

Table 6.4

LOGARITHMS OF THE GAMMA FUNCTION

n	$\log_{10} \Gamma(n)$	$\log_{10} \Gamma(n+\frac{1}{3})$	$\log_{10} \Gamma(n+\frac{1}{2})$	$\log_{10} \Gamma(n+\frac{2}{3})$	$f_2(n)$
1	0.00000 000	-0.04915 851	-0.05245 506	-0.04443 477	1.00000 000
2	0.00000 000	+0.07578 023	+0.12363 620	+0.17741 398	0.96027 923
3	0.30103 000	0.44375 702	0.52157 621	0.60338 271	0.94661 646
4	0.77815 125	0.96663 576	1.06564 43	1.16765 41	0.93972 921
5	1.38021 12	1.60345 79	1.71885 68	1.83666 09	0.93558 323
6	2.07918 12	2.33045 66	2.45921 95	2.58998 86	0.93281 466
7	2.85733 25	3.13208 89	3.27213 28	3.41389 73	0.93083 524
8	3.70243 05	3.99739 04	4.14719 41	4.29850 39	0.92934 980
9	4.60552 05	4.91820 91	5.07661 30	5.23635 60	0.92819 400
10	5.55976 30	5.88824 59	6.05433 66	6.22163 27	0.92726 910
11	6.55976 30	6.90248 63	7.07552 59	7.24966 15	0.92651 221
12	7.60115 57	7.95684 40	8.13622 37	8.31660 83	0.92588 137
13	8.68033 70	9.04792 45	9.23313 38	9.41927 06	0.92534 753
14	9.79428 03	10.17286 3	10.36346 8	10.55493 3	0.92488 990
15	10.94040 8	11.32921 0	11.52483 6	11.72126 5	0.92449 327
16	12.116500	12.514847	12.715167	12.916241	0.92414 619
17	13.320620	13.727922	13.932651	14.138090	0.92383 993
18	14.551069	14.966804	15.175689	15.385245	0.92356 769
19	15.806341	16.230045	16.442861	16.656311	0.92332 409
20	17.085095	17.516352	17.732896	17.950042	0.92310 485
21	18.386125	18.824561	19.044649	19.265313	0.92290 649
22	19.708344	20.153619	20.377088	20.601105	0.92272 615
23	21.050767	21.502573	21.729270	21.956492	0.92256 149
24	22.412494	22.870550	23.100338	23.330629	0.92241 055
25	23.792706	24.256751	24.489504	24.722740	0.92227 169
26	25.190646	25.660444	25.896045	26.132109	0.92214 350
27	26.605619	27.080949	27.319290	27.558078	0.92202 481
28	28.036983	28.517642	28.758623	29.000035	0.92191 460
29	29.484141	29.969940	30.213468	30.457412	0.92181 198
30	30.946539	31.437301	31.683290	31.929681	0.92171 621
31	32.423660	32.919221	33.167590	33.416347	0.92162 661
32	33.915022	34.415228	34.665900	34.916950	0.92154 262
33	35.420172	35.924878	36.177784	36.431055	0.92146 371
34	36.938686	37.447757	37.702829	37.958255	0.92138 944
35	38.470165	38.983473	39.240648	39.498167	0.92131 942
36	40.014233	40.531658	40.790876	41.050429	0.92125 329
37	41.570535	42.091963	42.353169	42.614701	0.92119 073
38	43.138737	43.664060	43.927200	44.190658	0.92113 146
39	44.718520	45.247636	45.512661	45.777995	0.92107 524
40	46.309585	46.842397	47.109258	47.376420	0.92102 182
41	47.911645	48.448061	48.716713	48.985659	0.92097 101
42	49.524429	50.064362	50.334761	50.605448	0.92092 262
43	51.147678	51.691044	51.963150	52.235536	0.92087 648
44	52.781147	53.327866	53.601639	53.875686	0.92083 244
45	54.424599	54.974597	55.249999	55.525670	0.92079 035
46	56.077812	56.631014	56.908011	57.185269	0.92075 010
47	57.740570	58.296908	58.575464	58.854276	0.92071 156
48	59.412668	59.972075	60.252157	60.532491	0.92067 462
49	61.093909	61.656322	61.937899	62.219723	0.92063 919
50	62.784105	63.349462	63.632504	63.915788	0.92060 518
51	64.483075	65.051318	65.335796	65.620510	0.92057 250
	$\log_{10} (n-1)!$	$\log_{10} (n-\frac{2}{3})!$	$\log_{10} (n-\frac{1}{2})!$	$\log_{10} (n-\frac{1}{3})!$	

$$\ln \Gamma(n) = \ln (n-1)! = (n-\frac{1}{2}) \ln n - n + f_2(n)$$

$$\ln 10 = 2.30258 509299$$

$\log_{10} \Gamma(n)$ compiled from E. S. Pearson, Table of the logarithms of the complete Γ -function, arguments 2 to 1200. Tracts for Computers No. VIII (Cambridge Univ. Press, Cambridge, England, 1922) (with permission).

