

APPENDIX.

TABLE I.
THE PROPERTIES OF SATURATED STEAM.

Temperature, Fahrenheit. t.	Pressure in lbs. per square inch at sea level. p.	Heat required to raise 1 lb of Water from 32° to t° Foot lbs h.	Total heat of Evaporation. Foot lbs. H.	Volume of 1 lb. in cubic feet
100	·942			
101	·971			
102	1'001			
103	1'031			
104	1'062	55,612	859,793	312·8
105	1'094			
106	1'127			
107	1'160			
108	1'195			
109	1'230			
110	1'267			
111	1'304			
112	1'342	62,560	861,908	244'
113	1'381			
114	1'421			
115	1'462			
116	1'504			
117	1'547			
118	1'591			
119	1'637			
120	1'683			
121	1'731	69,522	864,024	192'
122	1'779			
123	1'829			
124	1'880			
125	1'932			
126	1'985			

Temperature, Fahrenheit. t.	Pressure in lbs. per square inch at sea level. p.	Heat required to raise 1 lb. of Water from 32° to t°. Foot lbs. h.	Total heat of Evaporation. Foot lbs. H.	* Volume of 1 lb. in cubic feet
127	2'04			
128	2'096			
129	2'154			
130	2'212			
131	2'273	76,484	866,139	152'4
132	2'334			
133	2'397			
134	2'461			
135	2'526			
136	2'594			
137	2'663			
138	2'733			
139	2'805			
140	2'878	83,459	868,254	122'
141	2'953			
142	3'030			
143	3'108			
144	3'188			
145	3'270			
146	3'354			
147	3'440			
148	3'527			
149	3'616	90,435	870,369	98'45
150	3'707			
151	3'800			
152	3'895			
153	3'992			
154	4'091			
155	4'192			
156	4'295			
157	4'401			
158	4'508	97,411	872,484	80'02
159	4'618			
160	4'730			
161	4'844			
162	4'961			
163	5'08			
164	5'20			
165	5'32			
166	5'45			
167	5'58	104,387	874,600	65'47
168	5'71			
169	5'85			

Temperature, Fahrenheit. t.	Pressure in lbs. per square inch at sea level. p.	Heat required to raise 1 lb. of Water from 32° to t°. Foot lbs. h.	Total heat of Evaporation. Foot lbs. H.	Volume of 1 lb. in cubic feet
170	5'98			
171	6'12			
172	6'26			
173	6'40			
174	6'55			
175	6'70			
176	6'85	111,363	876,715	53'92
177	7'01			
178	7'17			
179	7'34			
180	7'50			
181	7'67			
182	7'84			
183	8'01			
184	8'19			
185	8'37	118,353	878,830	44'70
186	8'56			
187	8'75			
188	8'94			
189	9'13			
190	9'33			
191	9'53			
192	9'74			
193	9'95			
194	10'16	125,357	880,945	37'26
195	10'38			
196	10'60			
197	10'82			
198	11'05			
199	11'29			
200	11'52			
201	11'76			
202	12'01			
203	12'26	132,360	883,060	31'26
204	12'51			
205	12'77			
206	13'03			
207	13'30			
208	13'57			
209	13'84			
210	14'12			
211	14'41			
212	14'70	139,363	885,175	26'36

Temperature, Fahrenheit. t.	Pressure in lbs. per square inch at sea level. p.	Heat required to raise 1 lb. of Water from 32° to t°. Foot lbs. h.	Total heat of Evaporation. Foot lbs. H.	Volume of 1 lb. in cubic feet
213	14.99			
214	15.29			
215	15.60			
216	15.91			
217	16.22			
218	16.54			
219	16.87			
220	17.20			
221	17.53	146,380	887,290	22.34
222	17.87			
223	18.22			
224	18.57			
225	18.93			
226	19.29			
227	19.66			
228	20.03			
229	20.41			
230	20.80	153,412	889,405	19.03
231	21.19			
232	21.59			
233	21.99			
234	22.40			
235	22.82			
236	23.25			
237	23.67			
238	24.11			
239	24.55	160,429	891,520	16.28
240	25.00			
241	25.46			
242	25.92			
243	26.39			
244	26.87			
245	27.35			
246	27.84			
247	28.34			
248	28.85	167,460	893,635	14.00
249	29.36			
250	29.88			
251	30.41			
252	30.94			
253	31.48			
254	32.03			
255	32.59			

