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COMMON LOGARITHMS OF MIXED QUANTITIES FROM 0 TO 100, IN INCREMENTS OF 1/64

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OF 1/64

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COMMON LOGARITHMS OF MIXED QUANTITIES
FROM 0 TO 100, IN INCREMENTS OF $1/64$

Ray Schwarz

July 1963

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FROM 0 TO 100, IN INCREMENTS OF 1/64

Ray Schwarz

Lawrence Radiation Laboratory
University of California
Berkeley, California

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INTRODUCTION

The table herein lists the common logarithms for numbers expressed as fractions — from 0 to 99 - 63/64 in increments of 1/64.

This table is intended for use by persons who frequently convert fractional numbers into logarithms. Use of this table by such persons will eliminate the need for first converting fractions into decimals, thus time will be saved and a source of error will be eliminated.

The arrangement of the table is unconventional in that whole numbers are at the top of the columns and fractions are at the left side.

COMMON LOGARITHMS

	0	1	2	3	4	5	6	7	8	9
0.....	-INF.	ZERO	0.30103	0.47712	0.60206	0.69897	0.77815	0.84510	0.90309	0.95424
1/64	8.19382	0.00673	0.30441	0.47938	0.60375	0.70033	0.77928	0.84607	0.90394	0.95500
1/32..	8.49485	0.01336	0.30776	0.48162	0.60544	0.70168	0.78041	0.84703	0.90478	0.95575
3/64	8.67094	0.01989	0.31109	0.48385	0.60712	0.70302	0.78153	0.84800	0.90563	0.95650
1/16....	8.79588	0.02633	0.31439	0.48608	0.60879	0.70437	0.78265	0.84896	0.90647	0.95725
5/64	8.89279	0.03267	0.31767	0.48829	0.61046	0.70570	0.78377	0.84992	0.90731	0.95800
3/32..	8.97197	0.03892	0.32092	0.49049	0.61212	0.70704	0.78488	0.85088	0.90815	0.95874
7/64	9.03892	0.04508	0.32415	0.49267	0.61378	0.70837	0.78600	0.85183	0.90899	0.95949
1/8.....	9.09691	0.05115	0.32736	0.49485	0.61542	0.70969	0.78711	0.85278	0.90982	0.96023
9/64	9.14806	0.05714	0.33054	0.49702	0.61707	0.71102	0.78821	0.85374	0.91066	0.96098
5/32..	9.19382	0.06305	0.33370	0.49917	0.61870	0.71233	0.78932	0.85469	0.91149	0.96172
11/64	9.23521	0.06888	0.33683	0.50132	0.62033	0.71365	0.79042	0.85563	0.91232	0.96246
3/16....	9.27300	0.07463	0.33995	0.50345	0.62195	0.71496	0.79152	0.85658	0.91315	0.96320
13/64	9.30776	0.08031	0.34304	0.50557	0.62357	0.71626	0.79261	0.85752	0.91398	0.96394
7/32..	9.33995	0.08591	0.34611	0.50769	0.62518	0.71757	0.79370	0.85846	0.91481	0.96467
15/64	9.36991	0.09145	0.34916	0.50979	0.62679	0.71886	0.79479	0.85940	0.91563	0.96541
1/4.....	9.39794	0.09691	0.35218	0.51188	0.62839	0.72016	0.79588	0.86034	0.91645	0.96614
17/64	9.42427	0.10231	0.35519	0.51397	0.62998	0.72145	0.79696	0.86127	0.91728	0.96687
9/32..	9.44909	0.10763	0.35817	0.51604	0.63157	0.72274	0.79805	0.86221	0.91810	0.96761
19/64	9.47257	0.11290	0.36114	0.51810	0.63315	0.72402	0.79913	0.86314	0.91891	0.96834
5/16....	9.49485	0.11810	0.36408	0.52016	0.63473	0.72530	0.80020	0.86407	0.91973	0.96907
21/64	9.51604	0.12324	0.36701	0.52220	0.63630	0.72657	0.80128	0.86499	0.92055	0.96979
11/32..	9.53624	0.12832	0.36991	0.52423	0.63786	0.72785	0.80235	0.86592	0.92136	0.97052
23/64	9.55555	0.13334	0.37280	0.52626	0.63942	0.72911	0.80341	0.86684	0.92217	0.97125
3/8.....	9.57403	0.13830	0.37566	0.52827	0.64098	0.73038	0.80448	0.86776	0.92298	0.97197
25/64	9.59176	0.14321	0.37851	0.53028	0.64253	0.73164	0.80554	0.86868	0.92379	0.97269
13/32..	9.60879	0.14806	0.38134	0.53228	0.64407	0.73290	0.80660	0.86960	0.92460	0.97342
27/64	9.62518	0.15286	0.38415	0.53426	0.64561	0.73415	0.80766	0.87051	0.92541	0.97414
7/16....	9.64098	0.15761	0.38694	0.53624	0.64714	0.73540	0.80872	0.87143	0.92621	0.97486
29/64	9.65622	0.16230	0.38972	0.53821	0.64866	0.73665	0.80977	0.87234	0.92702	0.97558
15/32..	9.67094	0.16695	0.39248	0.54017	0.65019	0.73789	0.81082	0.87325	0.92782	0.97629
31/64	9.68518	0.17154	0.39522	0.54212	0.65170	0.73913	0.81187	0.87416	0.92862	0.97701

COMMON LOGARITHMS

	0	1	2	3	4	5	6	7	8	9
1/2.....	9.69897	0.17609	0.39794	0.54407	0.65321	0.74036	0.81291	0.87506	0.92942	0.97772
33/64	9.71233	0.18059	0.40065	0.54600	0.65472	0.74159	0.81396	0.87597	0.93022	0.97844
17/32..	9.72530	0.18505	0.40334	0.54793	0.65622	0.74282	0.81500	0.87687	0.93101	0.97915
35/64	9.73789	0.18946	0.40601	0.54985	0.65771	0.74405	0.81603	0.87777	0.93181	0.97986
9/16....	9.75012	0.19382	0.40866	0.55175	0.65920	0.74527	0.81707	0.87867	0.93260	0.98057
37/64	9.76202	0.19814	0.41130	0.55366	0.66069	0.74649	0.81810	0.87956	0.93339	0.98128
19/32..	9.77360	0.20242	0.41393	0.55555	0.66217	0.74770	0.81913	0.88046	0.93418	0.98199
39/64	9.78488	0.20666	0.41654	0.55743	0.66364	0.74891	0.82016	0.88135	0.93497	0.98270
5/3.....	9.79588	0.21085	0.41913	0.55931	0.66511	0.75012	0.82119	0.88224	0.93576	0.98340
41/64	9.80660	0.21501	0.42171	0.56118	0.66658	0.75133	0.82221	0.88313	0.93655	0.98411
21/32..	9.81707	0.21913	0.42427	0.56304	0.66804	0.75253	0.82323	0.88402	0.93733	0.98481
43/64	9.82729	0.22320	0.42682	0.56489	0.66949	0.75373	0.82425	0.88490	0.93811	0.98551
11/16....	9.83727	0.22724	0.42935	0.56673	0.67094	0.75492	0.82526	0.88579	0.93889	0.98621
45/64	9.84703	0.23125	0.43187	0.56857	0.67239	0.75611	0.82628	0.88667	0.93968	0.98691
23/32..	9.85658	0.23521	0.43437	0.57040	0.67383	0.75730	0.82729	0.88755	0.94045	0.98761
47/64	9.86592	0.23914	0.43686	0.57222	0.67526	0.75849	0.82830	0.88843	0.94123	0.98831
3/4.....	9.87506	0.24304	0.43933	0.57403	0.67669	0.75967	0.82930	0.88930	0.94201	0.98900
49/64	9.88402	0.24690	0.44179	0.57584	0.67812	0.76085	0.83031	0.89018	0.94278	0.98970
25/32..	9.89279	0.25072	0.44424	0.57764	0.67954	0.76202	0.83131	0.89105	0.94356	0.99039
51/64	9.90139	0.25452	0.44667	0.57943	0.68096	0.76319	0.83231	0.89192	0.94433	0.99109
13/16....	9.90982	0.25828	0.44909	0.58121	0.68237	0.76436	0.83331	0.89279	0.94510	0.99178
53/64	9.91810	0.26201	0.45150	0.58299	0.68378	0.76553	0.83430	0.89366	0.94587	0.99247
27/32..	9.92621	0.26570	0.45389	0.58476	0.68518	0.76669	0.83529	0.89452	0.94664	0.99316
55/64	9.93418	0.26937	0.45627	0.58652	0.68658	0.76785	0.83628	0.89539	0.94740	0.99385
7/8.....	9.94201	0.27300	0.45864	0.58827	0.68797	0.76901	0.83727	0.89625	0.94817	0.99454
57/64	9.94969	0.27661	0.46099	0.59002	0.68936	0.77016	0.83826	0.89711	0.94893	0.99522
29/32..	9.95725	0.28018	0.46333	0.59176	0.69075	0.77131	0.83924	0.89797	0.94969	0.99591
59/64	9.96467	0.28373	0.46566	0.59349	0.69213	0.77246	0.84022	0.89883	0.95046	0.99659
15/16....	9.97197	0.28724	0.46798	0.59522	0.69351	0.77360	0.84120	0.89968	0.95122	0.99728
61/64	9.97915	0.29073	0.47028	0.59694	0.69488	0.77474	0.84218	0.90054	0.95197	0.99796
31/32..	9.98621	0.29419	0.47257	0.59865	0.69625	0.77588	0.84315	0.90139	0.95273	0.99864
63/64	9.99316	0.29762	0.47485	0.60036	0.69761	0.77702	0.84413	0.90224	0.95349	0.99932

