77	.61	.01754	43
.12	.01137	61	.62	.01329	28	.12	.01536	95	.62	.01758	60
.13	.01140	78	.63	.01333	46	.13	.01541	.12412	.63	.01763	78
.14	.01144	96	.64	.01337	63	.14	.01545	29	.64	.01768	95
.15	.01148	.10713	.65	.01341	80	.15	.01549	47	.65	.01772	.13312
.16	.01152	31	.66	.01345	98	.16	.01554	64	.66	.01777	29
.17	.01155	48	.67	.01349	.11615	.17	.01558	81	.67	.01781	47
.18	.01159	65	.68	.01353	32	.18	.01562	99	.68	.01786	64
.19	.01163	83	.69	.01357	50	.19	.01567	.12516	.69	.01791	81
6.20	.01166	.10800	6.70	.01361	67	7.20	.01571	33	7.70	.01795	99
.21	.01170	17	.71	.01365	84	.21	.01575	51	.71	.01800	.13416
.22	.01174	35	.72	.01369	.11702	.22	.01580	68	.72	.01804	33
.23	.01178	52	.73	.01373	19	.23	.01584	85	.73	.01809	51
.24	.01181	69	.74	.01377	36	.24	.01588	.12603	.74	.01814	68
.25	.01185	87	.75	.01382	54	.25	.01593	20	.75	.01818	85
.26	.01189	.10904	.76	.01386	71	.26	.01597	37	.76	.01823	.13502
.27	.01193	21	.77	.01390	88	.27	.01601	55	.77	.01828	20
.28	.01197	39	.78	.01394	.11806	.28	.01606	72	.78	.01833	37
.29	.01200	56	.79	.01398	23	.29	.01610	89	.79	.01837	54
6.30	.01204	73	6.80	.01402	40	7.30	.01614	.12706	7.80	.01842	72
.31	.01208	91	.81	.01406	58	.31	.01619	24	.81	.01847	89
.32	.01212	.11008	.82	.01410	75	.32	.01623	41	.82	.01851	.13606
.33	.01216	25	.83	.01414	92	.33	.01628	58	.83	.01856	23
.34	.01219	43	.84	.01418	.11910	.34	.01632	76	.84	.01861	41
.35	.01223	60	.85	.01423	27	.35	.01637	93	.85	.01865	58
.36	.01227	78	.86	.01427	44	.36	.01641	.12810	.86	.01870	75
.37	.01231	95	.87	.01431	62	.37	.01646	28	.87	.01875	93
.38	.01235	.11112	.88	.01435	79	.38	.01650	45	.88	.01880	.13710
.39	.01239	30	.89	.01439	96	.39	.01654	62	.89	.01884	27
6.40	.01243	47	6.90	.01443	.12014	7.40	.01659	80	7.90	.01889	44
.41	.01246	64	.91	.01447	31	.41	.01663	97	.91	.01894	62
.42	.01250	82	.92	.01452	48	.42	.01668	.12914	.92	.01899	79
.43	.01254	99	.93	.01456	66	.43	.01672	31	.93	.01903	96
.44	.01258	.11216	.94	.01460	83	.44	.01677	49	.94	.01908	.13814
.45	.01262	34	.95	.01464	.12100	.45	.01681	66	.95	.01913	31
.46	.01266	51	.96	.01468	18	.46	.01686	83	.96	.01918	48
.47	.01270	68	.97	.01473	35	.47	.01690	.13001	.97	.01922	65
.48	.01274	86	.98	.01477	52	.48	.01695	18	.98	.01927	83
.49	.01278	.11303	.99	.01481	70	.49	.01699	35	.99	.01932	.13900
6.50	.01281	20	7.00	.01485	87	7.50	.01704	53	8.00	.01937	17

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
8.00	0.01937	0.13917	8.50	0.02185	0.14781	9.00	0.02447	0.15643	9.50	0.02724	0.16505
.01	.01942	35	.51	.02190	98	.01	.02453	61	.51	.02730	22
.02	.01947	52	.52	.02195	.14815	.02	.02458	78	.52	.02735	39
.03	.01951	69	.53	.02200	33	.03	.02463	95	.53	.02741	56
.04	.01956	86	.54	.02205	50	.04	.02469	.15712	.54	.02747	74
.05	.01961	.14004	.55	.02210	67	.05	.02474	30	.55	.02753	91
.06	.01966	21	.56	.02216	85	.06	.02480	47	.56	.02758	.16608
.07	.01971	38	.57	.02221	.14902	.07	.02485	64	.57	.02764	25
.08	.01976	56	.58	.02226	19	.08	.02490	81	.58	.02770	42
.09	.01980	73	.59	.02231	36	.09	.02496	99	.59	.02776	60
8.10	.01985	90	8.60	.02236	54	9.10	.02501	.15816	9.60	.02781	77
.11	.01990	.14107	.61	.02241	71	.11	.02507	33	.61	.02787	94
.12	.01995	25	.62	.02246	88	.12	.02512	50	.62	.02793	.16711
.13	.02000	42	.63	.02252	.15005	.13	.02518	68	.63	.02799	29
.14	.02005	59	.64	.02257	23	.14	.02523	85	.64	.02804	46
.15	.02010	77	.65	.02262	40	.15	.02529	.15902	.65	.02810	63
.16	.02015	94	.66	.02267	57	.16	.02534	19	.66	.02816	80
.17	.02020	.14211	.67	.02272	74	.17	.02540	36	.67	.02821	97
.18	.02024	28	.68	.02278	92	.18	.02545	54	.68	.02827	.16815
.19	.02029	46	.69	.02283	.15109	.19	.02551	71	.69	.02833	32
8.20	.02034	63	8.70	.02288	26	9.20	.02556	88	9.70	.02839	49
.21	.02039	80	.71	.02293	43	.21	.02562	.16005	.71	.02845	66
.22	.02044	97	.72	.02299	61	.22	.02567	23	.72	.02850	83
.23	.02049	.14315	.73	.02304	78	.23	.02573	40	.73	.02856	.16901
.24	.02054	32	.74	.02309	95	.24	.02578	57	.74	.02862	18
.25	.02059	49	.75	.02314	.15212	.25	.02584	74	.75	.02868	35
.26	.02064	67	.76	.02320	30	.26	.02589	91	.76	.02874	52
.27	.02069	84	.77	.02325	47	.27	.02595	.16109	.77	.02879	69
.28	.02074	.14401	.78	.02330	64	.28	.02600	26	.78	.02886	87
.29	.02079	18	.79	.02335	81	.29	.02606	43	.79	.02891	.17004
8.30	.02084	36	8.80	.02341	99	9.30	.02611	60	9.80	.02897	21
.31	.02089	53	.81	.02346	.15316	.31	.02617	78	.81	.02903	38
.32	.02094	70	.82	.02351	33	.32	.02623	95	.82	.02909	55
.33	.02099	87	.83	.02356	50	.33	.02628	.16212	.83	.02915	73
.34	.02104	.14505	.84	.02362	68	.34	.02634	29	.84	.02921	90
.35	.02109	22	.85	.02367	85	.35	.02640	47	.85	.02926	.17107
.36	.02114	39	.86	.02372	.15402	.36	.02645	64	.86	.02932	24
.37	.02119	57	.87	.02377	19	.37	.02651	81	.87	.02938	41
.38	.02124	74	.88	.02383	37	.38	.02656	98	.88	.02944	59
.39	.02129	91	.89	.02388	54	.39	.02662	.16315	.89	.02950	76
8.40	.02134	.14608	8.90	.02394	71	9.40	.02668	33	9.90	.02956	93
.41	.02139	26	.91	.02399	88	.41	.02673	50	.91	.02962	.17210
.42	.02144	43	.92	.02404	.15506	.42	.02679	67	.92	.02968	27
.43	.02149	60	.93	.02410	23	.43	.02684	84	.93	.02974	44
.44	.02154	77	.94	.02415	40	.44	.02690	.16401	.94	.02980	62
.45	.02159	95	.95	.02420	57	.45	.02696	19	.95	.02986	79
.46	.02164	.14712	.96	.02425	74	.46	.02701	36	.96	.02992	96
.47	.02169	29	.97	.02431	92	.47	.02707	53	.97	.02997	.17313
.48	.02174	46	.98	.02436	.15609	.48	.02713	70	.98	.03003	30
.49	.02180	64	.99	.02442	26	.49	.02719	88	.99	.03010	48
8.50	.02185	81	9.00	.02447	43	9.50	.02724	.16505	10.00	.03015	65

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
10.00	0.03015	0.17365	10.50	0.03321	0.18224	11.00	0.03641	0.19081	11.50	0.03975	0.19937
.01	.03021	82	.51	.03327	41	.01	.03647	98	.51	.03982	54
.02	.03027	99	.52	.03334	58	.02	.03654	.19115	.52	.03988	71
.03	.03033	.17416	.53	.03340	75	.03	.03660	32	.53	.03995	88
.04	.03039	34	.54	.03346	92	.04	.03667	49	.54	.04002	.20005
.05	.03045	51	.55	.03352	.18309	.05	.03674	67	.55	.04009	22
.06	.03051	68	.56	.03359	27	.06	.03680	84	.56	.04016	39
.07	.03057	85	.57	.03365	44	.07	.03687	.19201	.57	.04023	57
.08	.03063	.17502	.58	.03371	61	.08	.03693	18	.58	.04030	74
.09	.03069	19	.59	.03378	78	.09	.03700	35	.59	.04036	91
10.10	.03075	37	10.60	.03384	95	11.10	.03706	52	11.60	.04043	.20108
.11	.03081	54	.61	.03390	.18412	.11	.03713	69	.61	.04050	25
.12	.03087	71	.62	.03396	29	.12	.03719	86	.62	.04057	42
.13	.03093	88	.63	.03403	47	.13	.03726	.19304	.63	.04064	59
.14	.03099	.17605	.64	.03409	64	.14	.03733	21	.64	.04071	76
.15	.03106	23	.65	.03415	81	.15	.03740	38	.65	.04078	93
.16	.03112	40	.66	.03422	98	.16	.03746	55	.66	.04084	.20210
.17	.03118	57	.67	.03428	.18515	.17	.03753	72	.67	.04091	27
.18	.03124	74	.68	.03434	32	.18	.03759	89	.68	.04099	45
.19	.03130	91	.69	.03441	50	.19	.03766	.19406	.69	.04105	62
10.20	.03136	.17708	10.70	.03447	67	11.20	.03773	23	11.70	.04112	79
.21	.03142	26	.71	.03454	84	.21	.03780	41	.71	.04119	96
.22	.03148	43	.72	.03460	.18601	.22	.03786	58	.72	.04126	.20313
.23	.03154	60	.73	.03466	18	.23	.03793	75	.73	.04133	30
.24	.03160	77	.74	.03473	35	.24	.03799	92	.74	.04140	47
.25	.03166	94	.75	.03479	52	.25	.03806	.19509	.75	.04147	64
.26	.03173	.17812	.76	.03486	70	.26	.03813	26	.76	.04154	81
.27	.03179	29	.77	.03492	87	.27	.03819	43	.77	.04161	98
.28	.03185	46	.78	.03498	.18704	.28	.03826	60	.78	.04168	.20415
.29	.03191	63	.79	.03505	21	.29	.03833	78	.79	.04175	33
10.30	.03197	80	10.80	.03511	38	11.30	.03840	95	11.80	.04182	50
.31	.03203	97	.81	.03518	55	.31	.03846	.19612	.81	.04189	67
.32	.03209	.17915	.82	.03524	72	.32	.03853	29	.82	.04196	84
.33	.03216	32	.83	.03531	90	.33	.03860	46	.83	.04203	.20501
.34	.03222	49	.84	.03537	.18807	.34	.03866	63	.84	.04210	18
.35	.03228	66	.85	.03543	24	.35	.03873	80	.85	.04217	35
.36	.03234	83	.86	.03550	41	.36	.03880	97	.86	.04224	52
.37	.03240	.18000	.87	.03556	58	.37	.03886	.19714	.87	.04231	69
.38	.03246	18	.88	.03563	75	.38	.03894	32	.88	.04238	86
.39	.03253	35	.89	.03569	92	.39	.03900	49	.89	.04245	.20603
10.40	.03259	52	10.90	.03576	.16910	11.40	.03907	66	11.90	.04252	20
.41	.03265	69	.91	.03582	27	.41	.03914	83	.91	.04259	38
.42	.03271	86	.92	.03589	44	.42	.03920	.19800	.92	.04266	55
.43	.03277	.18103	.93	.03595	61	.43	.03927	17	.93	.04273	72
.44	.03284	21	.94	.03602	78	.44	.03934	34	.94	.04280	89
.45	.03290	38	.95	.03608	95	.45	.03941	51	.95	.04287	.20706
.46	.03296	55	.96	.03615	.19012	.46	.03947	68	.96	.04294	23
.47	.03302	72	.97	.03621	30	.47	.03954	85	.97	.04301	40
.48	.03308	89	.98	.03628	47	.48	.03961	.19903	.98	.04309	57
.49	.03315	.18206	.99	.03634	64	.49	.03968	20	.99	.04316	74
10.50	.03321	24	11.00	.03641	81	11.50	.03975	37	12.00	.04323	91

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
12.00	0.04323	0.20791	12.50	0.04685	0.21644	13.00	0.05060	0.22495	13.50	0.05450	0.23345
.01	.04330	.20808	.51	.04692	.61	.01	.05068	.22512	.51	.05458	.62
.02	.04337	.25	.52	.04699	.78	.02	.05076	.29	.52	.05466	.79
.03	.04344	.42	.53	.04707	.95	.03	.05083	.46	.53	.05474	.96
.04	.04351	.59	.54	.04714	.21712	.04	.05091	.63	.54	.05481	.23412
.05	.04358	.77	.55	.04721	.29	.05	.05099	.80	.55	.05489	.29
.06	.04366	.94	.56	.04729	.46	.06	.05106	.97	.56	.05497	.46
.07	.04373	.20911	.57	.04736	.63	.07	.05114	.22614	.57	.05505	.63
.08	.04380	.28	.58	.04744	.80	.08	.05122	.31	.58	.05513	.80
.09	.04387	.45	.59	.04751	.97	.09	.05129	.48	.59	.05521	.97
12.10	.04394	.62	12.60	.04759	.21814	13.10	.05137	.65	13.60	.05529	.23514
.11	.04401	.79	.61	.04766	.31	.11	.05145	.82	.61	.05537	.31
.12	.04408	.96	.62	.04773	.48	.12	.05152	.99	.62	.05545	.48
.13	.04415	.21013	.63	.04781	.65	.13	.05160	.22716	.63	.05553	.65
.14	.04423	.30	.64	.04788	.82	.14	.05168	.33	.64	.05561	.82
.15	.04430	.47	.65	.04796	.99	.15	.05176	.50	.65	.05569	.99
.16	.04437	.64	.66	.04804	.21917	.16	.05183	.67	.66	.05577	.23616
.17	.04444	.81	.67	.04811	.34	.17	.05191	.84	.67	.05585	.33
.18	.04451	.98	.68	.04818	.51	.18	.05199	.22801	.68	.05593	.50
.19	.04458	.21115	.69	.04826	.68	.19	.05207	.18	.69	.05601	.67
12.20	.04466	.32	12.70	.04833	.85	13.20	.05214	.35	13.70	.05609	.84
.21	.04473	.50	.71	.04841	.22002	.21	.05222	.52	.71	.05617	.23701
.22	.04480	.67	.72	.04848	.19	.22	.05230	.69	.72	.05625	.18
.23	.04488	.84	.73	.04856	.36	.23	.05238	.86	.73	.05634	.35
.24	.04495	.21201	.74	.04863	.53	.24	.05245	.22903	.74	.05642	.52
.25	.04502	.18	.75	.04871	.70	.25	.05253	.20	.75	.05650	.69
.26	.04509	.35	.76	.04878	.87	.26	.05261	.37	.76	.05658	.86
.27	.04516	.52	.77	.04886	.22104	.27	.05269	.54	.77	.05665	.23802
.28	.04524	.69	.78	.04893	.21	.28	.05277	.71	.78	.05673	.19
.29	.04531	.86	.79	.04901	.38	.29	.05284	.88	.79	.05682	.36
12.30	.04538	.21303	12.80	.04908	.55	13.30	.05292	.23005	13.80	.05690	.53
.31	.04545	.20	.81	.04916	.72	.31	.05300	.22	.81	.05698	.70
.32	.04553	.37	.82	.04924	.89	.32	.05308	.39	.82	.05706	.87
.33	.04560	.54	.83	.04931	.22206	.33	.05316	.56	.83	.05714	.23904
.34	.04567	.71	.84	.04939	.23	.34	.05324	.73	.84	.05722	.21
.35	.04574	.88	.85	.04946	.40	.35	.05331	.90	.85	.05730	.38
.36	.04582	.21405	.86	.04954	.57	.36	.05339	.23107	.86	.05738	.55
.37	.04589	.22	.87	.04961	.74	.37	.05347	.24	.87	.05747	.72
.38	.04596	.39	.88	.04969	.91	.38	.05355	.41	.88	.05755	.89
.39	.04604	.56	.89	.04976	.22308	.39	.05363	.58	.89	.05763	.24006
12.40	.04611	.74	12.90	.04984	.25	13.40	.05371	.75	13.90	.05771	.23
.41	.04619	.91	.91	.04992	.42	.41	.05379	.92	.91	.05779	.40
.42	.04626	.21508	.92	.04999	.59	.42	.05387	.23209	.92	.05787	.57
.43	.04633	.25	.93	.05007	.76	.43	.05394	.26	.93	.05796	.74
.44	.04641	.42	.94	.05014	.93	.44	.05402	.43	.94	.05804	.91
.45	.04648	.59	.95	.05022	.22410	.45	.05410	.60	.95	.05812	.24108
.46	.04655	.76	.96	.05030	.27	.46	.05418	.77	.96	.05820	.24
.47	.04663	.93	.97	.05037	.44	.47	.05426	.94	.97	.05828	.41
.48	.04670	.21610	.98	.05045	.61	.48	.05434	.23311	.98	.05836	.58
.49	.04677	.27	.99	.05053	.78	.49	.05442	.28	.99	.05844	.75
12.50	.04685	.44	13.00	.05060	.95	13.50	.05450	.45	14.00	.05853	.92

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
14.00	0.05853	0.24192	14.50	0.06269	0.25038	15.00	0.06699	0.25882	15.50	0.07142	0.26724
.01	.05861	.24209	.51	.06278	.55	.01	.06708	.99	.51	.07151	.41
.02	.05869	.26	.52	.06286	.72	.02	.06716	.25916	.52	.07159	.57
.03	.05877	.43	.53	.06295	.89	.03	.06725	.32	.53	.07168	.74
.04	.05885	.60	.54	.06303	.25106	.04	.06734	.49	.54	.07178	.91
.05	.05894	.77	.55	.06311	.22	.05	.06742	.66	.55	.07187	.26808
.06	.05902	.94	.56	.06320	.39	.06	.06751	.83	.56	.07196	.25
.07	.05910	.24311	.57	.06328	.56	.07	.06760	.26000	.57	.07205	.42
.08	.05919	.28	.58	.06337	.73	.08	.06769	.17	.58	.07214	.58
.09	.05927	.45	.59	.06345	.90	.09	.06778	.34	.59	.07223	.75
14.10	.05935	.62	14.60	.06354	.25207	15.10	.06786	.50	15.60	.07232	.92
.11	.05943	.78	.61	.06363	.24	.11	.06795	.67	.61	.07241	.26909
.12	.05951	.95	.62	.06371	.41	.12	.06804	.84	.62	.07250	.26
.13	.05959	.24412	.63	.06380	.58	.13	.06813	.26101	.63	.07259	.42
.14	.05968	.29	.64	.06388	.74	.14	.06821	.18	.64	.07268	.59
.15	.05976	.46	.65	.06396	.91	.15	.06830	.35	.65	.07277	.76
.16	.05984	.63	.66	.06405	.25308	.16	.06839	.52	.66	.07286	.93
.17	.05993	.80	.67	.06414	.25	.17	.06848	.68	.67	.07295	.27010
.18	.06001	.97	.68	.06422	.42	.18	.06857	.85	.68	.07304	.26
.19	.06009	.24514	.69	.06431	.59	.19	.06865	.26202	.69	.07313	.43
14.20	.06018	.31	14.70	.06439	.76	15.20	.06874	.19	15.70	.07322	.60
.21	.06026	.48	.71	.06448	.93	.21	.06883	.36	.71	.07332	.77
.22	.06034	.65	.72	.06457	.25410	.22	.06892	.53	.72	.07341	.94
.23	.06043	.82	.73	.06465	.26	.23	.06901	.69	.73	.07350	.27110
.24	.06051	.98	.74	.06473	.43	.24	.06910	.86	.74	.07359	.27
.25	.06059	.24615	.75	.06482	.60	.25	.06918	.26303	.75	.07368	.44
.26	.06067	.32	.76	.06491	.77	.26	.06927	.20	.76	.07377	.61
.27	.06076	.49	.77	.06499	.94	.27	.06936	.37	.77	.07386	.78
.28	.06084	.66	.78	.06508	.25511	.28	.06945	.54	.78	.07395	.94
.29	.06093	.83	.79	.06517	.28	.29	.06954	.71	.79	.07404	.27211
14.30	.06101	.24700	14.80	.06525	.45	15.30	.06963	.87	15.80	.07414	.28
.31	.06109	.17	.81	.06534	.61	.31	.06972	.26404	.81	.07423	.45
.32	.06118	.34	.82	.06542	.78	.32	.06981	.21	.82	.07432	.62
.33	.06126	.51	.83	.06551	.95	.33	.06990	.38	.83	.07441	.78
.34	.06135	.68	.84	.06560	.25612	.34	.06999	.55	.84	.07450	.95
.35	.06142	.84	.85	.06568	.29	.35	.07007	.71	.85	.07459	.27312
.36	.06151	.24801	.86	.06577	.46	.36	.07016	.88	.86	.07469	.29
.37	.06159	.18	.87	.06586	.63	.37	.07025	.26505	.87	.07478	.46
.38	.06168	.35	.88	.06595	.80	.38	.07034	.22	.88	.07487	.62
.39	.06176	.52	.89	.06603	.96	.39	.07043	.39	.89	.07496	.79
14.40	.06185	.69	14.90	.06612	.25713	15.40	.07052	.56	15.90	.07505	.96
.41	.06193	.86	.91	.06620	.30	.41	.07061	.72	.91	.07515	.27413
.42	.06202	.24903	.92	.06629	.47	.42	.07070	.89	.92	.07524	.29
.43	.06210	.20	.93	.06638	.64	.43	.07079	.26606	.93	.07533	.46
.44	.06219	.37	.94	.06647	.81	.44	.07088	.23	.94	.07542	.63
.45	.06227	.54	.95	.06655	.98	.45	.07096	.39	.95	.07552	.80
.46	.06235	.70	.96	.06664	.25814	.46	.07106	.57	.96	.07561	.97
.47	.06244	.87	.97	.06672	.31	.47	.07114	.73	.97	.07570	.27513
.48	.06252	.25004	.98	.06681	.48	.48	.07124	.90	.98	.07579	.30
.49	.06261	.21	.99	.06690	.65	.49	.07133	.26707	.99	.07588	.47
14.50	.06269	.38	15.00	.06699	.82	15.50	.07142	.24	16.00	.07598	.64

