

# **Estatística**

## **Tabelas**

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# Índice

Índice.....	2
Funções de Probabilidade de Distribuições Binomiais $B(N, p)$ .....	3
Funções de Probabilidade de Distribuições de Poisson ( $\lambda$ ) .....	11
Probabilidades Associadas à Cauda Direita da Distribuição Normal Padronizada ...	14
Valores Críticos da Distribuição Normal Padronizada.....	15
Valores Críticos de Distribuições $t_{GL}$ .....	16
Valores Críticos de Distribuições $\chi^2_{GL}$ .....	17
Valores Críticos de Distribuições $F_{GL1,GL2}$ .....	18
Números Aleatórios (Independentes e Equiprováveis) .....	27

## Funções de Probabilidade de Distribuições Binomiais $B(N, p)$

Os valores tabelados correspondem às probabilidades

$$p(y) = C_y^N \cdot p^y \cdot (1-p)^{N-y}.$$

**N = 2**

y	p	0.05 (0.95)	0.10 (0.90)	0.15 (0.85)	0.20 (0.80)	0.25 (0.75)	0.30 (0.70)	0.35 (0.65)	0.40 (0.60)	0.45 (0.55)	0.50 (0.50)
0 (2)		.9025	.8100	.7225	.6400	.5625	.4900	.4225	.3600	.3025	.2500
1 (1)		.0950	.1800	.2550	.3200	.3750	.4200	.4550	.4800	.4950	.5000
2 (0)		.0025	.0100	.0225	.0400	.0625	.0900	.1225	.1600	.2025	.2500

**N = 3**

y	p	0.05 (0.95)	0.10 (0.90)	0.15 (0.85)	0.20 (0.80)	0.25 (0.75)	0.30 (0.70)	0.35 (0.65)	0.40 (0.60)	0.45 (0.55)	0.50 (0.50)
0 (3)		.8574	.7290	.6141	.5120	.4219	.3430	.2746	.2160	.1664	.1250
1 (2)		.1354	.2430	.3251	.3840	.4219	.4410	.4436	.4320	.4084	.3750
2 (1)		.0071	.0270	.0574	.0960	.1406	.1890	.2389	.2880	.3341	.3750
3 (0)		.0001	.0010	.0034	.0080	.0156	.0270	.0429	.0640	.0911	.1250

**N = 4**

y	p	0.05 (0.95)	0.10 (0.90)	0.15 (0.85)	0.20 (0.80)	0.25 (0.75)	0.30 (0.70)	0.35 (0.65)	0.40 (0.60)	0.45 (0.55)	0.50 (0.50)
0 (4)		.8145	.6561	.5220	.4096	.3164	.2401	.1785	.1296	.0915	.0625
1 (3)		.1715	.2916	.3685	.4096	.4219	.4116	.3845	.3456	.2995	.2500
2 (2)		.0135	.0486	.0975	.1536	.2109	.2646	.3105	.3456	.3675	.3750
3 (1)		.0005	.0036	.0115	.0256	.0469	.0756	.1115	.1536	.2005	.2500
4 (0)		.0000	.0001	.0005	.0016	.0039	.0081	.0150	.0256	.0410	.0625

**N = 5**

y	p	0.05 (0.95)	0.10 (0.90)	0.15 (0.85)	0.20 (0.80)	0.25 (0.75)	0.30 (0.70)	0.35 (0.65)	0.40 (0.60)	0.45 (0.55)	0.50 (0.50)
0 (5)		.7738	.5905	.4437	.3277	.2373	.1681	.1160	.0778	.0503	.0313
1 (4)		.2036	.3281	.3915	.4096	.3955	.3602	.3124	.2592	.2059	.1563
2 (3)		.0214	.0729	.1382	.2048	.2637	.3087	.3364	.3456	.3369	.3125
3 (2)		.0011	.0081	.0244	.0512	.0879	.1323	.1811	.2304	.2757	.3125
4 (1)		.0000	.0005	.0022	.0064	.0146	.0284	.0488	.0768	.1128	.1563
5 (0)		.0000	.0000	.0001	.0003	.0010	.0024	.0053	.0102	.0185	.0313

Funções de Probabilidade de Distribuições Binomiais  $B(N, p)$

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**N = 6**

y	p (0.95)	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
		(0.90)	(0.85)	(0.80)	(0.75)	(0.70)	(0.65)	(0.60)	(0.55)	(0.50)	
0 (6)	.7351	.5314	.3771	.2621	.1780	.1176	.0754	.0467	.0277	.0156	
1 (5)	.2321	.3543	.3993	.3932	.3560	.3025	.2437	.1866	.1359	.0938	
2 (4)	.0305	.0984	.1762	.2458	.2966	.3241	.3280	.3110	.2780	.2344	
3 (3)	.0021	.0146	.0415	.0819	.1318	.1852	.2355	.2765	.3032	.3125	
4 (2)	.0001	.0012	.0055	.0154	.0330	.0595	.0951	.1382	.1861	.2344	
5 (1)	.0000	.0001	.0004	.0015	.0044	.0102	.0205	.0369	.0609	.0938	
6 (0)	.0000	.0000	.0000	.0001	.0002	.0007	.0018	.0041	.0083	.0156	

**N = 8**

y	p (0.95)	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
		(0.90)	(0.85)	(0.80)	(0.75)	(0.70)	(0.65)	(0.60)	(0.55)	(0.50)	
0 (8)	.6634	.4305	.2725	.1678	.1001	.0576	.0319	.0168	.0084	.0039	
1 (7)	.2793	.3826	.3847	.3355	.2670	.1977	.1373	.0896	.0548	.0313	
2 (6)	.0515	.1488	.2376	.2936	.3115	.2965	.2587	.2090	.1569	.1094	
3 (5)	.0054	.0331	.0839	.1468	.2076	.2541	.2786	.2787	.2568	.2188	
4 (4)	.0004	.0046	.0185	.0459	.0865	.1361	.1875	.2322	.2627	.2734	
5 (3)	.0000	.0004	.0026	.0092	.0231	.0467	.0808	.1239	.1719	.2188	
6 (2)	.0000	.0000	.0002	.0011	.0038	.0100	.0217	.0413	.0703	.1094	
7 (1)	.0000	.0000	.0000	.0001	.0004	.0012	.0033	.0079	.0164	.0313	
8 (0)	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0007	.0017	.0039	

**N = 9**

y	p (0.95)	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
		(0.90)	(0.85)	(0.80)	(0.75)	(0.70)	(0.65)	(0.60)	(0.55)	(0.50)	
0 (9)	.6302	.3874	.2316	.1342	.0751	.0404	.0207	.0101	.0046	.0020	
1 (8)	.2985	.3874	.3679	.3020	.2253	.1556	.1004	.0605	.0339	.0176	
2 (7)	.0629	.1722	.2597	.3020	.3003	.2668	.2162	.1612	.1110	.0703	
3 (6)	.0077	.0446	.1069	.1762	.2336	.2668	.2716	.2508	.2119	.1641	
4 (5)	.0006	.0074	.0283	.0661	.1168	.1715	.2194	.2508	.2600	.2461	
5 (4)	.0000	.0008	.0050	.0165	.0389	.0735	.1181	.1672	.2128	.2461	
6 (3)	.0000	.0001	.0006	.0028	.0087	.0210	.0424	.0743	.1160	.1641	
7 (2)	.0000	.0000	.0000	.0003	.0012	.0039	.0098	.0212	.0407	.0703	
8 (1)	.0000	.0000	.0000	.0000	.0001	.0004	.0013	.0035	.0083	.0176	
9 (0)	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0003	.0008	.0020	

**N = 10**

y	p (0.95)	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
		(0.90)	(0.85)	(0.80)	(0.75)	(0.70)	(0.65)	(0.60)	(0.55)	(0.50)	
0 (10)	.5987	.3487	.1969	.1074	.0563	.0282	.0135	.0060	.0025	.0010	
1 (9)	.3151	.3874	.3474	.2684	.1877	.1211	.0725	.0403	.0207	.0098	
2 (8)	.0746	.1937	.2759	.3020	.2816	.2335	.1757	.1209	.0763	.0439	
3 (7)	.0105	.0574	.1298	.2013	.2503	.2668	.2522	.2150	.1665	.1172	
4 (6)	.0010	.0112	.0401	.0881	.1460	.2001	.2377	.2508	.2384	.2051	
5 (5)	.0001	.0015	.0085	.0264	.0584	.1029	.1536	.2007	.2340	.2461	
6 (4)	.0000	.0001	.0012	.0055	.0162	.0368	.0689	.1115	.1596	.2051	
7 (3)	.0000	.0000	.0001	.0008	.0031	.0090	.0212	.0425	.0746	.1172	
8 (2)	.0000	.0000	.0000	.0001	.0004	.0014	.0043	.0106	.0229	.0439	
9 (1)	.0000	.0000	.0000	.0000	.0000	.0001	.0005	.0016	.0042	.0098	
10 (0)	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0003	.0010		

**N = 12**

y	p (0.95)	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
		(0.90)	(0.85)	(0.80)	(0.75)	(0.70)	(0.65)	(0.60)	(0.55)	(0.50)	
0 (12)	.5404	.2824	.1422	.0687	.0317	.0138	.0057	.0022	.0008	.0002	
1 (11)	.3413	.3766	.3012	.2062	.1267	.0712	.0368	.0174	.0075	.0029	
2 (10)	.0988	.2301	.2924	.2835	.2323	.1678	.1088	.0639	.0339	.0161	
3 (9)	.0173	.0852	.1720	.2362	.2581	.2397	.1954	.1419	.0923	.0537	
4 (8)	.0021	.0213	.0683	.1329	.1936	.2311	.2367	.2128	.1700	.1208	
5 (7)	.0002	.0038	.0193	.0532	.1032	.1585	.2039	.2270	.2225	.1934	
6 (6)	.0000	.0005	.0040	.0155	.0401	.0792	.1281	.1766	.2124	.2256	
7 (5)	.0000	.0000	.0006	.0033	.0115	.0291	.0591	.1009	.1489	.1934	
8 (4)	.0000	.0000	.0001	.0005	.0024	.0078	.0199	.0420	.0762	.1208	
9 (3)	.0000	.0000	.0000	.0001	.0004	.0015	.0048	.0125	.0277	.0537	
10 (2)	.0000	.0000	.0000	.0000	.0000	.0002	.0008	.0025	.0068	.0161	
11 (1)	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0003	.0010	.0029	
12 (0)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002		

**N = 14**

y	p	0.05 (0.95)	0.10 (0.90)	0.15 (0.85)	0.20 (0.80)	0.25 (0.75)	0.30 (0.70)	0.35 (0.65)	0.40 (0.60)	0.45 (0.55)	0.50 (0.50)
0 (14)		.4877	.2288	.1028	.0440	.0178	.0068	.0024	.0008	.0002	.0001
1 (13)		.3593	.3559	.2539	.1539	.0832	.0407	.0181	.0073	.0027	.0009
2 (12)		.1229	.2570	.2912	.2501	.1802	.1134	.0634	.0317	.0141	.0056
3 (11)		.0259	.1142	.2056	.2501	.2402	.1943	.1366	.0845	.0462	.0222
4 (10)		.0037	.0349	.0998	.1720	.2202	.2290	.2022	.1549	.1040	.0611
5 (9)		.0004	.0078	.0352	.0860	.1468	.1963	.2178	.2066	.1701	.1222
6 (8)		.0000	.0013	.0093	.0322	.0734	.1262	.1759	.2066	.2088	.1833
7 (7)		.0000	.0002	.0019	.0092	.0280	.0618	.1082	.1574	.1952	.2095
8 (6)		.0000	.0000	.0003	.0020	.0082	.0232	.0510	.0918	.1398	.1833
9 (5)		.0000	.0000	.0000	.0003	.0018	.0066	.0183	.0408	.0762	.1222
10 (4)		.0000	.0000	.0000	.0000	.0003	.0014	.0049	.0136	.0312	.0611
11 (3)		.0000	.0000	.0000	.0000	.0000	.0002	.0010	.0033	.0093	.0222
12 (2)		.0000	.0000	.0000	.0000	.0000	.0001	.0005	.0019	.0056	
13 (1)		.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0009	
14 (0)		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	