Temperature, Fahrenheit. t.	Pressure in lbs. per square inch at sea level. p.	Heat required to raise 1 lb. of Water from 32° to t°. Foot lbs. h.	Total heat of Evaporation. Foot lbs. H.	Volume of 1 lb. in cubic feet
256	33.15			
257	33.73	174,505	895,751	12.09
258	34.31			
259	34.90			
260	35.50			
261	36.11			
262	36.72			
263	37.35			
264	37.98			
265	38.62			
266	39.27	181,564	897,866	10.48
267	39.93			
268	40.60			
269	41.27			
270	41.96			
271	42.65			
272	43.35			
273	44.07			
274	44.79			
275	45.53	188,637	899,981	9.124
276	46.27			
277	47.02			
278	47.78			
279	48.55			
280	49.33			
281	50.13			
282	50.93			
283	51.74			
284	52.56	195,711	902,096	7.973
285	53.39			
286	54.24			
287	55.09			
288	55.96			
289	56.83			
290	57.72			
291	58.62			
292	59.53			
293	60.45	202,798	904,211	6.992
294	61.38			
295	62.33		778	
296	63.29			
297	64.25			
298	65.23			

B.T.N.

Temperature, Fahrenheit. t.	Pressure in lbs. per square inch at sea level. p.	Heat required to raise 1 lb. of Water from 32° to t°. Foot lbs. h.	Total heat of Evaporation. Foot lbs. H.	Volume of 1 lb. in cubic feet
299	66.22			
300	67.22			
301	68.24			
302	69.27	209,885	906,327	6.153
303	70.31			
304	71.36			
305	72.42			
306	73.50			
307	74.59			
308	75.69			
309	76.81			
310	77.94			
311	79.08	216,986	908,442	5.433
312	80.23			
313	81.40			
314	82.59			
315	83.78			
316	84.99			
317	86.21			
318	87.45			
319	88.70			
320	89.97	224,087	910,557	4.816
321	91.25			
322	92.54			
323	93.85			
324	95.17			
325	96.51			
326	97.86			
327	99.23			
328	100.62			
329	102.02	231,216	912,672	4.280
330	103.43			
331	104.86			
332	106.31			
333	107.77			
334	109.25			
335	110.74			
336	112.24			
337	113.76			
338	115.30	238,358	914,787	3.814
339	116.86			
340	118.43			
341	120.02			

Temperature, Fahrenheit. t.	Pressure in lbs. per square inch at sea level. p.	Heat required to raise 1 lb. of Water from 32° to t°. Foot lbs. h.	Total heat of Evaporation. Foot lbs. H.	Volume of 1 lb. in cubic feet
342	121.63			
343	123.26			
344	124.89			
345	126.55			
346	128.23			
347	129.93	245,501	916,902	3.410
348	131.64			
349	133.37			
350	135.11			
351	136.87			
352	138.65			
353	140.45			
354	142.27			
355	144.10			
356	145.95	252,658	919,017	3.057
357	147.82			
358	149.72			
359	151.63			
360	153.56			
361	155.51			
362	157.48			
363	159.46			
364	161.47			
365	163.49	259,829	921,132	2.748
366	165.53			
367	167.60			
368	169.69			
369	171.79			
370	173.92			
371	176.07			
372	178.23			
373	180.42			
374	182.63	267,013	923,247	2.476
375	184.86			
376	187.11			
377	189.38			
378	191.67			
379	193.98			
380	196.32			
381	198.68			
382	201.06			
383	203.46	274,198	925,362	2.236
384	205.88			

