

GAMMA, DIGAMMA AND TRIGAMMA FUNCTIONS

Table 6.1

$x$	$\Gamma(x)$	$\ln \Gamma(x)$	$\psi(x)$	$\psi'(x)$	
1.000	1.00000 00000	0.00000 00000	-0.57721 56649	1.64493 40668	0.000
1.005	0.99713 85354	-0.00286 55666	-0.56902 09113	1.63299 41567	0.005
1.010	0.99432 58512	-0.00569 03079	-0.56088 54579	1.62121 35283	0.010
1.015	0.99156 12888	-0.00847 45187	-0.55280 85156	1.60958 91824	0.015
1.020	0.98884 42033	-0.01121 84893	-0.54478 93105	1.59811 81919	0.020
1.025	0.98617 39633	-0.01392 25067	-0.53682 70828	1.58679 76993	0.025
1.030	0.98354 99506	-0.01658 68539	-0.52892 10873	1.57562 49154	0.030
1.035	0.98097 15606	-0.01921 18101	-0.52107 05921	1.56459 71163	0.035
1.040	0.97843 82009	-0.02179 76511	-0.51327 48789	1.55371 16426	0.040
1.045	0.97594 92919	-0.02434 46490	-0.50553 32428	1.54296 58968	0.045
1.050	0.97350 42656	-0.02685 30725	-0.49784 49913	1.53235 73421	0.050
1.055	0.97110 25663	-0.02932 31868	-0.49020 94448	1.52188 35001	0.055
1.060	0.96874 36495	-0.03175 52537	-0.48262 59358	1.51154 19500	0.060
1.065	0.96642 69823	-0.03414 95318	-0.47509 38088	1.50133 03259	0.065
1.070	0.96415 20425	-0.03650 62763	-0.46761 24199	1.49124 63164	0.070
1.075	0.96191 83189	-0.03882 57395	-0.46018 11367	1.48128 76622	0.075
1.080	0.95972 53107	-0.04110 81702	-0.45279 93380	1.47145 21556	0.080
1.085	0.95757 25273	-0.04335 38143	-0.44546 64135	1.46173 76377	0.085
1.090	0.95545 94882	-0.04556 29148	-0.43818 17635	1.45214 19988	0.090
1.095	0.95338 57227	-0.04773 57114	-0.43094 47988	1.44266 31755	0.095
1.100	0.95135 07699	-0.04987 24413	-0.42375 49404	1.43329 91508	0.100
1.105	0.94935 41778	-0.05197 33384	-0.41661 16193	1.42404 79514	0.105
1.110	0.94739 55040	-0.05403 86341	-0.40951 42761	1.41490 76482	0.110
1.115	0.94547 43149	-0.05606 85568	-0.40246 23611	1.40587 63535	0.115
1.120	0.94359 01856	-0.05806 33325	-0.39545 53339	1.39695 22213	0.120
1.125	0.94174 26997	-0.06002 31841	-0.38849 26633	1.38813 34449	0.125
1.130	0.93993 14497	-0.06194 83322	-0.38157 38268	1.37941 82573	0.130
1.135	0.93815 60356	-0.06383 89946	-0.37469 83110	1.37080 49288	0.135
1.140	0.93641 60657	-0.06569 53867	-0.36786 56106	1.36229 17670	0.140
1.145	0.93471 11562	-0.06751 77212	-0.36107 52291	1.35387 71152	0.145
1.150	0.93304 09311	-0.06930 62087	-0.35432 66780	1.34555 93520	0.150
1.155	0.93140 50217	-0.07106 10569	-0.34761 94768	1.33733 68900	0.155
1.160	0.92980 30666	-0.07278 24716	-0.34095 31528	1.32920 81752	0.160
1.165	0.92823 47120	-0.07447 06558	-0.33432 72413	1.32117 16859	0.165
1.170	0.92669 96106	-0.07612 58106	-0.32774 12847	1.31322 59322	0.170
1.175	0.92519 74225	-0.07774 81345	-0.32119 48332	1.30536 94548	0.175
1.180	0.92372 78143	-0.07933 78240	-0.31468 74438	1.29760 08248	0.180
1.185	0.92229 04591	-0.08089 50733	-0.30821 86809	1.28991 86421	0.185
1.190	0.92088 50371	-0.08242 00745	-0.30178 81156	1.28232 15358	0.190
1.195	0.91951 12341	-0.08391 30174	-0.29539 53259	1.27480 81622	0.195
1.200	0.91816 87424	-0.08537 40900	-0.28903 98966	1.26737 72054	0.200
1.205	0.91685 72606	-0.08680 34780	-0.28272 14187	1.26002 73755	0.205
1.210	0.91557 64930	-0.08820 13651	-0.27643 94897	1.25275 74090	0.210
1.215	0.91432 61500	-0.08956 79331	-0.27019 37135	1.24556 60671	0.215
1.220	0.91310 59475	-0.09090 33619	-0.26398 37000	1.23845 21360	0.220
1.225	0.91191 56071	-0.09220 78291	-0.25780 90652	1.23141 44258	0.225
1.230	0.91075 48564	-0.09348 15108	-0.25166 94307	1.22445 17702	0.230
1.235	0.90962 34274	-0.09472 45811	-0.24556 44243	1.21756 30254	0.235
1.240	0.90852 10583	-0.09593 72122	-0.23949 36791	1.21074 70707	0.240
1.245	0.90744 74922	-0.09711 95744	-0.23345 68341	1.20400 28063	0.245
1.250	0.90640 24771	-0.09827 18364	-0.22745 35334	1.19732 91545	0.250
	$y!$	$\ln y!$	$\frac{d}{dy} \ln y!$	$\frac{d^2}{dy^2} \ln y!$	$y$
	$\left[ \begin{matrix} (-6)6 \\ 5 \end{matrix} \right]$	$\left[ \begin{matrix} (-6)5 \\ 5 \end{matrix} \right]$	$\left[ \begin{matrix} (-6)7 \\ 5 \end{matrix} \right]$	$\left[ \begin{matrix} (-5)2 \\ 5 \end{matrix} \right]$	

For  $x > 2$  see Examples 1-4.

$$\log_{10} e = 0.43429 44819$$

Compiled from H. T. Davis, Tables of the higher mathematical functions, 2 vols. (Principia Press, Bloomington, Ind., 1933, 1935) (with permission). Known error has been corrected.