**N = 16**

y	p	0.05 (0.95)	0.10 (0.90)	0.15 (0.85)	0.20 (0.80)	0.25 (0.75)	0.30 (0.70)	0.35 (0.65)	0.40 (0.60)	0.45 (0.55)	0.50 (0.50)
0 (16)		.4401	.1853	.0743	.0281	.0100	.0033	.0010	.0003	.0001	.0000
1 (15)		.3706	.3294	.2097	.1126	.0535	.0228	.0087	.0030	.0009	.0002
2 (14)		.1463	.2745	.2775	.2111	.1336	.0732	.0353	.0150	.0056	.0018
3 (13)		.0359	.1423	.2285	.2463	.2079	.1465	.0888	.0468	.0215	.0085
4 (12)		.0061	.0514	.1311	.2001	.2252	.2040	.1553	.1014	.0572	.0278
5 (11)		.0008	.0137	.0555	.1201	.1802	.2099	.2008	.1623	.1123	.0667
6 (10)		.0001	.0028	.0180	.0550	.1101	.1649	.1982	.1983	.1684	.1222
7 (9)		.0000	.0004	.0045	.0197	.0524	.1010	.1524	.1889	.1969	.1746
8 (8)		.0000	.0001	.0009	.0055	.0197	.0487	.0923	.1417	.1812	.1964
9 (7)		.0000	.0000	.0001	.0012	.0058	.0185	.0442	.0840	.1318	.1746
10 (6)		.0000	.0000	.0000	.0002	.0014	.0056	.0167	.0392	.0755	.1222
11 (5)		.0000	.0000	.0000	.0000	.0002	.0013	.0049	.0142	.0337	.0667
12 (4)		.0000	.0000	.0000	.0000	.0000	.0002	.0011	.0040	.0115	.0278
13 (3)		.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0008	.0029	.0085
14 (2)		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0005	.0018
15 (1)		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002	

**N = 18**

y	p	0.05 (0.95)	0.10 (0.90)	0.15 (0.85)	0.20 (0.80)	0.25 (0.75)	0.30 (0.70)	0.35 (0.65)	0.40 (0.60)	0.45 (0.55)	0.50 (0.50)
0 (18)		.3972	.1501	.0536	.0180	.0056	.0016	.0004	.0001	.0000	.0000
1 (17)		.3763	.3002	.1704	.0811	.0338	.0126	.0042	.0012	.0003	.0001
2 (16)		.1683	.2835	.2556	.1723	.0958	.0458	.0190	.0069	.0022	.0006
3 (15)		.0473	.1680	.2406	.2297	.1704	.1046	.0547	.0246	.0095	.0031
4 (14)		.0093	.0700	.1592	.2153	.2130	.1681	.1104	.0614	.0291	.0117
5 (13)		.0014	.0218	.0787	.1507	.1988	.2017	.1664	.1146	.0666	.0327
6 (12)		.0002	.0052	.0301	.0816	.1436	.1873	.1941	.1655	.1181	.0708
7 (11)		.0000	.0010	.0091	.0350	.0820	.1376	.1792	.1892	.1657	.1214
8 (10)		.0000	.0002	.0022	.0120	.0376	.0811	.1327	.1734	.1864	.1669
9 (9)		.0000	.0000	.0004	.0033	.0139	.0386	.0794	.1284	.1694	.1855
10 (8)		.0000	.0000	.0001	.0008	.0042	.0149	.0385	.0771	.1248	.1669
11 (7)		.0000	.0000	.0000	.0001	.0010	.0046	.0151	.0374	.0742	.1214
12 (6)		.0000	.0000	.0000	.0000	.0002	.0012	.0047	.0145	.0354	.0708
13 (5)		.0000	.0000	.0000	.0000	.0000	.0002	.0012	.0045	.0134	.0327
14 (4)		.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0011	.0039	.0117
15 (3)		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0009	.0031
16 (2)		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0006
17 (1)		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001

**N = 20**

y	p	0.05 (0.95)	0.10 (0.90)	0.15 (0.85)	0.20 (0.80)	0.25 (0.75)	0.30 (0.70)	0.35 (0.65)	0.40 (0.60)	0.45 (0.55)	0.50 (0.50)
0 (20)		.3585	.1216	.0388	.0115	.0032	.0008	.0002	.0000	.0000	.0000
1 (19)		.3774	.2702	.1368	.0576	.0211	.0068	.0020	.0005	.0001	.0000
2 (18)		.1887	.2852	.2293	.1369	.0669	.0278	.0100	.0031	.0008	.0002
3 (17)		.0596	.1901	.2428	.2054	.1339	.0716	.0323	.0123	.0040	.0011
4 (16)		.0133	.0898	.1821	.2182	.1897	.1304	.0738	.0350	.0139	.0046
5 (15)		.0022	.0319	.1028	.1746	.2023	.1789	.1272	.0746	.0365	.0148
6 (14)		.0003	.0089	.0454	.1091	.1686	.1916	.1712	.1244	.0746	.0370
7 (13)		.0000	.0020	.0160	.0545	.1124	.1643	.1844	.1659	.1221	.0739
8 (12)		.0000	.0004	.0046	.0222	.0609	.1144	.1614	.1797	.1623	.1201
9 (11)		.0000	.0001	.0011	.0074	.0271	.0654	.1158	.1597	.1771	.1602
10 (10)		.0000	.0000	.0002	.0020	.0099	.0308	.0686	.1171	.1593	.1762
11 (9)		.0000	.0000	.0000	.0005	.0030	.0120	.0336	.0710	.1185	.1602
12 (8)		.0000	.0000	.0000	.0001	.0008	.0039	.0136	.0355	.0727	.1201
13 (7)		.0000	.0000	.0000	.0000	.0002	.0010	.0045	.0146	.0366	.0739
14 (6)		.0000	.0000	.0000	.0000	.0000	.0002	.0012	.0049	.0150	.0370
15 (5)		.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0013	.0049	.0148
16 (4)		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0013	.0046
17 (3)		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0011
18 (2)		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002

**N = 50**

y	p (0.95)	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
		(0.90)	(0.85)	(0.80)	(0.75)	(0.70)	(0.65)	(0.60)	(0.55)	(0.50)	
0 (50)	.0769	.0052	.0003	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1 (49)	.2025	.0286	.0026	.0002	.0000	.0000	.0000	.0000	.0000	.0000	.0000
2 (48)	.2611	.0779	.0113	.0011	.0001	.0000	.0000	.0000	.0000	.0000	.0000
3 (47)	.2199	.1386	.0319	.0044	.0004	.0000	.0000	.0000	.0000	.0000	.0000
4 (46)	.1360	.1809	.0661	.0128	.0016	.0001	.0000	.0000	.0000	.0000	.0000
5 (45)	.0658	.1849	.1072	.0295	.0049	.0006	.0000	.0000	.0000	.0000	.0000
6 (44)	.0260	.1541	.1419	.0554	.0123	.0018	.0002	.0000	.0000	.0000	.0000
7 (43)	.0086	.1076	.1575	.0870	.0259	.0048	.0006	.0000	.0000	.0000	.0000
8 (42)	.0024	.0643	.1493	.1169	.0463	.0110	.0017	.0002	.0000	.0000	.0000
9 (41)	.0006	.0333	.1230	.1364	.0721	.0220	.0042	.0005	.0000	.0000	.0000
10 (40)	.0001	.0152	.0890	.1398	.0985	.0386	.0093	.0014	.0001	.0000	
11 (39)	.0000	.0061	.0571	.1271	.1194	.0602	.0182	.0035	.0004	.0000	
12 (38)	.0000	.0022	.0328	.1033	.1294	.0838	.0319	.0076	.0011	.0001	
13 (37)	.0000	.0007	.0169	.0755	.1261	.1050	.0502	.0147	.0027	.0003	
14 (36)	.0000	.0002	.0079	.0499	.1110	.1189	.0714	.0260	.0059	.0008	
15 (35)	.0000	.0001	.0033	.0299	.0888	.1223	.0923	.0415	.0116	.0020	
16 (34)	.0000	.0000	.0013	.0164	.0648	.1147	.1088	.0606	.0207	.0044	
17 (33)	.0000	.0000	.0005	.0082	.0432	.0983	.1171	.0808	.0339	.0087	
18 (32)	.0000	.0000	.0001	.0037	.0264	.0772	.1156	.0987	.0508	.0160	
19 (31)	.0000	.0000	.0000	.0016	.0148	.0558	.1048	.1109	.0700	.0270	
20 (30)	.0000	.0000	.0000	.0006	.0077	.0370	.0875	.1146	.0888	.0419	
21 (29)	.0000	.0000	.0000	.0002	.0036	.0227	.0673	.1091	.1038	.0598	
22 (28)	.0000	.0000	.0000	.0001	.0016	.0128	.0478	.0959	.1119	.0788	
23 (27)	.0000	.0000	.0000	.0000	.0006	.0067	.0313	.0778	.1115	.0960	
24 (26)	.0000	.0000	.0000	.0000	.0002	.0032	.0190	.0584	.1026	.1080	
25 (25)	.0000	.0000	.0000	.0000	.0001	.0014	.0106	.0405	.0873	.1123	
26 (24)	.0000	.0000	.0000	.0000	.0000	.0006	.0055	.0259	.0687	.1080	
27 (23)	.0000	.0000	.0000	.0000	.0000	.0002	.0026	.0154	.0500	.0960	
28 (22)	.0000	.0000	.0000	.0000	.0000	.0001	.0012	.0084	.0336	.0788	
29 (21)	.0000	.0000	.0000	.0000	.0000	.0000	.0005	.0043	.0208	.0598	
30 (20)	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0020	.0119	.0419	
31 (19)	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0009	.0063	.0270	
32 (18)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0031	.0160	
33 (17)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0014	.0087	
34 (16)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0006	.0044	
35 (15)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0020	
36 (14)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0008	
37 (13)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	
38 (12)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	