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
16.00	0.07598	0.27564	16.50	0.08067	0.28402	17.00	0.08548	0.29237	17.50	0.09043	0.30071
.01	.07607	81	.51	.08076	18	.01	.08558	54	.51	.09052	87
.02	.07616	97	.52	.08085	35	.02	.08568	71	.52	.09063	.30104
.03	.07625	.27614	.53	.08095	52	.03	.08577	87	.53	.09073	21
.04	.07635	31	.54	.08104	68	.04	.08587	.29304	.54	.09082	37
.05	.07644	48	.55	.08114	85	.05	.08597	21	.55	.09093	54
.06	.07653	64	.56	.08124	.28502	.06	.08607	37	.56	.09102	70
.07	.07662	81	.57	.08133	19	.07	.08617	54	.57	.09113	87
.08	.07672	98	.58	.08142	35	.08	.08627	71	.58	.09123	.30204
.09	.07681	.27715	.59	.08152	52	.09	.08636	87	.59	.09132	20
16.10	.07690	31	16.60	.08162	69	17.10	.08646	.29404	17.60	.09143	37
.11	.07700	48	.61	.08172	86	.11	.08656	21	.61	.09153	54
.12	.07709	65	.62	.08181	.28602	.12	.08665	37	.62	.09163	70
.13	.07718	82	.63	.08190	19	.13	.08675	54	.63	.09173	87
.14	.07728	99	.64	.08200	36	.14	.08685	71	.64	.09183	.30304
.15	.07737	.27815	.65	.08209	52	.15	.08695	87	.65	.09193	20
.16	.07746	32	.66	.08219	69	.16	.08705	.29504	.66	.09203	37
.17	.07756	49	.67	.08229	86	.17	.08715	21	.67	.09213	53
.18	.07765	66	.68	.08239	.28703	.18	.08724	37	.68	.09223	70
.19	.07774	82	.69	.08248	19	.19	.08734	54	.69	.09234	87
16.20	.07784	99	16.70	.08258	36	17.20	.08744	71	17.70	.09243	.30403
.21	.07793	.27916	.71	.08267	53	.21	.08754	87	.71	.09254	20
.22	.07803	33	.72	.08277	69	.22	.08764	.29604	.72	.09264	37
.23	.07811	49	.73	.08286	86	.23	.08774	21	.73	.09274	53
.24	.07821	66	.74	.08296	.28803	.24	.08784	37	.74	.09284	70
.25	.07830	83	.75	.08306	20	.25	.08794	54	.75	.09294	86
.26	.07840	.28000	.76	.08315	36	.26	.08804	71	.76	.09304	.30503
.27	.07849	16	.77	.08325	53	.27	.08813	87	.77	.09315	20
.28	.07858	33	.78	.08335	70	.28	.08823	.29704	.78	.09324	36
.29	.07868	50	.79	.08344	86	.29	.08833	21	.79	.09335	53
16.30	.07878	67	16.80	.08354	.28903	17.30	.08843	37	17.80	.09345	70
.31	.07887	83	.81	.08364	20	.31	.08853	54	.81	.09355	86
.32	.07896	.28100	.82	.08373	37	.32	.08863	71	.82	.09365	30603
.33	.07906	17	.83	.08383	53	.33	.08873	87	.83	.09375	19
.34	.07915	34	.84	.08393	70	.34	.08883	.29804	.84	.09386	36
.35	.07924	50	.85	.08402	87	.35	.08893	21	.85	.09396	53
.36	.07934	67	.86	.08412	.29003	.36	.08902	37	.86	.09406	69
.37	.07943	84	.87	.08422	20	.37	.08913	54	.87	.09416	86
.38	.07953	.28201	.88	.08431	37	.38	.08923	71	.88	.09426	.30702
.39	.07962	17	.89	.08441	54	.39	.08932	87	.89	.09437	19
16.40	.07972	34	16.90	.08451	70	17.40	.08942	.29904	17.90	.09447	36
.41	.07981	51	.91	.08461	87	.41	.08953	21	.91	.09457	52
.42	.07991	68	.92	.08470	.29104	.42	.08962	37	.92	.09467	69
.43	.08000	84	.93	.08480	20	.43	.08972	54	.93	.09477	85
.44	.08009	.28301	.94	.08490	37	.44	.08983	71	.94	.09488	.30802
.45	.08019	18	.95	.08500	54	.45	.08992	87	.95	.09498	19
.46	.08029	35	.96	.08509	70	.46	.09002	.30004	.96	.09508	35
.47	.08038	51	.97	.08519	87	.47	.09013	21	.97	.09518	52
.48	.08047	68	.98	.08529	.29204	.48	.09022	37	.98	.09529	69
.49	.08057	85	.99	.08538	20	.49	.09032	54	.99	.09539	85
16.50	.08067	.28402	17.00	.08548	37	17.50	.09043	71	18.00	.09549	.30902

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
18.00	0.09549	0.30902	18.50	0.10068	0.31730	19.00	0.10600	0.32557	19.50	0.11143	0.33381
.01	.09559	18	.51	.10079	47	.01	.10610	73	.51	.11154	97
.02	.09570	35	.52	.10090	64	.02	.10621	90	.52	.11165	.33414
.03	.09580	51	.53	.10100	80	.03	.10632	.32606	.53	.11176	30
.04	.09590	68	.54	.10110	97	.04	.10643	23	.54	.11186	46
.05	.09601	85	.55	.10121	.31813	.05	.10653	39	.55	.11198	63
.06	.09611	.31001	.56	.10131	30	.06	.10664	56	.56	.11208	79
.07	.09621	18	.57	.10142	46	.07	.10675	72	.57	.11220	96
.08	.09631	34	.58	.10153	63	.08	.10686	89	.58	.11231	.33512
.09	.09642	51	.59	.10163	79	.09	.10696	.32705	.59	.11242	29
18.10	.09652	68	18.60	.10174	96	19.10	.10707	22	19.60	.11253	45
.11	.09662	84	.61	.10184	.31912	.11	.10718	38	.61	.11264	62
.12	.09673	.31101	.62	.10195	29	.12	.10729	55	.62	.11275	78
.13	.09683	17	.63	.10205	46	.13	.10739	71	.63	.11286	94
.14	.09693	34	.64	.10216	62	.14	.10751	88	.64	.11297	.33611
.15	.09704	51	.65	.10227	79	.15	.10761	.32804	.65	.11308	27
.16	.09714	67	.66	.10237	95	.16	.10772	21	.66	.11319	44
.17	.09724	84	.67	.10248	.32012	.17	.10783	37	.67	.11330	60
.18	.09734	.31200	.68	.10258	28	.18	.10794	54	.68	.11341	77
.19	.09745	17	.69	.10269	45	.19	.10804	70	.69	.11352	93
18.20	.09755	33	18.70	.10279	61	19.20	.10816	87	19.70	.11364	.33710
.21	.09766	50	.71	.10290	78	.21	.10826	.32903	.71	.11374	26
.22	.09776	67	.72	.10300	94	.22	.10837	20	.72	.11385	42
.23	.09786	83	.73	.10311	.32111	.23	.10848	36	.73	.11397	59
.24	.09797	.31300	.74	.10321	27	.24	.10859	53	.74	.11408	75
.25	.09807	16	.75	.10332	44	.25	.10870	69	.75	.11419	92
.26	.09818	33	.76	.10343	60	.26	.10881	86	.76	.11430	.33808
.27	.09828	50	.77	.10354	77	.27	.10891	.33002	.77	.11441	25
.28	.09838	66	.78	.10365	94	.28	.10902	18	.78	.11452	41
.29	.09849	83	.79	.10375	.32210	.29	.10913	35	.79	.11463	57
18.30	.09859	99	18.80	.10386	27	19.30	.10924	51	19.80	.11474	74
.31	.09870	.31416	.81	.10396	43	.31	.10935	68	.81	.11485	90
.32	.09880	32	.82	.10407	60	.32	.10946	84	.82	.11497	.33907
.33	.09890	49	.83	.10417	76	.33	.10957	.33101	.83	.11508	23
.34	.09901	66	.84	.10428	93	.34	.10967	17	.84	.11519	39
.35	.09911	82	.85	.10439	.32309	.35	.10979	34	.85	.11530	56
.36	.09922	99	.86	.10450	26	.36	.10989	50	.86	.11541	72
.37	.09932	.31515	.87	.10460	42	.37	.11000	67	.87	.11553	89
.38	.09943	32	.88	.10471	59	.38	.11011	83	.88	.11563	.34005
.39	.09953	48	.89	.10481	75	.39	.11022	.33200	.89	.11575	22
18.40	.09963	65	18.90	.10492	92	19.40	.11033	16	19.90	.11586	38
.41	.09974	81	.91	.10503	.32408	.41	.11044	33	.91	.11597	54
.42	.09984	98	.92	.10514	25	.42	.11055	49	.92	.11608	71
.43	.09995	.31615	.93	.10524	41	.43	.11066	66	.93	.11619	87
.44	.10005	31	.94	.10535	58	.44	.11077	82	.94	.11631	.34104
.45	.10016	48	.95	.10546	74	.45	.11088	98	.95	.11642	20
.46	.10026	64	.96	.10557	91	.46	.11099	.33315	.96	.11653	36
.47	.10037	81	.97	.10567	.32507	.47	.11110	31	.97	.11664	53
.48	.10047	97	.98	.10578	24	.48	.11121	48	.98	.11675	69
.49	.10058	.31714	.99	.10589	40	.49	.11132	64	.99	.11687	86
18.50	.10068	30	19.00	.10600	57	19.50	.11143	81	20.00	.11698	.34202

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
20.00	0.11698	0.34202	20.50	0.12265	0.35021	21.00	0.12843	0.35837	21.50	0.13432	0.36650
.01	.11709	18	.51	.12276	37	.01	.12854	53	.51	.13444	66
.02	.11720	35	.52	.12287	53	.02	.12866	69	.52	.13456	83
.03	.11731	51	.53	.12299	70	.03	.12878	86	.53	.13468	99
.04	.11743	68	.54	.12310	86	.04	.12890	.35902	.54	.13480	.36715
.05	.11754	.34284	.55	.12322	.35102	.05	.12901	18	.55	.13492	31
.06	.11765	.34300	.56	.12333	19	.06	.12913	35	.56	.13504	48
.07	.11777	17	.57	.12345	35	.07	.12925	51	.57	.13516	64
.08	.11788	33	.58	.12356	51	.08	.12936	67	.58	.13528	80
.09	.11799	50	.59	.12368	68	.09	.12948	83	.59	.13539	96
20.10	.11810	.34366	20.60	.12379	.35184	21.10	.12960	.36000	21.60	.13551	.36812
.11	.11821	82	.61	.12391	.35201	.11	.12972	.36016	.61	.13564	29
.12	.11833	99	.62	.12402	17	.12	.12983	32	.62	.13576	45
.13	.11844	.34415	.63	.12414	33	.13	.12995	49	.63	.13587	61
.14	.11856	32	.64	.12426	50	.14	.13007	65	.64	.13599	77
.15	.11867	48	.65	.12437	66	.15	.13018	81	.65	.13612	94
.16	.11878	64	.66	.12448	82	.16	.13030	97	.66	.13623	.36910
.17	.11889	81	.67	.12460	99	.17	.13042	.36114	.67	.13635	26
.18	.11900	97	.68	.12471	.35315	.18	.13054	30	.68	.13647	42
.19	.11911	.34513	.69	.12483	31	.19	.13065	46	.69	.13659	58
20.20	.11923	30	20.70	.12494	47	21.20	.13077	62	21.70	.13672	.36975
.21	.11934	46	.71	.12506	64	.21	.13089	79	.71	.13683	91
.22	.11946	63	.72	.12517	80	.22	.13101	95	.72	.13695	.37007
.23	.11957	79	.73	.12529	96	.23	.13112	.36211	.73	.13707	23
.24	.11968	95	.74	.12541	.35413	.24	.13125	28	.74	.13720	40
.25	.11980	.34612	.75	.12552	29	.25	.13136	44	.75	.13731	56
.26	.11991	28	.76	.12563	45	.26	.13148	60	.76	.13743	72
.27	.12002	44	.77	.12576	62	.27	.13159	76	.77	.13755	88
.28	.12014	61	.78	.12587	78	.28	.13172	93	.78	.13767	.37104
.29	.12025	77	.79	.12598	94	.29	.13183	.36309	.79	.13780	21
20.30	.12037	.34694	20.80	.12610	.35511	21.30	.13195	25	21.80	.13792	.37137
.31	.12048	.34710	.81	.12622	27	.31	.13207	41	.81	.13803	53
.32	.12059	26	.82	.12633	43	.32	.13219	58	.82	.13815	69
.33	.12071	43	.83	.12645	60	.33	.13231	74	.83	.13827	85
.34	.12082	59	.84	.12657	76	.34	.13242	90	.84	.13840	.37202
.35	.12093	.34775	.85	.12668	92	.35	.13254	.36406	.85	.13852	18
.36	.12105	92	.86	.12680	.35609	.36	.13266	23	.86	.13864	34
.37	.12116	.34808	.87	.12691	25	.37	.13278	39	.87	.13876	50
.38	.12127	24	.88	.12703	41	.38	.13290	55	.88	.13888	66
.39	.12139	41	.89	.12714	57	.39	.13301	71	.89	.13900	83
20.40	.12150	.34857	20.90	.12726	.35674	21.40	.13314	.36488	21.90	.13912	.37299
.41	.12162	74	.91	.12738	90	.41	.13325	.36504	.91	.13924	.37315
.42	.12173	90	.92	.12749	.35706	.42	.13337	20	.92	.13936	31
.43	.12184	.34906	.93	.12761	23	.43	.13349	36	.93	.13948	47
.44	.12196	23	.94	.12773	39	.44	.13361	53	.94	.13961	64
.45	.12207	.34939	.95	.12784	55	.45	.13373	69	.95	.13973	80
.46	.12219	55	.96	.12796	72	.46	.13385	85	.96	.13985	96
.47	.12230	72	.97	.12808	88	.47	.13396	.36601	.97	.13997	.37412
.48	.12242	88	.98	.12819	.35804	.48	.13409	18	.98	.14009	28
.49	.12253	.35004	.99	.12831	21	.49	.13420	34	.99	.14021	44
20.50	.12265	.35021	21.00	.12843	.35837	21.50	.13432	.36650	22.00	.14033	.37461

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
22.00	0.14033	0.37461	22.50	0.14644	0.38268	23.00	0.15267	0.39073	23.50	0.15900	0.39875
.01	.14045	77	.51	.14657	84	.01	.15279	89	.51	.15913	91
.02	.14057	93	.52	.14670	.38301	.02	.15292	.39105	.52	.15926	.39907
.03	.14069	.37509	.53	.14682	17	.03	.15305	21	.53	.15938	23
.04	.14081	25	.54	.14694	33	.04	.15317	37	.54	.15951	39
.05	.14094	42	.55	.14706	49	.05	.15330	53	.55	.15964	55
.06	.14106	58	.56	.14719	65	.06	.15342	69	.56	.15977	71
.07	.14118	74	.57	.14731	81	.07	.15355	86	.57	.15990	87
.08	.14130	90	.58	.14743	97	.08	.15368	.39202	.58	.16002	.40003
.09	.14142	.37606	.59	.14756	.38413	.09	.15381	18	.59	.16015	19
22.10	.14154	22	22.60	.14769	30	23.10	.15393	34	23.60	.16028	35
.11	.14167	39	.61	.14781	46	.11	.15406	50	.61	.16041	51
.12	.14179	55	.62	.14793	62	.12	.15418	66	.62	.16054	67
.13	.14191	71	.63	.14806	78	.13	.15431	82	.63	.16066	83
.14	.14203	87	.64	.14818	94	.14	.15443	98	.64	.16079	99
.15	.14215	.37703	.65	.14830	.38510	.15	.15456	.39314	.65	.16092	.40115
.16	.14227	19	.66	.14843	26	.16	.15468	30	.66	.16105	31
.17	.14240	36	.67	.14855	42	.17	.15481	46	.67	.16118	47
.18	.14252	52	.68	.14867	58	.18	.15494	62	.68	.16131	63
.19	.14264	68	.69	.14880	75	.19	.15506	78	.69	.16144	79
22.20	.14276	84	22.70	.14893	91	23.20	.15519	94	23.70	.16156	95
.21	.14288	.37800	.71	.14905	.38607	.21	.15531	.39410	.71	.16169	.40211
.22	.14300	16	.72	.14917	23	.22	.15544	26	.72	.16182	27
.23	.14313	33	.73	.14930	39	.23	.15557	42	.73	.16195	43
.24	.14325	49	.74	.14942	55	.24	.15569	58	.74	.16208	59
.25	.14338	65	.75	.14954	71	.25	.15582	74	.75	.16221	75
.26	.14350	81	.76	.14967	87	.26	.15595	90	.76	.16234	91
.27	.14362	97	.77	.14979	.38703	.27	.15607	.39506	.77	.16247	.40307
.28	.14374	.37913	.78	.14992	19	.28	.15620	22	.78	.16259	23
.29	.14386	29	.79	.15004	35	.29	.15633	39	.79	.16272	39
22.30	.14399	46	22.80	.15017	52	23.30	.15646	55	23.80	.16285	55
.31	.14411	62	.81	.15030	68	.31	.15659	71	.81	.16298	71
.32	.14423	78	.82	.15042	84	.32	.15671	87	.82	.16310	86
.33	.14435	94	.83	.15054	.38800	.33	.15684	.39603	.83	.16323	.40402
.34	.14448	.38010	.84	.15067	16	.34	.15697	19	.84	.16336	18
.35	.14460	26	.85	.15079	32	.35	.15709	35	.85	.16349	34
.36	.14472	42	.86	.15092	48	.36	.15722	51	.86	.16362	50
.37	.14485	59	.87	.15104	64	.37	.15735	67	.87	.16375	66
.38	.14497	75	.88	.15117	80	.38	.15747	83	.88	.16388	82
.39	.14509	91	.89	.15129	96	.39	.15760	99	.89	.16401	98
22.40	.14521	.38107	22.90	.15141	.38912	23.40	.15773	.39715	23.90	.16414	.40514
.41	.14534	23	.91	.15154	28	.41	.15786	31	.91	.16427	30
.42	.14546	39	.92	.15167	45	.42	.15798	47	.92	.16440	46
.43	.14558	55	.93	.15180	61	.43	.15811	63	.93	.16453	62
.44	.14571	72	.94	.15192	77	.44	.15824	79	.94	.16466	78
.45	.14583	88	.95	.15205	93	.45	.15836	95	.95	.16479	94
.46	.14595	.38204	.96	.15217	.39009	.46	.15849	.39811	.96	.16492	.40610
.47	.14608	20	.97	.15230	25	.47	.15862	27	.97	.16505	26
.48	.14620	36	.98	.15242	41	.48	.15875	43	.98	.16518	42
.49	.14632	52	.99	.15254	57	.49	.15887	59	.99	.16531	58
22.50	.14644	68	23.00	.15267	73	23.50	.15900	.39875	24.00	.16544	74

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
24.00	0.16544	0.40674	24.50	0.17197	0.41469	25.00	0.17861	0.42262	25.50	0.18534	0.43051
.01	.16557	90	.51	.17210	85	.01	.17874	78	.51	.18548	67
.02	.16570	.40706	.52	.17223	.41501	.02	.17887	93	.52	.18561	83
.03	.16582	21	.53	.17237	17	.03	.17901	.42309	.53	.18574	98
.04	.16595	37	.54	.17250	33	.04	.17914	25	.54	.18588	.43114
.05	.16608	53	.55	.17263	49	.05	.17928	41	.55	.18602	30
.06	.16621	69	.56	.17276	65	.06	.17941	57	.56	.18616	46
.07	.16634	85	.57	.17289	80	.07	.17955	73	.57	.18629	61
.08	.16647	.40801	.58	.17302	96	.08	.17967	88	.58	.18643	77
.09	.16660	17	.59	.17316	.41612	.09	.17981	.42404	.59	.18656	93
24.10	.16673	33	24.60	.17329	28	25.10	.17995	20	25.60	.18670	.43209
.11	.16686	49	.61	.17342	44	.11	.18008	36	.61	.18683	24
.12	.16699	65	.62	.17356	60	.12	.18022	52	.62	.18697	40
.13	.16713	81	.63	.17369	76	.13	.18034	67	.63	.18711	56
.14	.16726	97	.64	.17382	92	.14	.18048	83	.64	.18725	72
.15	.16739	.40913	.65	.17395	.41707	.15	.18062	99	.65	.18738	87
.16	.16752	29	.66	.17408	23	.16	.18075	.42515	.66	.18751	.43303
.17	.16765	45	.67	.17421	39	.17	.18089	31	.67	.18765	19
.18	.16777	60	.68	.17435	55	.18	.18102	46	.68	.18778	34
.19	.16790	76	.69	.17448	71	.19	.18115	62	.69	.18792	50
24.20	.16803	92	24.70	.17462	87	25.20	.18129	78	25.70	.18806	66
.21	.16817	.41008	.71	.17475	.41803	.21	.18142	94	.71	.18820	82
.22	.16830	24	.72	.17487	18	.22	.18156	.42610	.72	.18833	97
.23	.16843	40	.73	.17501	34	.23	.18169	25	.73	.18847	.43413
.24	.16856	56	.74	.17514	50	.24	.18183	41	.74	.18861	29
.25	.16869	72	.75	.17528	66	.25	.18196	57	.75	.18875	45
.26	.16882	88	.76	.17541	82	.26	.18210	73	.76	.18888	60
.27	.16895	.41104	.77	.17554	98	.27	.18223	88	.77	.18902	76
.28	.16909	20	.78	.17568	.41914	.28	.18236	.42704	.78	.18916	92
.29	.16922	36	.79	.17580	29	.29	.18250	20	.79	.18929	.43507
24.30	.16934	51	24.80	.17594	45	25.30	.18264	36	25.80	.18943	23
.31	.16947	67	.81	.17607	61	.31	.18277	52	.81	.18956	39
.32	.16960	83	.82	.17621	77	.32	.18290	67	.82	.18970	55
.33	.16974	99	.83	.17634	93	.33	.18304	83	.83	.18983	70
.34	.16987	.41215	.84	.17648	.42009	.34	.18318	99	.84	.18997	86
.35	.17000	31	.85	.17660	24	.35	.18331	.42815	.85	.19011	.43602
.36	.17013	47	.86	.17674	40	.36	.18344	30	.86	.19024	17
.37	.17026	63	.87	.17687	56	.37	.18358	46	.87	.19038	33
.38	.17040	79	.88	.17701	72	.38	.18372	62	.88	.19052	49
.39	.17053	95	.89	.17714	88	.39	.18385	78	.89	.19065	64
24.40	.17065	.41310	24.90	.17727	.42104	25.40	.18399	94	25.90	.19079	80
.41	.17078	26	.91	.17740	19	.41	.18412	.42909	.91	.19093	96
.42	.17092	42	.92	.17754	35	.42	.18426	25	.92	.19107	.43712
.43	.17105	58	.93	.17767	51	.43	.18439	41	.93	.19121	27
.44	.17118	74	.94	.17781	67	.44	.18453	57	.94	.19135	43
.45	.17131	90	.95	.17794	83	.45	.18466	72	.95	.19149	59
.46	.17145	.41406	.96	.17808	99	.46	.18480	88	.96	.19162	74
.47	.17158	22	.97	.17820	.42214	.47	.18493	.43004	.97	.19176	90
.48	.17171	38	.98	.17834	30	.48	.18507	20	.98	.19190	.43806
.49	.17184	53	.99	.17847	46	.49	.18520	35	.99	.19203	21
24.50	.17197	69	25.00	.17861	62	25.50	.18534	51	26.00	.19217	37

