FOUR PLACE LOGARITHMIC TABLES CONTAINING THE LOGARITHMS OF NUMBERS

Four Place Logarithmic Tables Containing the Logarithms of Numbers by Percey F. Smith

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PERCEY F. SMITH

FOUR PLACE LOGARITHMIC TABLES CONTAINING THE LOGARITHMS OF NUMBERS

FOUR-PLACE

LOGARITHMIC TABLES

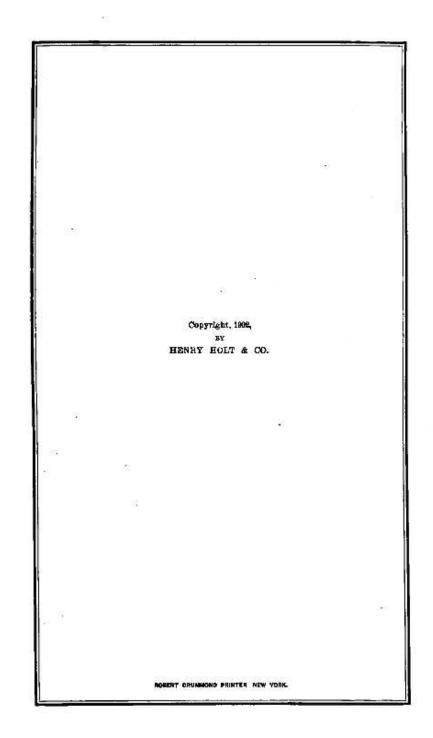CONTAINING THE

LOGARITHMS OF NUMBERS

AND OF THE

TRIGONOMETRIC FUNCTIONS

ARRANGED FOR USE IN THE ENTRANCE EXAMINATIONS
OF THE SHEFFIELD SCIENTIFIC SCHOOL
OF YALE UNIVERSITY

PREFACE

THESE tables are designed to furnish the student beginning the use of logarithms with an instrument for calculation perfect as far as possible within the limits of four-figure accuracy. The theory of logarithms as taught in the preparatory schools should include some attention to the degree of accuracy attainable in logarithmic computation, and this volume will serve very well to illustrate these principles. The student will appreciate the utility of logarithms just in so far as he is confident of attaining the maximum accuracy of which the system admits.

The admirable work of Dr. C. Bremiker, *Tafeln Vierstelliger Logarithmen*, has been taken as the basis of the present set, which comprises two tables only, viz.:

Logarithms of Numbers from 1 to 2000, pages 2–5;

Logarithms of the Trigonometric Functions, pages 6–29;
from 0° to 8° and 82° to 90° for every *one-hundredth*, and from 5° to 85° for every *one-tenth* of a degree.

The division of the degree into decimal parts has much to recommend it theoretically, and is also regarded with favor by many expert computers. In fact, a movement towards the adoption of such a system of subdivision is not only gaining headway in France and Germany, but is making itself felt in this country.

My acknowledgments are due my colleagues, Drs. W. A. Granville and E. R. Hedrick, for valuable assistance in reading proofs.

PERCEY F. SMITH.

SHEFFIELD SCIENTIFIC SCHOOL,
NEW HAVEN, CONN.,
January, 1902.

N.	0	1	2	3	4	5	6	7	8	9
0	—	0000	3010	4771	6021	6990	7782	8451	9031	9542
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3	4771	4914	5051	5185	5315	5441	5563	5682	5798	5911
4	6021	6128	6232	6335	6435	6532	6628	6721	6812	6902
5	6990	7076	7160	7243	7324	7404	7482	7559	7634	7709
6	7782	7853	7924	7993	8062	8129	8195	8261	8325	8388
7	8451	8513	8573	8633	8692	8751	8808	8865	8921	8976
8	9031	9085	9138	9191	9243	9294	9345	9395	9445	9494
9	9542	9590	9638	9685	9731	9777	9823	9868	9912	9956
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15	1761	1790	1818	1847	1875	1903	1931	1959	1987	2014
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18	2553	2577	2601	2625	2648	2672	2695	2718	2742	2765
19	2788	2810	2833	2856	2878	2900	2923	2945	2967	2989
20	3010	3032	3054	3075	3096	3118	3139	3160	3181	3201
21	3222	3243	3263	3284	3304	3324	3345	3365	3385	3404
22	3424	3444	3464	3483	3502	3522	3541	3560	3579	3598
23	3617	3636	3655	3674	3692	3711	3729	3747	3766	3784
24	3802	3820	3838	3856	3874	3892	3909	3927	3945	3962
25	3979	3997	4014	4031	4048	4065	4082	4099	4116	4133
26	4150	4166	4183	4200	4216	4232	4249	4265	4281	4298
27	4314	4330	4346	4362	4378	4393	4409	4425	4440	4456
28	4472	4487	4502	4518	4533	4548	4564	4579	4594	4609
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30	4771	4786	4800	4814	4829	4843	4857	4871	4886	4900
31	4914	4928	4942	4955	4969	4983	4997	5011	5024	5038
32	5051	5065	5079	5092	5105	5119	5132	5145	5159	5172
33	5185	5198	5211	5224	5237	5250	5263	5276	5289	5302
34	5315	5328	5340	5353	5366	5378	5391	5403	5416	5428
35	5441	5453	5465	5478	5490	5502	5514	5527	5539	5551
36	5563	5575	5587	5599	5611	5623	5635	5647	5658	5670
37	5682	5694	5705	5717	5729	5740	5752	5763	5775	5786
38	5798	5809	5821	5832	5843	5855	5866	5877	5888	5900
39	5911	5922	5933	5944	5955	5966	5977	5988	5999	6010
40	6021	6031	6042	6053	6064	6075	6085	6096	6107	6117
41	6128	6138	6149	6160	6170	6180	6191	6201	6212	6222
42	6232	6243	6253	6263	6274	6284	6294	6304	6314	6325
43	6335	6345	6355	6365	6375	6385	6395	6405	6415	6425
44	6435	6444	6454	6464	6474	6484	6493	6503	6513	6522
45	6532	6542	6551	6561	6571	6580	6590	6599	6609	6618
46	6628	6637	6646	6656	6665	6675	6684	6693	6702	6712
47	6721	6730	6739	6749	6758	6767	6776	6785	6794	6803
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P. P.