Temperature, Fahrenheit. t.	Pressure in lbs. per square inch at sea level. p.	Heat required to raise 1 lb. of Water from 32° to t°. Foot lbs. h.	Total heat of Evaporation. Foot lbs. H.	Volume of 1 lb. in cubic feet
385	208.33			
386	210.79			
387	213.28			
388	215.79			
389	218.32			
390	220.88			
391	223.46			
392	226.07	281,394	927,478	2.025
393	228.70			
394	231.35			
395	234.02			
396	236.72			
397	239.44			
398	242.19			
399	244.96			
400	247.75			
401	250.57	288,634	929,593	1.838

In order to reduce the figures contained in columns 2 and 3 of the above table to thermal units, it is only necessary to divide by 772, the number of foot pounds corresponding to one thermal unit.

To obtain the latent heat for any temperature we have only to subtract the figures in column 3 from the corresponding figures in column 4.

To find the pressure for any temperature intermediate to those given in the table, as for example 310°.25.

Find by the table the difference between the pressures for 310° and 311°. This is 1.14. Multiplying 1.14 by .25, and adding the result to the pressure corresponding to 310°, we get 77.94 + .285 = 78.225 lbs. per square inch as the pressure corresponding to 310°.25.

To find the temperature corresponding to 100 lbs. per square inch from the tables we find—

Pressure corresponding to 328° = 100.62 lbs. per square inch.

“ “ 327° = 99.23

Difference = 1.39

Now, if for 1.39 lbs. difference of pressure the difference of temperature is 1°, what will be the difference of temperature for .62 lb. difference of pressure?

$$1.39 : 1 : .62 : x.$$

$$\therefore x = \frac{.62}{1.39} = .446.$$

Then the temperature corresponding to 100 lbs. pressure is 328° - .446° = 327°.554.

Similarly to find the value of h. or H. for any temperature intermediate between those for which the values are given in the table. For example, find the total heat of evaporation of steam having the temperature 332°.

Total heat of evaporation corresponding to 338° = 914,787

“ “ “ 329° = 912,672

Diff. for 9° = 2,115

∴ Diff. for 1° = 235

Now 332° is 3 degrees above 329°. Therefore the total heat of evaporation for 332° = 912,672 + 3 × 235 = 913,377 foot lbs.

In a similar manner can be solved such a problem as the following. How much heat is required in order to raise the temperature of feed-water from that of the hot well 122° to that of the boiler 365°. The values of h. in this instance are taken from column 3.

This method of interpolation is only permissible because the values of h. and H. vary so slowly with the temperature. The method would not, for instance, be applicable to column 5.

TABLE II.
HYPERBOLIC LOGARITHMS.

The hyperbolic logarithm of a number is found by multiplying the common logarithm of the number by 2.30258.

Example:—The common logarithm of 7 is 0.8450980, which multiplied by 2.30258505 gives 1.9459100, the hyperbolic logarithm.