COMMON LOGARITHMS

	10	11	12	13	14	15	16	17	18	19
0.....	1.00000	1.04139	1.07918	1.11394	1.14613	1.17609	1.20412	1.23045	1.25527	1.27875
1/64	1.00068	1.04201	1.07975	1.11447	1.14661	1.17654	1.20454	1.23085	1.25565	1.27911
1/32..	1.00136	1.04262	1.08031	1.11499	1.14710	1.17700	1.20497	1.23125	1.25603	1.27947
3/64	1.00203	1.04324	1.08087	1.11551	1.14758	1.17745	1.20539	1.23164	1.25640	1.27982
1/16....	1.00271	1.04385	1.08144	1.11603	1.14806	1.17790	1.20581	1.23204	1.25678	1.28018
5/64	1.00338	1.04447	1.08200	1.11655	1.14854	1.17835	1.20624	1.23244	1.25715	1.28054
3/32..	1.00405	1.04508	1.08256	1.11706	1.14903	1.17880	1.20666	1.23284	1.25753	1.28089
7/64	1.00472	1.04569	1.08312	1.11758	1.14951	1.17925	1.20708	1.23323	1.25790	1.28125
1/8.....	1.00540	1.04630	1.08368	1.11810	1.14999	1.17970	1.20750	1.23363	1.25828	1.28160
9/64	1.00606	1.04691	1.08424	1.11862	1.15047	1.18014	1.20792	1.23403	1.25865	1.28196
5/32..	1.00673	1.04752	1.08480	1.11913	1.15095	1.18059	1.20834	1.23442	1.25903	1.28231
11/64	1.00740	1.04813	1.08536	1.11965	1.15143	1.18104	1.20876	1.23482	1.25940	1.28266
3/16....	1.00807	1.04873	1.08591	1.12016	1.15191	1.18149	1.20918	1.23521	1.25977	1.28302
13/64	1.00873	1.04934	1.08647	1.12068	1.15238	1.18193	1.20960	1.23561	1.26015	1.28337
7/32..	1.00940	1.04994	1.08703	1.12119	1.15286	1.18238	1.21002	1.23600	1.26052	1.28373
15/64	1.01006	1.05055	1.08758	1.12170	1.15334	1.18282	1.21044	1.23640	1.26089	1.28408
1/4.....	1.01072	1.05115	1.08814	1.12222	1.15381	1.18327	1.21085	1.23679	1.26126	1.28443
17/64	1.01139	1.05176	1.08869	1.12273	1.15429	1.18371	1.21127	1.23718	1.26163	1.28478
9/32..	1.01205	1.05236	1.08924	1.12324	1.15477	1.18416	1.21169	1.23758	1.26201	1.28514
19/64	1.01271	1.05296	1.08979	1.12375	1.15524	1.18460	1.21210	1.23797	1.26238	1.28549
5/16....	1.01336	1.05356	1.09035	1.12426	1.15572	1.18505	1.21252	1.23836	1.26275	1.28584
21/64	1.01402	1.05416	1.09090	1.12477	1.15619	1.18549	1.21294	1.23875	1.26312	1.28619
11/32..	1.01468	1.05476	1.09145	1.12528	1.15666	1.18593	1.21335	1.23914	1.26349	1.28654
23/64	1.01533	1.05535	1.09200	1.12579	1.15714	1.18637	1.21377	1.23953	1.26386	1.28689
3/8.....	1.01599	1.05595	1.09255	1.12629	1.15761	1.18682	1.21418	1.23992	1.26423	1.28724
25/64	1.01664	1.05655	1.09309	1.12680	1.15808	1.18726	1.21460	1.24032	1.26460	1.28759
13/32..	1.01729	1.05714	1.09364	1.12731	1.15855	1.18770	1.21501	1.24071	1.26497	1.28794
27/64	1.01795	1.05774	1.09419	1.12781	1.15902	1.18814	1.21542	1.24109	1.26533	1.28829
7/16....	1.01860	1.05833	1.09473	1.12832	1.15949	1.18858	1.21584	1.24148	1.26570	1.28864
29/64	1.01925	1.05892	1.09528	1.12882	1.15996	1.18902	1.21625	1.24187	1.26607	1.28899
15/32..	1.01989	1.05952	1.09582	1.12933	1.16043	1.18946	1.21666	1.24226	1.26644	1.28934
31/64	1.02054	1.06011	1.09637	1.12983	1.16090	1.18989	1.21707	1.24265	1.26680	1.28969

COMMON LOGARITHMS

	10	11	12	13	14	15	16	17	18	19
1/2.....	1.02119	1.06070	1.09691	1.13033	1.16137	1.19033	1.21748	1.24304	1.26717	1.29003
33/64	1.02184	1.06129	1.09745	1.13084	1.16184	1.19077	1.21790	1.24343	1.26754	1.29038
17/32..	1.02248	1.06188	1.09799	1.13134	1.16230	1.19121	1.21831	1.24381	1.26790	1.29073
35/64	1.02312	1.06246	1.09854	1.13184	1.16277	1.19164	1.21872	1.24420	1.26827	1.29108
9/16....	1.02377	1.06305	1.09908	1.13234	1.16324	1.19208	1.21913	1.24459	1.26864	1.29142
37/64	1.02441	1.06364	1.09962	1.13284	1.16370	1.19252	1.21954	1.24497	1.26900	1.29177
19/32..	1.02505	1.06422	1.10016	1.13334	1.16417	1.19295	1.21994	1.24536	1.26937	1.29212
39/64	1.02569	1.06481	1.10069	1.13384	1.16463	1.19339	1.22035	1.24574	1.26973	1.29246
5/8.....	1.02633	1.06539	1.10123	1.13434	1.16510	1.19382	1.22076	1.24613	1.27010	1.29281
41/64	1.02697	1.06598	1.10177	1.13483	1.16556	1.19425	1.22117	1.24651	1.27046	1.29316
21/32..	1.02760	1.06656	1.10231	1.13533	1.16602	1.19469	1.22158	1.24690	1.27082	1.29350
43/64	1.02824	1.06714	1.10284	1.13583	1.16649	1.19512	1.22198	1.24728	1.27119	1.29385
11/16....	1.02888	1.06772	1.10338	1.13632	1.16695	1.19555	1.22239	1.24767	1.27155	1.29419
45/64	1.02951	1.06830	1.10391	1.13682	1.16741	1.19599	1.22280	1.24805	1.27191	1.29454
23/32..	1.03014	1.06888	1.10444	1.13731	1.16787	1.19642	1.22320	1.24843	1.27228	1.29488
47/64	1.03078	1.06946	1.10498	1.13781	1.16833	1.19685	1.22361	1.24882	1.27264	1.29522
3/4.....	1.03141	1.07004	1.10551	1.13830	1.16879	1.19728	1.22401	1.24920	1.27300	1.29557
49/64	1.03204	1.07061	1.10604	1.13880	1.16925	1.19771	1.22442	1.24958	1.27336	1.29591
25/32..	1.03267	1.07119	1.10657	1.13929	1.16971	1.19814	1.22482	1.24996	1.27372	1.29625
51/64	1.03330	1.07177	1.10710	1.13978	1.17017	1.19857	1.22523	1.25034	1.27409	1.29660
13/16....	1.03393	1.07234	1.10763	1.14027	1.17063	1.19900	1.22563	1.25072	1.27445	1.29694
53/64	1.03455	1.07292	1.10816	1.14076	1.17109	1.19943	1.22604	1.25111	1.27481	1.29728
27/32..	1.03518	1.07349	1.10869	1.14125	1.17154	1.19986	1.22644	1.25149	1.27517	1.29762
55/64	1.03580	1.07406	1.10922	1.14174	1.17200	1.20029	1.22684	1.25187	1.27553	1.29797
7/8.....	1.03643	1.07463	1.10975	1.14223	1.17246	1.20071	1.22724	1.25225	1.27589	1.29831
57/64	1.03705	1.07520	1.11027	1.14272	1.17291	1.20114	1.22765	1.25263	1.27625	1.29865
29/32..	1.03768	1.07577	1.11080	1.14321	1.17337	1.20157	1.22805	1.25300	1.27661	1.29899
59/64	1.03830	1.07634	1.11133	1.14370	1.17382	1.20199	1.22845	1.25338	1.27696	1.29933
15/16....	1.03892	1.07691	1.11185	1.14418	1.17428	1.20242	1.22885	1.25376	1.27732	1.29967
61/64	1.03954	1.07748	1.11237	1.14467	1.17473	1.20285	1.22925	1.25414	1.27768	1.30001
31/32..	1.04016	1.07805	1.11290	1.14516	1.17519	1.20327	1.22965	1.25452	1.27804	1.30035
63/64	1.04078	1.07862	1.11342	1.14564	1.17564	1.20370	1.23005	1.25490	1.27840	1.30069

COMMON LOGARITHMS

	20	21	22	23	24	25	26	27	28	29
0.....	1.30103	1.32222	1.34242	1.36173	1.38021	1.39794	1.41497	1.43136	1.44716	1.46240
1/64	1.30137	1.32254	1.34273	1.36202	1.38049	1.39821	1.41523	1.43161	1.44740	1.46263
1/32..	1.30171	1.32287	1.34304	1.36232	1.38078	1.39848	1.41550	1.43187	1.44764	1.46287
3/64	1.30205	1.32319	1.34335	1.36261	1.38106	1.39875	1.41576	1.43212	1.44788	1.46310
1/16....	1.30239	1.32351	1.34365	1.36291	1.38134	1.39902	1.41602	1.43237	1.44813	1.46333
5/64	1.30272	1.32383	1.34396	1.36320	1.38162	1.39930	1.41628	1.43262	1.44837	1.46357
3/32..	1.30306	1.32415	1.34427	1.36349	1.38190	1.39957	1.41654	1.43287	1.44861	1.46380
7/64	1.30340	1.32448	1.34458	1.36379	1.38219	1.39984	1.41680	1.43312	1.44885	1.46403
1/8.....	1.30374	1.32480	1.34488	1.36408	1.38247	1.40011	1.41706	1.43337	1.44909	1.46427
9/64	1.30407	1.32512	1.34519	1.36438	1.38275	1.40038	1.41732	1.43362	1.44933	1.46450
5/32..	1.30441	1.32544	1.34550	1.36467	1.38303	1.40065	1.41758	1.43387	1.44957	1.46473
11/64	1.30475	1.32576	1.34580	1.36496	1.38331	1.40092	1.41783	1.43412	1.44982	1.46496
3/16....	1.30508	1.32608	1.34611	1.36525	1.38359	1.40119	1.41809	1.43437	1.45006	1.46520
13/64	1.30542	1.32640	1.34641	1.36555	1.38387	1.40145	1.41835	1.43462	1.45030	1.46543
7/32..	1.30575	1.32672	1.34672	1.36584	1.38415	1.40172	1.41861	1.43487	1.45054	1.46566
15/64	1.30609	1.32704	1.34702	1.36613	1.38443	1.40199	1.41887	1.43512	1.45078	1.46589
1/4.....	1.30643	1.32736	1.34733	1.36642	1.38471	1.40226	1.41913	1.43537	1.45102	1.46613
17/64	1.30676	1.32768	1.34763	1.36671	1.38499	1.40253	1.41939	1.43562	1.45126	1.46636
9/32..	1.30709	1.32800	1.34794	1.36701	1.38527	1.40280	1.41965	1.43586	1.45150	1.46659
19/64	1.30743	1.32832	1.34824	1.36730	1.38555	1.40307	1.41990	1.43611	1.45174	1.46682
5/16....	1.30776	1.32863	1.34855	1.36759	1.38583	1.40334	1.42016	1.43636	1.45198	1.46705
21/64	1.30810	1.32895	1.34885	1.36788	1.38611	1.40360	1.42042	1.43661	1.45222	1.46728
11/32..	1.30843	1.32927	1.34916	1.36817	1.38639	1.40387	1.42068	1.43686	1.45246	1.46752
23/64	1.30876	1.32959	1.34946	1.36846	1.38667	1.40414	1.42094	1.43711	1.45270	1.46775
3/8.....	1.30910	1.32991	1.34976	1.36875	1.38694	1.40441	1.42119	1.43735	1.45294	1.46798
25/64	1.30943	1.33022	1.35007	1.36904	1.38722	1.40467	1.42145	1.43760	1.45317	1.46821
13/32..	1.30976	1.33054	1.35037	1.36933	1.38750	1.40494	1.42171	1.43785	1.45341	1.46844
27/64	1.31010	1.33086	1.35067	1.36962	1.38778	1.40521	1.42196	1.43810	1.45365	1.46867
7/16....	1.31043	1.33117	1.35097	1.36991	1.38806	1.40547	1.42222	1.43834	1.45389	1.46890
29/64	1.31076	1.33149	1.35128	1.37020	1.38833	1.40574	1.42248	1.43859	1.45413	1.46913
15/32..	1.31109	1.33181	1.35158	1.37049	1.38861	1.40601	1.42273	1.43884	1.45437	1.46936
31/64	1.31142	1.33212	1.35188	1.37078	1.38889	1.40627	1.42299	1.43909	1.45461	1.46959