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9	19.8	18.9

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9	18.0	17.1

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8	14.4	13.6
9	16.2	15.3

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8	12.8	12.0
9	14.4	13.5

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7	9.8	9.1
8	11.2	10.4
9	12.6	11.7

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7	8.4	7.7
8	9.6	8.8
9	10.8	9.9

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8	7.2	6.4
9	8.1	7.2

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53	7243	7251	7259	7267	7275	7284	7292	7300	7308	7316
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64	8062	8069	8075	8082	8089	8096	8102	8109	8116	8122
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66	8195	8202	8209	8215	8222	8228	8235	8241	8248	8254
67	8261	8267	8274	8280	8287	8293	8299	8306	8312	8319
68	8325	8331	8338	8344	8351	8357	8363	8370	8376	8382
69	8388	8395	8401	8407	8414	8420	8426	8432	8439	8445
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78	8921	8927	8932	8938	8943	8949	8954	8960	8965	8971
79	8976	8982	8987	8993	8998	9004	9009	9015	9020	9025
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93	9685	9689	9694	9699	9703	9708	9713	9717	9722	9727
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99	9956	9961	9965	9969	9974	9978	9983	9987	9991	9996
100	0000	0004	0009	0013	0017	0022	0026	0030	0035	0039
N.	0	1	2	3	4	5	6	7	8	9

P. P.

9
1	0.9
2	1.8
3	2.7
4	3.6
5	4.5
6	5.4
7	6.3
8	7.2
9	8.1

8
1	0.8
2	1.6
3	2.4
4	3.2
5	4.0
6	4.8
7	5.6
8	6.4
9	7.2

7
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2	1.4
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4	2.8
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6	4.2
7	4.9
8	5.6
9	6.3

6
1	0.6
2	1.2
3	1.8
4	2.4
5	3.0
6	3.6
7	4.2
8	4.8
9	5.4

5
1	0.5
2	1.0
3	1.5
4	2.0
5	2.5
6	3.0
7	3.5
8	4.0
9	4.5

4
1	0.4
2	0.8
3	1.2
4	1.6
5	2.0
6	2.4
7	2.8
8	3.2
9	3.6

N.	0	1	2	3	4	5	6	7	8	9
100	0000	0004	0009	0013	0017	0022	0026	0030	0035	0039
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102	0086	0090	0095	0099	0103	0107	0111	0116	0120	0124
103	0128	0133	0137	0141	0145	0149	0154	0158	0162	0166
104	0170	0175	0179	0183	0187	0191	0195	0199	0204	0208
105	0212	0216	0220	0224	0228	0233	0237	0241	0245	0249
106	0253	0257	0261	0265	0269	0273	0278	0282	0286	0290
107	0294	0298	0302	0306	0310	0314	0318	0322	0326	0330
108	0334	0338	0342	0346	0350	0354	0358	0362	0366	0370
109	0374	0378	0382	0386	0390	0394	0398	0402	0406	0410
110	0414	0418	0422	0426	0430	0434	0438	0441	0445	0449
111	0453	0457	0461	0465	0469	0473	0477	0481	0484	0488
112	0492	0496	0500	0504	0508	0512	0516	0519	0523	0527
113	0531	0535	0538	0542	0546	0550	0554	0558	0561	0565
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123	0899	0903	0906	0910	0913	0917	0920	0924	0927	0931
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133	1239	1242	1245	1248	1252	1255	1258	1261	1265	1268
134	1271	1274	1278	1281	1284	1287	1290	1294	1297	1300
135	1303	1307	1310	1313	1316	1319	1323	1326	1329	1332
136	1335	1339	1342	1345	1348	1351	1355	1358	1361	1364
137	1367	1370	1374	1377	1380	1383	1386	1389	1392	1396
138	1399	1402	1405	1408	1411	1414	1418	1421	1424	1427
139	1430	1433	1436	1440	1443	1446	1449	1452	1455	1458
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141	1492	1495	1498	1501	1504	1508	1511	1514	1517	1520
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145	1614	1617	1620	1623	1626	1629	1632	1635	1638	1641
146	1644	1647	1649	1652	1655	1658	1661	1664	1667	1670
147	1673	1676	1679	1682	1685	1688	1691	1694	1697	1700
148	1703	1706	1708	1711	1714	1717	1720	1723	1726	1729
149	1732	1735	1738	1741	1744	1746	1749	1752	1755	1758
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N.	0	1	2	3	4	5	6	7	8	9