**N = 100**

y	p	0.05 (0.95)	0.10 (0.90)	0.15 (0.85)	0.20 (0.80)	0.25 (0.75)	0.30 (0.70)	0.35 (0.65)	0.40 (0.60)	0.45 (0.55)	0.50 (0.50)
0 (100)		.0059	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1 (99)		.0312	.0003	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
2 (98)		.0812	.0016	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
3 (97)		.1396	.0059	.0001	.0000	.0000	.0000	.0000	.0000	.0000	.0000
4 (96)		.1781	.0159	.0003	.0000	.0000	.0000	.0000	.0000	.0000	.0000
5 (95)		.1800	.0339	.0011	.0000	.0000	.0000	.0000	.0000	.0000	.0000
6 (94)		.1500	.0596	.0031	.0001	.0000	.0000	.0000	.0000	.0000	.0000
7 (93)		.1060	.0889	.0075	.0002	.0000	.0000	.0000	.0000	.0000	.0000
8 (92)		.0649	.1148	.0153	.0006	.0000	.0000	.0000	.0000	.0000	.0000
9 (91)		.0349	.1304	.0276	.0015	.0000	.0000	.0000	.0000	.0000	.0000
10 (90)		.0167	.1319	.0444	.0034	.0001	.0000	.0000	.0000	.0000	.0000
11 (89)		.0072	.1199	.0640	.0069	.0003	.0000	.0000	.0000	.0000	.0000
12 (88)		.0028	.0988	.0838	.0128	.0006	.0000	.0000	.0000	.0000	.0000
13 (87)		.0010	.0743	.1001	.0216	.0014	.0000	.0000	.0000	.0000	.0000
14 (86)		.0003	.0513	.1098	.0335	.0030	.0001	.0000	.0000	.0000	.0000
15 (85)		.0001	.0327	.1111	.0481	.0057	.0002	.0000	.0000	.0000	.0000
16 (84)		.0000	.0193	.1041	.0638	.0100	.0006	.0000	.0000	.0000	.0000
17 (83)		.0000	.0106	.0908	.0789	.0165	.0012	.0000	.0000	.0000	.0000
18 (82)		.0000	.0054	.0739	.0909	.0254	.0024	.0001	.0000	.0000	.0000
19 (81)		.0000	.0026	.0563	.0981	.0365	.0044	.0002	.0000	.0000	.0000
20 (80)		.0000	.0012	.0402	.0993	.0493	.0076	.0004	.0000	.0000	.0000
21 (79)		.0000	.0005	.0270	.0946	.0626	.0124	.0009	.0000	.0000	.0000
22 (78)		.0000	.0002	.0171	.0849	.0749	.0190	.0017	.0001	.0000	.0000
23 (77)		.0000	.0001	.0103	.0720	.0847	.0277	.0032	.0001	.0000	.0000
24 (76)		.0000	.0000	.0058	.0577	.0906	.0380	.0055	.0003	.0000	.0000
25 (75)		.0000	.0000	.0031	.0439	.0918	.0496	.0090	.0006	.0000	.0000
26 (74)		.0000	.0000	.0016	.0316	.0883	.0613	.0140	.0012	.0000	.0000
27 (73)		.0000	.0000	.0008	.0217	.0806	.0720	.0207	.0022	.0001	.0000
28 (72)		.0000	.0000	.0004	.0141	.0701	.0804	.0290	.0038	.0002	.0000
29 (71)		.0000	.0000	.0002	.0088	.0580	.0856	.0388	.0063	.0004	.0000
30 (70)		.0000	.0000	.0001	.0052	.0458	.0868	.0494	.0100	.0008	.0000
31 (69)		.0000	.0000	.0000	.0029	.0344	.0840	.0601	.0151	.0014	.0001
32 (68)		.0000	.0000	.0000	.0016	.0248	.0776	.0698	.0217	.0025	.0001
33 (67)		.0000	.0000	.0000	.0008	.0170	.0685	.0774	.0297	.0043	.0002
34 (66)		.0000	.0000	.0000	.0004	.0112	.0579	.0821	.0391	.0069	.0005
35 (65)		.0000	.0000	.0000	.0002	.0070	.0468	.0834	.0491	.0106	.0009
36 (64)		.0000	.0000	.0000	.0001	.0042	.0362	.0811	.0591	.0157	.0016
37 (63)		.0000	.0000	.0000	.0000	.0024	.0268	.0755	.0682	.0222	.0027
38 (62)		.0000	.0000	.0000	.0000	.0013	.0191	.0674	.0754	.0301	.0045
39 (61)		.0000	.0000	.0000	.0000	.0007	.0130	.0577	.0799	.0391	.0071
40 (60)		.0000	.0000	.0000	.0000	.0004	.0085	.0474	.0812	.0488	.0108

**N = 100**

y	p (0.95) (0.90) (0.85) (0.80) (0.75) (0.70) (0.65) (0.60) (0.55) (0.50)	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
		.0000	.0000	.0000	.0000	.0002	.0053	.0373	.0792	.0584	.0159
41 (59)	.0000	.0000	.0000	.0000	.0001	.0032	.0282	.0742	.0672	.0223	
42 (58)	.0000	.0000	.0000	.0000	.0000	.0019	.0205	.0667	.0741	.0301	
43 (57)	.0000	.0000	.0000	.0000	.0000	.0010	.0143	.0576	.0786	.0390	
44 (56)	.0000	.0000	.0000	.0000	.0000	.0005	.0096	.0478	.0800	.0485	
45 (55)	.0000	.0000	.0000	.0000	.0000	.0003	.0062	.0381	.0782	.0580	
46 (54)	.0000	.0000	.0000	.0000	.0000	.0001	.0038	.0292	.0736	.0666	
47 (53)	.0000	.0000	.0000	.0000	.0000	.0001	.0023	.0215	.0665	.0735	
48 (52)	.0000	.0000	.0000	.0000	.0000	.0001	.0013	.0152	.0577	.0780	
49 (51)	.0000	.0000	.0000	.0000	.0000	.0000	.0007	.0103	.0482	.0796	
50 (50)	.0000	.0000	.0000	.0000	.0000	.0000	.0004	.0068	.0386	.0780	
51 (49)	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0042	.0298	.0735	
52 (48)	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0026	.0221	.0666	
53 (47)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0015	.0157	.0580	
54 (46)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0008	.0108	.0485	
55 (45)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0004	.0071	.0390	
56 (44)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0045	.0301	
57 (43)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0045	.0301	
58 (42)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0027	.0223	
59 (41)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0016	.0159	
60 (40)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0009	.0108	
61 (39)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0005	.0071	
62 (38)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0045	
63 (37)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0027	
64 (36)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0016	
65 (35)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0009	
66 (34)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0005	
67 (33)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	
68 (32)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	
69 (31)	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	

## Funções de Probabilidade de Distribuições de Poisson ( $\lambda$ )

Os valores tabelados correspondem às probabilidades dadas pela expressão

$$p(y) = \frac{e^{-\lambda} \cdot \lambda^y}{y!}.$$

y	$\lambda$	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
0	0	.9048	.8187	.7408	.6703	.6065	.5488	.4966	.4493	.4066	.3679
1	1	.0905	.1637	.2222	.2681	.3033	.3293	.3476	.3595	.3659	.3679
2	2	.0045	.0164	.0333	.0536	.0758	.0988	.1217	.1438	.1647	.1839
3	3	.0002	.0011	.0033	.0072	.0126	.0198	.0284	.0383	.0494	.0613
4	4	.0000	.0001	.0003	.0007	.0016	.0030	.0050	.0077	.0111	.0153
5	5	.0000	.0000	.0000	.0001	.0002	.0004	.0007	.0012	.0020	.0031
6	6	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0003	.0005
7	7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001

y	$\lambda$	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
0	0	.3329	.3012	.2725	.2466	.2231	.2019	.1827	.1653	.1496	.1353
1	1	.3662	.3614	.3543	.3452	.3347	.3230	.3106	.2975	.2842	.2707
2	2	.2014	.2169	.2303	.2417	.2510	.2584	.2640	.2678	.2700	.2707
3	3	.0738	.0867	.0998	.1128	.1255	.1378	.1496	.1607	.1710	.1804
4	4	.0203	.0260	.0324	.0395	.0471	.0551	.0636	.0723	.0812	.0902
5	5	.0045	.0062	.0084	.0111	.0141	.0176	.0216	.0260	.0309	.0361
6	6	.0008	.0012	.0018	.0026	.0035	.0047	.0061	.0078	.0098	.0120
7	7	.0001	.0002	.0003	.0005	.0008	.0011	.0015	.0020	.0027	.0034
8	8	.0000	.0000	.0001	.0001	.0001	.0002	.0003	.0005	.0006	.0009
9	9	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0002

y	$\lambda$	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0
0	0	.1225	.1108	.1003	.0907	.0821	.0743	.0672	.0608	.0550	.0498
1	1	.2572	.2438	.2306	.2177	.2052	.1931	.1815	.1703	.1596	.1494
2	2	.2700	.2681	.2652	.2613	.2565	.2510	.2450	.2384	.2314	.2240
3	3	.1890	.1966	.2033	.2090	.2138	.2176	.2205	.2225	.2237	.2240
4	4	.0992	.1082	.1169	.1254	.1336	.1414	.1488	.1557	.1622	.1680
5	5	.0417	.0476	.0538	.0602	.0668	.0735	.0804	.0872	.0940	.1008
6	6	.0146	.0174	.0206	.0241	.0278	.0319	.0362	.0407	.0455	.0504
7	7	.0044	.0055	.0068	.0083	.0099	.0118	.0139	.0163	.0188	.0216
8	8	.0011	.0015	.0019	.0025	.0031	.0038	.0047	.0057	.0068	.0081
9	9	.0003	.0004	.0005	.0007	.0009	.0011	.0014	.0018	.0022	.0027
10	10	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0005	.0006	.0008
11	11	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0002	.0002
12	12	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001

Funções de Probabilidade de Distribuições de Poisson ( $\lambda$ )

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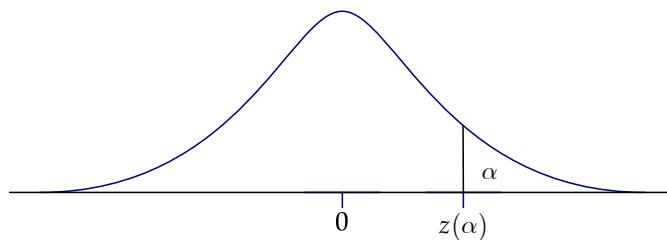
y	$\lambda$	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
0		.0450	.0408	.0369	.0334	.0302	.0273	.0247	.0224	.0202	.0183
1		.1397	.1304	.1217	.1135	.1057	.0984	.0915	.0850	.0789	.0733
2		.2165	.2087	.2008	.1929	.1850	.1771	.1692	.1615	.1539	.1465
3		.2237	.2226	.2209	.2186	.2158	.2125	.2087	.2046	.2001	.1954
4		.1733	.1781	.1823	.1858	.1888	.1912	.1931	.1944	.1951	.1954
5		.1075	.1140	.1203	.1264	.1322	.1377	.1429	.1477	.1522	.1563
6		.0555	.0608	.0662	.0716	.0771	.0826	.0881	.0936	.0989	.1042
7		.0246	.0278	.0312	.0348	.0385	.0425	.0466	.0508	.0551	.0595
8		.0095	.0111	.0129	.0148	.0169	.0191	.0215	.0241	.0269	.0298
9		.0033	.0040	.0047	.0056	.0066	.0076	.0089	.0102	.0116	.0132
10		.0010	.0013	.0016	.0019	.0023	.0028	.0033	.0039	.0045	.0053
11		.0003	.0004	.0005	.0006	.0007	.0009	.0011	.0013	.0016	.0019
12		.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0005	.0006
13		.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0002	.0002	.0002
14		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001

y	$\lambda$	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
0		.0166	.0150	.0136	.0123	.0111	.0101	.0091	.0082	.0074	.0067
1		.0679	.0630	.0583	.0540	.0500	.0462	.0427	.0395	.0365	.0337
2		.1393	.1323	.1254	.1188	.1125	.1063	.1005	.0948	.0894	.0842
3		.1904	.1852	.1798	.1743	.1687	.1631	.1574	.1517	.1460	.1404
4		.1951	.1944	.1933	.1917	.1898	.1875	.1849	.1820	.1789	.1755
5		.1600	.1633	.1662	.1687	.1708	.1725	.1738	.1747	.1753	.1755
6		.1093	.1143	.1191	.1237	.1281	.1323	.1362	.1398	.1432	.1462
7		.0640	.0686	.0732	.0778	.0824	.0869	.0914	.0959	.1002	.1044
8		.0328	.0360	.0393	.0428	.0463	.0500	.0537	.0575	.0614	.0653
9		.0150	.0168	.0188	.0209	.0232	.0255	.0281	.0307	.0334	.0363
10		.0061	.0071	.0081	.0092	.0104	.0118	.0132	.0147	.0164	.0181
11		.0023	.0027	.0032	.0037	.0043	.0049	.0056	.0064	.0073	.0082
12		.0008	.0009	.0011	.0013	.0016	.0019	.0022	.0026	.0030	.0034
13		.0002	.0003	.0004	.0005	.0006	.0007	.0008	.0009	.0011	.0013
14		.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0005
15		.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0002