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	20	21	22	23	24	25	26	27	28	29
1/2.....	1.31175	1.33244	1.35218	1.37107	1.38917	1.40654	1.42325	1.43933	1.45484	1.46982
33/64	1.31208	1.33275	1.35248	1.37136	1.38944	1.40681	1.42350	1.43958	1.45508	1.47005
17/32..	1.31242	1.33307	1.35279	1.37164	1.38972	1.40707	1.42376	1.43983	1.45532	1.47028
35/64	1.31275	1.33338	1.35309	1.37193	1.39000	1.40734	1.42401	1.44007	1.45556	1.47051
9/16....	1.31308	1.33370	1.35339	1.37222	1.39027	1.40760	1.42427	1.44032	1.45580	1.47074
37/64	1.31341	1.33401	1.35369	1.37251	1.39055	1.40797	1.42452	1.44056	1.45603	1.47097
19/32..	1.31374	1.33433	1.35399	1.37280	1.39082	1.40813	1.42478	1.44081	1.45627	1.47120
39/64	1.31406	1.33464	1.35429	1.37308	1.39110	1.40840	1.42503	1.44106	1.45651	1.47143
5/8.....	1.31439	1.33496	1.35459	1.37337	1.39138	1.40866	1.42529	1.44130	1.45675	1.47166
41/64	1.31472	1.33527	1.35489	1.37366	1.39165	1.40893	1.42554	1.44155	1.45699	1.47189
21/32..	1.31505	1.33558	1.35519	1.37395	1.39193	1.40919	1.42580	1.44179	1.45722	1.47212
43/64	1.31538	1.33590	1.35549	1.37423	1.39220	1.40946	1.42605	1.44204	1.45746	1.47234
11/16....	1.31571	1.33621	1.35579	1.37452	1.39248	1.40972	1.42631	1.44228	1.45769	1.47257
45/64	1.31604	1.33652	1.35609	1.37481	1.39275	1.40999	1.42656	1.44253	1.45793	1.47280
23/32..	1.31636	1.33683	1.35638	1.37509	1.39303	1.41025	1.42682	1.44277	1.45817	1.47303
47/64	1.31669	1.33715	1.35668	1.37538	1.39330	1.41051	1.42707	1.44302	1.45840	1.47326
3/4.....	1.31702	1.33746	1.35698	1.37566	1.39358	1.41078	1.42732	1.44326	1.45864	1.47349
49/64	1.31734	1.33777	1.35728	1.37595	1.39385	1.41104	1.42758	1.44351	1.45887	1.47371
25/32..	1.31767	1.33808	1.35758	1.37623	1.39412	1.41130	1.42783	1.44375	1.45911	1.47394
51/64	1.31800	1.33839	1.35788	1.37652	1.39440	1.41157	1.42808	1.44400	1.45935	1.47417
13/16....	1.31832	1.33871	1.35817	1.37680	1.39467	1.41183	1.42834	1.44424	1.45958	1.47440
53/64	1.31865	1.33902	1.35847	1.37709	1.39494	1.41209	1.42859	1.44448	1.45982	1.47463
27/32..	1.31898	1.33933	1.35877	1.37737	1.39522	1.41236	1.42884	1.44473	1.46005	1.47485
55/64	1.31930	1.33964	1.35906	1.37766	1.39549	1.41262	1.42910	1.44497	1.46029	1.47508
7/8.....	1.31963	1.33995	1.35936	1.37794	1.39576	1.41288	1.42935	1.44521	1.46052	1.47531
57/64	1.31995	1.34026	1.35966	1.37823	1.39604	1.41314	1.42960	1.44546	1.46076	1.47553
29/32..	1.32028	1.34057	1.35995	1.37851	1.39631	1.41340	1.42985	1.44570	1.46099	1.47576
59/64	1.32060	1.34088	1.36025	1.37880	1.39658	1.41367	1.43011	1.44594	1.46123	1.47599
15/16....	1.32092	1.34119	1.36055	1.37908	1.39685	1.41393	1.43036	1.44619	1.46146	1.47622
61/64	1.32125	1.34150	1.36084	1.37936	1.39712	1.41419	1.43061	1.44643	1.46170	1.47644
31/32..	1.32157	1.34181	1.36114	1.37965	1.39740	1.41445	1.43086	1.44667	1.46193	1.47667
63/64	1.32190	1.34211	1.36143	1.37993	1.39767	1.41471	1.43111	1.44692	1.46216	1.47689

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	30	31	32	33	34	35	36	37	38	39
0.....	1.47712	1.49136	1.50515	1.51851	1.53148	1.54407	1.55630	1.56820	1.57978	1.59106
1/64	1.47735	1.49158	1.50536	1.51872	1.53168	1.54426	1.55649	1.56839	1.57996	1.59124
1/32..	1.47757	1.49180	1.50557	1.51893	1.53188	1.54446	1.55668	1.56857	1.58014	1.59141
3/64	1.47780	1.49202	1.50579	1.51913	1.53208	1.54465	1.55687	1.56875	1.58032	1.59159
1/16....	1.47803	1.49224	1.50600	1.51934	1.53228	1.54484	1.55706	1.56893	1.58050	1.59176
5/64	1.47825	1.49245	1.50621	1.51954	1.53248	1.54504	1.55724	1.56912	1.58068	1.59193
3/32..	1.47848	1.49267	1.50642	1.51975	1.53267	1.54523	1.55743	1.56930	1.58085	1.59211
7/64	1.47870	1.49289	1.50663	1.51995	1.53287	1.54542	1.55762	1.56948	1.58103	1.59228
1/8.....	1.47893	1.49311	1.50684	1.52016	1.53307	1.54562	1.55781	1.56967	1.58121	1.59245
9/64	1.47915	1.49333	1.50705	1.52036	1.53327	1.54581	1.55800	1.56985	1.58139	1.59263
5/32..	1.47938	1.49355	1.50727	1.52057	1.53347	1.54600	1.55818	1.57003	1.58157	1.59280
11/64	1.47960	1.49376	1.50748	1.52077	1.53367	1.54620	1.55837	1.57021	1.58174	1.59297
3/16....	1.47983	1.49398	1.50769	1.52097	1.53387	1.54639	1.55856	1.57040	1.58192	1.59315
13/64	1.48005	1.49420	1.50790	1.52118	1.53407	1.54658	1.55875	1.57058	1.58210	1.59332
7/32..	1.48028	1.49442	1.50811	1.52138	1.53426	1.54677	1.55893	1.57076	1.58228	1.59349
15/64	1.48050	1.49463	1.50832	1.52159	1.53446	1.54697	1.55912	1.57094	1.58245	1.59367
1/4.....	1.48073	1.49485	1.50853	1.52179	1.53466	1.54716	1.55931	1.57113	1.58263	1.59384
17/64	1.48095	1.49507	1.50874	1.52200	1.53486	1.54735	1.55950	1.57131	1.58281	1.59401
9/32..	1.48117	1.49528	1.50895	1.52220	1.53506	1.54754	1.55968	1.57149	1.58299	1.59419
19/64	1.48140	1.49550	1.50916	1.52240	1.53525	1.54774	1.55987	1.57167	1.58316	1.59436
5/16....	1.48162	1.49572	1.50937	1.52261	1.53545	1.54793	1.56006	1.57185	1.58334	1.59453
21/64	1.48185	1.49593	1.50958	1.52281	1.53565	1.54812	1.56024	1.57204	1.58352	1.59470
11/32..	1.48207	1.49615	1.50979	1.52301	1.53585	1.54831	1.56043	1.57222	1.58369	1.59488
23/64	1.48229	1.49637	1.51000	1.52322	1.53605	1.54850	1.56062	1.57240	1.58387	1.59505
3/8.....	1.48252	1.49658	1.51021	1.52342	1.53624	1.54870	1.56080	1.57258	1.58405	1.59522
25/64	1.48274	1.49680	1.51042	1.52362	1.53644	1.54889	1.56099	1.57276	1.58423	1.59539
13/32..	1.48296	1.49702	1.51063	1.52383	1.53664	1.54908	1.56118	1.57294	1.58440	1.59557
27/64	1.48319	1.49723	1.51084	1.52403	1.53683	1.54927	1.56136	1.57313	1.58458	1.59574
1/16....	1.48341	1.49745	1.51105	1.52423	1.53703	1.54946	1.56155	1.57331	1.58476	1.59591
29/64	1.48363	1.49766	1.51126	1.52444	1.53723	1.54965	1.56173	1.57349	1.58493	1.59608
15/32..	1.48385	1.49788	1.51147	1.52464	1.53743	1.54985	1.56192	1.57367	1.58511	1.59625
31/64	1.48408	1.49810	1.51167	1.52484	1.53762	1.55004	1.56211	1.57385	1.58528	1.59643