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
26.00	0.19217	0.43837	26.50	0.19909	0.44620	27.00	0.20611	0.45399	27.50	0.21321	0.46175
.01	.19231	53	.51	.19923	35	.01	.20625	.45415	.51	.21335	90
.02	.19244	68	.52	.19937	51	.02	.20639	30	.52	.21350	.46206
.03	.19258	84	.53	.19951	67	.03	.20653	46	.53	.21364	21
.04	.19272	.43900	.54	.19965	82	.04	.20667	61	.54	.21379	37
.05	.19286	16	.55	.19979	98	.05	.20682	77	.55	.21392	52
.06	.19299	31	.56	.19993	.44713	.06	.20695	92	.56	.21407	68
.07	.19313	47	.57	.20007	29	.07	.20710	.45508	.57	.21421	83
.08	.19327	63	.58	.20021	45	.08	.20723	23	.58	.21436	99
.09	.19341	78	.59	.20035	60	.09	.20738	39	.59	.21450	.46314
26.10	.19355	94	26.60	.20049	76	27.10	.20752	54	27.60	.21465	30
.11	.19369	.44010	.61	.20063	92	.11	.20766	70	.61	.21479	45
.12	.19382	25	.62	.20077	.44807	.12	.20781	86	.62	.21493	61
.13	.19396	41	.63	.20091	23	.13	.20795	45601	.63	.21507	76
.14	.19410	57	.64	.20104	38	.14	.20809	17	.64	.21521	91
.15	.19423	72	.65	.20119	54	.15	.20823	32	.65	.21536	.46407
.16	.19438	88	.66	.20133	70	.16	.20837	48	.66	.21550	22
.17	.19452	.44104	.67	.20147	85	.17	.20851	63	.67	.21565	38
.18	.19465	19	.68	.20161	.44901	.18	.20866	79	.68	.21579	53
.19	.19479	35	.69	.20174	16	.19	.20879	94	.69	.21594	69
26.20	.19493	51	26.70	.20189	32	27.20	.20894	.45710	27.70	.21608	84
.21	.19506	66	.71	.20202	47	.21	.20908	25	.71	.21623	.46500
.22	.19520	82	.72	.20217	63	.22	.20922	41	.72	.21636	15
.23	.19535	98	.73	.20231	79	.23	.20936	56	.73	.21651	31
.24	.19548	.44213	.74	.20245	94	.24	.20951	72	.74	.21665	46
.25	.19562	29	.75	.20259	.45010	.25	.20964	87	.75	.21679	61
.26	.19576	45	.76	.20273	25	.26	.20979	.45803	.76	.21694	77
.27	.19589	60	.77	.20287	41	.27	.20993	18	.77	.21708	92
.28	.19604	76	.78	.20301	57	.28	.21008	34	.78	.21723	.46608
.29	.19617	91	.79	.20315	72	.29	.21021	49	.79	.21737	23
26.30	.19631	.44307	26.80	.20329	88	27.30	.21036	65	27.80	.21752	39
.31	.19645	23	.81	.20343	.45103	.31	.21050	80	.81	.21766	54
.32	.19659	38	.82	.20357	19	.32	.21064	96	.82	.21781	70
.33	.19673	54	.83	.20371	34	.33	.21078	.45911	.83	.21795	85
.34	.19687	70	.84	.20385	50	.34	.21093	27	.84	.21809	.46700
.35	.19700	85	.85	.20400	66	.35	.21107	42	.85	.21824	16
.36	.19714	.44401	.86	.20413	81	.36	.21121	58	.86	.21838	31
.37	.19729	17	.87	.20428	97	.37	.21135	73	.87	.21853	47
.38	.19742	32	.88	.20441	45212	.38	.21150	89	.88	.21867	62
.39	.19756	48	.89	.20456	28	.39	.21164	.46004	.89	.21882	78
26.40	.19770	64	26.90	.20469	43	27.40	.21178	20	27.90	.21896	93
.41	.19784	79	.91	.20484	59	.41	.21192	35	.91	.21910	.46808
.42	.19798	95	.92	.20498	75	.42	.21207	51	.92	.21925	24
.43	.19811	.44510	.93	.20512	90	.43	.21221	66	.93	.21939	39
.44	.19826	26	.94	.20526	.45306	.44	.21236	82	.94	.21954	55
.45	.19840	42	.95	.20540	21	.45	.21249	97	.95	.21968	70
.46	.19853	57	.96	.20554	37	.46	.21264	.46113	.96	.21983	86
.47	.19868	73	.97	.20568	52	.47	.21278	28	.97	.21997	.46901
.48	.19882	89	.98	.20583	68	.48	.21293	44	.98	.22011	16
.49	.19895	.44604	.99	.20597	84	.49	.21307	59	.99	.22026	32
26.50	.19909	20	27.00	.20611	99	27.50	.21321	75	28.00	.22040	47

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
28.00	0.22040	0.46947	28.50	0.22768	0.47716	29.00	0.23504	0.48481	29.50	0.24248	0.49242
.01	.22055	.63	.51	.22782	.31	.01	.23519	.96	.51	.24264	.58
.02	.22069	.78	.52	.22798	.47	.02	.23533	.48511	.52	.24278	.73
.03	.22083	.93	.53	.22812	.62	.03	.23549	.27	.53	.24293	.88
.04	.22098	.47009	.54	.22826	.77	.04	.23563	.42	.54	.24308	.49303
.05	.22113	.24	.55	.22842	.93	.05	.23578	.57	.55	.24323	.18
.06	.22128	.40	.56	.22856	.47808	.06	.23593	.73	.56	.24337	.33
.07	.22142	.55	.57	.22870	.23	.07	.23608	.88	.57	.24353	.49
.08	.22156	.70	.58	.22886	.39	.08	.23623	.48603	.58	.24368	.64
.09	.22171	.86	.59	.22900	.54	.09	.23637	.18	.59	.24383	.79
28.10	.22185	.47101	28.60	.22914	.69	29.10	.23653	.34	29.60	.24398	.94
.11	.22200	.17	.61	.22930	.85	.11	.23667	.49	.61	.24412	.49409
.12	.22214	.32	.62	.22944	.47900	.12	.23682	.64	.62	.24428	.25
.13	.22228	.47	.63	.22958	.15	.13	.23696	.79	.63	.24443	.40
.14	.22243	.63	.64	.22973	.30	.14	.23712	.95	.64	.24458	.55
.15	.22258	.78	.65	.22988	.46	.15	.23727	.48710	.65	.24473	.70
.16	.22273	.94	.66	.23003	.61	.16	.23741	.25	.66	.24488	.85
.17	.22287	.47209	.67	.23017	.76	.17	.23756	.40	.67	.24503	.49500
.18	.22301	.24	.68	.23032	.92	.18	.23771	.55	.68	.24518	.16
.19	.22316	.40	.69	.23047	.48007	.19	.23786	.71	.69	.24533	.31
28.20	.22330	.55	28.70	.23061	.22	29.20	.23801	.86	29.70	.24548	.46
.21	.22345	.70	.71	.23076	.38	.21	.23815	.48801	.71	.24563	.61
.22	.22360	.86	.72	.23091	.53	.22	.23830	.16	.72	.24578	.76
.23	.22374	.47301	.73	.23105	.68	.23	.23846	.32	.73	.24593	.91
.24	.22389	.17	.74	.23121	.84	.24	.23860	.47	.74	.24609	.49607
.25	.22403	.32	.75	.23135	.99	.25	.23875	.62	.75	.24623	.22
.26	.22417	.47	.76	.23150	.48114	.26	.23890	.77	.76	.24638	.37
.27	.22433	.63	.77	.23164	.29	.27	.23905	.93	.77	.24653	.52
.28	.22447	.78	.78	.23179	.45	.28	.23920	.48908	.78	.24668	.67
.29	.22461	.93	.79	.23194	.60	.29	.23935	.23	.79	.24683	.82
28.30	.22476	.47409	28.80	.23208	.75	29.30	.23949	.38	29.80	.24698	.97
.31	.22490	.24	.81	.23224	.91	.31	.23964	.53	.81	.24714	.49713
.32	.22506	.40	.82	.23238	.48206	.32	.23980	.69	.82	.24729	.28
.33	.22520	.55	.83	.23253	.21	.33	.23994	.84	.83	.24744	.43
.34	.22534	.70	.84	.23268	.37	.34	.24009	.99	.84	.24759	.58
.35	.22549	.86	.85	.23283	.52	.35	.24024	.49014	.85	.24774	.73
.36	.22563	.47501	.86	.23297	.67	.36	.24039	.30	.86	.24788	.88
.37	.22578	.16	.87	.23312	.82	.37	.24054	.45	.87	.24803	.49803
.38	.22593	.32	.88	.23327	.98	.38	.24069	.60	.88	.24819	.19
.39	.22607	.47	.89	.23341	.48313	.39	.24084	.75	.89	.24834	.34
28.40	.22621	.62	28.90	.23356	.28	29.40	.24098	.90	29.90	.24849	.49
.41	.22637	.78	.91	.23371	.44	.41	.24114	.49106	.91	.24864	.64
.42	.22651	.93	.92	.23386	.59	.42	.24129	.21	.92	.24879	.79
.43	.22665	.47608	.93	.23400	.74	.43	.24143	.36	.93	.24894	.94
.44	.22680	.24	.94	.23415	.89	.44	.24158	.51	.94	.24909	.49909
.45	.22695	.39	.95	.23430	.48405	.45	.24173	.66	.95	.24924	.24
.46	.22710	.55	.96	.23445	.20	.46	.24189	.82	.96	.24940	.40
.47	.22724	.70	.97	.23459	.35	.47	.24203	.97	.97	.24955	.55
.48	.22739	.85	.98	.23474	.50	.48	.24218	.49212	.98	.24970	.70
.49	.22754	.47701	.99	.23490	.66	.49	.24233	.27	.99	.24985	.85
28.50	.22768	.16	29.00	.23504	.81	29.50	.24248	.42	30.00	.25000	.50000

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
30.00	0.25000	0.50000	30.50	0.25760	0.50754	31.00	0.26527	0.51504	31.50	0.27301	0.52250
.01	.25015	15	.51	.25775	69	.01	.26542	19	.51	.27316	65
.02	.25030	30	.52	.25790	84	.02	.26558	34	.52	.27332	80
.03	.25045	45	.53	.25805	99	.03	.26573	49	.53	.27347	94
.04	.25060	60	.54	.25821	50814	.04	.26588	64	.54	.27362	52309
.05	.25076	76	.55	.25836	29	.05	.26604	79	.55	.27378	24
.06	.25091	91	.56	.25851	44	.06	.26619	94	.56	.27394	39
.07	.25106	50106	.57	.25866	59	.07	.26634	51608	.57	.27409	54
.08	.25121	21	.58	.25882	74	.08	.26649	23	.58	.27425	69
.09	.25136	36	.59	.25897	89	.09	.26665	38	.59	.27441	84
30.10	.25151	51	30.60	.25912	50904	31.10	.26680	53	31.60	.27457	99
.11	.25166	66	.61	.25927	19	.11	.26696	68	.61	.27471	52413
.12	.25181	81	.62	.25943	34	.12	.26711	83	.62	.27487	28
.13	.25196	96	.63	.25958	49	.13	.26727	98	.63	.27503	43
.14	.25211	50211	.64	.25973	64	.14	.26742	51713	.64	.27518	58
.15	.25228	27	.65	.25989	79	.15	.26758	28	.65	.27534	73
.16	.25243	42	.66	.26004	94	.16	.26773	43	.66	.27550	88
.17	.25258	57	.67	.26019	51009	.17	.26789	58	.67	.27566	52503
.18	.25273	72	.68	.26034	24	.18	.26804	73	.68	.27580	17
.19	.25288	87	.69	.26050	39	.19	.26820	88	.69	.27596	32
30.20	.25303	50302	30.70	.26065	54	31.20	.26836	51803	31.70	.27612	47
.21	.25318	17	.71	.26080	69	.21	.26851	18	.71	.27628	62
.22	.25333	32	.72	.26096	84	.22	.26867	33	.72	.27643	77
.23	.25348	47	.73	.26111	99	.23	.26881	47	.73	.27659	92
.24	.25363	62	.74	.26126	51114	.24	.26897	62	.74	.27675	52607
.25	.25378	77	.75	.26142	29	.25	.26912	77	.75	.27690	21
.26	.25394	92	.76	.26157	44	.26	.26928	92	.76	.27705	36
.27	.25410	50408	.77	.26172	59	.27	.26943	51907	.77	.27721	51
.28	.25425	23	.78	.26188	74	.28	.26959	22	.78	.27737	66
.29	.25440	38	.79	.26203	89	.29	.26975	37	.79	.27753	81
30.30	.25455	53	30.80	.26218	51204	31.30	.26990	52	31.80	.27769	96
.31	.25470	68	.81	.26234	19	.31	.27006	67	.81	.27783	52710
.32	.25485	83	.82	.26249	34	.32	.27021	82	.82	.27799	25
.33	.25500	98	.83	.26265	49	.33	.27037	97	.83	.27815	40
.34	.25516	50513	.84	.26280	64	.34	.27052	52012	.84	.27831	55
.35	.25531	28	.85	.26295	79	.35	.27067	26	.85	.27847	70
.36	.25546	43	.86	.26311	94	.36	.27083	41	.86	.27863	85
.37	.25561	58	.87	.26326	51309	.37	.27098	56	.87	.27877	99
.38	.25576	73	.88	.26342	24	.38	.27114	71	.88	.27893	52814
.39	.25591	88	.89	.26357	39	.39	.27130	86	.89	.27909	29
30.40	.25607	50603	30.90	.26372	54	31.40	.27145	52101	31.90	.27925	44
.41	.25622	18	.91	.26388	69	.41	.27161	16	.91	.27941	59
.42	.25637	33	.92	.26403	84	.42	.27176	31	.92	.27956	73
.43	.25653	49	.93	.26419	99	.43	.27192	46	.93	.27971	88
.44	.25668	64	.94	.26434	51414	.44	.27208	61	.94	.27987	52903
.45	.25684	79	.95	.26449	29	.45	.27222	75	.95	.28003	18
.46	.25699	94	.96	.26465	44	.46	.27238	90	.96	.28019	33
.47	.25714	50709	.97	.26480	59	.47	.27254	52205	.97	.28035	48
.48	.25729	24	.98	.26496	74	.48	.27269	20	.98	.28050	62
.49	.25744	39	.99	.26511	89	.49	.27285	35	.99	.28066	77
30.50	.25760	54	31.00	.26527	51504	31.50	.27301	50	32.00	.28082	92

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
32.00	0.28082	0.52992	32.50	0.28869	0.53730	33.00	0.29663	0.54464	33.50	0.30464	0.55194
.01	.28097	.53007	.51	.28885	.45	.01	.29680	.79	.51	.30479	.55208
.02	.28113	.22	.52	.28900	.59	.02	.29695	.93	.52	.30496	.23
.03	.28128	.36	.53	.28916	.74	.03	.29711	.54508	.53	.30511	.37
.04	.28144	.51	.54	.28933	.89	.04	.29726	.22	.54	.30528	.52
.05	.28160	.66	.55	.28949	.53804	.05	.29743	.37	.55	.30543	.66
.06	.28176	.81	.56	.28964	.18	.06	.29759	.52	.56	.30560	.81
.07	.28192	.96	.57	.28980	.33	.07	.29774	.66	.57	.30576	.96
.08	.28207	.53110	.58	.28996	.48	.08	.29791	.81	.58	.30592	.55310
.09	.28223	.25	.59	.29011	.62	.09	.29807	.96	.59	.30609	.25
32.10	.28239	.40	32.60	.29027	.77	33.10	.29823	.54610	33.60	.30624	.39
.11	.28255	.55	.61	.29043	.92	.11	.29839	.25	.61	.30641	.54
.12	.28269	.69	.62	.29059	.53906	.12	.29854	.39	.62	.30656	.68
.13	.28285	.84	.63	.29075	.21	.13	.29871	.54	.63	.30673	.83
.14	.28301	.99	.64	.29091	.36	.14	.29887	.69	.64	.20688	.97
.15	.28317	.53214	.65	.29107	.51	.15	.29902	.83	.65	.30705	.55412
.16	.28333	.29	.66	.29122	.65	.16	.29919	.98	.66	.30720	.26
.17	.28348	.43	.67	.29138	.80	.17	.29935	.54713	.67	.30737	.41
.18	.28364	.58	.68	.29155	.95	.18	.29950	.27	.68	.30753	.55
.19	.28380	.73	.69	.29170	.54009	.19	.29967	.42	.69	.30769	.70
32.20	.28396	.88	32.70	.29186	.24	33.20	.29982	.56	33.70	.30785	.84
.21	.28411	.53302	.71	.29202	.39	.21	.29999	.71	.71	.30801	.99
.22	.28427	.17	.72	.29217	.53	.22	.30015	.86	.72	.30817	.55513
.23	.28443	.32	.73	.29233	.68	.23	.30030	.54800	.73	.30834	.28
.24	.28459	.47	.74	.29250	.83	.24	.30047	.15	.74	.30850	.43
.25	.28474	.61	.75	.29265	.97	.25	.30062	.29	.75	.30866	.57
.26	.28490	.76	.76	.29281	.54112	.26	.30079	.44	.76	.30882	.72
.27	.28506	.91	.77	.29297	.27	.27	.30095	.59	.77	.30898	.86
.28	.28522	.53406	.78	.29312	.41	.28	.30110	.73	.78	.30915	.55601
.29	.28537	.20	.79	.29329	.56	.29	.30127	.88	.79	.30930	.15
32.30	.28553	.35	32.80	.29345	.71	33.30	.30142	.54902	33.80	.30947	.30
.31	.28569	.50	.81	.29360	.85	.31	.30159	.17	.81	.30963	.44
.32	.28585	.65	.82	.29376	.54200	.32	.30174	.31	.82	.30979	.59
.33	.28600	.79	.83	.29393	.15	.33	.30191	.46	.83	.30995	.73
.34	.28616	.94	.84	.29408	.29	.34	.30207	.61	.84	.31012	.88
.35	.28632	.53509	.85	.29424	.44	.35	.30223	.75	.85	.31027	.55702
.36	.28648	.24	.86	.29440	.59	.36	.30239	.90	.86	.31044	.17
.37	.28663	.38	.87	.29456	.73	.37	.30254	.55004	.87	.31059	.31
.38	.28679	.53	.88	.29472	.88	.38	.30271	.19	.88	.31076	.46
.39	.28695	.68	.89	.29488	.54303	.39	.30287	.34	.89	.31092	.60
32.40	.28711	.83	32.90	.29503	.17	33.40	.30303	.48	33.90	.31109	.75
.41	.28726	.97	.91	.29520	.32	.41	.30319	.63	.91	.31124	.89
.42	.28742	.53612	.92	.29536	.47	.42	.30335	.77	.92	.31140	.55803
.43	.28759	.27	.93	.29551	.61	.43	.30351	.92	.93	.31156	.18
.44	.28775	.42	.94	.29567	.76	.44	.30367	.55106	.94	.31172	.32
.45	.28790	.56	.95	.29584	.91	.45	.30383	.21	.95	.31189	.47
.46	.28806	.71	.96	.29599	.54405	.46	.30399	.35	.96	.31205	.61
.47	.28822	.86	.97	.29615	.20	.47	.30415	.50	.97	.31221	.76
.48	.28838	.53701	.98	.29632	.35	.48	.30432	.65	.98	.31237	.90
.49	.28853	.15	.99	.29647	.49	.49	.30447	.79	.99	.31254	.55905
32.50	.28869	.30	33.00	.29663	.64	33.50	.30464	.94	34.00	.31269	.19

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
34.00	0.31269	0.55919	34.50	0.32082	0.56641	35.00	0.32899	0.57358	35.50	0.33721	0.58070
.01	.31286	34	.51	.32098	55	.01	.32915	72	.51	.33739	85
.02	.31302	48	.52	.32114	69	.02	.32932	86	.52	.33755	99
.03	.31319	63	.53	.32131	84	.03	.32949	.57401	.53	.33771	.58113
.04	.31334	77	.54	.32147	98	.04	.32965	15	.54	.33787	27
.05	.31351	92	.55	.32164	.56713	.05	.32981	29	.55	.33804	41
.06	.31367	.56006	.56	.32180	27	.06	.32997	43	.56	.33821	56
.07	.31384	21	.57	.32195	41	.07	.33014	58	.57	.33837	70
.08	.31399	35	.58	.32212	56	.08	.33030	72	.58	.33854	84
.09	.31415	49	.59	.32228	70	.09	.33046	86	.59	.33870	98
34.10	.31432	64	34.60	.32244	84	35.10	.33064	.57501	35.60	.33886	.58212
.11	.31447	78	.61	.32261	99	.11	.33080	15	.61	.33903	26
.12	.31464	93	.62	.32277	.56813	.12	.33096	29	.62	.33920	41
.13	.31480	.56107	.63	.32293	27	.13	.33112	43	.63	.33936	55
.14	.31497	22	.64	.32310	42	.14	.33129	58	.64	.33953	69
.15	.31513	36	.65	.32326	56	.15	.33145	72	.65	.33969	83
.16	.31529	51	.66	.32343	71	.16	.33161	86	.66	.33985	97
.17	.31545	65	.67	.32359	85	.17	.33178	.57600	.67	.34003	.58312
.18	.31561	79	.68	.32375	99	.18	.33195	15	.68	.34019	26
.19	.31578	94	.69	.32392	.56914	.19	.33211	29	.69	.34036	40
34.20	.31593	.56208	34.70	.32408	28	35.20	.33227	43	35.70	.34052	54
.21	.31610	23	.71	.32424	42	.21	.33243	57	.71	.34068	68
.22	.31626	37	.72	.32441	57	.22	.33261	72	.72	.34085	82
.23	.31643	52	.73	.32457	71	.23	.33277	86	.73	.34102	97
.24	.31659	66	.74	.32473	85	.24	.33293	.57700	.74	.34118	.58411
.25	.31674	80	.75	.32490	.57000	.25	.33310	15	.75	.34135	25
.26	.31691	95	.76	.32506	14	.26	.33326	29	.76	.34151	39
.27	.31707	.56309	.77	.32522	28	.27	.33343	43	.77	.34168	53
.28	.31724	24	.78	.32539	43	.28	.33359	57	.78	.34184	67
.29	.31740	38	.79	.32555	57	.29	.33376	72	.79	.34201	82
34.30	.31757	53	34.80	.32571	71	35.30	.33392	86	35.80	.34218	96
.31	.31772	67	.81	.32588	86	.31	.33408	.57800	.81	.34234	.58510
.32	.31788	81	.82	.32604	.57100	.32	.33425	14	.82	.34251	24
.33	.31805	96	.83	.32620	14	.33	.33441	28	.83	.34267	38
.34	.31821	.56410	.84	.32637	29	.34	.33458	43	.84	.34283	52
.35	.31838	25	.85	.32653	43	.35	.33474	57	.85	.34301	67
.36	.31854	39	.86	.32669	57	.36	.33491	71	.86	.34317	81
.37	.31869	53	.87	.32686	72	.37	.33507	85	.87	.34334	95
.38	.31886	68	.88	.32702	86	.38	.33524	.57900	.88	.34350	.58609
.39	.31902	82	.89	.32718	.57200	.39	.33540	14	.89	.34367	23
34.40	.31919	97	34.90	.32736	15	35.40	.33557	28	35.90	.34383	37
.41	.31935	.56511	.91	.32752	29	.41	.33573	42	.91	.34399	51
.42	.31952	26	.92	.32768	43	.42	.33590	57	.92	.34417	66
.43	.31968	40	.93	.32785	58	.43	.33606	71	.93	.34433	80
.44	.31984	54	.94	.32801	72	.44	.33623	85	.94	.34450	94
.45	.32001	69	.95	.32817	86	.45	.33639	99	.95	.34466	.58708
.46	.32016	83	.96	.32833	.57300	.46	.33655	.58013	.96	.34483	22
.47	.32032	97	.97	.32850	15	.47	.33672	28	.97	.34499	36
.48	.32049	.56612	.98	.32866	29	.48	.33689	42	.98	.34516	50
.49	.32065	26	.99	.32882	43	.49	.33705	56	.99	.34532	64
34.50	.32082	41	35.00	.32899	58	35.50	.33721	70	36.00	.34550	79