LOGARITHMS OF THE GAMMA FUNCTION

Table 6.4

n	$\log_{10} \Gamma(n)$	$\log_{10} \Gamma(n + \frac{1}{3})$	$\log_{10} \Gamma(n + \frac{1}{2})$	$\log_{10} \Gamma(n + \frac{2}{3})$	$f_2(n)$
51	64.483075	65.051318	65.335796	65.620510	0.92057 250
52	66.190645	66.761717	67.047603	67.333720	0.92054 108
53	67.906648	68.480496	68.767762	69.055256	0.92051 084
54	69.630924	70.207494	70.496116	70.784961	0.92048 173
55	71.363318	71.942561	72.232512	72.522683	0.92045 367
56	73.103681	73.685548	73.976805	74.268279	0.92042 661
57	74.851869	75.436313	75.728854	76.021606	0.92040 051
58	76.607744	77.194720	77.488522	77.782531	0.92037 530
59	78.371172	78.960637	79.255677	79.550922	0.92035 095
60	80.142024	80.733936	81.030194	81.326654	0.92032 741
61	81.920175	82.514493	82.811950	83.109604	0.92030 464
62	83.705505	84.302190	84.600825	84.899655	0.92028 261
63	85.497896	86.096910	86.396705	86.696691	0.92026 127
64	87.297237	87.898542	88.199479	88.500604	0.92024 061
65	89.103417	89.706978	90.009038	90.311284	0.92022 057
66	90.916330	91.522113	91.825280	92.128629	0.92020 115
67	92.735874	93.343845	93.648101	93.952538	0.92018 231
68	94.561949	95.172075	95.477405	95.782913	0.92016 401
69	96.394458	97.006708	97.313096	97.619659	0.92014 625
70	98.233307	98.847650	99.155080	99.462684	0.92012 900
71	100.07841	100.69481	101.00327	101.31190	0.92011 223
72	101.92966	102.54810	102.85758	103.16722	0.92009 593
73	103.78700	104.40744	104.71791	105.02855	0.92008 008
74	105.65032	106.27274	106.58420	106.89582	0.92006 465
75	107.51955	108.14393	108.45636	108.76895	0.92004 964
76	109.39461	110.02091	110.33430	110.64785	0.92003 502
77	111.27543	111.90363	112.21797	112.53246	0.92002 078
78	113.16192	113.79200	114.10727	114.42269	0.92000 690
79	115.05401	115.68594	116.00214	116.31848	0.91999 338
80	116.95164	117.58540	117.90250	118.21976	0.91998 019
81	118.85473	119.49029	119.80830	120.12646	0.91996 733
82	120.76321	121.40056	121.71946	122.03850	0.91995 479
83	122.67703	123.31614	123.63591	123.95583	0.91994 254
84	124.59610	125.23696	125.55760	125.87838	0.91993 059
85	126.52038	127.16296	127.48445	127.80610	0.91991 892
86	128.44980	129.09407	129.41642	129.73891	0.91990 752
87	130.38430	131.03025	131.35344	131.67676	0.91989 638
88	132.32382	132.97143	133.29545	133.61959	0.91988 550
89	134.26830	134.91756	135.24239	135.56735	0.91987 486
90	136.21769	136.86857	137.19421	137.51999	0.91986 446
91	138.17194	138.82442	139.15086	139.47743	0.91985 428
92	140.13098	140.78505	141.11228	141.43964	0.91984 433
93	142.09477	142.75041	143.07842	143.40657	0.91983 459
94	144.06325	144.72044	145.04923	145.37815	0.91982 505
95	146.03638	146.69511	147.02467	147.35435	0.91981 572
96	148.01410	148.67435	149.00467	149.33511	0.91980 659
97	149.99637	150.65813	150.98920	151.32039	0.91979 764
98	151.98314	152.64639	152.97820	153.31013	0.91978 887
99	153.97437	154.63909	154.97164	155.30430	0.91978 028
100	155.97000	156.63619	156.96946	157.30285	0.91977 186
101	157.97000	158.63763	158.97163	159.30574	0.91976 361
	$\log_{10} (n-1)!$	$\log_{10} (n-\frac{2}{3})!$	$\log_{10} (n-\frac{1}{2})!$	$\log_{10} (n-\frac{1}{3})!$	$\left[\begin{smallmatrix} (-7)2 \\ 3 \end{smallmatrix} \right]$
	$\ln \Gamma(n) = \ln (n-1)! = (n-\frac{1}{2}) \ln n - n + f_2(n)$			$\ln 10 = 2.30258 509299$	