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	30	31	32	33	34	35	36	37	38	39
1/2.....	1.48430	1.49831	1.51188	1.52504	1.53782	1.55023	1.56229	1.57403	1.58546	1.59660
33/64	1.48452	1.49853	1.51209	1.52525	1.53802	1.55042	1.56248	1.57421	1.58564	1.59677
17/32..	1.48474	1.49874	1.51230	1.52545	1.53821	1.55061	1.56266	1.57439	1.58581	1.59694
35/64	1.48497	1.49896	1.51251	1.52565	1.53841	1.55080	1.56285	1.57457	1.58599	1.59711
9/16....	1.48519	1.49917	1.51272	1.52585	1.53861	1.55099	1.56304	1.57475	1.58617	1.59728
37/64	1.48541	1.49939	1.51293	1.52606	1.53880	1.55118	1.56322	1.57494	1.58634	1.59746
19/32..	1.48563	1.49960	1.51313	1.52626	1.53900	1.55137	1.56341	1.57512	1.58652	1.59763
39/64	1.48585	1.49982	1.51334	1.52646	1.53919	1.55156	1.56359	1.57530	1.58669	1.59790
5/8.....	1.48608	1.50003	1.51355	1.52666	1.53939	1.55175	1.56378	1.57548	1.58687	1.59797
41/64	1.48630	1.50025	1.51376	1.52686	1.53959	1.55195	1.56396	1.57566	1.58704	1.59814
21/32..	1.48652	1.50046	1.51397	1.52707	1.53978	1.55214	1.56415	1.57584	1.58722	1.59831
43/64	1.48674	1.50067	1.51417	1.52727	1.53998	1.55233	1.56433	1.57602	1.58740	1.59848
11/16....	1.48696	1.50089	1.51438	1.52747	1.54017	1.55252	1.56452	1.57620	1.58757	1.59865
45/64	1.48718	1.50110	1.51459	1.52767	1.54037	1.55271	1.56470	1.57638	1.58775	1.59882
23/32..	1.48740	1.50132	1.51480	1.52787	1.54056	1.55290	1.56489	1.57656	1.58792	1.59900
47/64	1.48762	1.50153	1.51500	1.52807	1.54076	1.55309	1.56507	1.57674	1.58810	1.59917
3/4.....	1.48785	1.50174	1.51521	1.52827	1.54095	1.55328	1.56526	1.57692	1.58827	1.59934
49/64	1.48807	1.50196	1.51542	1.52847	1.54115	1.55347	1.56544	1.57710	1.58845	1.59951
25/32..	1.48829	1.50217	1.51563	1.52868	1.54135	1.55366	1.56563	1.57728	1.58862	1.59968
51/64	1.48851	1.50238	1.51583	1.52888	1.54154	1.55385	1.56581	1.57746	1.58880	1.59985
13/16....	1.48873	1.50260	1.51604	1.52908	1.54174	1.55403	1.56600	1.57764	1.58897	1.60002
53/64	1.48895	1.50281	1.51625	1.52928	1.54193	1.55422	1.56618	1.57781	1.58915	1.60019
27/32..	1.48917	1.50302	1.51645	1.52948	1.54212	1.55441	1.56636	1.57799	1.58932	1.60036
55/64	1.48939	1.50324	1.51666	1.52968	1.54232	1.55460	1.56655	1.57817	1.58950	1.60053
7/8.....	1.48961	1.50345	1.51687	1.52988	1.54251	1.55479	1.56673	1.57835	1.58967	1.60070
57/64	1.48983	1.50366	1.51707	1.53008	1.54271	1.55498	1.56692	1.57853	1.58984	1.60087
29/32..	1.49005	1.50388	1.51728	1.53028	1.54290	1.55517	1.56710	1.57871	1.59002	1.60104
59/64	1.49027	1.50409	1.51748	1.53048	1.54310	1.55536	1.56728	1.57889	1.59019	1.60121
15/16....	1.49049	1.50430	1.51769	1.53068	1.54329	1.55555	1.56747	1.57907	1.59037	1.60138
61/64	1.49070	1.50451	1.51790	1.53088	1.54349	1.55574	1.56765	1.57925	1.59054	1.60155
31/32..	1.49092	1.50473	1.51810	1.53108	1.54368	1.55593	1.56783	1.57943	1.59072	1.60172
63/64	1.49114	1.50494	1.51831	1.53128	1.54387	1.55611	1.56802	1.57960	1.59089	1.60189

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	40	41	42	43	44	45	46	47	48	49
0.....	1.60206	1.61278	1.62325	1.63347	1.64345	1.65321	1.66276	1.67210	1.68124	1.69020
1/64	1.60223	1.61295	1.62341	1.63363	1.64361	1.65336	1.66291	1.67224	1.68138	1.69033
1/32..	1.60240	1.61311	1.62357	1.63378	1.64376	1.65351	1.66305	1.67239	1.68152	1.69047
3/64	1.60257	1.61328	1.62373	1.63394	1.64392	1.65366	1.66320	1.67253	1.68167	1.69061
1/16....	1.60274	1.61345	1.62390	1.63410	1.64407	1.65382	1.66335	1.67267	1.68181	1.69075
5/64	1.60291	1.61361	1.62406	1.63426	1.64422	1.65397	1.66349	1.67282	1.68195	1.69089
3/32..	1.60308	1.61378	1.62422	1.63441	1.64438	1.65412	1.66364	1.67296	1.68209	1.69103
7/64	1.60325	1.61394	1.62438	1.63457	1.64453	1.65427	1.66379	1.67311	1.68223	1.69116
1/8.....	1.60342	1.61411	1.62454	1.63473	1.64468	1.65442	1.66394	1.67325	1.68237	1.69130
9/64	1.60358	1.61427	1.62470	1.63489	1.64484	1.65457	1.66408	1.67340	1.68251	1.69144
5/32..	1.60375	1.61444	1.62486	1.63504	1.64499	1.65472	1.66423	1.67354	1.68265	1.69158
11/64	1.60392	1.61460	1.62502	1.63520	1.64515	1.65487	1.66438	1.67368	1.68279	1.69172
3/16....	1.60409	1.61477	1.62518	1.63536	1.64530	1.65502	1.66452	1.67383	1.68293	1.69185
13/64	1.60426	1.61493	1.62534	1.63552	1.64545	1.65517	1.66467	1.67397	1.68308	1.69199
7/32..	1.60443	1.61509	1.62551	1.63567	1.64561	1.65532	1.66482	1.67411	1.68322	1.69213
15/64	1.60460	1.61526	1.62567	1.63583	1.64576	1.65547	1.66496	1.67426	1.68336	1.69227
1/4.....	1.60477	1.61542	1.62583	1.63599	1.64591	1.65562	1.66511	1.67440	1.68350	1.69241
17/64	1.60493	1.61559	1.62599	1.63614	1.64607	1.65577	1.66526	1.67455	1.68364	1.69254
9/32..	1.60510	1.61575	1.62615	1.63630	1.64622	1.65592	1.66541	1.67469	1.68378	1.69268
19/64	1.60527	1.61592	1.62631	1.63646	1.64637	1.65607	1.66555	1.67483	1.68392	1.69282
5/16....	1.60544	1.61608	1.62647	1.63661	1.64653	1.65622	1.66570	1.67498	1.68406	1.69296
21/64	1.60561	1.61625	1.62663	1.63677	1.64668	1.65637	1.66584	1.67512	1.68420	1.69309
11/32..	1.60578	1.61641	1.62679	1.63693	1.64683	1.65652	1.66599	1.67526	1.68434	1.69323
23/64	1.60594	1.61657	1.62695	1.63708	1.64699	1.65667	1.66614	1.67541	1.68448	1.69337
3/8.....	1.60611	1.61674	1.62711	1.63724	1.64714	1.65682	1.66628	1.67555	1.68462	1.69351
25/64	1.60628	1.61690	1.62727	1.63740	1.64727	1.65697	1.66643	1.67569	1.68476	1.69364
13/32..	1.60645	1.61707	1.62743	1.63755	1.64744	1.65712	1.66658	1.67584	1.68490	1.69378
27/64	1.60662	1.61723	1.62759	1.63771	1.64760	1.65727	1.66672	1.67598	1.68504	1.69392
7/16....	1.60678	1.61739	1.62775	1.63786	1.64775	1.65741	1.66687	1.67612	1.68518	1.69406
29/64	1.60695	1.61756	1.62791	1.63802	1.64790	1.65756	1.66701	1.67626	1.68532	1.69419
15/32..	1.60712	1.61772	1.62807	1.63818	1.64805	1.65771	1.66716	1.67641	1.68546	1.69433
31/64	1.60729	1.61788	1.62823	1.63833	1.64821	1.65786	1.66731	1.67655	1.68560	1.69447

COMMON LOGARITHMS

	40	41	42	43	44	45	46	47	48	49
1/2.....	1.60746	1.61805	1.62839	1.63849	1.64836	1.65801	1.66745	1.67669	1.68574	1.69461
33/64	1.60762	1.61821	1.62855	1.63865	1.64851	1.65816	1.66760	1.67684	1.68538	1.69474
17/32..	1.60779	1.61838	1.62871	1.63880	1.64866	1.65831	1.66774	1.67698	1.68602	1.69488
35/64	1.60796	1.61854	1.62887	1.63896	1.64882	1.65846	1.66789	1.67712	1.68616	1.69502
9/16....	1.60812	1.61870	1.62903	1.63911	1.64897	1.65861	1.66804	1.67726	1.68630	1.69515
37/64	1.60829	1.61886	1.62919	1.63927	1.64912	1.65876	1.66818	1.67741	1.68644	1.69529
19/32..	1.60846	1.61903	1.62935	1.63942	1.64927	1.65891	1.66833	1.67755	1.68658	1.69543
39/64	1.60863	1.61919	1.62951	1.63958	1.64943	1.65905	1.66847	1.67769	1.68672	1.69556
5/8.....	1.60879	1.61935	1.62966	1.63974	1.64958	1.65920	1.66862	1.67783	1.68686	1.69570
41/64	1.60896	1.61952	1.62982	1.63989	1.64973	1.65935	1.66876	1.67798	1.68700	1.69584
21/32..	1.60913	1.61968	1.62998	1.64005	1.64988	1.65950	1.66891	1.67812	1.68714	1.69597
43/64	1.60929	1.61984	1.63014	1.64020	1.65003	1.65965	1.66906	1.67826	1.68728	1.69611
11/16....	1.60946	1.62001	1.63030	1.64036	1.65019	1.65980	1.66920	1.67840	1.68742	1.69625
45/64	1.60963	1.62017	1.63046	1.64051	1.65034	1.65995	1.66935	1.67855	1.68756	1.69638
23/32..	1.60979	1.62033	1.63062	1.64067	1.65049	1.66009	1.66949	1.67869	1.68770	1.69652
47/64	1.60996	1.62049	1.63078	1.64082	1.65064	1.66024	1.66964	1.67883	1.68784	1.69666
3/4.....	1.61013	1.62066	1.63094	1.64098	1.65079	1.66039	1.66978	1.67897	1.68797	1.69679
49/64	1.61029	1.62082	1.63109	1.64113	1.65094	1.66054	1.66993	1.67912	1.68811	1.69693
25/32..	1.61046	1.62098	1.63125	1.64129	1.65110	1.66069	1.67007	1.67926	1.68825	1.69707
51/64	1.61063	1.62114	1.63141	1.64144	1.65125	1.66084	1.67022	1.67940	1.68839	1.69720
13/16....	1.61079	1.62131	1.63157	1.64160	1.65140	1.66098	1.67036	1.67954	1.68853	1.69734
53/64	1.61096	1.62147	1.63173	1.64175	1.65155	1.66113	1.67051	1.67968	1.68867	1.69747
27/32..	1.61113	1.62163	1.63189	1.64191	1.65170	1.66128	1.67065	1.67983	1.68881	1.69761
55/64	1.61129	1.62179	1.63205	1.64206	1.65185	1.66143	1.67080	1.67997	1.68895	1.69775
7/8.....	1.61146	1.62195	1.63220	1.64222	1.65200	1.66158	1.67094	1.68011	1.68909	1.69788
57/64	1.61162	1.62212	1.63236	1.64237	1.65216	1.66172	1.67109	1.68025	1.68923	1.69802
29/32..	1.61179	1.62228	1.63252	1.64253	1.65231	1.66187	1.67123	1.68039	1.68936	1.69815
59/64	1.61196	1.62244	1.63268	1.64268	1.65246	1.66202	1.67138	1.68053	1.68950	1.69829
15/16....	1.61212	1.62260	1.63284	1.64284	1.65261	1.66217	1.67152	1.68068	1.68964	1.69843
61/64	1.61229	1.62276	1.63299	1.64299	1.65276	1.66232	1.67166	1.68082	1.68978	1.69856
31/32..	1.61245	1.62293	1.63315	1.64314	1.65291	1.66246	1.67181	1.68096	1.68992	1.69870
63/64	1.61262	1.62309	1.63331	1.64330	1.65306	1.66261	1.67195	1.68110	1.69006	1.69883