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
36.00	0.34550	0.58779	36.50	0.35381	0.59482	37.00	0.36219	0.60182	37.50	0.37059	0.60876
.01	.34566	93	.51	.35398	96	.01	.36234	95	.51	.37076	90
.02	.34583	.58807	.52	.35414	.59510	.02	.36251	.60209	.52	.37093	.60904
.03	.34599	21	.53	.35431	24	.03	.36268	23	.53	.37110	18
.04	.34616	35	.54	.35448	38	.04	.36285	37	.54	.37127	32
.05	.34632	49	.55	.35464	52	.05	.36302	51	.55	.37143	45
.06	.34649	63	.56	.35481	66	.06	.36319	65	.56	.37160	59
.07	.34665	77	.57	.35498	80	.07	.36336	79	.57	.37177	73
.08	.34681	91	.58	.35514	94	.08	.36352	93	.58	.37194	87
.09	.34699	.58906	.59	.35531	.59608	.09	.36369	.60307	.59	.37211	.61001
36.10	.34716	20	36.60	.35548	22	37.10	.36386	21	37.60	.37228	15
.11	.34732	34	.61	.35566	37	.11	.36403	35	.61	.37244	28
.12	.34749	48	.62	.35582	51	.12	.36420	49	.62	.37261	42
.13	.34765	62	.63	.35599	65	.13	.36437	63	.63	.37278	56
.14	.34782	76	.64	.35616	79	.14	.36453	76	.64	.37295	70
.15	.34798	90	.65	.35633	93	.15	.36470	90	.65	.37313	84
.16	.34815	.59004	.66	.35649	.59707	.16	.36486	.60404	.66	.37328	97
.17	.34831	18	.67	.35666	21	.17	.36503	18	.67	.37346	.61111
.18	.34848	32	.68	.35683	35	.18	.36520	32	.68	.37363	25
.19	.34864	46	.69	.35699	49	.19	.36537	46	.69	.37380	39
36.20	.34882	61	36.70	.35716	63	37.20	.36554	60	37.70	.37397	53
.21	.34899	75	.71	.35733	77	.21	.36571	74	.71	.37414	67
.22	.34915	89	.72	.35750	91	.22	.36588	88	.72	.37430	80
.23	.34932	.59103	.73	.35765	.59804	.23	.36605	.60502	.73	.37447	94
.24	.34948	17	.74	.35782	18	.24	.36622	16	.74	.37464	.61208
.25	.34965	31	.75	.35799	32	.25	.36638	29	.75	.37481	22
.26	.34981	45	.76	.35815	46	.26	.36655	43	.76	.37498	36
.27	.34998	59	.77	.35832	60	.27	.36672	57	.77	.37514	49
.28	.35014	73	.78	.35849	74	.28	.36688	71	.78	.37532	63
.29	.35031	87	.79	.35866	88	.29	.36705	85	.79	.37549	77
36.30	.35048	.59201	36.80	.35882	.59902	37.30	.36722	99	37.80	.37566	91
.31	.35064	15	.81	.35899	16	.31	.36739	.60613	.81	.37583	.61305
.32	.35081	29	.82	.35916	30	.32	.36756	27	.82	.37599	18
.33	.35099	44	.83	.35933	44	.33	.36772	40	.83	.37616	32
.34	.35115	58	.84	.35950	58	.34	.36789	54	.84	.37633	46
.35	.35132	72	.85	.35966	72	.35	.36806	68	.85	.37650	60
.36	.35148	86	.86	.35983	86	.36	.36823	82	.86	.37666	73
.37	.35165	.59300	.87	.36000	.60000	.37	.36840	96	.87	.37684	87
.38	.35182	14	.88	.36017	14	.38	.36857	.60710	.88	.37701	.61401
.39	.35198	28	.89	.36034	28	.39	.36874	24	.89	.37718	15
36.40	.35215	42	36.90	.36050	42	37.40	.36891	38	37.90	.37735	29
.41	.35231	56	.91	.36067	56	.41	.36907	51	.91	.37751	42
.42	.35248	70	.92	.36084	70	.42	.36924	65	.92	.37768	56
.43	.35265	84	.93	.36101	84	.43	.36941	79	.93	.37786	70
.44	.35281	98	.94	.36118	98	.44	.36958	93	.94	.37803	84
.45	.35298	.59412	.95	.36135	.60112	.45	.36975	.60807	.95	.37819	97
.46	.35314	26	.96	.36151	26	.46	.36992	21	.96	.37836	.61511
.47	.35331	40	.97	.36168	40	.47	.37009	35	.97	.37853	25
.48	.35348	54	.98	.36185	54	.48	.37025	48	.98	.37870	39
.49	.35364	68	.99	.36202	68	.49	.37042	62	.99	.37886	52
36.50	.35381	82	37.00	.36219	82	37.50	.37059	76	38.00	.37904	66

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
38.00	0.37904	0.61566	38.50	0.38752	0.62251	39.00	0.39604	0.62932	39.50	0.40460	0.63608
.01	.37921	80	.51	.38769	65	.01	.39622	46	.51	.40476	21
.02	.37938	94	.52	.38787	79	.02	.39638	59	.52	.40494	35
.03	.37954	.61607	.53	.38803	92	.03	.39656	73	.53	.40511	48
.04	.37971	21	.54	.38820	.62306	.04	.39672	86	.54	.40529	62
.05	.37989	35	.55	.38838	20	.05	.39690	.63000	.55	.40545	75
.06	.38006	49	.56	.38854	33	.06	.39706	13	.56	.40563	89
.07	.38022	62	.57	.38871	47	.07	.39724	27	.57	.40579	.63702
.08	.38039	76	.58	.38889	61	.08	.39740	40	.58	.40597	16
.09	.38057	90	.59	.38905	74	.09	.39758	54	.59	.40614	29
38.10	.38074	.61704	38.60	.38923	88	39.10	.39776	68	39.60	.40630	42
.11	.38090	17	.61	.38940	.62402	.11	.39792	81	.61	.40648	56
.12	.38107	31	.62	.38956	15	.12	.39810	95	.62	.40665	69
.13	.38124	45	.63	.38974	29	.13	.39826	.63108	.63	.40683	83
.14	.38142	59	.64	.38991	43	.14	.39844	22	.64	.40699	96
.15	.38158	72	.65	.39008	56	.15	.39860	35	.65	.40717	.63810
.16	.38175	86	.66	.39025	70	.16	.39878	49	.66	.40734	23
.17	.38192	.61800	.67	.39041	83	.17	.39894	62	.67	.40750	36
.18	.38208	13	.68	.39059	97	.18	.39912	76	.68	.40768	50
.19	.38226	27	.69	.39076	.62511	.19	.39928	89	.69	.40785	63
38.20	.38243	41	38.70	.39093	24	39.20	.39946	.63203	39.70	.40803	77
.21	.38260	55	.71	.39110	38	.21	.39963	16	.71	.40819	90
.22	.38276	68	.72	.39128	52	.22	.39980	30	.72	.40837	.63904
.23	.38294	82	.73	.39144	65	.23	.39998	44	.73	.40854	17
.24	.38311	96	.74	.39161	79	.24	.40014	57	.74	.40870	30
.25	.38327	.61909	.75	.39178	92	.25	.40032	71	.75	.40888	44
.26	.38345	23	.76	.39195	.62606	.26	.40049	84	.76	.40905	57
.27	.38362	37	.77	.39213	20	.27	.40066	98	.77	.40923	71
.28	.38379	51	.78	.39229	33	.28	.40083	.63311	.78	.40940	84
.29	.38395	64	.79	.39246	47	.29	.40101	25	.79	.40957	98
38.30	.38413	78	38.80	.39263	60	39.30	.40117	38	39.80	.40974	.64011
.31	.38430	92	.81	.39280	74	.31	.40135	52	.81	.40991	24
.32	.38446	.62005	.82	.39298	88	.32	.40151	65	.82	.41009	38
.33	.38464	19	.83	.39314	.62701	.33	.40169	79	.83	.41025	51
.34	.38481	33	.84	.39332	15	.34	.40185	92	.84	.41043	65
.35	.38497	46	.85	.39348	28	.35	.40203	.63406	.85	.41060	78
.36	.38514	60	.86	.39366	42	.36	.40220	19	.86	.41077	91
.37	.38532	74	.87	.39383	56	.37	.40237	33	.87	.41095	.64105
.38	.38548	87	.88	.39399	69	.38	.40254	46	.88	.41111	18
.39	.38565	.62101	.89	.39417	83	.39	.40272	60	.89	.41129	32
38.40	.38583	15	38.90	.39433	96	39.40	.40288	73	39.90	.41146	45
.41	.38599	28	.91	.39451	.62810	.41	.40306	87	.91	.41162	58
.42	.38616	42	.92	.39467	23	.42	.40323	.63500	.92	.41180	72
.43	.38634	56	.93	.39485	37	.43	.40340	14	.93	.41197	85
.44	.38650	69	.94	.39502	51	.44	.40357	27	.94	.41215	99
.45	.38667	83	.95	.39519	64	.45	.40373	40	.95	.41232	.64212
.46	.38685	97	.96	.39536	78	.46	.40391	54	.96	.41249	25
.47	.38701	.62210	.97	.39553	91	.47	.40408	67	.97	.41266	39
.48	.38718	24	.98	.39570	.62905	.48	.40425	81	.98	.41283	52
.49	.38736	38	.99	.39587	18	.49	.40442	94	.99	.41300	65
38.50	.38752	51	39.00	.39604	32	39.50	.40460	.63608	40.00	.41318	79

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
40.00	0.41318	0.64279	40.50	0.42179	0.64945	41.00	0.43041	0.65606	41.50	0.43907	0.66262
.01	.41335	92	.51	.42195	58	.01	.43059	19	.51	.43924	75
.02	.41353	.64306	.52	.42212	71	.02	.43076	32	.52	.43941	88
.03	.41369	19	.53	.42231	85	.03	.43093	45	.53	.43958	.66301
.04	.41386	32	.54	.42247	98	.04	.43111	59	.54	.43975	14
.05	.41404	46	.55	.42264	.65011	.05	.43128	72	.55	.43993	27
.06	.41421	59	.56	.42281	24	.06	.43145	85	.56	.44010	40
.07	.41438	72	.57	.42299	38	.07	.43162	98	.57	.44027	53
.08	.41456	86	.58	.42316	51	.08	.43179	.65711	.58	.44046	67
.09	.41472	99	.59	.42333	64	.09	.43198	24	.59	.44063	80
40.10	.41489	.64412	40.60	.42350	77	41.10	.43215	38	41.60	.44080	93
.11	.41507	26	.61	.42368	91	.11	.43232	51	.61	.44098	.66406
.12	.41524	39	.62	.42385	.65104	.12	.43249	64	.62	.44115	19
.13	.41541	52	.63	.42402	17	.13	.43266	77	.63	.44132	32
.14	.41559	66	.64	.42419	30	.14	.43283	90	.64	.44149	45
.15	.41575	79	.65	.42437	44	.15	.43300	.65803	.65	.44167	58
.16	.41592	92	.66	.42454	57	.16	.43317	16	.66	.44184	71
.17	.41610	.64506	.67	.42471	70	.17	.43336	30	.67	.44201	84
.18	.41627	19	.68	.42488	83	.18	.43353	43	.68	.44219	97
.19	.41644	32	.69	.42506	97	.19	.43370	56	.69	.44236	.66510
40.20	.41662	46	40.70	.42523	.65210	41.20	.43387	69	41.70	.44253	23
.21	.41679	59	.71	.42540	23	.21	.43404	82	.71	.44270	36
.22	.41695	72	.72	.42557	36	.22	.43422	95	.72	.44288	49
.23	.41714	86	.73	.42576	50	.23	.43439	.65908	.73	.44305	62
.24	.41730	99	.74	.42593	63	.24	.43456	21	.74	.44322	75
.25	.41747	.64612	.75	.42610	76	.25	.43474	35	.75	.44340	88
.26	.41765	26	.76	.42627	89	.26	.43491	48	.76	.44357	.66601
.27	.41782	39	.77	.42644	.65302	.27	.43509	61	.77	.44376	14
.28	.41799	52	.78	.42662	16	.28	.43526	74	.78	.44392	27
.29	.41817	66	.79	.42679	29	.29	.43543	87	.79	.44409	40
40.30	.41834	79	40.80	.42696	42	41.30	.43560	.66000	41.80	.44426	53
.31	.41851	92	.81	.42713	55	.31	.43577	13	.81	.44444	66
.32	.41869	.64706	.82	.42730	68	.32	.43594	26	.82	.44461	79
.33	.41885	19	.83	.42748	82	.33	.43611	39	.83	.44478	92
.34	.41902	32	.84	.42765	95	.34	.43630	53	.84	.44496	.66705
.35	.41920	46	.85	.42782	.65408	.35	.43647	66	.85	.44513	18
.36	.41937	59	.86	.42799	21	.36	.43664	79	.86	.44530	31
.37	.41954	72	.87	.42817	35	.37	.43682	92	.87	.44548	44
.38	.41971	85	.88	.42834	48	.38	.43699	.66105	.88	.44565	57
.39	.41989	99	.89	.42851	61	.39	.43716	18	.89	.44582	70
40.40	.42006	.64812	40.90	.42868	74	41.40	.43733	31	41.90	.44600	83
.41	.42023	25	.91	.42885	87	.41	.43750	44	.91	.44617	96
.42	.42041	39	.92	.42903	.65500	.42	.43767	57	.92	.44634	.66809
.43	.42058	52	.93	.42921	14	.43	.43785	70	.93	.44652	22
.44	.42075	65	.94	.42938	27	.44	.43803	84	.94	.44669	35
.45	.42092	78	.95	.42955	40	.45	.43820	97	.95	.44687	48
.46	.42110	92	.96	.42972	53	.46	.43838	.66210	.96	.44704	61
.47	.42127	.64905	.97	.42989	66	.47	.43855	23	.97	.44721	74
.48	.42143	18	.98	.43007	80	.48	.43872	36	.98	.44739	87
.49	.42162	32	.99	.43024	93	.49	.43889	49	.99	.44756	.66900
40.50	.42179	45	41.00	.43041	.65606	41.50	.43907	62	42.00	.44773	13

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
42.00	0.44773	0.66913	42.50	0.45642	0.67559	43.00	0.46512	0.68200	43.50	0.47383	0.68835
.01	.44791	.26	.51	.45660	.72	.01	.46530	.13	.51	.47400	.48
.02	.44808	.39	.52	.45677	.85	.02	.46547	.25	.52	.47418	.61
.03	.44826	.52	.53	.45695	.98	.03	.46564	.38	.53	.47435	.73
.04	.44843	.65	.54	.45711	.67610	.04	.46582	.51	.54	.47453	.86
.05	.44861	.78	.55	.45729	.23	.05	.46600	.64	.55	.47471	.99
.06	.44878	.91	.56	.45746	.36	.06	.46616	.76	.56	.47487	.68911
.07	.44895	.67004	.57	.45764	.49	.07	.46634	.89	.57	.47505	.24
.08	.44913	.17	.58	.45781	.62	.08	.46652	.68302	.58	.47523	.37
.09	.44930	.30	.59	.45799	.75	.09	.46669	.15	.59	.47540	.49
42.10	.44948	.43	42.60	.45817	.88	43.10	.46686	.27	43.60	.47558	.62
.11	.44965	.56	.61	.45833	.67700	.11	.46704	.40	.61	.47576	.75
.12	.44983	.69	.62	.45851	.13	.12	.46721	.53	.62	.47592	.87
.13	.45000	.82	.63	.45868	.26	.13	.46739	.66	.63	.47610	.69000
.14	.45016	.94	.64	.45886	.39	.14	.46756	.78	.64	.47627	.12
.15	.45033	.67107	.65	.45903	.52	.15	.46773	.91	.65	.47645	.25
.16	.45051	.20	.66	.45921	.65	.16	.46791	.68404	.66	.47662	.38
.17	.45068	.33	.67	.45937	.77	.17	.46809	.17	.67	.47679	.50
.18	.45086	.46	.68	.45955	.90	.18	.46825	.29	.68	.47697	.63
.19	.45103	.59	.69	.45972	.67803	.19	.46843	.42	.69	.47715	.76
42.20	.45121	.72	42.70	.45990	.16	43.20	.46861	.55	43.70	.47732	.88
.21	.45138	.85	.71	.46008	.29	.21	.46877	.67	.71	.47749	.69101
.22	.45156	.98	.72	.46025	.42	.22	.46895	.80	.72	.47766	.13
.23	.45173	.67211	.73	.46042	.54	.23	.46913	.93	.73	.47784	.26
.24	.45191	.24	.74	.46059	.67	.24	.46930	.68506	.74	.47802	.39
.25	.45208	.37	.75	.46077	.80	.25	.46947	.18	.75	.47819	.51
.26	.45226	.50	.76	.46095	.93	.26	.46965	.31	.76	.47837	.64
.27	.45243	.63	.77	.46112	.67906	.27	.46983	.44	.77	.47855	.77
.28	.45259	.75	.78	.46130	.19	.28	.46999	.56	.78	.47871	.89
.29	.45277	.88	.79	.46146	.31	.29	.47017	.69	.79	.47889	.69202
42.30	.45294	.67301	42.80	.46164	.44	43.30	.47035	.82	43.80	.47906	.14
.31	.45312	.14	.81	.46182	.57	.31	.47053	.95	.81	.47924	.27
.32	.45329	.27	.82	.46199	.70	.32	.47069	.68607	.82	.47942	.40
.33	.45347	.40	.83	.46217	.83	.33	.47087	.20	.83	.47958	.52
.34	.45364	.53	.84	.46233	.95	.34	.47105	.33	.84	.47976	.65
.35	.45382	.66	.85	.46251	.68008	.35	.47121	.45	.85	.47993	.77
.36	.45399	.79	.86	.46269	.21	.36	.47139	.58	.86	.48011	.90
.37	.45417	.92	.87	.46286	.34	.37	.47157	.71	.87	.48028	.69302
.38	.45433	.67404	.88	.46304	.47	.38	.47174	.83	.88	.48046	.15
.39	.45451	.17	.89	.46320	.59	.39	.47191	.96	.89	.48064	.28
42.40	.45468	.30	42.90	.46338	.72	43.40	.47209	.68709	43.90	.48080	.40
.41	.45486	.43	.91	.46356	.85	.41	.47226	.21	.91	.48098	.53
.42	.45503	.56	.92	.46373	.98	.42	.47244	.34	.92	.48115	.65
.43	.45521	.69	.93	.46390	.68110	.43	.47262	.47	.93	.48133	.78
.44	.45538	.82	.94	.46407	.23	.44	.47278	.59	.94	.48150	.90
.45	.45556	.95	.95	.46425	.36	.45	.47296	.72	.95	.48168	.69403
.46	.45573	.67508	.96	.46443	.49	.46	.47314	.85	.96	.48186	.16
.47	.45590	.20	.97	.46461	.62	.47	.47330	.97	.97	.48202	.28
.48	.45607	.33	.98	.46477	.74	.48	.47348	.68810	.98	.48221	.41
.49	.45625	.46	.99	.46495	.87	.49	.47366	.23	.99	.48237	.53
42.50	.45642	.59	43.00	.46512	.68200	43.50	.47383	.35	44.00	.48255	.66

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
44.00	0.48255	0.69466	44.50	0.49127	0.70091	45.00	0.50000	0.70711	45.50	0.50873	0.71325
.01	.48272	78	.51	.49144	.70103	.01	.50017	23	.51	.50890	37
.02	.48290	91	.52	.49163	16	.02	.50034	35	.52	.50908	50
.03	.48307	.69503	.53	.49179	28	.03	.50053	48	.53	.50925	62
.04	.48325	16	.54	.49198	41	.04	.50070	60	.54	.50942	74
.05	.48343	29	.55	.49214	53	.05	.50087	72	.55	.50960	86
.06	.48360	41	.56	.49233	66	.06	.50105	85	.56	.50977	98
.07	.48378	54	.57	.49250	78	.07	.50122	97	.57	.50995	.71411
.08	.48394	66	.58	.49266	90	.08	.50139	.70809	.58	.51012	23
.09	.48412	79	.59	.49285	.70203	.09	.50158	22	.59	.51030	35
44.10	.48429	91	44.60	.49301	15	45.10	.50175	34	45.60	.51047	47
.11	.48447	.69604	.61	.49320	28	.11	.50192	46	.61	.51064	59
.12	.48464	16	.62	.49337	40	.12	.50210	59	.62	.51082	72
.13	.48482	29	.63	.49355	53	.13	.50227	71	.63	.51100	84
.14	.48499	41	.64	.49372	65	.14	.50244	83	.64	.51117	96
.15	.48517	54	.65	.49389	77	.15	.50262	96	.65	.51134	.71508
.16	.48534	66	.66	.49407	90	.16	.50279	.70908	.66	.51153	21
.17	.48552	79	.67	.49424	.70302	.17	.50296	20	.67	.51170	33
.18	.48568	91	.68	.49442	15	.18	.50313	32	.68	.51187	45
.19	.48586	.69704	.69	.49459	27	.19	.50332	45	.69	.51204	57
44.20	.48605	17	44.70	.49476	39	45.20	.50349	57	45.70	.51221	69
.21	.48621	29	.71	.49494	52	.21	.50366	69	.71	.51238	81
.22	.48639	42	.72	.49511	64	.22	.50384	82	.72	.51257	94
.23	.48656	54	.73	.49529	77	.23	.50401	94	.73	.51274	.71606
.24	.48674	67	.74	.49546	89	.24	.50419	.71006	.74	.51291	18
.25	.48691	79	.75	.49563	.70401	.25	.50437	19	.75	.51309	30
.26	.48709	92	.76	.49581	14	.26	.50454	31	.76	.51326	42
.27	.48726	.69804	.77	.49598	26	.27	.50471	43	.77	.51344	55
.28	.48744	17	.78	.49617	39	.28	.50488	55	.78	.51362	67
.29	.48761	29	.79	.49633	51	.29	.50507	68	.79	.51379	79
44.30	.48779	42	44.80	.49650	63	45.30	.50524	80	45.80	.51396	91
.31	.48796	54	.81	.49669	76	.31	.50541	92	.81	.51413	.71703
.32	.48814	67	.82	.49686	88	.32	.50559	.71105	.82	.51430	15
.33	.48831	79	.83	.49704	.70501	.33	.50576	17	.83	.51449	28
.34	.48848	91	.84	.49721	13	.34	.50593	29	.84	.51466	40
.35	.48866	.69904	.85	.49738	25	.35	.50610	41	.85	.51483	52
.36	.48882	16	.86	.49756	38	.36	.50629	54	.86	.51501	64
.37	.48901	29	.87	.49773	50	.37	.50646	66	.87	.51518	76
.38	.48917	41	.88	.49790	62	.38	.50663	78	.88	.51535	88
.39	.48936	54	.89	.49808	75	.39	.50680	90	.89	.51552	.71800
44.40	.48952	66	44.90	.49825	87	45.40	.50699	.71203	45.90	.51571	13
.41	.48971	79	.91	.49844	.70600	.41	.50716	15	.91	.51588	25
.42	.48987	91	.92	.49861	12	.42	.50733	27	.92	.51606	37
.43	.49006	.70004	.93	.49877	24	.43	.50750	39	.93	.51623	49
.44	.49022	16	.94	.49896	37	.44	.50768	52	.94	.51640	61
.45	.49041	29	.95	.49913	49	.45	.50786	64	.95	.51657	73
.46	.49057	41	.96	.49930	61	.46	.50803	76	.96	.51675	85
.47	.49076	54	.97	.49948	74	.47	.50820	88	.97	.51693	98
.48	.49092	66	.98	.49965	86	.48	.50838	.71301	.98	.51710	.71910
.49	.49109	78	.99	.49982	98	.49	.50855	13	.99	.51728	22
44.50	.49127	91	45.00	.50000	.70711	45.50	.50873	25	46.00	.51745	34