No.	Logarithm	No.	Logarithm	No.	Logarithm	No.	Logarithm
1.01	.0099503	1.26	.2311116	1.51	.4121095	1.76	.5653138
1.02	.0198026	1.27	.2390169	1.52	.4187103	1.77	.5709795
1.03	.0295588	1.28	.2468601	1.53	.4252676	1.78	.5766133
1.04	.0392207	1.29	.2546422	1.54	.4317825	1.79	.5822156
1.05	.0487902	1.30	.2623643	1.55	.4382549	1.80	.5877866
1.06	.0582690	1.31	.2700271	1.56	.4446858	1.81	.5933268
1.07	.0676586	1.32	.2776317	1.57	.4510756	1.82	.5988365
1.08	.0769610	1.33	.2851788	1.58	.4574249	1.83	.6043159
1.09	.0861777	1.34	.2926696	1.59	.4637339	1.84	.6097655
1.10	.0953102	1.35	.3001046	1.60	.4700036	1.85	.6151856
1.11	.1043600	1.36	.3074847	1.61	.4762341	1.86	.6205764
1.12	.1133286	1.37	.3148108	1.62	.4824261	1.87	.6259384
1.13	.1222175	1.38	.3220835	1.63	.4885801	1.88	.6312717
1.14	.1310284	1.39	.3293037	1.64	.4946961	1.89	.6365768
1.15	.1397618	1.40	.3364722	1.65	.5007752	1.90	.6418538
1.16	.1484200	1.41	.3435897	1.66	.5068176	1.91	.6471033
1.17	.1570038	1.42	.3506568	1.67	.5128237	1.92	.6523251
1.18	.1655144	1.43	.3576744	1.68	.5187938	1.93	.6575200
1.19	.1739534	1.44	.3646431	1.69	.5247285	1.94	.6626879
1.20	.1823215	1.45	.3715635	1.70	.5306282	1.95	.6678294
1.21	.1906204	1.46	.3784365	1.71	.5364933	1.96	.6729445
1.22	.1988508	1.47	.3852623	1.72	.5423242	1.97	.6780335
1.23	.2070141	1.48	.3920420	1.73	.5481214	1.98	.6830968
1.24	.2151113	1.49	.3987762	1.74	.5538850	1.99	.6881346
1.25	.2231435	1.50	.4054652	1.75	.5596157	2.00	.6931472

HYPERBOLIC LOGARITHMS—continued.

No.	Logarithm	No.	Logarithm	No.	Logarithm	No.	Logarithm
2.01	.6981347	2.36	.8586616	2.71	.9969486	3.06	1.1184148
2.02	.7030974	2.37	.8628899	2.72	1.0006318	3.07	1.1216775
2.03	.7080357	2.38	.8671004	2.73	1.0043015	3.08	1.1249295
2.04	.7129497	2.39	.8712933	2.74	1.0079579	3.09	1.1281710
2.05	.7178399	2.40	.8754686	2.75	1.0116009	3.10	1.1314021
2.06	.7227059	2.41	.8796266	2.76	1.0152306	3.11	1.1346227
2.07	.7275485	2.42	.8837675	2.77	1.0188473	3.12	1.1378330
2.08	.7323678	2.43	.8878912	2.78	1.0224509	3.13	1.1410332
2.09	.7371640	2.44	.8919980	2.79	1.0260415	3.14	1.1442227
2.10	.7419373	2.45	.8960881	2.80	1.0296193	3.15	1.1474024
2.11	.7466880	2.46	.9001613	2.81	1.0331844	3.16	1.1505720
2.12	.7514160	2.47	.9042181	2.82	1.0367368	3.17	1.1537315
2.13	.7561219	2.48	.9082585	2.83	1.0402766	3.18	1.1568811
2.14	.7608058	2.49	.9122826	2.84	1.0438040	3.19	1.1600209
2.15	.7654679	2.50	.9162907	2.85	1.0473189	3.20	1.1631508
2.16	.7701082	2.51	.9202827	2.86	1.0508215	3.21	1.1662708
2.17	.7747271	2.52	.9242589	2.87	1.0543120	3.22	1.1693813
2.18	.7793248	2.53	.9282193	2.88	1.0577902	3.23	1.1724821
2.19	.7839015	2.54	.9321640	2.89	1.0612564	3.24	1.1755733
2.20	.7884573	2.55	.9360934	2.90	1.0647107	3.25	1.1786549
2.21	.7929925	2.56	.9400072	2.91	1.0681531	3.26	1.1817271
2.22	.7975071	2.57	.9439058	2.92	1.0715836	3.27	1.1847899
2.23	.8020015	2.58	.9477893	2.93	1.0750024	3.28	1.1878434
2.24	.8064758	2.59	.9516578	2.94	1.0784095	3.29	1.1908875
2.25	.8109303	2.60	.9555113	2.95	1.0818051	3.30	1.1939224
2.26	.8153647	2.61	.9593502	2.96	1.0851892	3.31	1.1969481
2.27	.8197798	2.62	.9631743	2.97	1.0885619	3.32	1.1999647
2.28	.8241754	2.63	.9669838	2.98	1.0919233	3.33	1.2029722
2.29	.8285518	2.64	.9707789	2.99	1.0952733	3.34	1.2059707
2.30	.8329090	2.65	.9745596	3.00	1.0986124	3.35	1.2089603
2.31	.8372467	2.66	.9783260	3.01	1.1019400	3.36	1.2119409
2.32	.8415671	2.67	.9820784	3.02	1.1052568	3.37	1.2149127
2.33	.8458682	2.68	.9858167	3.03	1.1085626	3.38	1.2178757
2.34	.8501509	2.69	.9895411	3.04	1.1118575	3.39	1.2208299
2.35	.8544154	2.70	.9932518	3.05	1.1151415	3.40	1.2237754