y	$\lambda$	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
0	.0041	.0025	.0015	.0009	.0006	.0003	.0002	.0001	.0001	.0000	
1	.0225	.0149	.0098	.0064	.0041	.0027	.0017	.0011	.0007	.0005	
2	.0618	.0446	.0318	.0223	.0156	.0107	.0074	.0050	.0034	.0023	
3	.1133	.0892	.0688	.0521	.0389	.0286	.0208	.0150	.0107	.0076	
4	.1558	.1339	.1118	.0912	.0729	.0573	.0443	.0337	.0254	.0189	
5	.1714	.1606	.1454	.1277	.1094	.0916	.0752	.0607	.0483	.0378	
6	.1571	.1606	.1575	.1490	.1367	.1221	.1066	.0911	.0764	.0631	
7	.1234	.1377	.1462	.1490	.1465	.1396	.1294	.1171	.1037	.0901	
8	.0849	.1033	.1188	.1304	.1373	.1396	.1375	.1318	.1232	.1126	
9	.0519	.0688	.0858	.1014	.1144	.1241	.1299	.1318	.1300	.1251	
10	.0285	.0413	.0558	.0710	.0858	.0993	.1104	.1186	.1235	.1251	
11	.0143	.0225	.0330	.0452	.0585	.0722	.0853	.0970	.1067	.1137	
12	.0065	.0113	.0179	.0263	.0366	.0481	.0604	.0728	.0844	.0948	
13	.0028	.0052	.0089	.0142	.0211	.0296	.0395	.0504	.0617	.0729	
14	.0011	.0022	.0041	.0071	.0113	.0169	.0240	.0324	.0419	.0521	
15	.0004	.0009	.0018	.0033	.0057	.0090	.0136	.0194	.0265	.0347	
16	.0001	.0003	.0007	.0014	.0026	.0045	.0072	.0109	.0157	.0217	
17	.0000	.0001	.0003	.0006	.0012	.0021	.0036	.0058	.0088	.0128	
18	.0000	.0000	.0001	.0002	.0005	.0009	.0017	.0029	.0046	.0071	
19	.0000	.0000	.0000	.0001	.0002	.0004	.0008	.0014	.0023	.0037	
20	.0000	.0000	.0000	.0000	.0001	.0002	.0003	.0006	.0011	.0019	
21	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0003	.0005	.0009	
22	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0002	.0004	
23	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002	
24	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	

# Probabilidades Associadas à Cauda Direita da Distribuição Normal Padronizada

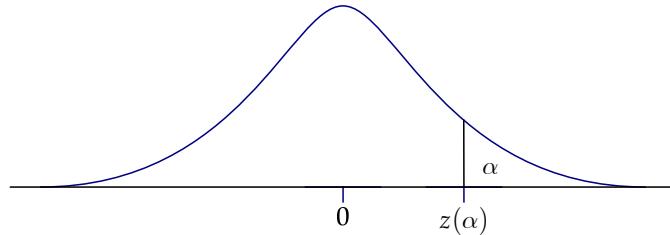
Os valores tabelados correspondem à área  $\alpha$  assinalada na figura abaixo, tal que,  
 $P(Z \geq z(\alpha)) = \alpha$ .



a	b	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0		.5000	.4960	.4920	.4880	.4840	.4801	.4761	.4721	.4681	.4641
0.1		.4602	.4562	.4522	.4483	.4443	.4404	.4364	.4325	.4286	.4247
0.2		.4207	.4168	.4129	.4090	.4052	.4013	.3974	.3936	.3897	.3859
0.3		.3821	.3783	.3745	.3707	.3669	.3632	.3594	.3557	.3520	.3483
0.4		.3446	.3409	.3372	.3336	.3300	.3264	.3228	.3192	.3156	.3121
0.5		.3085	.3050	.3015	.2981	.2946	.2912	.2877	.2843	.2810	.2776
0.6		.2743	.2709	.2676	.2643	.2611	.2578	.2546	.2514	.2483	.2451
0.7		.2420	.2389	.2358	.2327	.2296	.2266	.2236	.2206	.2177	.2148
0.8		.2119	.2090	.2061	.2033	.2005	.1977	.1949	.1922	.1894	.1867
0.9		.1841	.1814	.1788	.1762	.1736	.1711	.1685	.1660	.1635	.1611
1.0		.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401	.1379
1.1		.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190	.1170
1.2		.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003	.0985
1.3		.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838	.0823
1.4		.0808	.0793	.0778	.0764	.0749	.0735	.0721	.0708	.0694	.0681
1.5		.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0571	.0559
1.6		.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465	.0455
1.7		.0446	.0436	.0427	.0418	.0409	.0401	.0392	.0384	.0375	.0367
1.8		.0359	.0351	.0344	.0336	.0329	.0322	.0314	.0307	.0301	.0294
1.9		.0287	.0281	.0274	.0268	.0262	.0256	.0250	.0244	.0239	.0233
2.0		.0228	.0222	.0217	.0212	.0207	.0202	.0197	.0192	.0188	.0183
2.1		.0179	.0174	.0170	.0166	.0162	.0158	.0154	.0150	.0146	.0143
2.2		.0139	.0136	.0132	.0129	.0125	.0122	.0119	.0116	.0113	.0110
2.3		.0107	.0104	.0102	.00990	.00964	.00939	.00914	.00889	.00866	.00842
2.4		.00820	.00798	.00776	.00755	.00734	.00714	.00695	.00676	.00657	.00639
2.5		.00621	.00604	.00587	.00570	.00554	.00539	.00523	.00508	.00494	.00480
2.6		.00466	.00453	.00440	.00427	.00415	.00402	.00391	.00379	.00368	.00357
2.7		.00347	.00336	.00326	.00317	.00307	.00298	.00289	.00280	.00272	.00264
2.8		.00256	.00248	.00240	.00233	.00226	.00219	.00212	.00205	.00199	.00193
2.9		.00187	.00181	.00175	.00169	.00164	.00159	.00154	.00149	.00144	.00139
3.0		.00135	.00131	.00126	.00122	.00118	.00114	.00111	.00107	.00104	.00100

## Valores Críticos da Distribuição Normal Padronizada

Para diferentes valores de  $\alpha$  é tabelado o respectivo valor crítico,  $z(\alpha)$ , tal que  $P(Z \geq z(\alpha)) = \alpha$ .

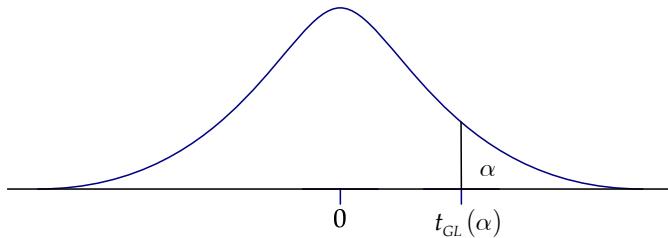


$\alpha$	$z(\alpha)$								
.50	0.0000	.050	1.6449	.030	1.8808	.020	2.0537	.010	2.3263
.45	0.1257	.048	1.6646	.029	1.8957	.019	2.0749	.009	2.3656
.40	0.2533	.046	1.6849	.028	1.9110	.018	2.0969	.008	2.4089
.35	0.3853	.044	1.7060	.027	1.9268	.017	2.1201	.007	2.4573
.30	0.5244	.042	1.7279	.026	1.9431	.016	2.1444	.006	2.5121
.25	0.6745	.040	1.7507	.025	1.9600	.015	2.1701	.005	2.5758
.20	0.8416	.038	1.7744	.024	1.9774	.014	2.1973	.004	2.6521
.15	1.0364	.036	1.7991	.023	1.9954	.013	2.2262	.003	2.7478
.10	1.2816	.034	1.8250	.022	2.0141	.012	2.2571	.002	2.8782
.05	1.6449	.032	1.8522	.021	2.0335	.011	2.2904	.001	3.0902

$\alpha$	$z(\alpha)$	$\alpha$	$z(\alpha)$	$\alpha$	$z(\alpha)$
.01	2.3263	.05	1.6449	.25	0.6745
.001	3.0902	.005	2.5758	.025	1.9600
.0001	3.7190	.0005	3.2905	.0025	2.8070
.00001	4.2649	.00005	3.8906	.00025	3.4808
.000001	4.7534	.000005	4.4172	.000025	4.0556

## Valores Críticos de Distribuições $t_{GL}$

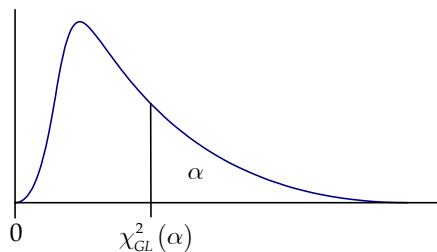
Os valores tabelados correspondem a  $t_{GL}(\alpha)$ , tais que,  $P(t_{GL} \geq t_{GL}(\alpha)) = \alpha$ .



GL	$\alpha$	0.25	0.20	0.15	0.10	0.05	0.025	0.010	0.005	0.001	0.0005
1		1.0000	1.3764	1.9626	3.0777	6.3138	12.706	31.821	63.657	318.31	636.62
2		0.8165	1.0607	1.3862	1.8856	2.9200	4.3027	6.9646	9.9248	22.327	31.599
3		0.7649	0.9785	1.2498	1.6377	2.3534	3.1824	4.5407	5.8409	10.215	12.924
4		0.7407	0.9410	1.1896	1.5332	2.1318	2.7764	3.7469	4.6041	7.1732	8.6103
5		0.7267	0.9195	1.1558	1.4759	2.0150	2.5706	3.3649	4.0321	5.8934	6.8688
6		0.7176	0.9057	1.1342	1.4398	1.9432	2.4469	3.1427	3.7074	5.2076	5.9588
7		0.7111	0.8960	1.1192	1.4149	1.8946	2.3646	2.9980	3.4995	4.7853	5.4079
8		0.7064	0.8889	1.1081	1.3968	1.8595	2.3060	2.8965	3.3554	4.5008	5.0413
9		0.7027	0.8834	1.0997	1.3830	1.8331	2.2622	2.8214	3.2498	4.2968	4.7809
10		0.6998	0.8791	1.0931	1.3722	1.8125	2.2281	2.7638	3.1693	4.1437	4.5869
11		0.6974	0.8755	1.0877	1.3634	1.7959	2.2010	2.7181	3.1058	4.0247	4.4370
12		0.6955	0.8726	1.0832	1.3562	1.7823	2.1788	2.6810	3.0545	3.9296	4.3178
13		0.6938	0.8702	1.0795	1.3502	1.7709	2.1604	2.6503	3.0123	3.8520	4.2208
14		0.6924	0.8681	1.0763	1.3450	1.7613	2.1448	2.6245	2.9768	3.7874	4.1405
15		0.6912	0.8662	1.0735	1.3406	1.7531	2.1314	2.6025	2.9467	3.7328	4.0728
16		0.6901	0.8647	1.0711	1.3368	1.7459	2.1199	2.5835	2.9208	3.6862	4.0150
17		0.6892	0.8633	1.0690	1.3334	1.7396	2.1098	2.5669	2.8982	3.6458	3.9651
18		0.6884	0.8620	1.0672	1.3304	1.7341	2.1009	2.5524	2.8784	3.6105	3.9216
19		0.6876	0.8610	1.0655	1.3277	1.7291	2.0930	2.5395	2.8609	3.5794	3.8834
20		0.6870	0.8600	1.0640	1.3253	1.7247	2.0860	2.5280	2.8453	3.5518	3.8495
21		0.6864	0.8591	1.0627	1.3232	1.7207	2.0796	2.5176	2.8314	3.5272	3.8193
22		0.6858	0.8583	1.0614	1.3212	1.7171	2.0739	2.5083	2.8188	3.5050	3.7921
23		0.6853	0.8575	1.0603	1.3195	1.7139	2.0687	2.4999	2.8073	3.4850	3.7676
24		0.6848	0.8569	1.0593	1.3178	1.7109	2.0639	2.4922	2.7969	3.4668	3.7454
25		0.6844	0.8562	1.0584	1.3163	1.7081	2.0595	2.4851	2.7874	3.4502	3.7251
26		0.6840	0.8557	1.0575	1.3150	1.7056	2.0555	2.4786	2.7787	3.4350	3.7066
27		0.6837	0.8551	1.0567	1.3137	1.7033	2.0518	2.4727	2.7707	3.4210	3.6896
28		0.6834	0.8546	1.0560	1.3125	1.7011	2.0484	2.4671	2.7633	3.4082	3.6739
29		0.6830	0.8542	1.0553	1.3114	1.6991	2.0452	2.4620	2.7564	3.3962	3.6594
30		0.6828	0.8538	1.0547	1.3104	1.6973	2.0423	2.4573	2.7500	3.3852	3.6460
40		0.6807	0.8507	1.0500	1.3031	1.6839	2.0211	2.4233	2.7045	3.3069	3.5510
60		0.6786	0.8477	1.0455	1.2958	1.6706	2.0003	2.3901	2.6603	3.2317	3.4602
120		0.6765	0.8446	1.0409	1.2886	1.6577	1.9799	2.3578	2.6174	3.1595	3.3735
$\infty$		0.6745	0.8416	1.0364	1.2816	1.6449	1.9600	2.3263	2.5758	3.0902	3.2905