P.P.

5		**4**		**3**		**2**	
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4	2.0	4	1.6	4	1.2	4	0.8
5	2.5	5	2.0	5	1.5	5	1.0
6	3.0	6	2.4	6	1.8	6	1.2
7	3.5	7	2.8	7	2.1	7	1.4
8	4.0	8	3.2	8	2.4	8	1.6
9	4.5	9	3.6	9	2.7	9	1.8

N.	0	1	2	3	4	5	6	7	8	9	P. P.
150	1761	1764	1767	1770	1772	1775	1779	1781	1784	1787	
151	1790	1793	1796	1798	1801	1804	1807	1810	1813	1816	
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153	1847	1850	1853	1855	1858	1861	1864	1867	1870	1872	
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157	1959	1962	1965	1967	1970	1973	1976	1978	1981	1984	
158	1987	1989	1992	1995	1996	2000	2003	2006	2009	2011	
159	2014	2017	2019	2022	2025	2028	2030	2033	2036	2038	
160	2041	2044	2047	2049	2052	2055	2057	2060	2063	2066	
161	2068	2071	2074	2076	2079	2082	2084	2087	2090	2092	
162	2095	2098	2101	2103	2106	2109	2111	2114	2117	2119	
163	2122	2125	2127	2130	2133	2135	2138	2140	2143	2146	
164	2148	2151	2154	2156	2159	2162	2164	2167	2170	2172	
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166	2201	2204	2206	2209	2212	2214	2217	2219	2222	2225	
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168	2253	2256	2258	2261	2263	2266	2269	2271	2274	2276	
169	2279	2281	2284	2287	2289	2292	2294	2297	2299	2302	
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173	2380	2383	2385	2388	2390	2393	2395	2398	2400	2403	
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177	2480	2482	2485	2487	2490	2492	2494	2497	2499	2502	
178	2504	2507	2509	2512	2514	2516	2519	2521	2524	2526	
179	2529	2531	2533	2536	2538	2541	2543	2545	2548	2550	
180	2553	2555	2558	2560	2562	2565	2567	2570	2572	2574	
181	2577	2579	2582	2584	2586	2589	2591	2594	2596	2598	
182	2601	2603	2605	2608	2610	2613	2615	2617	2620	2622	
183	2625	2627	2629	2632	2634	2636	2639	2641	2643	2646	
184	2648	2651	2653	2655	2658	2660	2662	2665	2667	2669	
185	2672	2674	2676	2679	2681	2683	2686	2688	2690	2693	
186	2695	2697	2700	2702	2704	2707	2709	2711	2714	2716	
187	2718	2721	2723	2725	2728	2730	2732	2735	2737	2739	
188	2742	2744	2746	2749	2751	2753	2756	2758	2760	2762	
189	2765	2767	2769	2772	2774	2776	2778	2781	2783	2785	
190	2788	2790	2792	2794	2797	2799	2801	2804	2806	2808	
191	2810	2813	2815	2817	2819	2822	2824	2826	2828	2831	
192	2833	2835	2838	2840	2842	2844	2847	2849	2851	2853	
193	2856	2858	2860	2862	2865	2867	2869	2871	2874	2876	
194	2878	2880	2883	2885	2887	2889	2891	2894	2896	2898	
195	2900	2903	2905	2907	2909	2911	2914	2916	2918	2920	
196	2923	2925	2927	2929	2931	2934	2936	2938	2940	2942	
197	2945	2947	2949	2951	2953	2956	2958	2960	2962	2964	
198	2967	2969	2971	2973	2975	2978	2980	2982	2984	2986	
199	2989	2991	2993	2995	2997	2999	3002	3004	3006	3008	
200	3010	3012	3015	3017	3019	3021	3023	3025	3028	3030	
N.	0	1	2	3	4	5	6	7	8	9	

P. P. columns:

3
1 0.3
2 0.6
3 0.9
4 1.2
5 1.5
6 1.8
7 2.1
8 2.4
9 2.7

2
1 0.2
2 0.4
3 0.6
4 0.8
5 1.0
6 1.2
7 1.4
8 1.6
9 1.8