HYPERBOLIC LOGARITHMS—continued.

No	Logarithm	No.	Logarithm	No.	Logarithm	No	Logarithm
3'41	1'2267122	3'76	1'3244189	4'11	1'4134230	4'46	1'4951487
3'42	1'2296405	3'77	1'3270749	4'12	1'4158531	4'47	1'4973883
3'43	1'2325605	3'78	1'3297240	4'13	1'4182774	4'48	1'4996230
3'44	1'2354714	3'79	1'3323660	4'14	1'4206957	4'49	1'5018527
3'45	1'2383742	3'80	1'3350010	4'15	1'4231083	4'50	1'5040773
3'46	1'2412685	3'81	1'3376291	4'16	1'4255150	4'51	1'5062971
3'47	1'2441545	3'82	1'3402504	4'17	1'4279161	4'52	1'5085119
3'48	1'2470322	3'83	1'3428648	4'18	1'4303112	4'53	1'5107219
3'49	1'2499017	3'84	1'3454723	4'19	1'4327007	4'54	1'5129269
3'50	1'2527629	3'85	1'3480731	4'20	1'4350845	4'55	1'5151272
3'51	1'2556160	3'86	1'3506671	4'21	1'4374626	4'56	1'5173226
3'52	1'2584609	3'87	1'3532544	4'22	1'4398351	4'57	1'5195132
3'53	1'2612978	3'88	1'3558351	4'23	1'4422020	4'58	1'5216990
3'54	1'2641266	3'89	1'3584091	4'24	1'4445632	4'59	1'5238800
3'55	1'2669475	3'90	1'3609765	4'25	1'4469189	4'60	1'5260563
3'56	1'2697605	3'91	1'3635373	4'26	1'4492691	4'61	1'5282278
3'57	1'2725655	3'92	1'3660916	4'27	1'4516138	4'62	1'5303947
3'58	1'2753627	3'93	1'3686395	4'28	1'4539530	4'63	1'5325568
3'59	1'2781521	3'94	1'3711807	4'29	1'4562867	4'64	1'5347143
3'60	1'2809338	3'95	1'3737156	4'30	1'4586149	4'65	1'5368672
3'61	1'2837077	3'96	1'3762440	4'31	1'4609379	4'66	1'5390154
3'62	1'2864740	3'97	1'3787661	4'32	1'4632553	4'67	1'5411590
3'63	1'2892326	3'98	1'3812818	4'33	1'4655675	4'68	1'5432981
3'64	1'2919836	3'99	1'3837912	4'34	1'4678743	4'69	1'5454325
3'65	1'2947271	4'00	1'3862943	4'35	1'4701758	4'70	1'5475625
3'66	1'2974631	4'01	1'3887912	4'36	1'4724720	4'71	1'5496879
3'67	1'3001916	4'02	1'3912818	4'37	1'4747630	4'72	1'5518087
3'68	1'3029127	4'03	1'3937763	4'38	1'4770487	4'73	1'5539252
3'69	1'3056264	4'04	1'3962446	4'39	1'4793292	4'74	1'5560371
3'70	1'3083328	4'05	1'3987168	4'40	1'4816045	4'75	1'5581446
3'71	1'3110318	4'06	1'4011829	4'41	1'4838746	4'76	1'5602476
3'72	1'3137236	4'07	1'4036429	4'42	1'4861396	4'77	1'5623462
3'73	1'3164082	4'08	1'4060969	4'43	1'4883995	4'78	1'5644405
3'74	1'3190856	4'09	1'4085449	4'44	1'4906543	4'79	1'5665304
3'75	1'3217559	4'10	1'4109869	4'45	1'4929040	4'80	1'5686159