COMMON LOGARITHMS

	50	51	52	53	54	55	56	57	58	59
0.....	1.69897	1.70757	1.71600	1.72428	1.73239	1.74036	1.74819	1.75587	1.76343	1.77085
1/64	1.69911	1.70770	1.71613	1.72440	1.73252	1.74049	1.74831	1.75599	1.76354	1.77097
1/32..	1.69924	1.70784	1.71626	1.72453	1.73264	1.74061	1.74843	1.75611	1.76366	1.77108
3/64	1.69938	1.70797	1.71639	1.72466	1.73277	1.74073	1.74855	1.75623	1.76378	1.77120
1/16....	1.69951	1.70810	1.71653	1.72479	1.73290	1.74086	1.74867	1.75635	1.76390	1.77131
5/64	1.69965	1.70823	1.71666	1.72492	1.73302	1.74098	1.74879	1.75647	1.76401	1.77143
3/32..	1.69978	1.70837	1.71679	1.72504	1.73315	1.74110	1.74891	1.75659	1.76413	1.77154
7/64	1.69992	1.70850	1.71692	1.72517	1.73327	1.74123	1.74904	1.75671	1.76425	1.77166
1/8.....	1.70005	1.70863	1.71705	1.72530	1.73340	1.74135	1.74916	1.75683	1.76436	1.77177
9/64	1.70019	1.70877	1.71718	1.72543	1.73352	1.74147	1.74928	1.75694	1.76448	1.77189
5/32..	1.70033	1.70890	1.71731	1.72555	1.73365	1.74159	1.74940	1.75706	1.76460	1.77200
11/64	1.70046	1.70903	1.71744	1.72568	1.73377	1.74172	1.74952	1.75718	1.76471	1.77212
3/16....	1.70060	1.70916	1.71757	1.72581	1.73390	1.74184	1.74964	1.75730	1.76483	1.77223
13/64	1.70073	1.70930	1.71770	1.72594	1.73402	1.74196	1.74976	1.75742	1.76495	1.77234
7/32..	1.70087	1.70943	1.71783	1.72606	1.73415	1.74209	1.74988	1.75754	1.76506	1.77246
15/64	1.70100	1.70956	1.71796	1.72619	1.73427	1.74221	1.75000	1.75766	1.76518	1.77257
1/4.....	1.70114	1.70969	1.71809	1.72632	1.73440	1.74233	1.75012	1.75778	1.76530	1.77269
17/64	1.70127	1.70983	1.71822	1.72645	1.73452	1.74246	1.75024	1.75789	1.76541	1.77280
9/32..	1.70141	1.70996	1.71835	1.72657	1.73465	1.74258	1.75036	1.75801	1.76553	1.77292
19/64	1.70154	1.71009	1.71848	1.72670	1.73477	1.74270	1.75048	1.75813	1.76565	1.77303
5/16....	1.70168	1.71022	1.71861	1.72683	1.73490	1.74282	1.75060	1.75825	1.76576	1.77315
21/64	1.70181	1.71036	1.71874	1.72696	1.73502	1.74295	1.75073	1.75837	1.76588	1.77326
11/32..	1.70195	1.71049	1.71886	1.72708	1.73515	1.74307	1.75085	1.75849	1.76599	1.77337
23/64	1.70208	1.71062	1.71899	1.72721	1.73527	1.74319	1.75097	1.75860	1.76611	1.77349
3/8.....	1.70222	1.71075	1.71912	1.72734	1.73540	1.74331	1.75109	1.75872	1.76623	1.77360
25/64	1.70235	1.71088	1.71925	1.72746	1.73552	1.74344	1.75121	1.75884	1.76634	1.77372
13/32..	1.70248	1.71102	1.71938	1.72759	1.73565	1.74356	1.75133	1.75896	1.76646	1.77383
27/64	1.70262	1.71115	1.71951	1.72772	1.73577	1.74368	1.75145	1.75908	1.76658	1.77395
7/16....	1.70275	1.71128	1.71964	1.72785	1.73590	1.74380	1.75157	1.75920	1.76669	1.77406
29/64	1.70289	1.71141	1.71977	1.72797	1.73602	1.74393	1.75169	1.75931	1.76681	1.77417
15/32..	1.70302	1.71154	1.71990	1.72810	1.73615	1.74405	1.75181	1.75943	1.76692	1.77429
31/64	1.70316	1.71168	1.72003	1.72823	1.73627	1.74417	1.75193	1.75955	1.76704	1.77440

COMMON LOGARITHMS

	50	51	52	53	54	55	56	57	58	59
1/2.....	1.70329	1.71181	1.72016	1.72835	1.73640	1.74429	1.75205	1.75967	1.76716	1.77452
33/64	1.70343	1.71194	1.72029	1.72848	1.73652	1.74442	1.75217	1.75979	1.76727	1.77463
17/32..	1.70356	1.71207	1.72042	1.72861	1.73665	1.74454	1.75229	1.75990	1.76739	1.77474
35/64	1.70369	1.71220	1.72055	1.72873	1.73677	1.74466	1.75241	1.76002	1.76750	1.77486
9/16....	1.70383	1.71233	1.72068	1.72886	1.73689	1.74478	1.75253	1.76014	1.76762	1.77497
37/64	1.70396	1.71247	1.72081	1.72899	1.73702	1.74490	1.75265	1.76026	1.76774	1.77509
19/32..	1.70410	1.71260	1.72093	1.72911	1.73714	1.74503	1.75277	1.76038	1.76785	1.77520
39/64	1.70423	1.71273	1.72106	1.72924	1.73727	1.74515	1.75289	1.76049	1.76797	1.77531
5/8.....	1.70437	1.71286	1.72119	1.72937	1.73739	1.74527	1.75301	1.76061	1.76808	1.77543
41/64	1.70450	1.71299	1.72132	1.72949	1.73752	1.74539	1.75313	1.76073	1.76820	1.77554
21/32..	1.70463	1.71312	1.72145	1.72962	1.73764	1.74551	1.75325	1.76085	1.76831	1.77566
43/64	1.70477	1.71325	1.72158	1.72975	1.73776	1.74564	1.75337	1.76096	1.76843	1.77577
11/16....	1.70490	1.71339	1.72171	1.72987	1.73789	1.74576	1.75349	1.76108	1.76855	1.77588
45/64	1.70503	1.71352	1.72184	1.73000	1.73801	1.74588	1.75361	1.76120	1.76866	1.77600
23/32..	1.70517	1.71365	1.72197	1.73013	1.73814	1.74600	1.75373	1.76132	1.76878	1.77611
47/64	1.70530	1.71378	1.72209	1.73025	1.73826	1.74612	1.75385	1.76143	1.76889	1.77622
3/4.....	1.70544	1.71391	1.72222	1.73038	1.73838	1.74624	1.75397	1.76155	1.76901	1.77634
49/64	1.70557	1.71404	1.72235	1.73050	1.73851	1.74637	1.75409	1.76167	1.76912	1.77645
25/32..	1.70570	1.71417	1.72248	1.73063	1.73863	1.74649	1.75420	1.76179	1.76924	1.77656
51/64	1.70584	1.71430	1.72261	1.73076	1.73876	1.74661	1.75432	1.76190	1.76935	1.77668
13/16....	1.70597	1.71443	1.72274	1.73088	1.73888	1.74673	1.75444	1.76202	1.76947	1.77679
53/64	1.70610	1.71457	1.72287	1.73101	1.73900	1.74685	1.75456	1.76214	1.76958	1.77691
27/32..	1.70624	1.71470	1.72299	1.73114	1.73913	1.74697	1.75468	1.76226	1.76970	1.77702
55/64	1.70637	1.71483	1.72312	1.73126	1.73925	1.74710	1.75480	1.76237	1.76982	1.77713
7/8.....	1.70650	1.71496	1.72325	1.73139	1.73937	1.74722	1.75492	1.76249	1.76993	1.77725
57/64	1.70664	1.71509	1.72338	1.73151	1.73950	1.74734	1.75504	1.76261	1.77005	1.77736
29/32..	1.70677	1.71522	1.72351	1.73164	1.73962	1.74746	1.75516	1.76273	1.77016	1.77747
59/64	1.70690	1.71535	1.72364	1.73176	1.73975	1.74758	1.75528	1.76284	1.77028	1.77759
15/16....	1.70704	1.71548	1.72376	1.73189	1.73987	1.74770	1.75540	1.76296	1.77039	1.77770
61/64	1.70717	1.71561	1.72389	1.73202	1.73999	1.74782	1.75552	1.76308	1.77051	1.77781
31/32..	1.70730	1.71574	1.72402	1.73214	1.74012	1.74795	1.75564	1.76319	1.77062	1.77792
63/64	1.70744	1.71587	1.72415	1.73227	1.74024	1.74807	1.75576	1.76331	1.77074	1.77804