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
46.00	0.51745	0.71934	46.50	0.52616	0.72537	47.00	0.53487	0.73135	47.50	0.54358	0.73728
.01	.51762	46	.51	.52634	49	.01	.53505	47	.51	.54376	40
.02	.51780	58	.52	.52651	61	.02	.53522	59	.52	.54392	51
.03	.51797	70	.53	.52668	73	.03	.53540	71	.53	.54410	63
.04	.51814	82	.54	.52686	85	.04	.53558	83	.54	.54428	75
.05	.51833	95	.55	.52703	97	.05	.53575	95	.55	.54445	87
.06	.51850	.72007	.56	.52721	.72609	.06	.53593	.73207	.56	.54461	98
.07	.51867	19	.57	.52738	21	.07	.53610	19	.57	.54479	.73810
.08	.51885	31	.58	.52756	33	.08	.53628	31	.58	.54497	22
.09	.51902	43	.59	.52773	45	.09	.53644	42	.59	.54515	34
46.10	.51919	55	46.60	.52790	57	47.10	.53661	54	47.60	.54532	46
.11	.51937	67	.61	.52808	69	.11	.53679	66	.61	.54549	57
.12	.51954	79	.62	.52825	81	.12	.53697	78	.62	.54566	69
.13	.51971	91	.63	.52843	93	.13	.53714	90	.63	.54584	81
.14	.51990	.72104	.64	.52860	.72705	.14	.53732	.73302	.64	.54602	93
.15	.52007	16	.65	.52878	17	.15	.53749	14	.65	.54618	.73904
.16	.52024	28	.66	.52895	29	.16	.53767	26	.66	.54636	16
.17	.52042	40	.67	.52913	41	.17	.53783	37	.67	.54653	28
.18	.52059	52	.68	.52930	53	.18	.53801	49	.68	.54671	40
.19	.52076	64	.69	.52947	65	.19	.53818	61	.69	.54688	51
46.20	.52094	76	46.70	.52965	77	47.20	.53836	73	47.70	.54705	63
.21	.52111	88	.71	.52982	89	.21	.53854	85	.71	.54723	75
.22	.52128	.72200	.72	.53000	.72801	.22	.53871	97	.72	.54741	87
.23	.52146	12	.73	.53017	13	.23	.53889	.73409	.73	.54757	98
.24	.52163	24	.74	.53035	25	.24	.53905	20	.74	.54775	.74010
.25	.52180	36	.75	.53052	37	.25	.53923	32	.75	.54793	22
.26	.52198	48	.76	.53070	49	.26	.53940	44	.76	.54810	34
.27	.52217	61	.77	.53087	61	.27	.53958	56	.77	.54827	45
.28	.52234	73	.78	.53105	73	.28	.53975	68	.78	.54844	57
.29	.52251	85	.79	.53122	85	.29	.53993	80	.79	.54862	69
46.30	.52269	97	46.80	.53140	97	47.30	.54009	91	47.80	.54878	80
.31	.52286	.72309	.81	.53157	.72909	.31	.54027	.73503	.81	.54896	92
.32	.52303	21	.82	.53175	21	.32	.54045	15	.82	.54914	.74104
.33	.52321	33	.83	.53192	33	.33	.54062	27	.83	.54932	16
.34	.52338	45	.84	.53210	45	.34	.54080	39	.84	.54948	27
.35	.52355	57	.85	.53227	57	.35	.54097	51	.85	.54966	39
.36	.52373	69	.86	.53245	69	.36	.54114	62	.86	.54984	51
.37	.52390	81	.87	.53261	80	.37	.54131	74	.87	.55000	62
.38	.52407	93	.88	.53278	92	.38	.54149	86	.88	.55018	74
.39	.52425	.72405	.89	.53296	.73004	.39	.54167	98	.89	.55036	86
46.40	.52442	17	46.90	.53313	16	47.40	.54184	.73610	47.90	.55053	98
.41	.52460	29	.91	.53331	28	.41	.54202	22	.91	.55070	.74209
.42	.52477	41	.92	.53348	40	.42	.54218	33	.92	.55088	21
.43	.52494	53	.93	.53366	52	.43	.54236	45	.93	.55105	33
.44	.52512	65	.94	.53383	64	.44	.54254	57	.94	.55122	44
.45	.52529	77	.95	.53401	76	.45	.54271	69	.95	.55140	56
.46	.52547	89	.96	.53419	88	.46	.54289	81	.96	.55157	68
.47	.52564	.72501	.97	.53436	.73100	.47	.54305	92	.97	.55174	79
.48	.52581	13	.98	.53454	12	.48	.54323	.73704	.98	.55192	91
.49	.52599	25	.99	.53470	23	.49	.54340	16	.99	.55209	.74303
46.50	.52616	37	47.00	.53487	35	47.50	.54358	28	48.00	.55226	14

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
48.00	0.55226	0.74314	48.50	0.56094	0.74896	49.00	0.56959	0.75471	49.50	0.57822	0.76041
.01	.55244	26	.51	.56111	.74907	.01	.56975	82	.51	.57839	52
.02	.55261	38	.52	.56129	19	.02	.56993	94	.52	.57856	63
.03	.55279	50	.53	.56145	30	.03	.57010	.75505	.53	.57874	75
.04	.55296	61	.54	.56163	42	.04	.57028	17	.54	.57891	86
.05	.55313	73	.55	.56180	53	.05	.57045	28	.55	.57908	97
.06	.55331	85	.56	.56198	65	.06	.57063	40	.56	.57926	.76109
.07	.55348	96	.57	.56214	76	.07	.57080	51	.57	.57943	20
.08	.55366	.74408	.58	.56232	88	.08	.57096	62	.58	.57959	31
.09	.55383	20	.59	.56250	.75000	.09	.57114	74	.59	.57978	43
48.10	.55400	31	48.60	.56267	11	49.10	.57131	85	49.60	.57994	54
.11	.55418	43	.61	.56285	23	.11	.57149	97	.61	.58011	65
.12	.55434	54	.62	.56301	34	.12	.57166	.75608	.62	.58028	76
.13	.55452	66	.63	.56319	46	.13	.57184	20	.63	.58046	88
.14	.55470	78	.64	.56336	57	.14	.57200	31	.64	.58063	99
.15	.55486	89	.65	.56354	69	.15	.57217	42	.65	.58080	.76210
.16	.55504	.74501	.66	.56370	80	.16	.57235	54	.66	.58098	22
.17	.55522	13	.67	.56388	92	.17	.57252	65	.67	.58115	33
.18	.55538	24	.68	.56405	.75103	.18	.57270	77	.68	.58131	44
.19	.55556	36	.69	.56423	15	.19	.57287	88	.69	.58150	56
48.20	.55574	48	48.70	.56439	26	49.20	.57305	.75700	49.70	.58167	67
.21	.55590	59	.71	.56457	38	.21	.57322	11	.71	.58183	78
.22	.55608	71	.72	.56474	49	.22	.57338	22	.72	.58200	89
.23	.55625	82	.73	.56492	61	.23	.57356	34	.73	.58218	.76301
.24	.55643	94	.74	.56508	72	.24	.57373	45	.74	.58235	12
.25	.55661	.74606	.75	.56526	84	.25	.57391	57	.75	.58252	23
.26	.55677	17	.76	.56543	95	.26	.57408	68	.76	.58270	35
.27	.55695	29	.77	.56561	.75207	.27	.57425	79	.77	.58287	46
.28	.55713	41	.78	.56577	18	.28	.57443	91	.78	.58304	57
.29	.55729	52	.79	.56596	30	.29	.57459	.75802	.79	.58321	68
48.30	.55747	64	48.80	.56612	41	49.30	.57476	13	49.80	.58339	80
.31	.55764	75	.81	.56630	53	.31	.57494	25	.81	.58356	91
.32	.55781	87	.82	.56647	64	.32	.57511	36	.82	.58373	.76402
.33	.55799	99	.83	.56665	76	.33	.57529	48	.83	.58389	13
.34	.55816	.74710	.84	.56681	87	.34	.57546	59	.84	.58408	25
.35	.55834	22	.85	.56699	99	.35	.57563	70	.85	.58425	36
.36	.55850	33	.86	.56716	.75310	.36	.57581	82	.86	.58441	47
.37	.55868	45	.87	.56734	22	.37	.57597	93	.87	.58458	58
.38	.55886	57	.88	.56751	33	.38	.57614	.75904	.88	.58477	70
.39	.55903	68	.89	.56769	45	.39	.57632	16	.89	.58493	81
48.40	.55920	80	48.90	.56785	56	49.40	.57649	27	49.90	.58510	92
.41	.55937	91	.91	.56803	68	.41	.57666	38	.91	.58527	.76503
.42	.55955	.74803	.92	.56820	79	.42	.57684	50	.92	.58545	15
.43	.55973	15	.93	.56838	91	.43	.57701	61	.93	.58562	26
.44	.55989	26	.94	.56855	.75402	.44	.57719	73	.94	.58579	37
.45	.56007	38	.95	.56873	14	.45	.57736	84	.95	.58596	48
.46	.56024	49	.96	.56889	25	.46	.57752	95	.96	.58614	60
.47	.56042	61	.97	.56907	37	.47	.57771	.76007	.97	.58631	71
.48	.56058	72	.98	.56924	48	.48	.57787	18	.98	.58648	82
.49	.56076	84	.99	.56942	60	.49	.57804	29	.99	.58665	93
48.50	.56094	96	49.00	.56959	71	49.50	.57822	41	50.00	.58682	.76604

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
50.00	0.58682	0.76604	50.50	0.59540	0.77162	51.00	0.60396	0.77715	51.50	0.61248	0.78261
.01	.58700	16	.51	.59558	74	.01	.60413	26	.51	.61265	72
.02	.58717	27	.52	.59575	85	.02	.60430	37	.52	.61282	83
.03	.58734	38	.53	.59592	96	.03	.60448	48	.53	.61298	93
.04	.58751	49	.54	.59609	.77207	.04	.60465	59	.54	.61315	.78304
.05	.58769	61	.55	.59626	18	.05	.60480	69	.55	.61332	15
.06	.58786	72	.56	.59643	29	.06	.60497	80	.56	.61350	26
.07	.58803	83	.57	.59660	40	.07	.60514	91	.57	.61367	37
.08	.58820	94	.58	.59677	51	.08	.60532	.77802	.58	.61384	48
.09	.58837	.76705	.59	.59694	62	.09	.60549	13	.59	.61401	59
50.10	.58855	17	50.60	.59711	73	51.10	.60566	24	51.60	.61417	69
.11	.58872	28	.61	.59728	84	.11	.60583	35	.61	.61434	80
.12	.58889	39	.62	.59747	96	.12	.60600	46	.62	.61451	91
.13	.58906	50	.63	.59764	.77307	.13	.60617	57	.63	.61469	.78402
.14	.58923	61	.64	.59781	18	.14	.60634	68	.64	.61486	13
.15	.58939	72	.65	.59798	29	.15	.60651	79	.65	.61503	24
.16	.58958	84	.66	.59815	40	.16	.60669	90	.66	.61519	34
.17	.58975	95	.67	.59832	51	.17	.60686	.77901	.67	.61536	45
.18	.58992	.76806	.68	.59849	62	.18	.60703	12	.68	.61553	56
.19	.59009	17	.69	.59866	73	.19	.60720	23	.69	.61571	67
50.20	.59025	28	50.70	.59883	84	51.20	.60737	34	51.70	.61588	78
.21	.59044	40	.71	.59890	95	.21	.60754	45	.71	.61604	88
.22	.59061	51	.72	.59917	.77406	.22	.60771	56	.72	.61621	99
.23	.59078	62	.73	.59934	17	.23	.60789	67	.73	.61638	.78510
.24	.59095	73	.74	.59951	28	.24	.60806	78	.74	.61655	21
.25	.59111	84	.75	.59968	39	.25	.60821	88	.75	.61673	32
.26	.59128	95	.76	.59985	50	.26	.60838	99	.76	.61690	43
.27	.59147	.76907	.77	.60002	61	.27	.60856	.78010	.77	.61706	53
.28	.59164	18	.78	.60019	72	.28	.60873	21	.78	.61723	64
.29	.59181	29	.79	.60036	83	.29	.60890	32	.79	.61740	75
50.30	.59198	40	50.80	.60053	94	51.30	.60907	43	51.80	.61758	86
.31	.59215	51	.81	.60070	.77505	.31	.60924	54	.81	.61773	96
.32	.59231	62	.82	.60089	17	.32	.60941	65	.82	.61791	.78607
.33	.59248	73	.83	.60106	28	.33	.60959	76	.83	.61808	18
.34	.59267	85	.84	.60123	39	.34	.60976	87	.84	.61825	29
.35	.59284	96	.85	.60140	50	.35	.60993	98	.85	.61842	40
.36	.59301	.77007	.86	.60157	61	.36	.61009	.78108	.86	.61858	50
.37	.59318	18	.87	.60174	72	.37	.61026	19	.87	.61876	61
.38	.59335	29	.88	.60191	83	.38	.61043	30	.88	.61893	72
.39	.59352	40	.89	.60208	94	.39	.61060	41	.89	.61910	83
50.40	.59369	51	50.90	.60225	.77605	51.40	.61077	52	51.90	.61927	94
.41	.59386	62	.91	.60242	16	.41	.61095	63	.91	.61943	.78704
.42	.59404	74	.92	.60260	27	.42	.61112	74	.92	.61961	15
.43	.59421	85	.93	.60277	38	.43	.61129	85	.93	.61978	26
.44	.59438	96	.94	.60294	49	.44	.61146	96	.94	.61995	37
.45	.59455	.77107	.95	.60311	60	.45	.61162	.78206	.95	.62011	47
.46	.59472	18	.96	.60328	71	.46	.61179	17	.96	.62028	58
.47	.59489	29	.97	.60345	82	.47	.61196	28	.97	.62046	69
.48	.59506	40	.98	.60362	93	.48	.61213	39	.98	.62063	80
.49	.59523	51	.99	.60379	.77704	.49	.61231	50	.99	.62079	90
50.50	.59540	62	51.00	.60396	15	51.50	.61248	61	52.00	.62096	.78801

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
52.00	0.62096	0.78801	52.50	0.62940	0.79335	53.00	0.63783	0.79864	53.50	0.64619	0.80386
.01	.62113	12	.51	.62958	46	.01	.63799	74	.51	.64635	96
.02	.62131	23	.52	.62975	57	.02	.63816	85	.52	.64651	.80406
.03	.62146	33	.53	.62991	67	.03	.63832	95	.53	.64669	17
.04	.62164	44	.54	.63009	78	.04	.63850	.79906	.54	.64685	27
.05	.62181	55	.55	.63025	88	.05	.63866	16	.55	.64703	38
.06	.62198	66	.56	.63042	99	.06	.63883	27	.56	.64719	48
.07	.62214	76	.57	.63059	.79410	.07	.63899	37	.57	.64735	58
.08	.62232	87	.58	.63075	20	.08	.63917	48	.58	.64753	69
.09	.62249	98	.59	.63093	31	.09	.63933	58	.59	.64769	79
52.10	.62265	.78908	52.60	.63109	41	53.10	.63949	68	53.60	.64785	89
.11	.62282	19	.61	.63126	52	.11	.63966	79	.61	.64803	.80500
.12	.62299	30	.62	.63144	63	.12	.63982	89	.62	.64819	10
.13	.62317	41	.63	.63160	73	.13	.64000	.80000	.63	.64835	20
.14	.62333	51	.64	.63177	84	.14	.64016	10	.64	.64852	31
.15	.62350	62	.65	.63193	94	.15	.64034	21	.65	.64869	41
.16	.62367	73	.66	.63210	.79505	.16	.64050	31	.66	.64885	51
.17	.62383	83	.67	.63228	16	.17	.64067	42	.67	.64902	62
.18	.62401	94	.68	.63244	26	.18	.64083	52	.68	.64918	72
.19	.62418	.79005	.69	.63261	37	.19	.64101	63	.69	.64935	82
52.20	.62435	16	52.70	.63277	47	53.20	.64117	73	53.70	.64952	93
.21	.62451	26	.71	.63295	58	.21	.64134	84	.71	.64968	.80603
.22	.62468	37	.72	.63312	69	.22	.64150	94	.72	.64985	13
.23	.62486	48	.73	.63328	79	.23	.64167	.80104	.73	.65002	24
.24	.62502	58	.74	.63346	90	.24	.64184	15	.74	.65018	34
.25	.62519	69	.75	.63362	.79600	.25	.64200	25	.75	.65035	44
.26	.62536	80	.76	.63379	11	.26	.64218	36	.76	.65052	55
.27	.62552	90	.77	.63395	21	.27	.64234	46	.77	.65068	65
.28	.62570	.79101	.78	.63413	32	.28	.64251	57	.78	.65085	75
.29	.62587	12	.79	.63428	42	.29	.64267	67	.79	.65102	86
52.30	.62603	22	52.80	.63446	53	53.30	.64285	78	53.80	.65118	96
.31	.62620	33	.81	.63464	64	.31	.64301	88	.81	.65135	.80706
.32	.62638	44	.82	.63479	74	.32	.64317	98	.82	.65152	17
.33	.62654	54	.83	.63497	85	.33	.64335	.80209	.83	.65168	27
.34	.62671	65	.84	.63513	95	.34	.64351	19	.84	.65185	37
.35	.62688	76	.85	.63530	.79706	.35	.64369	30	.85	.65202	48
.36	.62704	86	.86	.63546	16	.36	.64385	40	.86	.65219	58
.37	.62722	97	.87	.63564	27	.37	.64402	51	.87	.65235	68
.38	.62739	.79208	.88	.63580	37	.38	.64418	61	.88	.65251	78
.39	.62755	18	.89	.63597	48	.39	.64434	71	.89	.65269	89
52.40	.62772	29	52.90	.63613	58	53.40	.64452	82	53.90	.65285	99
.41	.62790	40	.91	.63631	69	.41	.64468	92	.91	.65301	.80809
.42	.62806	50	.92	.63647	79	.42	.64486	.80303	.92	.65319	20
.43	.62823	61	.93	.63664	90	.43	.64502	13	.93	.65335	30
.44	.62840	72	.94	.63680	.79800	.44	.64518	23	.94	.65351	40
.45	.62856	82	.95	.63698	11	.45	.64536	34	.95	.65367	50
.46	.62874	93	.96	.63716	22	.46	.64552	44	.96	.65385	61
.47	.62890	.79303	.97	.63731	32	.47	.64569	55	.97	.65401	71
.48	.62907	14	.98	.63749	43	.48	.64585	65	.98	.65417	81
.49	.62925	25	.99	.63765	53	.49	.64601	75	.99	.65434	91
52.50	.62940	35	53.00	.63783	64	53.50	.64619	86	54.00	.65451	.80902

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
54.00	0.65451	0.80902	54.50	0.66279	0.81412	55.00	0.67101	0.81915	55.50	0.67919	0.82413
.01	.65468	12	.51	.66295	22	.01	.67117	25	.51	.67936	23
.02	.65484	22	.52	.66312	32	.02	.67133	35	.52	.67950	32
.03	.65500	32	.53	.66328	42	.03	.67150	45	.53	.67967	42
.04	.65518	43	.54	.66344	52	.04	.67166	55	.54	.67983	52
.05	.65534	53	.55	.66361	62	.05	.67183	65	.55	.68000	62
.06	.65550	63	.56	.66377	72	.06	.67199	75	.56	.68016	72
.07	.65566	73	.57	.66393	82	.07	.67215	85	.57	.68033	82
.08	.65584	84	.58	.66411	93	.08	.67232	95	.58	.68049	92
.09	.65600	94	.59	.66427	.81503	.09	.67248	.82005	.59	.68064	.82501
54.10	.65616	.81004	54.60	.66444	13	55.10	.67265	15	55.60	.68081	11
.11	.65633	14	.61	.66460	23	.11	.67281	25	.61	.68097	21
.12	.65651	25	.62	.66476	33	.12	.67297	35	.62	.68114	31
.13	.65667	35	.63	.66493	43	.13	.67314	45	.63	.68130	41
.14	.65683	45	.64	.66509	53	.14	.67330	55	.64	.68147	51
.15	.65699	55	.65	.66525	63	.15	.67347	65	.65	.68163	61
.16	.65717	66	.66	.66542	73	.16	.67363	75	.66	.68178	70
.17	.65733	76	.67	.66558	83	.17	.67379	85	.67	.68195	80
.18	.65749	86	.68	.66576	94	.18	.67396	95	.68	.68211	90
.19	.65766	96	.69	.66592	.81604	.19	.67412	.82105	.69	.68228	.82600
54.20	.65782	.81106	54.70	.66608	14	55.20	.67429	15	55.70	.68244	10
.21	.65800	17	.71	.66625	24	.21	.67445	25	.71	.68261	20
.22	.65816	27	.72	.66641	34	.22	.67462	35	.72	.68277	30
.23	.65832	37	.73	.66657	44	.23	.67478	45	.73	.68292	39
.24	.65848	47	.74	.66674	54	.24	.67494	55	.74	.68309	49
.25	.65865	57	.75	.66690	64	.25	.67511	65	.75	.68325	59
.26	.65882	68	.76	.66706	74	.26	.67527	75	.76	.68342	69
.27	.65899	78	.77	.66723	84	.27	.67544	85	.77	.68358	79
.28	.65915	88	.78	.66739	94	.28	.67560	95	.78	.68373	88
.29	.65931	98	.79	.66755	.81704	.29	.67575	.82204	.79	.68390	98
54.30	.65947	.81208	54.80	.66772	14	55.30	.67591	14	55.80	.68406	.82708
.31	.65965	19	.81	.66790	25	.31	.67608	24	.81	.68423	18
.32	.65982	29	.82	.66806	35	.32	.67624	34	.82	.68439	28
.33	.65998	39	.83	.66822	45	.33	.67641	44	.83	.68454	37
.34	.66014	49	.84	.66839	55	.34	.67657	54	.84	.68471	47
.35	.66030	59	.85	.66855	65	.35	.67674	64	.85	.68487	57
.36	.66047	69	.86	.66872	75	.36	.67690	74	.86	.68504	67
.37	.66064	80	.87	.66888	85	.37	.67707	84	.87	.68520	77
.38	.66081	90	.88	.66904	95	.38	.67723	94	.88	.68535	86
.39	.66097	.81300	.89	.66921	.81805	.39	.67739	.82304	.89	.68552	96
54.40	.66113	10	54.90	.66937	15	55.40	.67756	14	55.90	.68568	.82806
.41	.66129	20	.91	.66953	25	.41	.67772	24	.91	.68585	16
.42	.66146	30	.92	.66970	35	.42	.67787	33	.92	.68601	26
.43	.66164	41	.93	.66986	45	.43	.67804	43	.93	.68616	35
.44	.66180	51	.94	.67002	55	.44	.67820	53	.94	.68633	45
.45	.66196	61	.95	.67019	65	.45	.67837	63	.95	.68650	55
.46	.66212	71	.96	.67035	75	.46	.67853	73	.96	.68666	65
.47	.66229	81	.97	.67052	85	.47	.67870	83	.97	.68681	74
.48	.66245	91	.98	.67068	95	.48	.67886	93	.98	.68698	84
.49	.66261	.81401	.99	.67084	.81905	.49	.67903	.82403	.99	.68714	94
54.50	.66279	12	55.00	.67101	15	55.50	.67919	13	56.00	.68731	.82904