HYPERBOLIC LOGARITHMS—continued.

No.	Logarithm	No.	Logarithm	No.	Logarithm	No.	Logarithm
4'81	1'5706971	5'16	1'6409365	5'51	1'7065646	5'86	1'7681496
4'82	1'5727739	5'17	1'6428726	5'52	1'7083778	5'87	1'7698546
4'83	1'5748464	5'18	1'6448050	5'53	1'7101878	5'88	1'7715567
4'84	1'5769147	5'19	1'6467336	5'54	1'7119944	5'89	1'7732559
4'85	1'5789787	5'20	1'6486586	5'55	1'7137979	5'90	1'7749523
4'86	1'5810384	5'21	1'6505798	5'56	1'7155981	5'91	1'7766458
4'87	1'5830939	5'22	1'6524974	5'57	1'7173950	5'92	1'7783364
4'88	1'5851452	5'23	1'6544112	5'58	1'7191887	5'93	1'7800242
4'89	1'5871923	5'24	1'6563214	5'59	1'7209792	5'94	1'7817091
4'90	1'5892352	5'25	1'6582280	5'60	1'7227655	5'95	1'7833912
4'91	1'5912739	5'26	1'6601310	5'61	1'7245507	5'96	1'7850704
4'92	1'5933085	5'27	1'6620303	5'62	1'7263316	5'97	1'7867469
4'93	1'5953389	5'28	1'6639260	5'63	1'7281094	5'98	1'7884205
4'94	1'5973653	5'29	1'6658182	5'64	1'7298840	5'99	1'7900914
4'95	1'5993875	5'30	1'6677068	5'65	1'7316555	6'00	1'7917595
4'96	1'6014057	5'31	1'6695918	5'66	1'7334238	6'01	1'7934247
4'97	1'6034198	5'32	1'6714733	5'67	1'7351891	6'02	1'7950872
4'98	1'6054298	5'33	1'6733512	5'68	1'7369512	6'03	1'7967470
4'99	1'6074358	5'34	1'6752256	5'69	1'7387102	6'04	1'7984040
5'00	1'6094379	5'35	1'6770965	5'70	1'7404661	6'05	1'8000582
5'01	1'6114359	5'36	1'6789639	5'71	1'7422189	6'06	1'8017098
5'02	1'6134300	5'37	1'6808278	5'72	1'7439687	6'07	1'8033586
5'03	1'6154200	5'38	1'6826882	5'73	1'7457155	6'08	1'8050047
5'04	1'6174060	5'39	1'6845453	5'74	1'7474591	6'09	1'8066481
5'05	1'6193882	5'40	1'6863989	5'75	1'7491998	6'10	1'8082887
5'06	1'6213664	5'41	1'6882491	5'76	1'7509374	6'11	1'8099267
5'07	1'6233408	5'42	1'6900958	5'77	1'7526720	6'12	1'8115621
5'08	1'6253112	5'43	1'6919391	5'78	1'7544036	6'13	1'8131947
5'09	1'6272778	5'44	1'6937790	5'79	1'7561323	6'14	1'8148247
5'10	1'6292405	5'45	1'6956155	5'80	1'7578579	6'15	1'8164520
5'11	1'6311994	5'46	1'6974487	5'81	1'7595805	6'16	1'8180767
5'12	1'6331544	5'47	1'6992786	5'82	1'7613002	6'17	1'8196988
5'13	1'6351057	5'48	1'7011051	5'83	1'7630170	6'18	1'8213182
5'14	1'6370530	5'49	1'7029282	5'84	1'7647308	6'19	1'8229351
5'15	1'6389967	5'50	1'7047481	5'85	1'7664416	6'20	1'8245493

HYPERBOLIC LOGARITHMS—continued.