## Valores Críticos de Distribuições $\chi^2_{GL}$

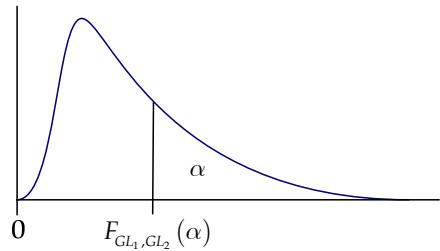
Os valores tabelados correspondem a  $\chi^2_{GL}(\alpha)$ , tais que,  $P(\chi^2_{GL} \geq \chi^2_{GL}(\alpha)) = \alpha$ .



GL	$\alpha$												
	0.995	0.990	0.975	0.950	0.900	0.750	0.500	0.250	0.100	0.050	0.025	0.010	0.005
1	0.000	0.000	0.001	0.004	0.016	0.102	0.455	1.323	2.706	3.841	5.024	6.635	7.879
2	0.010	0.020	0.051	0.103	0.211	0.575	1.386	2.773	4.605	5.991	7.378	9.210	10.60
3	0.072	0.115	0.216	0.352	0.584	1.213	2.366	4.108	6.251	7.815	9.348	11.34	12.84
4	0.207	0.297	0.484	0.711	1.064	1.923	3.357	5.385	7.779	9.488	11.14	13.28	14.86
5	0.412	0.554	0.831	1.145	1.610	2.675	4.351	6.626	9.236	11.07	12.83	15.09	16.75
6	0.676	0.872	1.237	1.635	2.204	3.455	5.348	7.841	10.64	12.59	14.45	16.81	18.55
7	0.989	1.239	1.690	2.167	2.833	4.255	6.346	9.037	12.02	14.07	16.01	18.48	20.28
8	1.344	1.646	2.180	2.733	3.490	5.071	7.344	10.22	13.36	15.51	17.53	20.09	21.95
9	1.735	2.088	2.700	3.325	4.168	5.899	8.343	11.39	14.68	16.92	19.02	21.67	23.59
10	2.156	2.558	3.247	3.940	4.865	6.737	9.342	12.55	15.99	18.31	20.48	23.21	25.19
11	2.603	3.053	3.816	4.575	5.578	7.584	10.34	13.70	17.28	19.68	21.92	24.72	26.76
12	3.074	3.571	4.404	5.226	6.304	8.438	11.34	14.85	18.55	21.03	23.34	26.22	28.30
13	3.565	4.107	5.009	5.892	7.042	9.299	12.34	15.98	19.81	22.36	24.74	27.69	29.82
14	4.075	4.660	5.629	6.571	7.790	10.17	13.34	17.12	21.06	23.68	26.12	29.14	31.32
15	4.601	5.229	6.262	7.261	8.547	11.04	14.34	18.25	22.31	25.00	27.49	30.58	32.80
16	5.142	5.812	6.908	7.962	9.312	11.91	15.34	19.37	23.54	26.30	28.85	32.00	34.27
17	5.697	6.408	7.564	8.672	10.09	12.79	16.34	20.49	24.77	27.59	30.19	33.41	35.72
18	6.265	7.015	8.231	9.390	10.86	13.68	17.34	21.60	25.99	28.87	31.53	34.81	37.16
19	6.844	7.633	8.907	10.12	11.65	14.56	18.34	22.72	27.20	30.14	32.85	36.19	38.58
20	7.434	8.260	9.591	10.85	12.44	15.45	19.34	23.83	28.41	31.41	34.17	37.57	40.00
21	8.034	8.897	10.28	11.59	13.24	16.34	20.34	24.93	29.62	32.67	35.48	38.93	41.40
22	8.643	9.542	10.98	12.34	14.04	17.24	21.34	26.04	30.81	33.92	36.78	40.29	42.80
23	9.260	10.20	11.69	13.09	14.85	18.14	22.34	27.14	32.01	35.17	38.08	41.64	44.18
24	9.886	10.86	12.40	13.85	15.66	19.04	23.34	28.24	33.20	36.42	39.36	42.98	45.56
25	10.52	11.52	13.12	14.61	16.47	19.94	24.34	29.34	34.38	37.65	40.65	44.31	46.93
26	11.16	12.20	13.84	15.38	17.29	20.84	25.34	30.43	35.56	38.89	41.92	45.64	48.29
27	11.81	12.88	14.57	16.15	18.11	21.75	26.34	31.53	36.74	40.11	43.19	46.96	49.64
28	12.46	13.56	15.31	16.93	18.94	22.66	27.34	32.62	37.92	41.34	44.46	48.28	50.99
29	13.12	14.26	16.05	17.71	19.77	23.57	28.34	33.71	39.09	42.56	45.72	49.59	52.34
30	13.79	14.95	16.79	18.49	20.60	24.48	29.34	34.80	40.26	43.77	46.98	50.89	53.67
40	20.71	22.16	24.43	26.51	29.05	33.66	39.34	45.62	51.81	55.76	59.34	63.69	66.77
50	27.99	29.71	32.36	34.76	37.69	42.94	49.33	56.33	63.17	67.50	71.42	76.15	79.49
60	35.53	37.48	40.48	43.19	46.46	52.29	59.33	66.98	74.40	79.08	83.30	88.38	91.95
70	43.28	45.44	48.76	51.74	55.33	61.70	69.33	77.58	85.53	90.53	95.02	100.4	104.2
80	51.17	53.54	57.15	60.39	64.28	71.14	79.33	88.13	96.58	101.9	106.6	112.3	116.3
90	59.20	61.75	65.65	69.13	73.29	80.62	89.33	98.65	107.6	113.1	118.1	124.1	128.3
100	67.33	70.06	74.22	77.93	82.36	90.13	99.33	109.1	118.5	124.3	129.6	135.8	140.2

## Valores Críticos de Distribuições $F_{GL_1,GL_2}$

Os valores tabelados correspondem a  $F_{GL_1,GL_2}(\alpha)$ , tais que,  $P(F_{GL_1,GL_2} \geq F_{GL_1,GL_2}(\alpha)) = \alpha$ .



Como apenas se apresentam tabelas para valores de  $\alpha$  iguais a 10%, 5%, 2.5% e 1%, os valores críticos para diferentes valores de  $\alpha$  poderão ser aproximados por interpolação.

A seguinte equivalência poderá ser útil:

$$F_{GL_1,GL_2}(\alpha) = \frac{1}{F_{GL_2,GL_1}(1-\alpha)}$$

		$\alpha = 10\%$																					
GL <sub>2</sub>		GL <sub>1</sub>																					
		1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	25	30	40	50	100	150
1	39.86	49.50	53.59	55.83	57.24	58.20	58.91	59.44	59.86	60.19	60.47	60.71	61.07	61.35	61.57	61.74	62.05	62.26	62.53	62.69	63.01	63.11	63.17
2	8.526	9.000	9.162	9.243	9.293	9.326	9.349	9.367	9.381	9.392	9.401	9.408	9.420	9.429	9.436	9.441	9.451	9.458	9.466	9.471	9.481	9.485	9.486
3	5.538	5.462	5.391	5.343	5.309	5.285	5.266	5.252	5.240	5.230	5.222	5.216	5.205	5.196	5.190	5.184	5.175	5.168	5.160	5.155	5.144	5.141	5.139
4	4.545	4.325	4.191	4.107	4.051	4.010	3.979	3.955	3.936	3.920	3.907	3.896	3.878	3.864	3.853	3.844	3.828	3.817	3.804	3.795	3.778	3.772	3.769
5	4.060	3.780	3.619	3.520	3.453	3.405	3.368	3.339	3.316	3.297	3.282	3.268	3.247	3.230	3.217	3.207	3.187	3.174	3.157	3.147	3.126	3.119	3.116
6	3.776	3.463	3.289	3.181	3.108	3.055	3.014	2.983	2.958	2.937	2.920	2.905	2.881	2.863	2.848	2.836	2.815	2.800	2.781	2.770	2.746	2.738	2.734
7	3.589	3.257	3.074	2.961	2.883	2.827	2.785	2.752	2.725	2.703	2.684	2.668	2.643	2.623	2.607	2.595	2.571	2.555	2.535	2.523	2.497	2.488	2.484
8	3.458	3.113	2.924	2.806	2.726	2.668	2.624	2.589	2.561	2.538	2.519	2.502	2.475	2.455	2.438	2.425	2.400	2.383	2.361	2.348	2.321	2.312	2.307
9	3.360	3.006	2.813	2.693	2.611	2.551	2.505	2.469	2.440	2.416	2.396	2.379	2.351	2.329	2.312	2.298	2.272	2.255	2.232	2.218	2.189	2.179	2.174
10	3.285	2.924	2.728	2.605	2.522	2.461	2.414	2.377	2.347	2.323	2.302	2.284	2.255	2.233	2.215	2.201	2.174	2.155	2.132	2.117	2.087	2.077	2.071
11	3.225	2.860	2.660	2.536	2.451	2.389	2.342	2.304	2.274	2.248	2.227	2.209	2.179	2.156	2.138	2.123	2.095	2.076	2.052	2.036	2.005	1.994	1.989
12	3.177	2.807	2.606	2.480	2.394	2.331	2.283	2.245	2.214	2.188	2.166	2.147	2.117	2.094	2.075	2.060	2.031	2.011	1.986	1.970	1.938	1.927	1.921
13	3.136	2.763	2.560	2.434	2.347	2.283	2.234	2.195	2.164	2.138	2.116	2.097	2.066	2.042	2.023	2.007	1.978	1.958	1.931	1.915	1.882	1.870	1.864
14	3.102	2.726	2.522	2.395	2.307	2.243	2.193	2.154	2.122	2.095	2.073	2.054	2.022	1.998	1.978	1.962	1.933	1.912	1.885	1.869	1.834	1.822	1.816
15	3.073	2.695	2.490	2.361	2.273	2.208	2.158	2.119	2.086	2.059	2.037	2.017	1.985	1.961	1.941	1.924	1.894	1.873	1.845	1.828	1.793	1.781	1.774
16	3.048	2.668	2.462	2.333	2.244	2.178	2.128	2.088	2.055	2.028	2.005	1.985	1.953	1.928	1.908	1.891	1.860	1.839	1.811	1.793	1.757	1.744	1.738
17	3.026	2.645	2.437	2.308	2.218	2.152	2.102	2.061	2.028	2.001	1.978	1.958	1.925	1.900	1.879	1.862	1.831	1.809	1.781	1.763	1.726	1.713	1.706
18	3.007	2.624	2.416	2.286	2.196	2.130	2.079	2.038	2.005	1.977	1.954	1.933	1.900	1.875	1.854	1.837	1.805	1.783	1.754	1.736	1.698	1.684	1.678
19	2.990	2.606	2.397	2.266	2.176	2.109	2.058	2.017	1.984	1.956	1.932	1.912	1.878	1.852	1.831	1.814	1.782	1.759	1.730	1.711	1.673	1.659	1.652
20	2.975	2.589	2.380	2.249	2.158	2.091	2.040	1.999	1.965	1.937	1.913	1.892	1.859	1.833	1.811	1.794	1.761	1.738	1.708	1.690	1.650	1.636	1.629
21	2.961	2.575	2.365	2.233	2.142	2.075	2.023	1.982	1.948	1.920	1.896	1.875	1.841	1.815	1.793	1.776	1.742	1.719	1.689	1.670	1.630	1.616	1.608
22	2.949	2.561	2.351	2.219	2.128	2.060	2.008	1.967	1.933	1.904	1.880	1.859	1.825	1.798	1.777	1.759	1.726	1.702	1.671	1.652	1.611	1.597	1.590
23	2.937	2.549	2.339	2.207	2.115	2.047	1.995	1.953	1.919	1.890	1.866	1.845	1.811	1.784	1.762	1.744	1.710	1.686	1.655	1.636	1.594	1.580	1.572
24	2.927	2.538	2.327	2.195	2.103	2.035	1.983	1.941	1.906	1.877	1.853	1.832	1.797	1.770	1.748	1.730	1.696	1.672	1.641	1.621	1.579	1.564	1.556
25	2.918	2.528	2.317	2.184	2.092	2.024	1.971	1.929	1.895	1.866	1.841	1.820	1.785	1.758	1.736	1.718	1.683	1.659	1.627	1.607	1.565	1.549	1.542
26	2.909	2.519	2.307	2.174	2.082	2.014	1.961	1.919	1.884	1.855	1.830	1.809	1.774	1.747	1.724	1.706	1.671	1.647	1.615	1.594	1.551	1.536	1.528
27	2.901	2.511	2.299	2.165	2.073	2.005	1.952	1.909	1.874	1.845	1.820	1.799	1.764	1.736	1.714	1.695	1.660	1.636	1.603	1.583	1.539	1.523	1.515
28	2.894	2.503	2.291	2.157	2.064	1.996	1.943	1.900	1.865	1.836	1.811	1.790	1.754	1.726	1.704	1.685	1.650	1.625	1.592	1.572	1.528	1.512	1.504
29	2.887	2.495	2.283	2.149	2.057	1.988	1.935	1.892	1.857	1.827	1.802	1.781	1.745	1.717	1.695	1.676	1.640	1.616	1.583	1.562	1.517	1.501	1.493
30	2.881	2.489	2.276	2.142	2.049	1.980	1.927	1.884	1.849	1.819	1.794	1.773	1.737	1.709	1.686	1.667	1.632	1.606	1.573	1.552	1.507	1.491	1.482