COMMON LOGARITHMS

	60	61	62	63	64	65	66	67	68	69
0.....	1.77815	1.78533	1.79239	1.79934	1.80618	1.81291	1.81954	1.82607	1.83251	1.83885
1/64	1.77826	1.78544	1.79250	1.79945	1.80629	1.81302	1.81965	1.82618	1.83261	1.83895
1/32..	1.77838	1.78555	1.79261	1.79956	1.80639	1.81312	1.81975	1.82628	1.83271	1.83905
3/64	1.77849	1.78566	1.79272	1.79966	1.80650	1.81323	1.81985	1.82638	1.83281	1.83914
1/16....	1.77860	1.78577	1.79283	1.79977	1.80660	1.81333	1.81996	1.82648	1.83291	1.83924
5/64	1.77872	1.78589	1.79294	1.79988	1.80671	1.81344	1.82006	1.82658	1.83301	1.83934
3/32..	1.77883	1.78600	1.79305	1.79999	1.80682	1.81354	1.82016	1.82668	1.83311	1.83944
7/64	1.77894	1.78611	1.79316	1.80009	1.80692	1.81364	1.82026	1.82678	1.83321	1.83954
1/8.....	1.77906	1.78622	1.79327	1.80020	1.80703	1.81375	1.82037	1.82688	1.83331	1.83964
9/64	1.77917	1.78633	1.79338	1.80031	1.80713	1.81385	1.82047	1.82699	1.83341	1.83973
5/32..	1.77928	1.78644	1.79348	1.80042	1.80724	1.81396	1.82057	1.82709	1.83351	1.83983
11/64	1.77939	1.78655	1.79359	1.80052	1.80734	1.81406	1.82067	1.82719	1.83361	1.83993
3/16....	1.77951	1.78666	1.79370	1.80063	1.80745	1.81416	1.82078	1.82729	1.83370	1.84003
13/64	1.77962	1.78677	1.79381	1.80074	1.80756	1.81427	1.82088	1.82739	1.83380	1.84013
7/32..	1.77973	1.78688	1.79392	1.80085	1.80766	1.81437	1.82098	1.82749	1.83390	1.84022
15/64	1.77984	1.78700	1.79403	1.80095	1.80777	1.81448	1.82108	1.82759	1.83400	1.84032
1/4.....	1.77996	1.78711	1.79414	1.80106	1.80787	1.81458	1.82119	1.82769	1.83410	1.84042
17/64	1.78007	1.78722	1.79425	1.80117	1.80798	1.81468	1.82129	1.82779	1.83420	1.84052
9/32..	1.78018	1.78733	1.79436	1.80128	1.80808	1.81479	1.82139	1.82789	1.83430	1.84062
19/64	1.78029	1.78744	1.79447	1.80138	1.80819	1.81489	1.82149	1.82799	1.83440	1.84071
5/16....	1.78041	1.78755	1.79458	1.80149	1.80830	1.81500	1.82160	1.82810	1.83450	1.84081
21/64	1.78052	1.78766	1.79468	1.80160	1.80840	1.81510	1.82170	1.82820	1.83460	1.84091
11/32..	1.78063	1.78777	1.79479	1.80170	1.80851	1.81520	1.82180	1.82830	1.83470	1.84101
23/64	1.78074	1.78788	1.79490	1.80181	1.80861	1.81531	1.82190	1.82840	1.83480	1.84111
3/8.....	1.78086	1.78799	1.79501	1.80192	1.80872	1.81541	1.82200	1.82850	1.83490	1.84120
25/64	1.78097	1.78810	1.79512	1.80203	1.80882	1.81552	1.82211	1.82860	1.83500	1.84130
13/32..	1.78108	1.78821	1.79523	1.80213	1.80893	1.81562	1.82221	1.82870	1.83510	1.84140
27/64	1.78119	1.78832	1.79534	1.80224	1.80903	1.81572	1.82231	1.82880	1.83519	1.84150
7/16....	1.78131	1.78843	1.79545	1.80235	1.80914	1.81583	1.82241	1.82890	1.83529	1.84159
29/64	1.78142	1.78854	1.79555	1.80245	1.80924	1.81593	1.82252	1.82900	1.83539	1.84169
15/32..	1.78153	1.78865	1.79566	1.80256	1.80935	1.81603	1.82262	1.82910	1.83549	1.84179
31/64	1.78164	1.78876	1.79577	1.80267	1.80945	1.81614	1.82272	1.82920	1.83559	1.84189

COMMON LOGARITHMS

	60	61	62	63	64	65	66	67	68	69
1/2.....	1.78176	1.78888	1.79588	1.80277	1.80956	1.81624	1.82282	1.82930	1.83569	1.84198
33/64	1.78187	1.78899	1.79599	1.80288	1.80966	1.81634	1.82292	1.82940	1.83579	1.84208
17/32..	1.78198	1.78910	1.79610	1.80299	1.80977	1.81645	1.82303	1.82950	1.83589	1.84218
35/64	1.78209	1.78921	1.79621	1.80309	1.80988	1.81655	1.82313	1.82961	1.83599	1.84228
9/16....	1.78220	1.78932	1.79631	1.80320	1.80998	1.81666	1.82323	1.82971	1.83609	1.84238
37/64	1.78232	1.78943	1.79642	1.80331	1.81009	1.81676	1.82333	1.82981	1.83619	1.84247
19/32..	1.78243	1.78954	1.79653	1.80341	1.81019	1.81686	1.82343	1.82991	1.83628	1.84257
39/64	1.78254	1.78965	1.79664	1.80352	1.81030	1.81697	1.82354	1.83001	1.83638	1.84267
5/8.....	1.78265	1.78976	1.79675	1.80363	1.81040	1.81707	1.82364	1.83011	1.83648	1.84277
41/64	1.78276	1.78987	1.79686	1.80373	1.81051	1.81717	1.82374	1.83021	1.83658	1.84286
21/32..	1.78288	1.78998	1.79696	1.80384	1.81061	1.81728	1.82384	1.83031	1.83668	1.84296
43/64	1.78299	1.79009	1.79707	1.80395	1.81072	1.81738	1.82394	1.83041	1.83678	1.84306
11/16....	1.78310	1.79020	1.79718	1.80405	1.81082	1.81748	1.82404	1.83051	1.83688	1.84315
45/64	1.78321	1.79031	1.79729	1.80416	1.81093	1.81759	1.82415	1.83061	1.83698	1.84325
23/32..	1.78332	1.79042	1.79740	1.80427	1.81103	1.81769	1.82425	1.83071	1.83708	1.84335
47/64	1.78343	1.79053	1.79751	1.80437	1.81113	1.81779	1.82435	1.83081	1.83717	1.84345
3/4.....	1.78355	1.79064	1.79761	1.80448	1.81124	1.81790	1.82445	1.83091	1.83727	1.84354
49/64	1.78366	1.79075	1.79772	1.80459	1.81134	1.81800	1.82455	1.83101	1.83737	1.84364
25/32..	1.78377	1.79086	1.79783	1.80469	1.81145	1.81810	1.82465	1.83111	1.83747	1.84374
51/64	1.78388	1.79097	1.79794	1.80480	1.81155	1.81821	1.82476	1.83121	1.83757	1.84384
13/16....	1.78399	1.79108	1.79805	1.80491	1.81166	1.81831	1.82486	1.83131	1.83767	1.84393
53/64	1.78410	1.79119	1.79815	1.80501	1.81176	1.81841	1.82496	1.83141	1.83777	1.84403
27/32..	1.78422	1.79130	1.79826	1.80512	1.81187	1.81851	1.82506	1.83151	1.83786	1.84413
55/64	1.78433	1.79141	1.79837	1.80522	1.81197	1.81862	1.82516	1.83161	1.83796	1.84422
7/8.....	1.78444	1.79152	1.79848	1.80533	1.81208	1.81872	1.82526	1.83171	1.83806	1.84432
57/64	1.78455	1.79162	1.79859	1.80544	1.81218	1.81882	1.82537	1.83181	1.83816	1.84442
29/32..	1.78466	1.79173	1.79869	1.80554	1.81229	1.81893	1.82547	1.83191	1.83826	1.84452
59/64	1.78477	1.79184	1.79880	1.80565	1.81239	1.81903	1.82557	1.83201	1.83836	1.84461
15/16....	1.78488	1.79195	1.79891	1.80576	1.81250	1.81913	1.82567	1.83211	1.83846	1.84471
61/64	1.78500	1.79206	1.79902	1.80586	1.81260	1.81924	1.82577	1.83221	1.83855	1.84481
31/32..	1.78511	1.79217	1.79913	1.80597	1.81270	1.81934	1.82587	1.83231	1.83865	1.84490
63/64	1.78522	1.79228	1.79923	1.80607	1.81281	1.81944	1.82597	1.83241	1.83875	1.84500

COMMON LOGARITHMS

	70	71	72	73	74	75	76	77	78	79
0.....	1.84510	1.85126	1.85733	1.86332	1.86923	1.87506	1.88081	1.88649	1.89209	1.89763
1/64	1.84519	1.85135	1.85743	1.86342	1.86932	1.87515	1.88090	1.88658	1.89218	1.89771
1/32..	1.84529	1.85145	1.85752	1.86351	1.86942	1.87524	1.88099	1.88667	1.89227	1.89780
3/64	1.84539	1.85154	1.85762	1.86360	1.86951	1.87533	1.88108	1.88676	1.89236	1.89788
1/16....	1.84549	1.85164	1.85771	1.86369	1.86960	1.87542	1.88117	1.88684	1.89244	1.89797
5/64	1.84558	1.85174	1.85780	1.86379	1.86969	1.87551	1.88126	1.88693	1.89253	1.89806
3/32..	1.84568	1.85183	1.85790	1.86388	1.86978	1.87560	1.88135	1.88702	1.89262	1.89814
7/64	1.84578	1.85193	1.85799	1.86397	1.86987	1.87569	1.88144	1.88711	1.89270	1.89823
1/8.....	1.84587	1.85202	1.85809	1.86407	1.86996	1.87578	1.88153	1.88720	1.89279	1.89831
9/64	1.84597	1.85212	1.85818	1.86416	1.87006	1.87587	1.88162	1.88728	1.89288	1.89840
5/32..	1.84607	1.85221	1.85827	1.86425	1.87015	1.87597	1.88171	1.88737	1.89296	1.89849
11/64	1.84616	1.85231	1.85837	1.86434	1.87024	1.87606	1.88179	1.88746	1.89305	1.89857
3/16....	1.84626	1.85240	1.85846	1.86444	1.87033	1.87615	1.88188	1.88755	1.89314	1.89866
13/64	1.84636	1.85250	1.85856	1.86453	1.87042	1.87624	1.88197	1.88763	1.89322	1.89874
7/32..	1.84645	1.85259	1.85865	1.86462	1.87051	1.87633	1.88206	1.88772	1.89331	1.89883
15/64	1.84655	1.85269	1.85874	1.86471	1.87061	1.87642	1.88215	1.88781	1.89340	1.89891
1/4.....	1.84665	1.85278	1.85884	1.86481	1.87070	1.87651	1.88224	1.88790	1.89348	1.89900
17/64	1.84674	1.85288	1.85893	1.86490	1.87079	1.87660	1.88233	1.88799	1.89357	1.89908
9/32..	1.84684	1.85298	1.85903	1.86499	1.87088	1.87669	1.88242	1.88807	1.89366	1.89917
19/64	1.84694	1.85307	1.85912	1.86509	1.87097	1.87678	1.88251	1.88816	1.89374	1.89926
5/16....	1.84703	1.85317	1.85921	1.86518	1.87106	1.87687	1.88260	1.88825	1.89383	1.89934
21/64	1.84713	1.85326	1.85931	1.86527	1.87115	1.87696	1.88268	1.88834	1.89392	1.89943
11/32..	1.84723	1.85336	1.85940	1.86536	1.87124	1.87705	1.88277	1.88843	1.89400	1.89951
23/64	1.84732	1.85345	1.85949	1.86546	1.87134	1.87714	1.88286	1.88851	1.89409	1.89960
3/8.....	1.84742	1.85355	1.85959	1.86555	1.87143	1.87723	1.88295	1.88860	1.89418	1.89968
25/64	1.84751	1.85364	1.85968	1.86564	1.87152	1.87732	1.88304	1.88869	1.89426	1.89977
13/32..	1.84761	1.85374	1.85978	1.86573	1.87161	1.87741	1.88313	1.88878	1.89435	1.89985
27/64	1.84771	1.85383	1.85987	1.86583	1.87170	1.87750	1.88322	1.88886	1.89444	1.89994
7/16....	1.84780	1.85393	1.85996	1.86592	1.87179	1.87759	1.88331	1.88895	1.89452	1.90003
29/64	1.84790	1.85402	1.86006	1.86601	1.87188	1.87768	1.88340	1.88904	1.89461	1.90011
15/32..	1.84800	1.85412	1.86015	1.86610	1.87197	1.87777	1.88348	1.88913	1.89470	1.90020
31/64	1.84809	1.85421	1.86024	1.86619	1.87207	1.87786	1.88357	1.88921	1.89478	1.90028