No.	Logarithm	No.	Logarithm	No.	Logarithm	No.	Logarithm
6·21	1·8261608	6·56	1·8809906	6·91	1·9329696	7·26	1·9823798
6·22	1·8277699	6·57	1·8825138	6·92	1·9344157	7·27	1·9837562
6·23	1·8293763	6·58	1·8840347	6·93	1·9358598	7·28	1·9851308
6·24	1·8309801	6·59	1·8855533	6·94	1·9373017	7·29	1·9865035
6·25	1·8325814	6·60	1·8870697	6·95	1·9387416	7·30	1·9878743
6·26	1·8341801	6·61	1·8885837	6·96	1·9401794	7·31	1·9892432
6·27	1·8357763	6·62	1·8900954	6·97	1·9416152	7·32	1·9906103
6·28	1·8373699	6·63	1·8916048	6·98	1·9430489	7·33	1·9919754
6·29	1·8389610	6·64	1·8931119	6·99	1·9444805	7·34	1·9933387
6·30	1·8405496	6·65	1·8946168	7·00	1·9459100	7·35	1·9947002
6·31	1·8421356	6·66	1·8961194	7·01	1·9473376	7·36	1·9960599
6·32	1·8437191	6·67	1·8976198	7·02	1·9487632	7·37	1·9974177
6·33	1·8453002	6·68	1·8991179	7·03	1·9501866	7·38	1·9987736
6·34	1·8468787	6·69	1·9006138	7·04	1·9516080	7·39	2·0001278
6·35	1·8484547	6·70	1·9021075	7·05	1·9530275	7·40	2·0014800
6·36	1·8500283	6·71	1·9035989	7·06	1·9544449	7·41	2·0028305
6·37	1·8515994	6·72	1·9050881	7·07	1·9558604	7·42	2·0041790
6·38	1·8531680	6·73	1·9065751	7·08	1·9572739	7·43	2·0055258
6·39	1·8547342	6·74	1·9080600	7·09	1·9586853	7·44	2·0068708
6·40	1·8562979	6·75	1·9095425	7·10	1·9600947	7·45	2·0082140
6·41	1·8578592	6·76	1·9110228	7·11	1·9615022	7·46	2·0095553
6·42	1·8594181	6·77	1·9125011	7·12	1·9629077	7·47	2·0108949
6·43	1·8609745	6·78	1·9139771	7·13	1·9643112	7·48	2·0122327
6·44	1·8625285	6·79	1·9154509	7·14	1·9657127	7·49	2·0135687
6·45	1·8640801	6·80	1·9169226	7·15	1·9671123	7·50	2·0149030
6·46	1·8656293	6·81	1·9183921	7·16	1·9685099	7·51	2·0162354
6·47	1·8671761	6·82	1·9198594	7·17	1·9699056	7·52	2·0175661
6·48	1·8687205	6·83	1·9213247	7·18	1·9712993	7·53	2·0188950
6·49	1·8702625	6·84	1·9227877	7·19	1·9726911	7·54	2·0202221
6·50	1·8718021	6·85	1·9242486	7·20	1·9740810	7·55	2·0215475
6·51	1·8733394	6·86	1·9257074	7·21	1·9754689	7·56	2·0228711
6·52	1·8748743	6·87	1·9271641	7·22	1·9768549	7·57	2·0241929
6·53	1·8764069	6·88	1·9286186	7·23	1·9782390	7·58	2·0255131
6·54	1·8779371	6·89	1·9300710	7·24	1·9796212	7·59	2·0268315
6·55	1·8794650	6·90	1·9315214	7·25	1·9810014	7·60	2·0281482

HYPERBOLIC LOGARITHMS—continued.