$\alpha = 10\%$  (continuação)

GL <sub>2</sub>	GL <sub>1</sub>																						
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	25	30	40	50	100	150	200
32	2.869	2.477	2.263	2.129	2.036	1.967	1.913	1.870	1.835	1.805	1.780	1.758	1.722	1.694	1.671	1.652	1.616	1.590	1.556	1.535	1.489	1.472	1.464
34	2.859	2.466	2.252	2.118	2.024	1.955	1.901	1.858	1.822	1.793	1.767	1.745	1.709	1.680	1.657	1.638	1.601	1.576	1.541	1.520	1.473	1.456	1.447
36	2.850	2.456	2.243	2.108	2.014	1.945	1.891	1.847	1.811	1.781	1.756	1.734	1.697	1.669	1.645	1.626	1.589	1.563	1.528	1.506	1.458	1.441	1.432
38	2.842	2.448	2.234	2.099	2.005	1.935	1.881	1.838	1.802	1.772	1.746	1.724	1.687	1.658	1.635	1.615	1.578	1.551	1.516	1.494	1.445	1.428	1.419
40	2.835	2.440	2.226	2.091	1.997	1.927	1.873	1.829	1.793	1.763	1.737	1.715	1.678	1.649	1.625	1.605	1.568	1.541	1.506	1.483	1.434	1.416	1.406
42	2.829	2.434	2.219	2.084	1.989	1.919	1.865	1.821	1.785	1.755	1.729	1.706	1.669	1.640	1.616	1.596	1.559	1.532	1.496	1.473	1.423	1.405	1.395
44	2.823	2.427	2.213	2.077	1.983	1.913	1.858	1.814	1.778	1.747	1.721	1.699	1.662	1.632	1.608	1.588	1.550	1.523	1.487	1.464	1.413	1.395	1.385
46	2.818	2.422	2.207	2.071	1.977	1.906	1.852	1.808	1.771	1.741	1.715	1.692	1.655	1.625	1.601	1.581	1.543	1.515	1.479	1.456	1.404	1.386	1.376
48	2.813	2.417	2.202	2.066	1.971	1.901	1.846	1.802	1.765	1.735	1.709	1.686	1.648	1.619	1.594	1.574	1.536	1.508	1.472	1.448	1.396	1.377	1.367
50	2.809	2.412	2.197	2.061	1.966	1.895	1.840	1.796	1.760	1.729	1.703	1.680	1.643	1.613	1.588	1.568	1.529	1.502	1.465	1.441	1.388	1.369	1.359
60	2.791	2.393	2.177	2.041	1.946	1.875	1.819	1.775	1.738	1.707	1.680	1.657	1.619	1.589	1.564	1.543	1.504	1.476	1.437	1.413	1.358	1.337	1.326
70	2.779	2.380	2.164	2.027	1.931	1.860	1.804	1.760	1.723	1.691	1.665	1.641	1.603	1.572	1.547	1.526	1.486	1.457	1.418	1.392	1.335	1.314	1.302
80	2.769	2.370	2.154	2.016	1.921	1.849	1.793	1.748	1.711	1.680	1.653	1.629	1.590	1.559	1.534	1.513	1.472	1.443	1.403	1.377	1.318	1.296	1.284
90	2.762	2.363	2.146	2.008	1.912	1.841	1.785	1.739	1.702	1.670	1.643	1.620	1.581	1.550	1.524	1.503	1.461	1.432	1.391	1.365	1.304	1.281	1.269
100	2.756	2.356	2.139	2.002	1.906	1.834	1.778	1.732	1.695	1.663	1.636	1.612	1.573	1.542	1.516	1.494	1.453	1.423	1.382	1.355	1.293	1.270	1.257
125	2.746	2.346	2.128	1.990	1.894	1.822	1.765	1.720	1.682	1.650	1.623	1.599	1.559	1.528	1.502	1.480	1.437	1.407	1.365	1.337	1.273	1.248	1.235
150	2.739	2.338	2.121	1.983	1.886	1.814	1.757	1.712	1.674	1.642	1.614	1.590	1.550	1.518	1.492	1.470	1.427	1.396	1.353	1.325	1.259	1.233	1.219
200	2.731	2.329	2.111	1.973	1.876	1.804	1.747	1.701	1.663	1.631	1.603	1.579	1.539	1.507	1.480	1.458	1.414	1.383	1.339	1.310	1.242	1.214	1.199
300	2.722	2.320	2.102	1.964	1.867	1.794	1.737	1.691	1.652	1.620	1.592	1.568	1.527	1.495	1.468	1.445	1.401	1.369	1.325	1.295	1.224	1.194	1.178
500	2.716	2.313	2.095	1.956	1.859	1.786	1.729	1.683	1.644	1.612	1.583	1.559	1.518	1.485	1.458	1.435	1.391	1.358	1.313	1.282	1.209	1.178	1.160

$\alpha = 5\%$ 

GL <sub>2</sub>	GL <sub>1</sub>																						
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	25	30	40	50	100	150	200
1	161.4	199.5	215.7	224.6	230.2	234.0	236.8	238.9	240.5	241.9	243.0	243.9	245.4	246.5	247.3	248.0	249.3	250.1	251.1	251.8	253.0	253.5	253.7
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40	19.40	19.41	19.42	19.43	19.44	19.45	19.46	19.46	19.47	19.48	19.49	19.49	19.49
3	10.13	9.552	9.277	9.117	9.013	8.941	8.887	8.845	8.812	8.786	8.763	8.745	8.715	8.692	8.675	8.660	8.634	8.617	8.594	8.581	8.554	8.545	8.540
4	7.709	6.944	6.591	6.388	6.256	6.163	6.094	6.041	5.999	5.964	5.936	5.912	5.873	5.844	5.821	5.803	5.769	5.746	5.717	5.699	5.664	5.652	5.646
5	6.608	5.786	5.409	5.192	5.050	4.950	4.876	4.818	4.772	4.735	4.704	4.678	4.636	4.604	4.579	4.558	4.521	4.496	4.464	4.444	4.405	4.392	4.385
6	5.987	5.143	4.757	4.534	4.387	4.284	4.207	4.147	4.099	4.060	4.027	4.000	3.956	3.922	3.896	3.874	3.835	3.808	3.774	3.754	3.712	3.698	3.690
7	5.591	4.737	4.347	4.120	3.972	3.866	3.787	3.726	3.677	3.637	3.603	3.575	3.529	3.494	3.467	3.445	3.404	3.376	3.340	3.319	3.275	3.260	3.252
8	5.318	4.459	4.066	3.838	3.687	3.581	3.500	3.438	3.388	3.347	3.313	3.284	3.237	3.202	3.173	3.150	3.108	3.079	3.043	3.020	2.975	2.959	2.951
9	5.117	4.256	3.863	3.633	3.482	3.374	3.293	3.230	3.179	3.137	3.102	3.073	3.025	2.989	2.960	2.936	2.893	2.864	2.826	2.803	2.756	2.739	2.731
10	4.965	4.103	3.708	3.478	3.326	3.217	3.135	3.072	3.020	2.978	2.943	2.913	2.865	2.828	2.798	2.774	2.730	2.700	2.661	2.637	2.588	2.572	2.563
11	4.844	3.982	3.587	3.357	3.204	3.095	3.012	2.948	2.896	2.854	2.818	2.788	2.739	2.701	2.671	2.646	2.601	2.570	2.531	2.507	2.457	2.439	2.431
12	4.747	3.885	3.490	3.259	3.106	2.996	2.913	2.849	2.796	2.753	2.717	2.687	2.637	2.599	2.568	2.544	2.498	2.466	2.426	2.401	2.350	2.332	2.323
13	4.667	3.806	3.411	3.179	3.025	2.915	2.832	2.767	2.714	2.671	2.635	2.604	2.554	2.515	2.484	2.459	2.412	2.380	2.339	2.314	2.261	2.243	2.234
14	4.600	3.739	3.344	3.112	2.958	2.848	2.764	2.699	2.646	2.602	2.565	2.534	2.484	2.445	2.413	2.388	2.341	2.308	2.266	2.241	2.187	2.169	2.159
15	4.543	3.682	3.287	3.056	2.901	2.790	2.707	2.641	2.588	2.544	2.507	2.475	2.424	2.385	2.353	2.328	2.280	2.247	2.204	2.178	2.123	2.105	2.095
16	4.494	3.634	3.239	3.007	2.852	2.741	2.657	2.591	2.538	2.494	2.456	2.425	2.373	2.333	2.302	2.276	2.227	2.194	2.151	2.124	2.068	2.049	2.039
17	4.451	3.592	3.197	2.965	2.810	2.699	2.614	2.548	2.494	2.450	2.413	2.381	2.329	2.289	2.257	2.230	2.181	2.148	2.104	2.077	2.020	2.001	1.991
18	4.414	3.555	3.160	2.928	2.773	2.661	2.577	2.510	2.456	2.412	2.374	2.342	2.290	2.250	2.217	2.191	2.141	2.107	2.063	2.035	1.978	1.958	1.948
19	4.381	3.522	3.127	2.895	2.740	2.628	2.544	2.477	2.423	2.378	2.340	2.308	2.256	2.215	2.182	2.155	2.106	2.071	2.026	1.999	1.940	1.920	1.910
20	4.351	3.493	3.098	2.866	2.711	2.599	2.514	2.447	2.393	2.348	2.310	2.278	2.225	2.184	2.151	2.124	2.074	2.039	1.994	1.966	1.907	1.886	1.875
21	4.325	3.467	3.072	2.840	2.685	2.573	2.488	2.420	2.366	2.321	2.283	2.250	2.197	2.156	2.123	2.096	2.045	2.010	1.965	1.936	1.876	1.855	1.845
22	4.301	3.443	3.049	2.817	2.661	2.549	2.464	2.397	2.342	2.297	2.259	2.226	2.173	2.131	2.098	2.071	2.020	1.984	1.938	1.909	1.849	1.827	1.817
23	4.279	3.422	3.028	2.796	2.640	2.528	2.442	2.375	2.320	2.275	2.236	2.204	2.150	2.109	2.075	2.048	1.996	1.961	1.914	1.885	1.823	1.802	1.791
24	4.260	3.403	3.009	2.776	2.621	2.508	2.423	2.355	2.300	2.255	2.216	2.183	2.130	2.088	2.054	2.027	1.975	1.939	1.892	1.863	1.800	1.779	1.768
25	4.242	3.385	2.991	2.759	2.603	2.490	2.405	2.337	2.282	2.236	2.198	2.165	2.111	2.069	2.035	2.007	1.955	1.919	1.872	1.842	1.779	1.757	1.746
26	4.225	3.369	2.975	2.743	2.587	2.474	2.388	2.321	2.265	2.220	2.181	2.148	2.094	2.052	2.018	1.990	1.938	1.901	1.853	1.823	1.760	1.738	1.726
27	4.210	3.354	2.960	2.728	2.572	2.459	2.373	2.305	2.250	2.204	2.166	2.132	2.078	2.036	2.002	1.974	1.921	1.884	1.836	1.806	1.742	1.719	1.708
28	4.196	3.340	2.947	2.714	2.558	2.445	2.359	2.291	2.236	2.190	2.151	2.118	2.064	2.021	1.987	1.959	1.906	1.869	1.820	1.790	1.725	1.702	1.691
29	4.183	3.328	2.934	2.701	2.545	2.432	2.346	2.278	2.223	2.177	2.138	2.104	2.050	2.007	1.973	1.945	1.891	1.854	1.806	1.775	1.710	1.686	1.675
30	4.171	3.316	2.922	2.690	2.534	2.421	2.334	2.266	2.211	2.165	2.126	2.092	2.037	1.995	1.960	1.932	1.878	1.841	1.792	1.761	1.695	1.672	1.660