COMMON LOGARITHMS

	70	71	72	73	74	75	76	77	78	79
1/2.....	1.84819	1.85431	1.86034	1.86629	1.87216	1.87795	1.88366	1.88930	1.89487	1.90037
33/64	1.84829	1.85440	1.86043	1.86638	1.87225	1.87804	1.88375	1.88939	1.89496	1.90045
17/32..	1.84838	1.85450	1.86053	1.86647	1.87234	1.87813	1.88384	1.88948	1.89504	1.90054
35/64	1.84848	1.85459	1.86062	1.86656	1.87243	1.87822	1.88393	1.88956	1.89513	1.90062
9/16....	1.84857	1.85469	1.86071	1.86666	1.87252	1.87831	1.88402	1.88965	1.89522	1.90071
37/64	1.84867	1.85478	1.86081	1.86675	1.87261	1.87840	1.88410	1.88974	1.89530	1.90079
19/32..	1.84877	1.85488	1.86090	1.86684	1.87270	1.87849	1.88419	1.88983	1.89539	1.90088
39/64	1.84886	1.85497	1.86099	1.86693	1.87279	1.87858	1.88428	1.88991	1.89547	1.90096
5/8.....	1.84896	1.85506	1.86109	1.86703	1.87288	1.87867	1.88437	1.89000	1.89556	1.90105
41/64	1.84905	1.85516	1.86118	1.86712	1.87298	1.87876	1.88446	1.89009	1.89565	1.90113
21/32..	1.84915	1.85525	1.86127	1.86721	1.87307	1.87884	1.88455	1.89018	1.89573	1.90122
43/64	1.84925	1.85535	1.86137	1.86730	1.87316	1.87893	1.88464	1.89026	1.89582	1.90131
11/16....	1.84934	1.85544	1.86146	1.86739	1.87325	1.87902	1.88472	1.89035	1.89591	1.90139
45/64	1.84944	1.85554	1.86155	1.86749	1.87334	1.87911	1.88481	1.89044	1.89599	1.90148
23/32..	1.84953	1.85563	1.86165	1.86758	1.87343	1.87920	1.88490	1.89053	1.89608	1.90156
47/64	1.84963	1.85573	1.86174	1.86767	1.87352	1.87929	1.88499	1.89061	1.89616	1.90165
3/4.....	1.84973	1.85582	1.86183	1.86776	1.87361	1.87938	1.88508	1.89070	1.89625	1.90173
49/64	1.84982	1.85592	1.86193	1.86785	1.87370	1.87947	1.88517	1.89079	1.89634	1.90182
25/32..	1.84992	1.85601	1.86202	1.86795	1.87379	1.87956	1.88526	1.89087	1.89642	1.90190
51/64	1.85001	1.85611	1.86211	1.86804	1.87388	1.87965	1.88534	1.89096	1.89651	1.90199
13/16....	1.85011	1.85620	1.86221	1.86813	1.87397	1.87974	1.88543	1.89105	1.89660	1.90207
53/64	1.85021	1.85629	1.86230	1.86822	1.87406	1.87983	1.88552	1.89114	1.89668	1.90216
27/32..	1.85030	1.85639	1.86239	1.86831	1.87416	1.87992	1.88561	1.89122	1.89677	1.90224
55/64	1.85040	1.85648	1.86249	1.86841	1.87425	1.88001	1.88570	1.89131	1.89685	1.90233
7/8.....	1.85049	1.85658	1.86258	1.86850	1.87434	1.88010	1.88579	1.89140	1.89694	1.90241
57/64	1.85059	1.85667	1.86267	1.86859	1.87443	1.88019	1.88587	1.89149	1.89703	1.90250
29/32..	1.85068	1.85677	1.86276	1.86868	1.87452	1.88028	1.88596	1.89157	1.89711	1.90258
59/64	1.85078	1.85686	1.86286	1.86877	1.87461	1.88037	1.88605	1.89166	1.89720	1.90267
15/16....	1.85088	1.85696	1.86295	1.86886	1.87470	1.88046	1.88614	1.89175	1.89728	1.90275
61/64	1.85097	1.85705	1.86304	1.86896	1.87479	1.88055	1.88623	1.89183	1.89737	1.90284
31/32..	1.85107	1.85714	1.86314	1.86905	1.87488	1.88063	1.88631	1.89192	1.89746	1.90292
63/64	1.85116	1.85724	1.86323	1.86914	1.87497	1.88072	1.88640	1.89201	1.89754	1.90301

COMMON LOGARITHMS

	80	81	82	83	84	85	86	87	88	89
0.....	1.90309	1.90849	1.91381	1.91908	1.92428	1.92942	1.93450	1.93952	1.94448	1.94939
1/64	1.90317	1.90857	1.91390	1.91916	1.92436	1.92950	1.93458	1.93960	1.94456	1.94947
1/32..	1.90326	1.90865	1.91398	1.91924	1.92444	1.92958	1.93466	1.93968	1.94464	1.94954
3/64	1.90334	1.90874	1.91406	1.91932	1.92452	1.92966	1.93474	1.93975	1.94471	1.94962
1/16....	1.90343	1.90882	1.91414	1.91940	1.92460	1.92974	1.93481	1.93983	1.94479	1.94969
5/64	1.90351	1.90890	1.91423	1.91949	1.92468	1.92982	1.93489	1.93991	1.94487	1.94977
3/32..	1.90360	1.90899	1.91431	1.91957	1.92476	1.92990	1.93497	1.93999	1.94495	1.94985
7/64	1.90368	1.90907	1.91439	1.91965	1.92484	1.92998	1.93505	1.94006	1.94502	1.94992
1/8.....	1.90377	1.90915	1.91448	1.91973	1.92493	1.93006	1.93513	1.94014	1.94510	1.95000
9/64	1.90385	1.90924	1.91456	1.91981	1.92501	1.93014	1.93521	1.94022	1.94518	1.95008
5/32..	1.90394	1.90932	1.91464	1.91989	1.92509	1.93022	1.93529	1.94030	1.94525	1.95015
11/64	1.90402	1.90941	1.91472	1.91998	1.92517	1.93030	1.93537	1.94038	1.94533	1.95023
3/16....	1.90411	1.90949	1.91481	1.92006	1.92525	1.93038	1.93544	1.94045	1.94541	1.95030
13/64	1.90419	1.90957	1.91489	1.92014	1.92533	1.93046	1.93552	1.94053	1.94548	1.95038
7/32..	1.90428	1.90966	1.91497	1.92022	1.92541	1.93054	1.93560	1.94061	1.94556	1.95046
15/64	1.90436	1.90974	1.91505	1.92030	1.92549	1.93061	1.93568	1.94069	1.94564	1.95053
1/4.....	1.90445	1.90982	1.91514	1.92038	1.92557	1.93069	1.93576	1.94077	1.94571	1.95061
17/64	1.90453	1.90991	1.91522	1.92047	1.92565	1.93077	1.93584	1.94084	1.94579	1.95068
9/32..	1.90461	1.90999	1.91530	1.92055	1.92573	1.93085	1.93592	1.94092	1.94587	1.95076
19/64	1.90470	1.91007	1.91538	1.92063	1.92581	1.93093	1.93600	1.94100	1.94595	1.95084
5/16....	1.90478	1.91016	1.91547	1.92071	1.92589	1.93101	1.93607	1.94108	1.94602	1.95091
21/64	1.90487	1.91024	1.91555	1.92079	1.92597	1.93109	1.93615	1.94115	1.94610	1.95099
11/32..	1.90495	1.91032	1.91563	1.92087	1.92605	1.93117	1.93623	1.94123	1.94618	1.95106
23/64	1.90504	1.91041	1.91571	1.92095	1.92613	1.93125	1.93631	1.94131	1.94625	1.95114
3/8.....	1.90512	1.91049	1.91580	1.92104	1.92621	1.93133	1.93639	1.94139	1.94633	1.95122
25/64	1.90521	1.91057	1.91588	1.92112	1.92629	1.93141	1.93647	1.94146	1.94641	1.95129
13/32..	1.90529	1.91066	1.91596	1.92120	1.92637	1.93149	1.93655	1.94154	1.94648	1.95137
27/64	1.90537	1.91074	1.91604	1.92128	1.92645	1.93157	1.93662	1.94162	1.94656	1.95144
7/16....	1.90546	1.91082	1.91612	1.92136	1.92654	1.93165	1.93670	1.94170	1.94664	1.95152
29/64	1.90554	1.91091	1.91621	1.92144	1.92662	1.93173	1.93678	1.94178	1.94671	1.95160
15/32..	1.90563	1.91099	1.91629	1.92152	1.92670	1.93181	1.93686	1.94185	1.94679	1.95167
31/64	1.90571	1.91107	1.91637	1.92161	1.92678	1.93189	1.93694	1.94193	1.94687	1.95175