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
56.00	0.68731	0.82904	56.50	0.69537	0.83389	57.00	0.70337	0.83867	57.50	0.71131	0.84339
.01	.68747	14	.51	.69552	98	.01	.70354	77	.51	.71148	49
.02	.68762	23	.52	.69569	.83408	.02	.70369	86	.52	.71163	58
.03	.68779	33	.53	.69584	17	.03	.70385	96	.53	.71178	67
.04	.68795	43	.54	.69601	27	.04	.70400	.83905	.54	.71195	77
.05	.68812	53	.55	.69617	37	.05	.70417	15	.55	.71210	86
.06	.68827	62	.56	.69632	46	.06	.70432	24	.56	.71225	95
.07	.68844	72	.57	.69649	56	.07	.70449	34	.57	.71242	.84405
.08	.68860	82	.58	.69666	66	.08	.70464	43	.58	.71257	14
.09	.68875	91	.59	.69681	75	.09	.70481	53	.59	.71272	23
56.10	.68892	.83001	56.60	.69697	85	57.10	.70496	62	57.60	.71289	33
.11	.68908	11	.61	.69712	94	.11	.70511	71	.61	.71305	42
.12	.68925	21	.62	.69729	.83504	.12	.70528	81	.62	.71320	51
.13	.68940	30	.63	.69746	14	.13	.70543	90	.63	.71337	61
.14	.68956	40	.64	.69761	23	.14	.70560	.84000	.64	.71352	70
.15	.68973	50	.65	.69778	33	.15	.70575	09	.65	.71369	80
.16	.68990	60	.66	.69793	42	.16	.70592	19	.66	.71384	89
.17	.69005	69	.67	.69809	52	.17	.70607	28	.67	.71399	98
.18	.69021	79	.68	.69826	62	.18	.70624	38	.68	.71416	.84508
.19	.69038	89	.69	.69841	71	.19	.70639	47	.69	.71431	17
56.20	.69053	98	56.70	.69858	81	57.20	.70656	57	57.70	.71446	26
.21	.69069	.83108	.71	.69873	90	.21	.70671	66	.71	.71463	36
.22	.69086	18	.72	.69890	.83600	.22	.70688	76	.72	.71479	45
.23	.69103	28	.73	.69905	09	.23	.70703	85	.73	.71494	54
.24	.69118	37	.74	.69921	19	.24	.70718	94	.74	.71509	63
.25	.69134	47	.75	.69938	29	.25	.70735	.84104	.75	.71526	73
.26	.69151	57	.76	.69953	38	.26	.70750	13	.76	.71541	82
.27	.69166	66	.77	.69970	48	.27	.70767	23	.77	.71556	91
.28	.69182	76	.78	.69985	57	.28	.70782	32	.78	.71573	.84601
.29	.69199	86	.79	.70002	67	.29	.70799	42	.79	.71589	10
56.30	.69214	95	56.80	.70017	76	57.30	.70814	51	57.80	.71604	19
.31	.69231	.83205	.81	.70033	86	.31	.70831	61	.81	.71621	29
.32	.69247	15	.82	.70050	96	.32	.70846	70	.82	.71636	38
.33	.69262	24	.83	.70065	.83705	.33	.70861	79	.83	.71651	47
.34	.69279	34	.84	.70082	15	.34	.70878	89	.84	.71668	57
.35	.69296	44	.85	.70097	24	.35	.70893	98	.85	.71683	66
.36	.69311	53	.86	.70114	34	.36	.70910	.84208	.86	.71699	75
.37	.69327	63	.87	.70129	43	.37	.70925	17	.87	.71714	84
.38	.69344	73	.88	.70146	53	.38	.70940	26	.88	.71731	94
.39	.69359	82	.89	.70161	62	.39	.70957	36	.89	.71746	.84703
56.40	.69376	92	56.90	.70177	72	57.40	.70972	45	57.90	.71761	12
.41	.69392	.83302	.91	.70193	81	.41	.70989	55	.91	.71776	21
.42	.69407	11	.92	.70209	91	.42	.71004	64	.92	.71793	31
.43	.69424	21	.93	.70224	.83800	.43	.71019	73	.93	.71809	40
.44	.69441	31	.94	.70241	10	.44	.71036	83	.94	.71824	49
.45	.69456	40	.95	.70258	20	.45	.71051	92	.95	.71841	59
.46	.69472	50	.96	.70273	29	.46	.71068	.84302	.96	.71856	68
.47	.69489	60	.97	.70290	39	.47	.71083	11	.97	.71871	77
.48	.69504	69	.98	.70305	48	.48	.71099	20	.98	.71887	86
.49	.69521	79	.99	.70322	58	.49	.71115	30	.99	.71904	96
56.50	.69537	89	57.00	.70337	67	57.50	.71131	39	58.00	.71919	.84805

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
58.00	0.71919	0.84805	58.50	0.72699	0.85264	59.00	0.73474	0.85717	59.50	0.74241	0.86163
.01	.71934	14	.51	.72715	73	.01	.73489	26	.51	.74256	72
.02	.71949	23	.52	.72730	82	.02	.73505	35	.52	.74272	81
.03	.71966	33	.53	.72746	91	.03	.73520	44	.53	.74285	89
.04	.71982	42	.54	.72761	.85300	.04	.73536	53	.54	.74301	98
.05	.71997	51	.55	.72778	10	.05	.73551	62	.55	.74316	.86207
.06	.72012	60	.56	.72793	19	.06	.73567	71	.56	.74332	16
.07	.72027	69	.57	.72809	28	.07	.73582	80	.57	.74348	25
.08	.72044	79	.58	.72824	37	.08	.73598	89	.58	.74363	34
.09	.72060	88	.59	.72839	46	.09	.73613	98	.59	.74379	43
58.10	.72075	97	58.60	.72855	55	59.10	.73627	.85806	59.60	.74392	51
.11	.72090	.84906	.61	.72870	64	.11	.73642	15	.61	.74408	60
.12	.72107	16	.62	.72885	73	.12	.73658	24	.62	.74423	69
.13	.72123	25	.63	.72901	82	.13	.73673	33	.63	.74439	78
.14	.72138	34	.64	.72916	91	.14	.73688	42	.64	.74454	87
.15	.72153	43	.65	.72933	.85401	.15	.73704	51	.65	.74468	95
.16	.72168	52	.66	.72949	10	.16	.73719	60	.66	.74484	.86304
.17	.72185	62	.67	.72964	19	.17	.73735	69	.67	.74499	13
.18	.72201	71	.68	.72979	28	.18	.73750	78	.68	.74515	22
.19	.72216	80	.69	.72995	37	.19	.73766	87	.69	.74530	31
58.20	.72231	89	58.70	.73010	46	59.20	.73781	96	59.70	.74546	40
.21	.72247	98	.71	.73026	55	.21	.73797	.85905	.71	.74560	48
.22	.72264	.85008	.72	.73041	64	.22	.73812	14	.72	.74575	57
.23	.72279	17	.73	.73056	73	.23	.73828	23	.73	.74591	66
.24	.72294	26	.74	.73072	82	.24	.73843	32	.74	.74606	75
.25	.72310	35	.75	.73087	91	.25	.73859	41	.75	.74622	84
.26	.72325	44	.76	.73103	.85500	.26	.73874	50	.76	.74636	92
.27	.72342	54	.77	.73118	09	.27	.73888	58	.77	.74651	.86401
.28	.72357	63	.78	.73133	18	.28	.73903	67	.78	.74667	10
.29	.72372	72	.79	.73149	27	.29	.73919	76	.79	.74682	19
58.30	.72388	81	58.80	.73164	36	59.30	.73934	85	59.80	.74696	27
.31	.72403	90	.81	.73179	45	.31	.73950	94	.81	.74712	36
.32	.72418	99	.82	.73197	55	.32	.73965	.86003	.82	.74727	45
.33	.72435	.85109	.83	.73212	64	.33	.73981	12	.83	.74743	54
.34	.72451	18	.84	.73227	73	.34	.73996	21	.84	.74759	63
.35	.72466	27	.85	.73243	82	.35	.74012	30	.85	.74772	71
.36	.72481	36	.86	.73258	91	.36	.74027	39	.86	.74788	80
.37	.72497	45	.87	.73274	.85600	.37	.74043	48	.87	.74803	89
.38	.72512	54	.88	.73289	09	.38	.74056	56	.88	.74819	98
.39	.72529	64	.89	.73304	18	.39	.74072	65	.89	.74833	.86506
58.40	.72544	73	58.90	.73320	27	59.40	.74087	74	59.90	.74848	15
.41	.72560	82	.91	.73335	36	.41	.74103	83	.91	.74864	24
.42	.72575	91	.92	.73351	45	.42	.74118	92	.92	.74880	33
.43	.72590	.85200	.93	.73366	54	.43	.74134	.86101	.93	.74893	41
.44	.72606	09	.94	.73381	63	.44	.74149	10	.94	.74909	50
.45	.72621	18	.95	.73397	72	.45	.74165	19	.95	.74925	59
.46	.72638	28	.96	.73412	81	.46	.74179	27	.96	.74940	68
.47	.72653	37	.97	.73428	90	.47	.74194	36	.97	.74954	76
.48	.72669	46	.98	.73443	99	.48	.74210	45	.98	.74970	85
.49	.72684	55	.99	.73459	.85708	.49	.74225	54	.99	.74985	94
58.50	.72699	64	59.00	.73474	17	59.50	.74241	63	60.00	.75001	.86603

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
60.00	0.75001	0.86603	60.50	0.75753	0.87036	61.00	0.76496	0.87462	61.50	0.77232	0.87882
.01	.75015	11	.51	.75767	44	.01	.76510	70	.51	.77247	90
.02	.75030	20	.52	.75782	53	.02	.76526	79	.52	.77261	98
.03	.75046	29	.53	.75796	61	.03	.76540	87	.53	.77276	.87907
.04	.75060	37	.54	.75812	70	.04	.76556	96	.54	.77290	15
.05	.75075	46	.55	.75828	79	.05	.76570	.87504	.55	.77305	23
.06	.75091	55	.56	.75841	87	.06	.76585	13	.56	.77320	32
.07	.75106	64	.57	.75857	96	.07	.76599	21	.57	.77334	40
.08	.75120	72	.58	.75871	.87104	.08	.76615	30	.58	.77349	48
.09	.75136	81	.59	.75887	13	.09	.76629	38	.59	.77364	57
60.10	.75152	90	60.60	.75901	21	61.10	.76643	46	61.60	.77378	65
.11	.75165	98	.61	.75916	30	.11	.76659	55	.61	.77392	73
.12	.75181	.86707	.62	.75932	39	.12	.76673	63	.62	.77407	81
.13	.75197	16	.63	.75946	47	.13	.76689	72	.63	.77422	90
.14	.75211	24	.64	.75962	56	.14	.76703	80	.64	.77436	98
.15	.75226	33	.65	.75976	64	.15	.76718	89	.65	.77451	.88006
.16	.75242	42	.66	.75991	73	.16	.76732	97	.66	.77466	15
.17	.75257	51	.67	.76005	81	.17	.76746	.87605	.67	.77480	23
.18	.75271	59	.68	.76021	90	.18	.76762	14	.68	.77495	31
.19	.75287	68	.69	.76035	98	.19	.76776	22	.69	.77509	39
60.20	.75302	77	60.70	.76051	.87207	61.20	.76792	31	61.70	.77525	48
.21	.75316	85	.71	.76065	15	.21	.76806	39	.71	.77539	56
.22	.75332	94	.72	.76080	24	.22	.76820	47	.72	.77553	64
.23	.75348	.86803	.73	.76096	33	.23	.76836	56	.73	.77569	73
.24	.75361	11	.74	.76110	41	.24	.76850	64	.74	.77583	81
.25	.75377	20	.75	.76126	50	.25	.76866	73	.75	.77597	89
.26	.75393	29	.76	.76140	58	.26	.76880	81	.76	.77611	97
.27	.75407	37	.77	.76155	67	.27	.76894	89	.77	.77627	.88106
.28	.75422	46	.78	.76169	75	.28	.76909	98	.78	.77641	14
.29	.75438	55	.79	.76185	84	.29	.76923	.87706	.79	.77655	22
60.30	.75452	63	60.80	.76199	92	61.30	.76939	15	61.80	.77669	30
.31	.75467	72	.81	.76215	.87301	.31	.76953	23	.81	.77685	39
.32	.75481	80	.82	.76229	09	.32	.76967	31	.82	.77699	47
.33	.75497	89	.83	.76244	18	.33	.76983	40	.83	.77713	55
.34	.75513	98	.84	.76258	26	.34	.76997	48	.84	.77727	63
.35	.75527	.86906	.85	.76274	35	.35	.77011	56	.85	.77743	72
.36	.75542	15	.86	.76288	43	.36	.77027	65	.86	.77757	80
.37	.75558	24	.87	.76304	52	.37	.77041	73	.87	.77771	88
.38	.75572	32	.88	.76318	60	.38	.77057	82	.88	.77785	96
.39	.75587	41	.89	.76333	69	.39	.77071	90	.89	.77799	.88204
60.40	.75601	49	60.90	.76347	77	61.40	.77085	98	61.90	.77815	13
.41	.75617	58	.91	.76363	86	.41	.77101	.87807	.91	.77829	21
.42	.75633	67	.92	.76377	94	.42	.77115	15	.92	.77844	29
.43	.75647	75	.93	.76393	.87403	.43	.77129	23	.93	.77858	37
.44	.75662	84	.94	.76407	11	.44	.77145	32	.94	.77874	46
.45	.75678	93	.95	.76423	20	.45	.77159	40	.95	.77888	54
.46	.75692	.87001	.96	.76437	28	.46	.77173	48	.96	.77902	62
.47	.75707	10	.97	.76452	37	.47	.77189	57	.97	.77916	70
.48	.75721	18	.98	.76466	45	.48	.77203	65	.98	.77930	78
.49	.75737	27	.99	.76482	54	.49	.77217	73	.99	.77946	87
60.50	.75753	36	61.00	.76496	62	61.50	.77232	82	62.00	.77960	95

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
62.00	0.77960	0.88295	62.50	0.78679	0.88701	63.00	0.79390	0.89101	63.50	0.80090	0.89493
.01	.77974	.88303	.51	.78693	.09	.01	.79404	.09	.51	.80104	.89501
.02	.77988	.88311	.52	.78707	.17	.02	.79417	.16	.52	.80119	.89509
.03	.78002	.88319	.53	.78721	.25	.03	.79431	.24	.53	.80133	.89517
.04	.78018	.88328	.54	.78735	.33	.04	.79445	.32	.54	.80147	.89525
.05	.78032	.88336	.55	.78750	.41	.05	.79459	.40	.55	.80160	.89532
.06	.78047	.88344	.56	.78764	.49	.06	.79474	.48	.56	.80174	.89540
.07	.78061	.88352	.57	.78778	.57	.07	.79488	.56	.57	.80188	.89548
.08	.78075	.88360	.58	.78792	.65	.08	.79502	.64	.58	.80203	.89556
.09	.78089	.88368	.59	.78808	.74	.09	.79516	.72	.59	.80215	.89563
62.10	.78105	.88377	62.60	.78822	.82	63.10	.79531	.80	63.60	.80230	.89571
.11	.78119	.88385	.61	.78837	.90	.11	.79545	.88	.61	.80244	.89579
.12	.78133	.88393	.62	.78851	.98	.12	.79559	.96	.62	.80258	.89587
.13	.78147	.88401	.63	.78865	.88806	.13	.79572	.89203	.63	.80271	.89594
.14	.78162	.88409	.64	.78879	.14	.14	.79586	.11	.64	.80285	.89602
.15	.78176	.88417	.65	.78893	.22	.15	.79600	.19	.65	.80300	.89610
.16	.78192	.88426	.66	.78908	.30	.16	.79615	.27	.66	.80314	.89618
.17	.78206	.88434	.67	.78922	.38	.17	.79629	.35	.67	.80326	.89625
.18	.78220	.88442	.68	.78936	.46	.18	.79643	.43	.68	.80341	.89633
.19	.78234	.88450	.69	.78950	.54	.19	.79657	.51	.69	.80355	.89641
62.20	.78248	.88458	62.70	.78965	.62	63.20	.79672	.59	63.70	.80369	.89649
.21	.78262	.88466	.71	.78979	.70	.21	.79684	.66	.71	.80382	.89656
.22	.78276	.88474	.72	.78993	.78	.22	.79698	.74	.72	.80396	.89664
.23	.78292	.88483	.73	.79007	.86	.23	.79713	.82	.73	.80411	.89672
.24	.78307	.88491	.74	.79021	.94	.24	.79727	.90	.74	.80425	.89680
.25	.78321	.88499	.75	.79036	.88902	.25	.79741	.98	.75	.80438	.89687
.26	.78335	.88507	.76	.79050	.10	.26	.79756	.89306	.76	.80452	.89695
.27	.78349	.88515	.77	.79064	.18	.27	.79770	.14	.77	.80466	.89703
.28	.78363	.88523	.78	.79078	.26	.28	.79782	.21	.78	.80479	.89710
.29	.78377	.88531	.79	.79093	.34	.29	.79797	.29	.79	.80493	.89718
62.30	.78392	.88539	62.80	.79107	.42	63.30	.79811	.37	63.80	.80508	.89726
.31	.78406	.88547	.81	.79121	.50	.31	.79825	.45	.81	.80522	.89734
.32	.78422	.88556	.82	.79135	.58	.32	.79840	.53	.82	.80534	.89741
.33	.78436	.88564	.83	.79149	.66	.33	.79854	.61	.83	.80549	.89749
.34	.78450	.88572	.84	.79164	.74	.34	.79866	.68	.84	.80563	.89757
.35	.78464	.88580	.85	.79176	.81	.35	.79881	.76	.85	.80576	.89764
.36	.78478	.88588	.86	.79190	.89	.36	.79895	.84	.86	.80590	.89772
.37	.78493	.88596	.87	.79205	.97	.37	.79909	.92	.87	.80604	.89780
.38	.78507	.88604	.88	.79219	.89005	.38	.79924	.89400	.88	.80617	.89787
.39	.78521	.88612	.89	.79233	.13	.39	.79938	.08	.89	.80631	.89795
62.40	.78535	.88620	62.90	.79247	.21	63.40	.79950	.15	63.90	.80646	.89803
.41	.78549	.88628	.91	.79262	.29	.41	.79965	.23	.91	.80658	.89810
.42	.78565	.88637	.92	.79276	.37	.42	.79979	.31	.92	.80673	.89818
.43	.78579	.88645	.93	.79290	.45	.43	.79993	.39	.93	.80687	.89826
.44	.78594	.88653	.94	.79304	.53	.44	.80008	.47	.94	.80700	.89833
.45	.78608	.88661	.95	.79319	.61	.45	.80020	.54	.95	.80714	.89841
.46	.78622	.88669	.96	.79333	.69	.46	.80034	.62	.96	.80728	.89849
.47	.78636	.88677	.97	.79347	.77	.47	.80049	.70	.97	.80741	.89856
.48	.78650	.88685	.98	.79361	.85	.48	.80063	.78	.98	.80755	.89864
.49	.78664	.88693	.99	.79376	.93	.49	.80077	.86	.99	.80770	.89872
62.50	.78679	.88701	63.00	.79390	.89101	63.50	.80090	.93	64.00	.80782	.89879

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
64.00	0.80782	0.89879	64.50	0.81467	0.90259	65.00	0.82140	0.90631	65.50	0.82803	0.90996
.01	.80797	.87	.51	.81480	.66	.01	.82152	.38	.51	.82815	.91003
.02	.80811	.95	.52	.81494	.74	.02	.82167	.46	.52	.82830	.11
.03	.80824	.89902	.53	.81507	.81	.03	.82180	.53	.53	.82843	.18
.04	.80838	.10	.54	.81521	.89	.04	.82192	.60	.54	.82856	.25
.05	.80852	.18	.55	.81534	.96	.05	.82207	.68	.55	.82868	.32
.06	.80865	.25	.56	.81548	.90304	.06	.82220	.75	.56	.82883	.40
.07	.80879	.33	.57	.81561	.11	.07	.82232	.82	.57	.82896	.47
.08	.80894	.41	.58	.81575	.19	.08	.82247	.90	.58	.82908	.54
.09	.80906	.48	.59	.81588	.26	.09	.82259	.97	.59	.82921	.61
64.10	.80921	.56	64.60	.81602	.34	65.10	.82272	.90704	65.60	.82934	.68
.11	.80933	.63	.61	.81615	.41	.11	.82287	.12	.61	.82948	.76
.12	.80948	.71	.62	.81629	.49	.12	.82299	.19	.62	.82961	.83
.13	.80962	.79	.63	.81642	.56	.13	.82312	.26	.63	.82974	.90
.14	.80975	.86	.64	.81655	.63	.14	.82327	.34	.64	.82987	.97
.15	.80989	.94	.65	.81669	.71	.15	.82339	.41	.65	.82999	.91104
.16	.81002	.90001	.66	.81682	.78	.16	.82352	.48	.66	.83014	.12
.17	.81016	.09	.67	.81696	.86	.17	.82367	.56	.67	.83027	.19
.18	.81031	.17	.68	.81709	.93	.18	.82379	.63	.68	.83039	.26
.19	.81043	.24	.69	.81723	.90401	.19	.82392	.70	.69	.83052	.33
64.20	.81058	.32	64.70	.81736	.08	65.20	.82406	.78	65.70	.83065	.40
.21	.81070	.39	.71	.81751	.16	.21	.82419	.85	.71	.83080	.48
.22	.81085	.47	.72	.81763	.23	.22	.82432	.92	.72	.83092	.55
.23	.81099	.55	.73	.81778	.31	.23	.82446	.90800	.73	.83105	.62
.24	.81112	.62	.74	.81790	.38	.24	.82459	.07	.74	.83118	.69
.25	.81126	.70	.75	.81805	.46	.25	.82472	.14	.75	.83131	.76
.26	.81139	.77	.76	.81817	.53	.26	.82486	.22	.76	.83143	.83
.27	.81153	.85	.77	.81830	.60	.27	.82499	.29	.77	.83158	.91
.28	.81167	.93	.78	.81845	.68	.28	.82512	.36	.78	.83171	.98
.29	.81180	.90100	.79	.81857	.75	.29	.82526	.44	.79	.83184	.91205
64.30	.81195	.08	64.80	.81872	.83	65.30	.82539	.51	65.80	.83196	.12
.31	.81207	.15	.81	.81884	.90	.31	.82552	.58	.81	.83209	.19
.32	.81222	.23	.82	.81899	.98	.32	.82564	.65	.82	.83222	.26
.33	.81234	.30	.83	.81912	.90505	.33	.82579	.73	.83	.83235	.33
.34	.81249	.38	.84	.81924	.12	.34	.82592	.80	.84	.83249	.41
.35	.81263	.46	.85	.81939	.20	.35	.82604	.87	.85	.83262	.48
.36	.81276	.53	.86	.81951	.27	.36	.82619	.95	.86	.83275	.55
.37	.81290	.61	.87	.81966	.35	.37	.82632	.90902	.87	.83288	.62
.38	.81303	.68	.88	.81979	.42	.38	.82644	.09	.88	.83300	.69
.39	.81317	.76	.89	.81991	.49	.39	.82657	.16	.89	.83313	.76
64.40	.81330	.83	64.90	.82006	.57	65.40	.82672	.24	65.90	.83326	.83
.41	.81344	.91	.91	.82018	.64	.41	.82684	.31	.91	.83340	.91
.42	.81357	.98	.92	.82033	.72	.42	.82697	.38	.92	.83353	.98
.43	.81371	.90206	.93	.82046	.79	.43	.82710	.45	.93	.83366	.91305
.44	.81384	.13	.94	.82058	.86	.44	.82724	.53	.94	.83379	.12
.45	.81398	.21	.95	.82073	.94	.45	.82737	.60	.95	.83392	.19
.46	.81411	.28	.96	.82085	.90601	.46	.82750	.67	.96	.83404	.26
.47	.81425	.36	.97	.82100	.09	.47	.82763	.74	.97	.83417	.33
.48	.81440	.44	.98	.82113	.16	.48	.82777	.82	.98	.83430	.40
.49	.81452	.51	.99	.82125	.23	.49	.82790	.89	.99	.83443	.47
64.50	.81467	.59	65.00	.82140	.31	65.50	.82803	.96	66.00	.83457	.55