No.	Logarithm	No.	Logarithm	No.	Logarithm	No.	Logarithm
7·61	2·0294631	7·96	2·0744290	8·31	2·1174596	8·66	2·1587147
7·62	2·0307763	7·97	2·0756845	8·32	2·1186622	8·67	2·1598687
7·63	2·0320878	7·98	2·0769384	8·33	2·1198634	8·68	2·1610215
7·64	2·0333976	7·99	2·0781907	8·34	2·1210632	8·69	2·1621729
7·65	2·0347056	8·00	2·0794414	8·35	2·1222615	8·70	2·1633230
7·66	2·0360119	8·01	2·0806907	8·36	2·1234584	8·71	2·1644718
7·67	2·0373166	8·02	2·0819384	8·37	2·1246539	8·72	2·1656192
7·68	2·0386195	8·03	2·0831845	8·38	2·1258479	8·73	2·1667653
7·69	2·0399207	8·04	2·0844290	8·39	2·1270405	8·74	2·1679101
7·70	2·0412203	8·05	2·0856720	8·40	2·1282317	8·75	2·1690536
7·71	2·0425181	8·06	2·0869135	8·41	2·1294214	8·76	2·1701959
7·72	2·0438143	8·07	2·0881534	8·42	2·1306098	8·77	2·1713367
7·73	2·0451088	8·08	2·0893918	8·43	2·1317967	8·78	2·1724763
7·74	2·0464016	8·09	2·0906287	8·44	2·1329822	8·79	2·1736146
7·75	2·0476928	8·10	2·0918640	8·45	2·1341664	8·80	2·1747517
7·76	2·0489823	8·11	2·0930984	8·46	2·1353491	8·81	2·1758874
7·77	2·0502701	8·12	2·0943306	8·47	2·1365304	8·82	2·1770218
7·78	2·0515563	8·13	2·0955613	8·48	2·1377104	8·83	2·1781550
7·79	2·0528408	8·14	2·0967905	8·49	2·1388889	8·84	2·1792868
7·80	2·0541237	8·15	2·0980182	8·50	2·1400661	8·85	2·1804174
7·81	2·0554049	8·16	2·0992444	8·51	2·1412410	8·86	2·1815467
7·82	2·0566845	8·17	2·1004691	8·52	2·1424163	8·87	2·1826747
7·83	2·0579624	8·18	2·1016923	8·53	2·1435893	8·88	2·1838015
7·84	2·0592388	8·19	2·1029140	8·54	2·1447609	8·89	2·1849270
7·85	2·0605135	8·20	2·1041341	8·55	2·1459312	8·90	2·1860512
7·86	2·0617866	8·21	2·1053529	8·56	2·1471001	8·91	2·1871742
7·87	2·0630580	8·22	2·1065702	8·57	2·1482676	8·92	2·1882959
7·88	2·0643278	8·23	2·1077861	8·58	2·1494339	8·93	2·1894163
7·89	2·0655961	8·24	2·1089998	8·59	2·1505987	8·94	2·1905355
7·90	2·0668627	8·25	2·1102128	8·60	2·1517622	8·95	2·1916535
7·91	2·0681277	8·26	2·1114243	8·61	2·1529243	8·96	2·1927702
7·92	2·0693911	8·27	2·1126343	8·62	2·1540851	8·97	2·1938856
7·93	2·0706530	8·28	2·1138428	8·63	2·1552445	8·98	2·1949998
7·94	2·0719132	8·29	2·1150499	8·64	2·1564026	8·99	2·1961128
7·95	2·0731719	8·30	2·1162555	8·65	2·1575593	9·00	2·1972245