$\alpha = 5\%$  (continuação)

GL <sub>2</sub>	GL <sub>1</sub>																						
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	25	30	40	50	100	150	200
32	4.149	3.295	2.901	2.668	2.512	2.399	2.313	2.244	2.189	2.142	2.103	2.070	2.015	1.972	1.937	1.908	1.854	1.817	1.767	1.736	1.669	1.645	1.633
34	4.130	3.276	2.883	2.650	2.494	2.380	2.294	2.225	2.170	2.123	2.084	2.050	1.995	1.952	1.917	1.888	1.833	1.795	1.745	1.713	1.645	1.621	1.609
36	4.113	3.259	2.866	2.634	2.477	2.364	2.277	2.209	2.153	2.106	2.067	2.033	1.977	1.934	1.899	1.870	1.815	1.776	1.726	1.694	1.625	1.600	1.587
38	4.098	3.245	2.852	2.619	2.463	2.349	2.262	2.194	2.138	2.091	2.051	2.017	1.962	1.918	1.883	1.853	1.798	1.760	1.708	1.676	1.606	1.581	1.568
40	4.085	3.232	2.839	2.606	2.449	2.336	2.249	2.180	2.124	2.077	2.038	2.003	1.948	1.904	1.868	1.839	1.783	1.744	1.693	1.660	1.589	1.564	1.551
42	4.073	3.220	2.827	2.594	2.438	2.324	2.237	2.168	2.112	2.065	2.025	1.991	1.935	1.891	1.855	1.826	1.770	1.731	1.679	1.646	1.574	1.548	1.535
44	4.062	3.209	2.816	2.584	2.427	2.313	2.226	2.157	2.101	2.054	2.014	1.980	1.924	1.879	1.844	1.814	1.758	1.718	1.666	1.633	1.560	1.534	1.520
46	4.052	3.200	2.807	2.574	2.417	2.304	2.216	2.147	2.091	2.044	2.004	1.969	1.913	1.869	1.833	1.803	1.747	1.707	1.654	1.621	1.547	1.521	1.507
48	4.043	3.191	2.798	2.565	2.409	2.295	2.207	2.138	2.082	2.035	1.995	1.960	1.904	1.859	1.823	1.793	1.737	1.697	1.644	1.610	1.536	1.509	1.495
50	4.034	3.183	2.790	2.557	2.400	2.286	2.199	2.130	2.073	2.026	1.986	1.952	1.895	1.850	1.814	1.784	1.727	1.687	1.634	1.599	1.525	1.498	1.484
60	4.001	3.150	2.758	2.525	2.368	2.254	2.167	2.097	2.040	1.993	1.952	1.917	1.860	1.815	1.778	1.748	1.690	1.649	1.594	1.559	1.481	1.453	1.438
70	3.978	3.128	2.736	2.503	2.346	2.231	2.143	2.074	2.017	1.969	1.928	1.893	1.836	1.790	1.753	1.722	1.664	1.622	1.566	1.530	1.450	1.420	1.404
80	3.960	3.111	2.719	2.486	2.329	2.214	2.126	2.056	1.999	1.951	1.910	1.875	1.817	1.772	1.734	1.703	1.644	1.602	1.545	1.508	1.426	1.395	1.379
90	3.947	3.098	2.706	2.473	2.316	2.201	2.113	2.043	1.986	1.938	1.897	1.861	1.803	1.757	1.720	1.688	1.629	1.586	1.528	1.491	1.407	1.375	1.358
100	3.936	3.087	2.696	2.463	2.305	2.191	2.103	2.032	1.975	1.927	1.886	1.850	1.792	1.746	1.708	1.676	1.616	1.573	1.515	1.477	1.392	1.359	1.342
125	3.917	3.069	2.677	2.444	2.287	2.172	2.084	2.013	1.956	1.907	1.866	1.830	1.772	1.725	1.687	1.655	1.594	1.551	1.491	1.452	1.364	1.330	1.311
150	3.904	3.056	2.665	2.432	2.274	2.160	2.071	2.001	1.943	1.894	1.853	1.817	1.758	1.711	1.673	1.641	1.580	1.535	1.475	1.436	1.345	1.309	1.290
200	3.888	3.041	2.650	2.417	2.259	2.144	2.056	1.985	1.927	1.878	1.837	1.801	1.742	1.694	1.656	1.623	1.561	1.516	1.455	1.415	1.321	1.283	1.263
300	3.873	3.026	2.635	2.402	2.244	2.129	2.040	1.969	1.911	1.862	1.821	1.785	1.725	1.677	1.638	1.606	1.543	1.497	1.435	1.393	1.296	1.256	1.234
500	3.860	3.014	2.623	2.390	2.232	2.117	2.028	1.957	1.899	1.850	1.808	1.772	1.712	1.664	1.625	1.592	1.528	1.482	1.419	1.376	1.275	1.233	1.210

$\alpha = 2.5\%$ 

GL <sub>2</sub>	GL <sub>1</sub>																						
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	25	30	40	50	100	150	200
1	647.8	799.5	864.2	899.6	921.8	937.1	948.2	956.7	963.3	968.6	973.0	976.7	982.5	986.9	990.3	993.1	998.1	1001	1006	1008	1013	1015	1016
2	38.51	39.00	39.17	39.25	39.30	39.33	39.36	39.37	39.39	39.40	39.41	39.41	39.43	39.44	39.44	39.45	39.46	39.46	39.47	39.48	39.49	39.49	39.49
3	17.44	16.04	15.44	15.10	14.88	14.73	14.62	14.54	14.47	14.42	14.37	14.34	14.28	14.23	14.20	14.17	14.12	14.08	14.04	14.01	13.96	13.94	13.93
4	12.22	10.65	9.979	9.605	9.364	9.197	9.074	8.980	8.905	8.844	8.794	8.751	8.684	8.633	8.592	8.560	8.501	8.461	8.411	8.381	8.319	8.299	8.289
5	10.01	8.434	7.764	7.388	7.146	6.978	6.853	6.757	6.681	6.619	6.568	6.525	6.456	6.403	6.362	6.329	6.268	6.227	6.175	6.144	6.080	6.059	6.048
6	8.813	7.260	6.599	6.227	5.988	5.820	5.695	5.600	5.523	5.461	5.410	5.366	5.297	5.244	5.202	5.168	5.107	5.065	5.012	4.980	4.915	4.893	4.882
7	8.073	6.542	5.890	5.523	5.285	5.119	4.995	4.899	4.823	4.761	4.709	4.666	4.596	4.543	4.501	4.467	4.405	4.362	4.309	4.276	4.210	4.188	4.176
8	7.571	6.059	5.416	5.053	4.817	4.652	4.529	4.433	4.357	4.295	4.243	4.200	4.130	4.076	4.034	3.999	3.937	3.894	3.840	3.807	3.739	3.716	3.705
9	7.209	5.715	5.078	4.718	4.484	4.320	4.197	4.102	4.026	3.964	3.912	3.868	3.798	3.744	3.701	3.667	3.604	3.560	3.505	3.472	3.403	3.380	3.368
10	6.937	5.456	4.826	4.468	4.236	4.072	3.950	3.855	3.779	3.717	3.665	3.621	3.550	3.496	3.453	3.419	3.355	3.311	3.255	3.221	3.152	3.128	3.116
11	6.724	5.256	4.630	4.275	4.044	3.881	3.759	3.664	3.588	3.526	3.474	3.430	3.359	3.304	3.261	3.226	3.162	3.118	3.061	3.027	2.956	2.932	2.920
12	6.554	5.096	4.474	4.121	3.891	3.728	3.607	3.512	3.436	3.374	3.321	3.277	3.206	3.152	3.108	3.073	3.008	2.963	2.906	2.871	2.800	2.775	2.763
13	6.414	4.965	4.347	3.996	3.767	3.604	3.483	3.388	3.312	3.250	3.197	3.153	3.082	3.027	2.983	2.948	2.882	2.837	2.780	2.744	2.671	2.647	2.634
14	6.298	4.857	4.242	3.892	3.663	3.501	3.380	3.285	3.209	3.147	3.095	3.050	2.979	2.923	2.879	2.844	2.778	2.732	2.674	2.638	2.565	2.539	2.526
15	6.200	4.765	4.153	3.804	3.576	3.415	3.293	3.199	3.123	3.060	3.008	2.963	2.891	2.836	2.792	2.756	2.689	2.644	2.585	2.549	2.474	2.448	2.435
16	6.115	4.687	4.077	3.729	3.502	3.341	3.219	3.125	3.049	2.986	2.934	2.889	2.817	2.761	2.717	2.681	2.614	2.568	2.509	2.472	2.396	2.370	2.357
17	6.042	4.619	4.011	3.665	3.438	3.277	3.156	3.061	2.985	2.922	2.870	2.825	2.753	2.697	2.652	2.616	2.548	2.502	2.442	2.405	2.329	2.302	2.289
18	5.978	4.560	3.954	3.608	3.382	3.221	3.100	3.005	2.929	2.866	2.814	2.769	2.696	2.640	2.596	2.559	2.491	2.445	2.384	2.347	2.269	2.242	2.229
19	5.922	4.508	3.903	3.559	3.333	3.172	3.051	2.956	2.880	2.817	2.765	2.720	2.647	2.591	2.546	2.509	2.441	2.394	2.333	2.295	2.217	2.190	2.176
20	5.871	4.461	3.859	3.515	3.289	3.128	3.007	2.913	2.837	2.774	2.721	2.676	2.603	2.547	2.501	2.464	2.396	2.349	2.287	2.249	2.170	2.142	2.128
21	5.827	4.420	3.819	3.475	3.250	3.090	2.969	2.874	2.798	2.735	2.682	2.637	2.564	2.507	2.462	2.425	2.356	2.308	2.246	2.208	2.128	2.100	2.086
22	5.786	4.383	3.783	3.440	3.215	3.055	2.934	2.839	2.763	2.700	2.647	2.602	2.528	2.472	2.426	2.389	2.320	2.272	2.210	2.171	2.090	2.062	2.047
23	5.750	4.349	3.750	3.408	3.183	3.023	2.902	2.808	2.731	2.668	2.615	2.570	2.497	2.440	2.394	2.357	2.287	2.239	2.176	2.137	2.056	2.027	2.013
24	5.717	4.319	3.721	3.379	3.155	2.995	2.874	2.779	2.703	2.640	2.586	2.541	2.468	2.411	2.365	2.327	2.257	2.209	2.146	2.107	2.024	1.995	1.981
25	5.686	4.291	3.694	3.353	3.129	2.969	2.848	2.753	2.677	2.613	2.560	2.515	2.441	2.384	2.338	2.300	2.230	2.182	2.118	2.079	1.996	1.966	1.952
26	5.659	4.265	3.670	3.329	3.105	2.945	2.824	2.729	2.653	2.590	2.536	2.491	2.417	2.360	2.314	2.276	2.205	2.157	2.093	2.053	1.969	1.940	1.925
27	5.633	4.242	3.647	3.307	3.083	2.923	2.802	2.707	2.631	2.568	2.514	2.469	2.395	2.337	2.291	2.253	2.183	2.133	2.069	2.029	1.945	1.915	1.900
28	5.610	4.221	3.626	3.286	3.063	2.903	2.782	2.687	2.611	2.547	2.494	2.448	2.374	2.317	2.270	2.232	2.161	2.112	2.048	2.007	1.922	1.892	1.877
29	5.588	4.201	3.607	3.267	3.044	2.884	2.763	2.669	2.592	2.529	2.475	2.430	2.355	2.298	2.251	2.213	2.142	2.092	2.028	1.987	1.901	1.871	1.855
30	5.568	4.182	3.589	3.250	3.026	2.867	2.746	2.651	2.575	2.511	2.458	2.412	2.338	2.280	2.233	2.195	2.124	2.074	2.009	1.968	1.882	1.851	1.835