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
66.00	0.83457	0.91355	66.50	0.84100	0.91706	67.00	0.84732	0.92050	67.50	0.85355	0.92388
.01	.83470	62	.51	.84113	13	.01	.84745	57	.51	.85368	95
.02	.83483	69	.52	.84126	20	.02	.84758	64	.52	.85379	.92401
.03	.83496	76	.53	.84138	27	.03	.84771	71	.53	.85392	08
.04	.83509	83	.54	.84151	34	.04	.84784	78	.54	.85405	15
.05	.83521	90	.55	.84164	41	.05	.84796	85	.55	.85416	21
.06	.83534	97	.56	.84177	48	.06	.84808	91	.56	.85429	28
.07	.83547	.91404	.57	.84190	55	.07	.84820	98	.57	.85442	35
.08	.83560	11	.58	.84203	62	.08	.84833	.92105	.58	.85453	41
.09	.83573	18	.59	.84215	69	.09	.84846	12	.59	.85466	48
66.10	.83585	25	66.60	.84227	75	67.10	.84859	19	67.60	.85479	55
.11	.83598	32	.61	.84239	82	.11	.84870	25	.61	.85490	61
.12	.83613	40	.62	.84252	89	.12	.84883	32	.62	.85503	68
.13	.83626	47	.63	.84265	96	.13	.84896	39	.63	.85516	75
.14	.83638	54	.64	.84278	.91803	.14	.84909	46	.64	.85527	81
.15	.83651	61	.65	.84291	10	.15	.84920	52	.65	.85540	88
.16	.83664	68	.66	.84304	17	.16	.84933	59	.66	.85551	94
.17	.83677	75	.67	.84316	24	.17	.84946	66	.67	.85564	.92501
.18	.83690	82	.68	.84329	31	.18	.84959	73	.68	.85577	08
.19	.83702	89	.69	.84342	38	.19	.84972	80	.69	.85588	14
66.20	.83715	96	66.70	.84355	45	67.20	.84983	86	67.70	.85601	21
.21	.83728	.91503	.71	.84368	52	.21	.84995	93	.71	.85614	28
.22	.83741	10	.72	.84379	58	.22	.85008	.92200	.72	.85625	34
.23	.83754	17	.73	.84392	65	.23	.85021	07	.73	.85638	41
.24	.83766	24	.74	.84405	72	.24	.85032	13	.74	.85649	47
.25	.83779	31	.75	.84418	79	.25	.85045	20	.75	.85662	54
.26	.83792	38	.76	.84430	86	.26	.85058	27	.76	.85675	61
.27	.83805	45	.77	.84443	93	.27	.85071	34	.77	.85686	67
.28	.83818	52	.78	.84456	.91900	.28	.85082	40	.78	.85699	74
.29	.83831	59	.79	.84469	07	.29	.85095	47	.79	.85711	80
66.30	.83843	66	66.80	.84482	14	67.30	.85108	54	67.80	.85724	87
.31	.83856	73	.81	.84493	20	.31	.85121	61	.81	.85736	94
.32	.83869	80	.82	.84506	27	.32	.85132	67	.82	.85748	.92600
.33	.83882	87	.83	.84519	34	.33	.85145	74	.83	.85761	07
.34	.83895	94	.84	.84532	41	.34	.85158	81	.84	.85772	13
.35	.83907	.91601	.85	.84544	48	.35	.85169	87	.85	.85785	20
.36	.83920	08	.86	.84557	55	.36	.85182	94	.86	.85798	27
.37	.83933	15	.87	.84570	62	.37	.85195	.92301	.87	.85809	33
.38	.83946	22	.88	.84581	68	.38	.85208	08	.88	.85822	40
.39	.83959	29	.89	.84594	75	.39	.85219	14	.89	.85833	46
66.40	.83972	36	66.90	.84607	82	67.40	.85232	21	67.90	.85846	53
.41	.83984	43	.91	.84620	89	.41	.85245	28	.91	.85857	59
.42	.83997	50	.92	.84633	96	.42	.85256	34	.92	.85870	66
.43	.84010	57	.93	.84646	.92003	.43	.85269	41	.93	.85883	73
.44	.84023	64	.94	.84658	10	.44	.85282	48	.94	.85894	79
.45	.84036	71	.95	.84669	16	.45	.85294	55	.95	.85907	86
.46	.84049	78	.96	.84682	23	.46	.85306	61	.96	.85918	92
.47	.84061	85	.97	.84695	30	.47	.85318	68	.97	.85931	99
.48	.84074	92	.98	.84708	37	.48	.85331	75	.98	.85942	.92705
.49	.84087	99	.99	.84721	44	.49	.85342	81	.99	.85955	12
66.50	.84100	.91706	67.00	.84732	50	67.50	.85355	88	68.00	.85966	18

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
68.00	0.85966	0.92718	68.50	0.86568	0.93042	69.00	0.87157	0.93358	69.50	0.87735	0.93667
.01	.85979	25	.51	.86579	48	.01	.87168	64	.51	.87746	73
.02	.85990	31	.52	.86592	55	.02	.87181	71	.52	.87758	79
.03	.86003	38	.53	.86603	61	.03	.87193	77	.53	.87771	86
.04	.86016	45	.54	.86615	67	.04	.87204	83	.54	.87782	92
.05	.86027	51	.55	.86628	74	.05	.87215	89	.55	.87793	98
.06	.86040	58	.56	.86639	80	.06	.87228	96	.56	.87804	.93704
.07	.86052	64	.57	.86650	86	.07	.87239	.93402	.57	.87816	10
.08	.86065	71	.58	.86663	93	.08	.87251	08	.58	.87827	16
.09	.86076	77	.59	.86674	99	.09	.87262	14	.59	.87838	22
68.10	.86089	84	68.60	.86687	.93106	69.10	.87273	20	69.60	.87849	28
.11	.86100	90	.61	.86698	12	.11	.87286	27	.61	.87861	34
.12	.86113	97	.62	.86710	18	.12	.87297	33	.62	.87872	40
.13	.86124	.92803	.63	.86723	25	.13	.87308	39	.63	.87883	46
.14	.86137	10	.64	.86734	31	.14	.87320	45	.64	.87896	53
.15	.86148	16	.65	.86745	37	.15	.87333	52	.65	.87908	59
.16	.86161	23	.66	.86758	44	.16	.87344	58	.66	.87919	65
.17	.86172	29	.67	.86769	50	.17	.87355	64	.67	.87930	71
.18	.86185	36	.68	.86780	56	.18	.87366	70	.68	.87941	77
.19	.86196	42	.69	.86793	63	.19	.87378	76	.69	.87953	83
68.20	.86209	49	68.70	.86805	69	69.20	.87391	83	69.70	.87964	89
.21	.86221	55	.71	.86816	75	.21	.87402	89	.71	.87975	95
.22	.86234	62	.72	.86829	82	.22	.87413	95	.72	.87986	.93801
.23	.86245	68	.73	.86840	88	.23	.87424	.93501	.73	.87998	07
.24	.86256	74	.74	.86851	94	.24	.87436	07	.74	.88009	13
.25	.86269	81	.75	.86864	.93201	.25	.87449	14	.75	.88020	19
.26	.86280	87	.76	.86875	07	.26	.87460	20	.76	.88031	25
.27	.86293	94	.77	.86887	13	.27	.87471	26	.77	.88043	31
.28	.86304	.92900	.78	.86900	20	.28	.87482	32	.78	.88054	37
.29	.86317	07	.79	.86911	26	.29	.87494	38	.79	.88065	43
68.30	.86328	13	68.80	.86922	32	69.30	.87505	44	69.80	.88076	49
.31	.86341	20	.81	.86935	39	.31	.87518	51	.81	.88088	55
.32	.86352	26	.82	.86946	45	.32	.87529	57	.82	.88099	61
.33	.86365	33	.83	.86957	51	.33	.87540	63	.83	.88110	67
.34	.86377	39	.84	.86971	58	.34	.87552	69	.84	.88121	73
.35	.86388	45	.85	.86982	64	.35	.87563	75	.85	.88133	79
.36	.86401	52	.86	.86993	70	.36	.87574	81	.86	.88144	85
.37	.86412	58	.87	.87004	76	.37	.87587	88	.87	.88155	91
.38	.86425	65	.88	.87017	83	.38	.87598	94	.88	.88166	97
.39	.86436	71	.89	.87028	89	.39	.87610	.93600	.89	.88178	.93903
68.40	.86449	78	68.90	.87040	95	69.40	.87621	06	69.90	.88189	09
.41	.86460	84	.91	.87053	.93302	.41	.87632	12	.91	.88200	15
.42	.86471	90	.92	.87064	08	.42	.87643	18	.92	.88212	21
.43	.86484	97	.93	.87075	14	.43	.87655	24	.93	.88223	27
.44	.86496	.93003	.94	.87086	20	.44	.87666	30	.94	.88234	33
.45	.86509	10	.95	.87099	27	.45	.87679	37	.95	.88245	39
.46	.86520	16	.96	.87110	33	.46	.87690	43	.96	.88257	45
.47	.86533	23	.97	.87122	39	.47	.87701	49	.97	.88268	51
.48	.86544	29	.98	.87135	46	.48	.87713	55	.98	.88279	57
.49	.86555	35	.99	.87146	52	.49	.87724	61	.99	.88290	63
68.50	.86568	42	69.00	.87157	58	69.50	.87735	67	70.00	.88302	69

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
70.00	0.88302	0.93969	70.50	0.88857	0.94264	71.00	0.89401	0.94552	71.50	0.89931	0.94832
.01	.88313	75	.51	.88868	70	.01	.89412	58	.51	.89942	38
.02	.88324	81	.52	.88880	76	.02	.89422	63	.52	.89952	43
.03	.88336	87	.53	.88891	82	.03	.89433	69	.53	.89963	49
.04	.88347	93	.54	.88900	87	.04	.89444	75	.54	.89973	54
.05	.88358	99	.55	.88912	93	.05	.89454	80	.55	.89984	60
.06	.88369	.94005	.56	.88923	99	.06	.89465	86	.56	.89996	66
.07	.88381	11	.57	.88934	.94305	.07	.89476	92	.57	.90005	71
.08	.88392	17	.58	.88946	11	.08	.89486	97	.58	.90016	77
.09	.88403	23	.59	.88955	16	.09	.89497	.94603	.59	.90026	82
70.10	.88415	29	70.60	.88966	22	71.10	.89509	09	71.60	.90037	88
.11	.88426	35	.61	.88978	28	.11	.89518	14	.61	.90047	93
.12	.88437	41	.62	.88989	34	.12	.89529	20	.62	.90058	99
.13	.88448	47	.63	.89000	40	.13	.89539	25	.63	.90068	.94904
.14	.88460	53	.64	.89010	45	.14	.89550	31	.64	.90079	10
.15	.88469	58	.65	.89021	51	.15	.89562	37	.65	.90089	15
.16	.88480	64	.66	.89032	57	.16	.89571	42	.66	.90100	21
.17	.88492	70	.67	.89044	63	.17	.89582	48	.67	.90109	26
.18	.88503	76	.68	.89055	69	.18	.89594	54	.68	.90121	32
.19	.88514	82	.69	.89065	74	.19	.89603	59	.69	.90130	37
70.20	.88526	88	70.70	.89076	80	71.20	.89615	65	71.70	.90142	43
.21	.88537	94	.71	.89087	86	.21	.89626	71	.71	.90151	48
.22	.88548	.94100	.72	.89098	92	.22	.89635	76	.72	.90163	54
.23	.88559	06	.73	.89108	97	.23	.89647	82	.73	.90172	59
.24	.88571	12	.74	.89119	.94403	.24	.89656	87	.74	.90182	64
.25	.88582	18	.75	.89131	09	.25	.89668	93	.75	.90193	70
.26	.88593	24	.76	.89142	15	.26	.89679	99	.76	.90203	75
.27	.88603	29	.77	.89151	20	.27	.89688	.94704	.77	.90214	81
.28	.88614	35	.78	.89163	26	.28	.89700	10	.78	.90223	86
.29	.88625	41	.79	.89174	32	.29	.89709	15	.79	.90235	92
70.30	.88637	47	70.80	.89185	38	71.30	.89721	21	71.80	.90244	97
.31	.88648	53	.81	.89195	43	.31	.89732	27	.81	.90256	.95003
.32	.88659	59	.82	.89206	49	.32	.89742	32	.82	.90265	08
.33	.88670	65	.83	.89217	55	.33	.89753	38	.83	.90277	14
.34	.88682	71	.84	.89229	61	.34	.89762	43	.84	.90286	19
.35	.88691	76	.85	.89238	66	.35	.89774	49	.85	.90296	24
.36	.88702	82	.86	.89250	72	.36	.89785	55	.86	.90307	30
.37	.88714	88	.87	.89261	78	.37	.89795	60	.87	.90317	35
.38	.88725	94	.88	.89270	83	.38	.89806	66	.88	.90328	41
.39	.88736	.94200	.89	.89282	89	.39	.89815	71	.89	.90337	46
70.40	.88748	06	70.90	.89293	95	71.40	.89827	77	71.90	.90349	52
.41	.88759	12	.91	.89304	.94501	.41	.89836	82	.91	.90358	57
.42	.88768	17	.92	.89314	06	.42	.89848	88	.92	.90368	62
.43	.88780	23	.93	.89325	12	.43	.89859	94	.93	.90379	68
.44	.88791	29	.94	.89337	18	.44	.89869	99	.94	.90389	73
.45	.88802	35	.95	.89346	23	.45	.89880	.94805	.95	.90400	79
.46	.88814	41	.96	.89357	29	.46	.89889	10	.96	.90410	84
.47	.88825	47	.97	.89369	35	.47	.89901	16	.97	.90419	89
.48	.88834	52	.98	.89378	40	.48	.89910	21	.98	.90431	95
.49	.88846	58	.99	.89389	46	.49	.89922	27	.99	.90440	.95100
70.50	.88857	64	71.00	.89401	52	71.50	.89931	32	72.00	.90452	06

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
72.00	0.90452	0.95106	72.50	0.90958	0.95372	73.00	0.91451	0.95630	73.50	0.91934	0.95882
.01	.90461	11	.51	.90968	77	.01	.91462	36	.51	.91943	87
.02	.90471	16	.52	.90977	82	.02	.91472	41	.52	.91953	92
.03	.90482	22	.53	.90987	87	.03	.91482	46	.53	.91962	97
.04	.90491	27	.54	.90998	93	.04	.91491	51	.54	.91972	.95902
.05	.90503	33	.55	.91008	98	.05	.91501	56	.55	.91982	07
.06	.90512	38	.56	.91017	.95403	.06	.91510	61	.56	.91991	12
.07	.90522	43	.57	.91027	08	.07	.91520	66	.57	.92001	17
.08	.90533	49	.58	.91038	14	.08	.91529	71	.58	.92010	22
.09	.90543	54	.59	.91048	19	.09	.91539	76	.59	.92018	26
72.10	.90552	59	72.60	.91057	24	73.10	.91549	81	73.60	.92028	31
.11	.90564	65	.61	.91067	29	.11	.91558	86	.61	.92037	36
.12	.90573	70	.62	.91076	34	.12	.91570	92	.62	.92047	41
.13	.90585	76	.63	.91088	40	.13	.91579	97	.63	.92056	46
.14	.90594	81	.64	.91097	45	.14	.91589	.95702	.64	.92066	51
.15	.90604	86	.65	.91107	50	.15	.91598	07	.65	.92076	56
.16	.90615	92	.66	.91117	55	.16	.91608	12	.66	.92085	61
.17	.90625	97	.67	.91128	61	.17	.91617	17	.67	.92095	66
.18	.90634	.95202	.68	.91138	66	.18	.91627	22	.68	.92104	71
.19	.90646	08	.69	.91147	71	.19	.91637	27	.69	.92114	76
72.20	.90655	13	72.70	.91157	76	73.20	.91646	32	73.70	.92124	81
.21	.90665	18	.71	.91166	81	.21	.91656	37	.71	.92131	85
.22	.90676	24	.72	.91176	86	.22	.91665	42	.72	.92141	90
.23	.90686	29	.73	.91187	92	.23	.91675	47	.73	.92150	95
.24	.90695	34	.74	.91197	97	.24	.91684	52	.74	.92160	.96000
.25	.90707	40	.75	.91206	.95502	.25	.91694	57	.75	.92170	05
.26	.90716	45	.76	.91216	07	.26	.91704	62	.76	.92179	10
.27	.90726	50	.77	.91225	12	.27	.91713	67	.77	.92189	15
.28	.90737	56	.78	.91237	18	.28	.91723	72	.78	.92198	20
.29	.90747	61	.79	.91246	23	.29	.91732	77	.79	.92208	25
72.30	.90756	66	72.80	.91256	28	73.30	.91742	82	73.80	.92216	29
.31	.90766	71	.81	.91266	33	.31	.91751	87	.81	.92225	34
.32	.90777	77	.82	.91275	38	.32	.91761	92	.82	.92235	39
.33	.90787	82	.83	.91285	43	.33	.91771	97	.83	.92244	44
.34	.90796	87	.84	.91294	48	.34	.91780	.95802	.84	.92254	49
.35	.90808	93	.85	.91306	54	.35	.91790	07	.85	.92264	54
.36	.90817	98	.86	.91315	59	.36	.91799	12	.86	.92273	59
.37	.90827	.95303	.87	.91325	64	.37	.91809	17	.87	.92281	63
.38	.90838	09	.88	.91334	69	.38	.91819	22	.88	.92291	68
.39	.90848	14	.89	.91344	74	.39	.91828	27	.89	.92300	73
72.40	.90857	19	72.90	.91353	79	73.40	.91838	32	73.90	.92310	78
.41	.90867	24	.91	.91363	84	.41	.91847	37	.91	.92319	83
.42	.90878	30	.92	.91374	90	.42	.91857	42	.92	.92329	88
.43	.90888	35	.93	.91384	95	.43	.91866	47	.93	.92337	92
.44	.90897	40	.94	.91394	.95600	.44	.91876	52	.94	.92346	97
.45	.90907	45	.95	.91403	05	.45	.91886	57	.95	.92356	.96102
.46	.90918	51	.96	.91413	10	.46	.91895	62	.96	.92366	07
.47	.90928	56	.97	.91422	15	.47	.91905	67	.97	.92375	12
.48	.90937	61	.98	.91432	20	.48	.91914	72	.98	.92385	17
.49	.90947	66	.99	.91441	25	.49	.91924	77	.99	.92392	21
72.50	.90958	72	73.00	.91451	30	73.50	.91934	82	74.00	.92402	26

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
74.00	0.92402	0.96126	74.50	0.92858	0.96363	75.00	0.93302	0.96593	75.50	0.93731	0.96815
.01	.92412	31	.51	.92868	68	.01	.93310	97	.51	.93739	19
.02	.92421	36	.52	.92876	72	.02	.93319	.96602	.52	.93749	24
.03	.92431	41	.53	.92885	77	.03	.93327	06	.53	.93757	28
.04	.92439	45	.54	.92895	82	.04	.93337	11	.54	.93764	32
.05	.92448	50	.55	.92903	86	.05	.93345	15	.55	.93774	37
.06	.92458	55	.56	.92912	91	.06	.93354	20	.56	.93782	41
.07	.92467	60	.57	.92922	96	.07	.93362	24	.57	.93790	45
.08	.92477	65	.58	.92930	.96400	.08	.93372	29	.58	.93799	50
.09	.92485	69	.59	.92939	05	.09	.93379	33	.59	.93807	54
74.10	.92494	74	74.60	.92949	10	75.10	.93389	38	75.60	.93815	58
.11	.92504	79	.61	.92957	14	.11	.93397	42	.61	.93824	63
.12	.92514	84	.62	.92966	19	.12	.93406	47	.62	.93832	67
.13	.92521	88	.63	.92974	23	.13	.93414	51	.63	.93840	71
.14	.92531	93	.64	.92984	28	.14	.93424	56	.64	.93850	76
.15	.92541	98	.65	.92993	33	.15	.93432	60	.65	.93857	80
.16	.92550	.96203	.66	.93001	37	.16	.93439	64	.66	.93865	84
.17	.92560	08	.67	.93011	42	.17	.93449	69	.67	.93875	89
.18	.92567	12	.68	.93020	47	.18	.93457	73	.68	.93883	93
.19	.92577	17	.69	.93028	51	.19	.93466	78	.69	.93890	97
74.20	.92587	22	74.70	.93038	56	75.20	.93474	82	75.70	.93900	.96902
.21	.92596	27	.71	.93045	60	.21	.93484	87	.71	.93908	06
.22	.92604	31	.72	.93055	65	.22	.93491	91	.72	.93915	10
.23	.92614	36	.73	.93065	70	.23	.93501	96	.73	.93923	14
.24	.92623	41	.74	.93072	74	.24	.93509	.96700	.74	.93933	19
.25	.92633	46	.75	.93082	79	.25	.93519	05	.75	.93941	23
.26	.92641	50	.76	.93090	83	.26	.93526	09	.76	.93948	27
.27	.92650	55	.77	.93099	88	.27	.93534	13	.77	.93958	32
.28	.92660	60	.78	.93107	92	.28	.93544	18	.78	.93966	36
.29	.92668	64	.79	.93117	97	.29	.93551	22	.79	.93974	40
74.30	.92677	69	74.80	.93126	.96502	75.30	.93561	27	75.80	.93983	45
.31	.92687	74	.81	.93134	06	.31	.93569	31	.81	.93991	49
.32	.92696	79	.82	.93144	11	.32	.93579	36	.82	.93999	53
.33	.92704	83	.83	.93151	15	.33	.93586	40	.83	.94007	57
.34	.92714	88	.84	.93161	20	.34	.93594	44	.84	.94016	62
.35	.92723	93	.85	.93169	24	.35	.93604	49	.85	.94024	66
.36	.92731	97	.86	.93178	29	.36	.93611	53	.86	.94032	70
.37	.92741	.96302	.87	.93188	34	.37	.93621	58	.87	.94040	74
.38	.92750	07	.88	.93196	38	.38	.93629	62	.88	.94049	79
.39	.92760	12	.89	.93206	43	.39	.93639	67	.89	.94057	83
74.40	.92768	16	74.90	.93213	47	75.40	.93646	71	75.90	.94065	87
.41	.92777	21	.91	.93223	52	.41	.93654	75	.91	.94073	91
.42	.92787	26	.92	.93231	56	.42	.93664	80	.92	.94082	96
.43	.92795	30	.93	.93240	61	.43	.93671	84	.93	.94090	.97000
.44	.92804	35	.94	.93248	65	.44	.93679	88	.94	.94098	04
.45	.92814	40	.95	.93258	70	.45	.93689	93	.95	.94106	08
.46	.92822	44	.96	.93265	74	.46	.93697	97	.96	.94115	13
.47	.92831	49	.97	.93275	79	.47	.93706	.96802	.97	.94123	17
.48	.92841	54	.98	.93285	84	.48	.93714	06	.98	.94131	21
.49	.92849	58	.99	.93292	88	.49	.93722	10	.99	.94139	25
74.50	.92858	63	75.00	.93302	93	75.50	.93731	15	76.00	.94148	30