COMMON LOGARITHMS

	80	81	82	83	84	85	86	87	88	89
1/2.....	1.90580	1.91116	1.91645	1.92169	1.92686	1.93197	1.93702	1.94201	1.94694	1.95182
33/64	1.90588	1.91124	1.91654	1.92177	1.92694	1.93205	1.93709	1.94209	1.94702	1.95190
17/32..	1.90596	1.91132	1.91662	1.92185	1.92702	1.93212	1.93717	1.94216	1.94710	1.95197
35/64	1.90605	1.91141	1.91670	1.92193	1.92710	1.93220	1.93725	1.94224	1.94717	1.95205
9/16....	1.90613	1.91149	1.91678	1.92201	1.92718	1.93228	1.93733	1.94232	1.94725	1.95213
37/64	1.90622	1.91157	1.91687	1.92209	1.92726	1.93236	1.93741	1.94240	1.94733	1.95220
19/32..	1.90630	1.91166	1.91695	1.92217	1.92734	1.93244	1.93749	1.94247	1.94740	1.95228
39/64	1.90639	1.91174	1.91703	1.92225	1.92742	1.93252	1.93756	1.94255	1.94748	1.95235
5/8.....	1.90647	1.91182	1.91711	1.92234	1.92750	1.93260	1.93764	1.94263	1.94756	1.95243
41/64	1.90655	1.91191	1.91719	1.92242	1.92758	1.93268	1.93772	1.94271	1.94763	1.95250
21/32..	1.90664	1.91199	1.91728	1.92250	1.92766	1.93276	1.93780	1.94278	1.94771	1.95258
43/64	1.90672	1.91207	1.91736	1.92258	1.92774	1.93284	1.93788	1.94286	1.94779	1.95266
11/16....	1.90681	1.91216	1.91744	1.92266	1.92782	1.93292	1.93796	1.94294	1.94786	1.95273
45/64	1.90689	1.91224	1.91752	1.92274	1.92790	1.93300	1.93803	1.94302	1.94794	1.95281
23/32..	1.90697	1.91232	1.91760	1.92282	1.92798	1.93308	1.93811	1.94309	1.94802	1.95288
47/64	1.90706	1.91240	1.91769	1.92290	1.92806	1.93315	1.93819	1.94317	1.94809	1.95296
3/4.....	1.90714	1.91249	1.91777	1.92298	1.92814	1.93323	1.93827	1.94325	1.94817	1.95303
49/64	1.90723	1.91257	1.91785	1.92307	1.92822	1.93331	1.93835	1.94332	1.94824	1.95311
25/32..	1.90731	1.91265	1.91793	1.92315	1.92830	1.93339	1.93843	1.94340	1.94832	1.95319
51/64	1.90739	1.91274	1.91801	1.92323	1.92838	1.93347	1.93850	1.94348	1.94840	1.95326
13/16....	1.90748	1.91282	1.91810	1.92331	1.92846	1.93355	1.93858	1.94356	1.94847	1.95334
53/64	1.90756	1.91290	1.91818	1.92339	1.92854	1.93363	1.93866	1.94363	1.94855	1.95341
27/32..	1.90765	1.91299	1.91826	1.92347	1.92862	1.93371	1.93874	1.94371	1.94863	1.95349
55/64	1.90773	1.91307	1.91834	1.92355	1.92870	1.93379	1.93882	1.94379	1.94870	1.95356
7/8.....	1.90781	1.91315	1.91842	1.92363	1.92878	1.93387	1.93889	1.94387	1.94878	1.95364
57/64	1.90790	1.91323	1.91851	1.92371	1.92886	1.93395	1.93897	1.94394	1.94886	1.95371
29/32..	1.90798	1.91332	1.91859	1.92379	1.92894	1.93402	1.93905	1.94402	1.94893	1.95379
59/64	1.90807	1.91340	1.91867	1.92388	1.92902	1.93410	1.93913	1.94410	1.94901	1.95387
15/16....	1.90815	1.91348	1.91875	1.92396	1.92910	1.93418	1.93921	1.94417	1.94908	1.95394
61/64	1.90823	1.91357	1.91883	1.92404	1.92918	1.93426	1.93929	1.94425	1.94916	1.95402
31/32..	1.90832	1.91365	1.91891	1.92412	1.92926	1.93434	1.93936	1.94433	1.94924	1.95409
63/64	1.90840	1.91373	1.91900	1.92420	1.92934	1.93442	1.93944	1.94441	1.94931	1.95417

COMMON LOGARITHMS

	90	91	92	93	94	95	96	97	98	99
0.....	1.95424	1.95904	1.96379	1.96848	1.97313	1.97772	1.98227	1.98677	1.99123	1.99564
1/64	1.95432	1.95912	1.96386	1.96856	1.97320	1.97780	1.98234	1.98684	1.99130	1.99570
1/32..	1.95439	1.95919	1.96394	1.96863	1.97327	1.97787	1.98241	1.98691	1.99136	1.99577
3/64	1.95447	1.95927	1.96401	1.96870	1.97334	1.97794	1.98248	1.98698	1.99143	1.99584
1/16....	1.95454	1.95934	1.96408	1.96877	1.97342	1.97801	1.98255	1.98705	1.99150	1.99591
5/64	1.95462	1.95941	1.96416	1.96885	1.97349	1.97808	1.98262	1.98712	1.99157	1.99598
3/32..	1.95469	1.95949	1.96423	1.96892	1.97356	1.97815	1.98270	1.98719	1.99164	1.99605
7/64	1.95477	1.95956	1.96430	1.96899	1.97363	1.97822	1.98277	1.98726	1.99171	1.99611
1/8.....	1.95485	1.95964	1.96438	1.96907	1.97370	1.97829	1.98284	1.98733	1.99178	1.99618
9/64	1.95492	1.95971	1.96445	1.96914	1.97378	1.97837	1.98291	1.98740	1.99185	1.99625
5/32..	1.95500	1.95979	1.96452	1.96921	1.97385	1.97844	1.98298	1.98747	1.99192	1.99632
11/64	1.95507	1.95986	1.96460	1.96928	1.97392	1.97851	1.98305	1.98754	1.99199	1.99639
3/16....	1.95515	1.95994	1.96467	1.96936	1.97399	1.97858	1.98312	1.98761	1.99206	1.99646
13/64	1.95522	1.96001	1.96475	1.96943	1.97407	1.97865	1.98319	1.98768	1.99213	1.99653
7/32..	1.95530	1.96008	1.96482	1.96950	1.97414	1.97872	1.98326	1.98775	1.99219	1.99659
15/64	1.95537	1.96016	1.96489	1.96958	1.97421	1.97879	1.98333	1.98782	1.99226	1.99666
1/4.....	1.95545	1.96023	1.96497	1.96965	1.97428	1.97886	1.98340	1.98789	1.99233	1.99673
17/64	1.95552	1.96031	1.96504	1.96972	1.97435	1.97894	1.98347	1.98796	1.99240	1.99680
9/32..	1.95560	1.96038	1.96511	1.96979	1.97443	1.97901	1.98354	1.98803	1.99247	1.99687
19/64	1.95567	1.96046	1.96519	1.96987	1.97450	1.97908	1.98361	1.98810	1.99254	1.99694
5/16....	1.95575	1.96053	1.96526	1.96994	1.97457	1.97915	1.98368	1.98817	1.99261	1.99700
21/64	1.95582	1.96060	1.96533	1.97001	1.97464	1.97922	1.98375	1.98824	1.99268	1.99707
11/32..	1.95590	1.96068	1.96541	1.97009	1.97471	1.97929	1.98382	1.98831	1.99275	1.99714
23/64	1.95597	1.96075	1.96548	1.97016	1.97479	1.97936	1.98389	1.98838	1.99282	1.99721
3/8.....	1.95605	1.96083	1.96555	1.97023	1.97486	1.97943	1.98396	1.98845	1.99288	1.99728
25/64	1.95612	1.96090	1.96563	1.97030	1.97493	1.97951	1.98403	1.98852	1.99295	1.99735
13/32..	1.95620	1.96098	1.96570	1.97038	1.97500	1.97958	1.98411	1.98859	1.99302	1.99741
27/64	1.95627	1.96105	1.96577	1.97045	1.97507	1.97965	1.98418	1.98866	1.99309	1.99748
7/16....	1.95635	1.96112	1.96585	1.97052	1.97514	1.97972	1.98425	1.98873	1.99316	1.99755
29/64	1.95642	1.96120	1.96592	1.97059	1.97522	1.97979	1.98432	1.98880	1.99323	1.99762
15/32..	1.95650	1.96127	1.96599	1.97067	1.97529	1.97986	1.98439	1.98887	1.99330	1.99769
31/64	1.95657	1.96135	1.96607	1.97074	1.97536	1.97993	1.98446	1.98893	1.99337	1.99775

COMMON LOGARITHMS

	90	91	92	93	94	95	96	97	98	99
1/2.....	1.95665	1.96142	1.96614	1.97081	1.97543	1.98000	1.98453	1.98900	1.99344	1.99782
33/64	1.95672	1.96150	1.96622	1.97088	1.97550	1.98007	1.98460	1.98907	1.99351	1.99789
17/32..	1.95680	1.96157	1.96629	1.97096	1.97558	1.98015	1.98467	1.98914	1.99357	1.99796
35/64	1.95687	1.96164	1.96636	1.97103	1.97565	1.98022	1.98474	1.98921	1.99364	1.99803
9/16....	1.95695	1.96172	1.96644	1.97110	1.97572	1.98029	1.98481	1.98928	1.99371	1.99810
37/64	1.95702	1.96179	1.96651	1.97117	1.97579	1.98036	1.98488	1.98935	1.99378	1.99816
19/32..	1.95710	1.96187	1.96658	1.97125	1.97586	1.98043	1.98495	1.98942	1.99385	1.99823
39/64	1.95717	1.96194	1.96665	1.97132	1.97593	1.98050	1.98502	1.98949	1.99392	1.99830
5/8.....	1.95725	1.96201	1.96673	1.97139	1.97601	1.98057	1.98509	1.98956	1.99399	1.99837
41/64	1.95732	1.96209	1.96680	1.97146	1.97608	1.98064	1.98516	1.98963	1.99406	1.99844
21/32..	1.95740	1.96216	1.96687	1.97154	1.97615	1.98071	1.98523	1.98970	1.99412	1.99850
43/64	1.95747	1.96224	1.96695	1.97161	1.97622	1.98078	1.98530	1.98977	1.99419	1.99857
11/16....	1.95755	1.96231	1.96702	1.97168	1.97629	1.98086	1.98537	1.98984	1.99426	1.99864
45/64	1.95762	1.96238	1.96709	1.97175	1.97636	1.98093	1.98544	1.98991	1.99433	1.99871
23/32..	1.95770	1.96246	1.96717	1.97183	1.97644	1.98100	1.98551	1.98998	1.99440	1.99878
47/64	1.95777	1.96253	1.96724	1.97190	1.97651	1.98107	1.98558	1.99005	1.99447	1.99884
3/4.....	1.95785	1.96261	1.96731	1.97197	1.97658	1.98114	1.98565	1.99012	1.99454	1.99891
49/64	1.95792	1.96268	1.96739	1.97204	1.97665	1.98121	1.98572	1.99019	1.99461	1.99898
25/32..	1.95800	1.96275	1.96746	1.97212	1.97672	1.98128	1.98579	1.99026	1.99467	1.99905
51/64	1.95807	1.96283	1.96753	1.97219	1.97679	1.98135	1.98586	1.99032	1.99474	1.99912
13/16....	1.95815	1.96290	1.96761	1.97226	1.97687	1.98142	1.98593	1.99039	1.99481	1.99918
53/64	1.95822	1.96298	1.96768	1.97233	1.97694	1.98149	1.98600	1.99046	1.99488	1.99925
27/32..	1.95830	1.96305	1.96775	1.97241	1.97701	1.98156	1.98607	1.99053	1.99495	1.99932
55/64	1.95837	1.96312	1.96783	1.97248	1.97708	1.98163	1.98614	1.99060	1.99502	1.99939
7/8.....	1.95844	1.96320	1.96790	1.97255	1.97715	1.98171	1.98621	1.99067	1.99509	1.99946
57/64	1.95852	1.96327	1.96797	1.97262	1.97722	1.98178	1.98628	1.99074	1.99516	1.99952
29/32..	1.95859	1.96335	1.96804	1.97269	1.97729	1.98185	1.98635	1.99081	1.99522	1.99959
59/64	1.95867	1.96342	1.96812	1.97277	1.97737	1.98192	1.98642	1.99088	1.99529	1.99966
15/16....	1.95874	1.96349	1.96819	1.97284	1.97744	1.98199	1.98649	1.99095	1.99536	1.99973
61/64	1.95882	1.96357	1.96826	1.97291	1.97751	1.98206	1.98656	1.99102	1.99543	1.99980
31/32..	1.95889	1.96364	1.96834	1.97298	1.97758	1.98213	1.98663	1.99109	1.99550	1.99986
63/64	1.95897	1.96371	1.96841	1.97306	1.97765	1.98220	1.98670	1.99116	1.99557	1.99993

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