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
76.00	0.94148	0.97030	76.50	0.94550	0.97237	77.00	0.94940	0.97437	77.50	0.95316	0.97630
.01	.94156	34	.51	.94558	41	.01	.94947	41	.51	.95322	33
.02	.94164	38	.52	.94566	45	.02	.94955	45	.52	.95330	37
.03	.94171	42	.53	.94574	49	.03	.94963	49	.53	.95338	41
.04	.94179	46	.54	.94581	53	.04	.94971	53	.54	.95345	45
.05	.94189	51	.55	.94589	57	.05	.94979	57	.55	.95351	48
.06	.94197	55	.56	.94597	61	.06	.94986	61	.56	.95359	52
.07	.94204	59	.57	.94605	65	.07	.94992	64	.57	.95367	56
.08	.94212	63	.58	.94613	69	.08	.95000	68	.58	.95375	60
.09	.94220	67	.59	.94622	74	.09	.95008	72	.59	.95381	63
76.10	.94230	72	76.60	.94630	78	77.10	.95016	76	77.60	.95388	67
.11	.94237	76	.61	.94638	82	.11	.95024	80	.61	.95396	71
.12	.94245	80	.62	.94646	86	.12	.95031	84	.62	.95404	75
.13	.94253	84	.63	.94653	90	.13	.95039	88	.63	.95410	78
.14	.94261	88	.64	.94661	94	.14	.95047	92	.64	.95418	82
.15	.94271	93	.65	.94669	98	.15	.95055	96	.65	.95426	86
.16	.94278	97	.66	.94677	.97302	.16	.95061	99	.66	.95433	90
.17	.94286	.97101	.67	.94685	06	.17	.95068	.97503	.67	.95439	93
.18	.94294	05	.68	.94692	10	.18	.95076	07	.68	.95447	97
.19	.94302	09	.69	.94700	14	.19	.95084	11	.69	.95455	.97701
76.20	.94309	13	76.70	.94708	18	77.20	.95092	15	77.70	.95463	05
.21	.94319	18	.71	.94716	22	.21	.95100	19	.71	.95469	08
.22	.94327	22	.72	.94724	26	.22	.95107	23	.72	.95476	12
.23	.94335	26	.73	.94731	30	.23	.95115	27	.73	.95484	16
.24	.94342	30	.74	.94739	34	.24	.95121	30	.74	.95490	19
.25	.94350	34	.75	.94747	38	.25	.95129	34	.75	.95498	23
.26	.94358	38	.76	.94755	42	.26	.95137	38	.76	.95506	27
.27	.94368	43	.77	.94762	46	.27	.95144	42	.77	.95513	31
.28	.94375	47	.78	.94770	50	.28	.95152	46	.78	.95519	34
.29	.94383	51	.79	.94778	54	.29	.95160	50	.79	.95527	38
76.30	.94391	55	76.80	.94786	58	77.30	.95166	53	77.80	.95535	42
.31	.94399	59	.81	.94794	62	.31	.95174	57	.81	.95541	45
.32	.94406	63	.82	.94801	66	.32	.95181	61	.82	.95549	49
.33	.94414	67	.83	.94809	70	.33	.95189	65	.83	.95556	53
.34	.94422	71	.84	.94817	74	.34	.95197	69	.84	.95562	56
.35	.94432	76	.85	.94825	78	.35	.95205	73	.85	.95570	60
.36	.94440	80	.86	.94833	82	.36	.95211	76	.86	.95578	64
.37	.94447	84	.87	.94840	86	.37	.95219	80	.87	.95584	67
.38	.94455	88	.88	.94848	90	.38	.95226	84	.88	.95592	71
.39	.94463	92	.89	.94856	94	.39	.95234	88	.89	.95600	75
76.40	.94471	96	76.90	.94864	98	77.40	.95242	92	77.90	.95605	78
.41	.94478	.97200	.91	.94871	.97402	.41	.95248	95	.91	.95613	82
.42	.94486	04	.92	.94879	06	.42	.95256	99	.92	.95621	86
.43	.94494	08	.93	.94885	09	.43	.95263	.97603	.93	.95627	89
.44	.94502	12	.94	.94893	13	.44	.95271	07	.94	.95635	93
.45	.94511	17	.95	.94901	17	.45	.95279	11	.95	.95643	97
.46	.94519	21	.96	.94909	21	.46	.95285	14	.96	.95648	.97800
.47	.94527	25	.97	.94916	25	.47	.95293	18	.97	.95656	04
.48	.94535	29	.98	.94924	29	.48	.95301	22	.98	.95664	08
.49	.94543	33	.99	.94932	33	.49	.95308	26	.99	.95670	11
76.50	.94550	37	77.00	.94940	37	77.50	.95316	30	78.00	.95678	15

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
78.00	0.95678	0.97815	78.50	0.96024	0.97992	79.00	0.96360	0.98163	79.50	0.96678	0.98325
.01	.95684	18	.51	.96032	96	.01	.96366	66	.51	.96686	29
.02	.95691	22	.52	.96038	99	.02	.96372	69	.52	.96692	32
.03	.95699	26	.53	.96046	.98003	.03	.96379	73	.53	.96698	35
.04	.95705	29	.54	.96052	06	.04	.96385	76	.54	.96704	38
.05	.95713	33	.55	.96060	10	.05	.96391	79	.55	.96710	41
.06	.95719	36	.56	.96065	13	.06	.96399	83	.56	.96717	45
.07	.95727	40	.57	.96073	17	.07	.96405	86	.57	.96723	48
.08	.95734	44	.58	.96079	20	.08	.96411	89	.58	.96729	51
.09	.95740	47	.59	.96087	24	.09	.96419	93	.59	.96735	54
78.10	.95748	51	78.60	.96093	27	79.10	.96425	96	79.60	.96741	57
.11	.95756	55	.61	.96101	31	.11	.96430	99	.61	.96747	60
.12	.95762	58	.62	.96107	34	.12	.96436	.98202	.62	.96753	63
.13	.95770	62	.63	.96113	37	.13	.96444	06	.63	.96761	67
.14	.95776	65	.64	.96120	41	.14	.96450	09	.64	.96767	70
.15	.95783	69	.65	.96126	44	.15	.96456	12	.65	.96772	73
.16	.95789	72	.66	.96134	48	.16	.96464	16	.66	.96778	76
.17	.95797	76	.67	.96140	51	.17	.96470	19	.67	.96784	79
.18	.95805	80	.68	.96148	55	.18	.96476	22	.68	.96790	82
.19	.95811	83	.69	.96154	58	.19	.96482	25	.69	.96796	85
78.20	.95819	87	78.70	.96160	61	79.20	.96489	29	79.70	.96804	89
.21	.95825	90	.71	.96167	65	.21	.96495	32	.71	.96810	92
.22	.95832	94	.72	.96173	68	.22	.96501	35	.72	.96816	95
.23	.95838	97	.73	.96181	72	.23	.96509	39	.73	.96822	98
.24	.95846	.97901	.74	.96187	75	.24	.96515	42	.74	.96828	.98401
.25	.95854	05	.75	.96195	79	.25	.96521	45	.75	.96833	04
.26	.95860	08	.76	.96201	82	.26	.96527	48	.76	.96839	07
.27	.95868	12	.77	.96207	85	.27	.96535	52	.77	.96845	10
.28	.95873	15	.78	.96215	89	.28	.96540	55	.78	.96851	13
.29	.95881	19	.79	.96220	92	.29	.96546	58	.79	.96857	16
78.30	.95887	22	78.80	.96228	96	79.30	.96552	61	79.80	.96865	20
.31	.95895	26	.81	.96234	99	.31	.96560	65	.81	.96871	23
.32	.95901	29	.82	.96240	.98102	.32	.96566	68	.82	.96877	26
.33	.95909	33	.83	.96248	06	.33	.96572	71	.83	.96883	29
.34	.95915	36	.84	.96254	09	.34	.96578	74	.84	.96889	32
.35	.95922	40	.85	.96260	12	.35	.96584	77	.85	.96894	35
.36	.95928	43	.86	.96267	16	.36	.96592	81	.86	.96900	38
.37	.95936	47	.87	.96273	19	.37	.96597	84	.87	.96906	41
.38	.95944	51	.88	.96281	23	.38	.96603	87	.88	.96912	44
.39	.95950	54	.89	.96287	26	.39	.96609	90	.89	.96918	47
78.40	.95958	58	78.90	.96293	29	79.40	.96617	94	79.90	.96924	50
.41	.95964	61	.91	.96301	33	.41	.96623	97	.91	.96930	53
.42	.95971	65	.92	.96307	36	.42	.96629	.98300	.92	.96936	56
.43	.95977	68	.93	.96313	39	.43	.96635	03	.93	.96942	59
.44	.95985	72	.94	.96320	43	.44	.96641	06	.94	.96950	63
.45	.95991	75	.95	.96326	46	.45	.96649	10	.95	.96956	66
.46	.95999	79	.96	.96332	49	.46	.96654	13	.96	.96961	69
.47	.96005	82	.97	.96340	53	.47	.96660	16	.97	.96967	72
.48	.96013	86	.98	.96346	56	.48	.96666	19	.98	.96973	75
.49	.96018	89	.99	.96352	59	.49	.96672	22	.99	.96979	78
78.50	.96024	92	79.00	.96360	63	79.50	.96678	25	80.00	.96985	81

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
80.00	0.96985	0.98481	80.50	0.97277	0.98629	81.00	0.97553	0.98769	81.50	0.97816	0.98902
.01	.96991	84	.51	.97281	31	.01	.97559	72	.51	.97820	04
.02	.96997	87	.52	.97287	34	.02	.97563	74	.52	.97826	07
.03	.97003	90	.53	.97293	37	.03	.97569	77	.53	.97830	09
.04	.97009	93	.54	.97298	40	.04	.97575	80	.54	.97836	12
.05	.97015	96	.55	.97304	43	.05	.97579	82	.55	.97840	14
.06	.97021	99	.56	.97310	46	.06	.97585	85	.56	.97846	17
.07	.97026	.98502	.57	.97316	49	.07	.97591	88	.57	.97852	20
.08	.97032	05	.58	.97322	52	.08	.97597	91	.58	.97856	22
.09	.97038	08	.59	.97326	54	.09	.97601	93	.59	.97862	25
80.10	.97044	11	80.60	.97332	57	81.10	.97606	96	81.60	.97866	27
.11	.97050	14	.61	.97338	60	.11	.97612	99	.61	.97871	30
.12	.97056	17	.62	.97344	63	.12	.97616	.98801	.62	.97875	32
.13	.97062	20	.63	.97350	66	.13	.97622	04	.63	.97881	35
.14	.97068	23	.64	.97356	69	.14	.97628	07	.64	.97885	37
.15	.97074	26	.65	.97360	71	.15	.97632	09	.65	.97891	40
.16	.97080	29	.66	.97366	74	.16	.97638	12	.66	.97895	42
.17	.97086	32	.67	.97372	77	.17	.97644	15	.67	.97901	45
.18	.97091	35	.68	.97377	80	.18	.97648	17	.68	.97907	48
.19	.97097	38	.69	.97383	83	.19	.97654	20	.69	.97911	50
80.20	.97103	41	80.70	.97389	86	81.20	.97660	23	81.70	.97917	53
.21	.97109	44	.71	.97395	89	.21	.97666	26	.71	.97921	55
.22	.97115	47	.72	.97399	91	.22	.97670	28	.72	.97927	58
.23	.97121	50	.73	.97405	94	.23	.97676	31	.73	.97931	60
.24	.97127	53	.74	.97411	97	.24	.97680	33	.74	.97937	63
.25	.97133	56	.75	.97417	.98700	.25	.97686	36	.75	.97941	65
.26	.97139	59	.76	.97421	02	.26	.97691	39	.76	.97947	68
.27	.97145	62	.77	.97427	05	.27	.97695	41	.77	.97951	70
.28	.97149	64	.78	.97433	08	.28	.97701	44	.78	.97957	73
.29	.97155	67	.79	.97439	11	.29	.97707	47	.79	.97961	75
80.30	.97160	70	80.80	.97445	14	81.30	.97711	49	81.80	.97966	78
.31	.97166	73	.81	.97448	16	.31	.97717	52	.81	.97970	80
.32	.97172	76	.82	.97454	19	.32	.97723	55	.82	.97976	83
.33	.97178	79	.83	.97460	22	.33	.97727	57	.83	.97980	85
.34	.97184	82	.84	.97466	25	.34	.97733	60	.84	.97986	88
.35	.97190	85	.85	.97472	28	.35	.97739	63	.85	.97990	90
.36	.97196	88	.86	.97476	30	.36	.97743	65	.86	.97996	93
.37	.97202	91	.87	.97482	33	.37	.97749	68	.87	.98000	95
.38	.97208	94	.88	.97488	36	.38	.97753	70	.88	.98004	97
.39	.97214	97	.89	.97494	39	.39	.97759	73	.89	.98010	.99000
80.40	.97220	.98600	80.90	.97498	41	81.40	.97765	76	81.90	.98014	02
.41	.97226	03	.91	.97504	44	.41	.97769	78	.91	.98020	05
.42	.97229	05	.92	.97510	47	.42	.97775	81	.92	.98024	07
.43	.97235	08	.93	.97516	50	.43	.97778	83	.93	.98030	10
.44	.97241	11	.94	.97520	52	.44	.97784	86	.94	.98034	12
.45	.97247	14	.95	.97526	55	.45	.97790	89	.95	.98040	15
.46	.97253	17	.96	.97531	58	.46	.97794	91	.96	.98044	17
.47	.97259	20	.97	.97537	61	.47	.97800	94	.97	.98050	20
.48	.97265	23	.98	.97541	63	.48	.97804	96	.98	.98054	22
.49	.97271	26	.99	.97547	66	.49	.97810	99	.99	.98058	24
80.50	.97277	29	81.00	.97553	69	81.50	.97816	.98902	82.00	.98063	27

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
82.00	0.98063	0.99027	82.50	0.98295	0.99144	83.00	0.98516	0.99255	83.50	0.98718	0.99357
.01	.98067	29	.51	.98301	47	.01	.98520	57	.51	.98722	59
.02	.98073	32	.52	.98305	49	.02	.98523	59	.52	.98726	61
.03	.98077	34	.53	.98309	51	.03	.98527	61	.53	.98730	63
.04	.98083	37	.54	.98315	54	.04	.98531	63	.54	.98734	65
.05	.98087	39	.55	.98319	56	.05	.98535	65	.55	.98738	67
.06	.98091	41	.56	.98323	58	.06	.98539	67	.56	.98742	69
.07	.98097	44	.57	.98327	60	.07	.98543	69	.57	.98746	71
.08	.98101	46	.58	.98333	63	.08	.98549	72	.58	.98750	73
.09	.98107	49	.59	.98337	65	.09	.98553	74	.59	.98754	75
82.10	.98111	51	82.60	.98341	67	83.10	.98557	76	83.60	.98758	77
.11	.98115	53	.61	.98345	69	.11	.98561	78	.61	.98762	79
.12	.98121	56	.62	.98351	72	.12	.98565	80	.62	.98766	81
.13	.98125	58	.63	.98355	74	.13	.98569	82	.63	.98770	83
.14	.98131	61	.64	.98359	76	.14	.98573	84	.64	.98774	85
.15	.98135	63	.65	.98363	78	.15	.98577	86	.65	.98776	86
.16	.98139	65	.66	.98369	81	.16	.98581	88	.66	.98780	88
.17	.98145	68	.67	.98373	83	.17	.98585	90	.67	.98784	90
.18	.98149	70	.68	.98377	85	.18	.98589	92	.68	.98788	92
.19	.98153	72	.69	.98381	87	.19	.98593	94	.69	.98792	94
82.20	.98159	75	82.70	.98385	89	83.20	.98599	97	83.70	.98796	96
.21	.98163	77	.71	.98391	92	.21	.98603	99	.71	.98800	98
.22	.98168	80	.72	.98394	94	.22	.98607	.99301	.72	.98804	.99400
.23	.98172	82	.73	.98398	96	.23	.98611	03	.73	.98808	02
.24	.98176	84	.74	.98402	98	.24	.98615	05	.74	.98812	04
.25	.98182	87	.75	.98406	.99200	.25	.98619	07	.75	.98816	06
.26	.98186	89	.76	.98412	03	.26	.98623	09	.76	.98820	08
.27	.98190	91	.77	.98416	05	.27	.98627	11	.77	.98821	09
.28	.98196	94	.78	.98420	07	.28	.98631	13	.78	.98825	11
.29	.98200	96	.79	.98424	09	.29	.98635	15	.79	.98829	13
82.30	.98204	98	82.80	.98428	11	83.30	.98639	17	83.80	.98833	15
.31	.98210	.99101	.81	.98434	14	.31	.98643	19	.81	.98837	17
.32	.98214	03	.82	.98438	16	.32	.98647	21	.82	.98841	19
.33	.98218	05	.83	.98442	18	.33	.98651	23	.83	.98845	21
.34	.98224	08	.84	.98446	20	.34	.98655	25	.84	.98849	23
.35	.98228	10	.85	.98450	22	.35	.98659	27	.85	.98851	24
.36	.98232	12	.86	.98456	25	.36	.98663	29	.86	.98855	26
.37	.98238	15	.87	.98460	27	.37	.98666	31	.87	.98859	28
.38	.98242	17	.88	.98464	29	.38	.98670	33	.88	.98863	30
.39	.98246	19	.89	.98468	31	.39	.98674	35	.89	.98867	32
82.40	.98252	22	82.90	.98472	33	83.40	.98678	37	83.90	.98871	34
.41	.98256	24	.91	.98476	35	.41	.98682	39	.91	.98875	36
.42	.98260	26	.92	.98482	38	.42	.98686	41	.92	.98879	38
.43	.98264	28	.93	.98486	40	.43	.98690	43	.93	.98881	39
.44	.98270	31	.94	.98490	42	.44	.98694	45	.94	.98885	41
.45	.98274	33	.95	.98494	44	.45	.98698	47	.95	.98889	43
.46	.98277	35	.96	.98498	46	.46	.98702	49	.96	.98893	45
.47	.98283	38	.97	.98502	48	.47	.98706	51	.97	.98897	47
.48	.98287	40	.98	.98506	50	.48	.98710	53	.98	.98901	49
.49	.98291	42	.99	.98510	52	.49	.98714	55	.99	.98903	50
82.50	.98295	44	83.00	.98516	55	83.50	.98718	57	84.00	.98907	52

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
84.00	0.98907	0.99452	84.50	0.99082	0.99540	85.00	0.99239	0.99619	85.50	0.99385	0.99692
.01	.98911	54	.51	.99084	41	.01	.99243	21	.51	.99387	93
.02	.98915	56	.52	.99088	43	.02	.99247	23	.52	.99389	94
.03	.98919	58	.53	.99092	45	.03	.99249	24	.53	.99393	96
.04	.98921	59	.54	.99094	46	.04	.99253	26	.54	.99395	97
.05	.98925	61	.55	.99098	48	.05	.99255	27	.55	.99399	99
.06	.98929	63	.56	.99102	50	.06	.99259	29	.56	.99401	.99700
.07	.98933	65	.57	.99104	51	.07	.99261	30	.57	.99403	01
.08	.98937	67	.58	.99108	53	.08	.99265	32	.58	.99407	03
.09	.98939	68	.59	.99112	55	.09	.99267	33	.59	.99409	04
84.10	.98943	70	84.60	.99114	56	85.10	.99271	35	85.60	.99411	05
.11	.98947	72	.61	.99118	58	.11	.99273	36	.61	.99415	07
.12	.98951	74	.62	.99120	59	.12	.99277	38	.62	.99417	08
.13	.98955	76	.63	.99124	61	.13	.99279	39	.63	.99419	09
.14	.98957	77	.64	.99128	63	.14	.99281	40	.64	.99423	11
.15	.98961	79	.65	.99130	64	.15	.99285	42	.65	.99425	12
.16	.98965	81	.66	.99134	66	.16	.99287	43	.66	.99427	13
.17	.98969	83	.67	.99138	68	.17	.99291	45	.67	.99431	15
.18	.98973	85	.68	.99140	69	.18	.99293	46	.68	.99433	16
.19	.98975	86	.69	.99144	71	.19	.99297	48	.69	.99435	17
84.20	.98979	88	84.70	.99146	72	85.20	.99299	49	85.70	.99439	19
.21	.98983	90	.71	.99150	74	.21	.99303	51	.71	.99441	20
.22	.98987	92	.72	.99154	76	.22	.99305	52	.72	.99443	21
.23	.98989	93	.73	.99156	77	.23	.99309	54	.73	.99445	22
.24	.98993	95	.74	.99160	79	.24	.99311	55	.74	.99449	24
.25	.98997	97	.75	.99162	80	.25	.99315	57	.75	.99451	25
.26	.99001	99	.76	.99166	82	.26	.99317	58	.76	.99453	26
.27	.99003	.99500	.77	.99170	84	.27	.99319	59	.77	.99457	28
.28	.99006	02	.78	.99172	85	.28	.99323	61	.78	.99459	29
.29	.99010	04	.79	.99176	87	.29	.99325	62	.79	.99461	30
84.30	.99014	06	84.80	.99178	88	85.30	.99329	64	85.80	.99463	31
.31	.99016	07	.81	.99182	90	.31	.99331	65	.81	.99467	33
.32	.99020	09	.82	.99186	92	.32	.99335	67	.82	.99469	34
.33	.99024	11	.83	.99188	93	.33	.99337	68	.83	.99471	35
.34	.99026	12	.84	.99192	95	.34	.99339	69	.84	.99475	37
.35	.99030	14	.85	.99194	96	.35	.99343	71	.85	.99477	38
.36	.99034	16	.86	.99198	98	.36	.99345	72	.86	.99479	39
.37	.99038	18	.87	.99200	99	.37	.99349	74	.87	.99481	40
.38	.99040	19	.88	.99204	.99601	.38	.99351	75	.88	.99485	42
.39	.99044	21	.89	.99208	03	.39	.99353	76	.89	.99487	43
84.40	.99048	23	84.90	.99210	04	85.40	.99357	78	85.90	.99489	44
.41	.99050	24	.91	.99214	06	.41	.99359	79	.91	.99491	45
.42	.99054	26	.92	.99216	07	.42	.99363	81	.92	.99495	47
.43	.99058	28	.93	.99220	09	.43	.99365	82	.93	.99497	48
.44	.99062	30	.94	.99222	10	.44	.99367	83	.94	.99499	49
.45	.99064	31	.95	.99226	12	.45	.99371	85	.95	.99501	50
.46	.99068	33	.96	.99227	13	.46	.99373	86	.96	.99505	52
.47	.99072	35	.97	.99231	15	.47	.99377	88	.97	.99507	53
.48	.99074	36	.98	.99233	16	.48	.99379	89	.98	.99509	54
.49	.99078	38	.99	.99237	18	.49	.99381	90	.99	.99511	55
84.50	.99082	40	85.00	.99239	19	85.50	.99385	92	86.00	.99513	56

θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$	θ	$\sin^2 \theta$	$\sin \theta$
86.00	0.99513	0.99756	86.50	0.99626	0.99813						
.01	.99517	58	.51	.99630	15						
.02	.99519	59	.52	.99632	16						
.03	.99521	60	.53	.99634	17						
.04	.99523	61	.54	.99636	18						
.05	.99525	62	.55	.99638	19						
.06	.99529	64	.56	.99640	20						
.07	.99531	65	.57	.99642	21						
.08	.99533	66	.58	.99644	22						
.09	.99535	67	.59	.99646	23						
86.10	.99537	68	86.60	.99648	24						
.11	.99541	70	.61	.99650	25						
.12	.99543	71	.62	.99652	26						
.13	.99545	72	.63	.99654	27						
.14	.99547	73	.64	.99656	28						
.15	.99549	74	.65	.99658	29						
.16	.99553	76	.66	.99660	30						
.17	.99554	77	.67	.99662	31						
.18	.99556	78	.68	.99664	32						
.19	.99558	79	.69	.99666	33						
86.20	.99560	80	86.70	.99668	34						
.21	.99562	81	.71	.99670	35						
.22	.99564	82	.72	.99672	36						
.23	.99568	84	.73	.99674	37						
.24	.99570	85	.74	.99676	38						
.25	.99572	86	.75	.99678	39						
.26	.99574	87	.76	.99680	40						
.27	.99576	88	.77	.99682	41						
.28	.99578	89	.78	.99684	42						
.29	.99580	90	.79	.99686	43						
86.30	.99584	92	86.80	.99688	44						
.31	.99586	93	.81	.99690	45						
.32	.99588	94	.82	.99692	46						
.33	.99590	95	.83	.99694	47						
.34	.99592	96	.84	.99696	48						
.35	.99594	97	.85	.99698	49						
.36	.99596	98	.86	.99700	50						
.37	.99598	99	.87	.99702	51						
.38	.99600	.99800	.88	.99704	52						
.39	.99604	02	.89	.99706	53						
86.40	.99606	03	86.90	.99708	54						
.41	.99608	04	.91	.99710	55						
.42	.99610	05	.92	.99712	56						
		06	.93	.99712	56						
		07	.94	.99714	57						
		08	.95	.99716	58						
		09		.99718	59						
		10		.99720	60						
		11		.99722	61						
		12			62						