$\alpha = 2.5\% \quad (\text{continuação})$ 

GL <sub>2</sub>	GL <sub>1</sub>																						
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	25	30	40	50	100	150	200
32	5.531	4.149	3.557	3.218	2.995	2.836	2.715	2.620	2.543	2.480	2.426	2.381	2.306	2.248	2.201	2.163	2.091	2.041	1.975	1.934	1.846	1.815	1.799
34	5.499	4.120	3.529	3.191	2.968	2.808	2.688	2.593	2.516	2.453	2.399	2.353	2.278	2.220	2.173	2.135	2.062	2.012	1.946	1.904	1.815	1.784	1.767
36	5.471	4.094	3.505	3.167	2.944	2.785	2.664	2.569	2.492	2.429	2.375	2.329	2.254	2.196	2.148	2.110	2.037	1.986	1.919	1.877	1.787	1.755	1.739
38	5.446	4.071	3.483	3.145	2.923	2.763	2.643	2.548	2.471	2.407	2.353	2.307	2.232	2.174	2.126	2.088	2.015	1.963	1.896	1.854	1.763	1.730	1.713
40	5.424	4.051	3.463	3.126	2.904	2.744	2.624	2.529	2.452	2.388	2.334	2.288	2.213	2.154	2.107	2.068	1.994	1.943	1.875	1.832	1.741	1.708	1.691
42	5.404	4.033	3.446	3.109	2.887	2.727	2.607	2.512	2.435	2.371	2.317	2.271	2.196	2.137	2.089	2.050	1.976	1.924	1.856	1.813	1.720	1.687	1.670
44	5.386	4.016	3.430	3.093	2.871	2.712	2.591	2.496	2.419	2.355	2.302	2.255	2.180	2.121	2.073	2.034	1.960	1.908	1.839	1.796	1.702	1.668	1.651
46	5.369	4.001	3.415	3.079	2.857	2.698	2.577	2.482	2.405	2.341	2.287	2.241	2.165	2.106	2.058	2.019	1.945	1.893	1.824	1.780	1.685	1.651	1.634
48	5.354	3.987	3.402	3.066	2.844	2.685	2.565	2.470	2.393	2.329	2.274	2.228	2.152	2.093	2.045	2.006	1.931	1.879	1.809	1.765	1.670	1.635	1.618
50	5.340	3.975	3.390	3.054	2.833	2.674	2.553	2.458	2.381	2.317	2.263	2.216	2.140	2.081	2.033	1.993	1.919	1.866	1.796	1.752	1.656	1.621	1.603
60	5.286	3.925	3.343	3.008	2.786	2.627	2.507	2.412	2.334	2.270	2.216	2.169	2.093	2.033	1.985	1.944	1.869	1.815	1.744	1.699	1.599	1.563	1.543
70	5.247	3.890	3.309	2.975	2.754	2.595	2.474	2.379	2.302	2.237	2.183	2.136	2.059	1.999	1.950	1.910	1.833	1.779	1.707	1.660	1.558	1.520	1.500
80	5.218	3.864	3.284	2.950	2.730	2.571	2.450	2.355	2.277	2.213	2.158	2.111	2.035	1.974	1.925	1.884	1.807	1.752	1.679	1.632	1.527	1.488	1.467
90	5.196	3.844	3.265	2.932	2.711	2.552	2.432	2.336	2.259	2.194	2.140	2.092	2.015	1.955	1.905	1.864	1.787	1.731	1.657	1.610	1.503	1.463	1.441
100	5.179	3.828	3.250	2.917	2.696	2.537	2.417	2.321	2.244	2.179	2.124	2.077	2.000	1.939	1.890	1.849	1.770	1.715	1.640	1.592	1.483	1.442	1.420
125	5.147	3.800	3.222	2.890	2.670	2.511	2.390	2.295	2.217	2.153	2.098	2.050	1.973	1.911	1.862	1.820	1.741	1.685	1.609	1.559	1.448	1.405	1.381
150	5.126	3.781	3.204	2.872	2.652	2.494	2.373	2.278	2.200	2.135	2.080	2.032	1.955	1.893	1.843	1.801	1.722	1.665	1.588	1.538	1.423	1.379	1.355
200	5.100	3.758	3.182	2.850	2.630	2.472	2.351	2.256	2.178	2.113	2.058	2.010	1.932	1.870	1.820	1.778	1.698	1.640	1.562	1.511	1.393	1.346	1.320
300	5.075	3.735	3.160	2.829	2.609	2.451	2.330	2.234	2.156	2.091	2.036	1.988	1.910	1.848	1.797	1.755	1.674	1.616	1.536	1.484	1.361	1.312	1.285
500	5.054	3.716	3.142	2.811	2.592	2.434	2.313	2.217	2.139	2.074	2.019	1.971	1.892	1.830	1.779	1.736	1.655	1.596	1.515	1.462	1.336	1.284	1.254

$\alpha = 1.0\%$ 

GL <sub>2</sub>	GL <sub>1</sub>																						
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	25	30	40	50	100	150	200
1	4052	4999	5403	5625	5764	5859	5928	5981	6022	6056	6083	6106	6143	6170	6192	6209	6240	6261	6287	6303	6334	6345	6350
2	98.50	99.00	99.17	99.25	99.30	99.33	99.37	99.39	99.40	99.41	99.42	99.43	99.44	99.44	99.45	99.46	99.47	99.47	99.48	99.49	99.49	99.49	99.49
3	34.12	30.82	29.46	28.71	28.24	27.91	27.67	27.49	27.35	27.23	27.13	27.05	26.92	26.83	26.75	26.69	26.58	26.50	26.41	26.35	26.24	26.20	26.18
4	21.20	18.00	16.69	15.98	15.52	15.21	14.98	14.80	14.66	14.55	14.45	14.37	14.25	14.15	14.08	14.02	13.91	13.84	13.75	13.69	13.58	13.54	13.52
5	16.26	13.27	12.06	11.39	10.97	10.67	10.46	10.29	10.16	10.05	9.963	9.888	9.770	9.680	9.610	9.553	9.449	9.379	9.291	9.238	9.130	9.094	9.075
6	13.75	10.92	9.780	9.148	8.746	8.466	8.260	8.102	7.976	7.874	7.790	7.718	7.605	7.519	7.451	7.396	7.296	7.229	7.143	7.091	6.987	6.951	6.934
7	12.25	9.547	8.451	7.847	7.460	7.191	6.993	6.840	6.719	6.620	6.538	6.469	6.359	6.275	6.209	6.155	6.058	5.992	5.908	5.858	5.755	5.720	5.702
8	11.26	8.649	7.591	7.006	6.632	6.371	6.178	6.029	5.911	5.814	5.734	5.667	5.559	5.477	5.412	5.359	5.263	5.198	5.116	5.065	4.963	4.929	4.911
9	10.56	8.022	6.992	6.422	6.057	5.802	5.613	5.467	5.351	5.257	5.178	5.111	5.005	4.924	4.860	4.808	4.713	4.649	4.567	4.517	4.415	4.380	4.363
10	10.04	7.559	6.552	5.994	5.636	5.386	5.200	5.057	4.942	4.849	4.772	4.706	4.601	4.520	4.457	4.405	4.311	4.247	4.165	4.115	4.014	3.979	3.962
11	9.646	7.206	6.217	5.668	5.316	5.069	4.886	4.744	4.632	4.539	4.462	4.397	4.293	4.213	4.150	4.099	4.005	3.941	3.860	3.810	3.708	3.673	3.656
12	9.330	6.927	5.953	5.412	5.064	4.821	4.640	4.499	4.388	4.296	4.220	4.155	4.052	3.972	3.909	3.858	3.765	3.701	3.619	3.569	3.467	3.432	3.414
13	9.074	6.701	5.739	5.205	4.862	4.620	4.441	4.302	4.191	4.100	4.025	3.960	3.857	3.778	3.716	3.665	3.571	3.507	3.425	3.375	3.272	3.237	3.219
14	8.862	6.515	5.564	5.035	4.695	4.456	4.278	4.140	4.030	3.939	3.864	3.800	3.698	3.619	3.556	3.505	3.412	3.348	3.266	3.215	3.112	3.076	3.059
15	8.683	6.359	5.417	4.893	4.556	4.318	4.142	4.004	3.895	3.805	3.730	3.666	3.564	3.485	3.423	3.372	3.278	3.214	3.132	3.081	2.977	2.942	2.923
16	8.531	6.226	5.292	4.773	4.437	4.202	4.026	3.890	3.780	3.691	3.616	3.553	3.451	3.372	3.310	3.259	3.165	3.101	3.018	2.967	2.863	2.827	2.808
17	8.400	6.112	5.185	4.669	4.336	4.102	3.927	3.791	3.682	3.593	3.519	3.455	3.353	3.275	3.212	3.162	3.068	3.003	2.920	2.869	2.764	2.728	2.709
18	8.285	6.013	5.092	4.579	4.248	4.015	3.841	3.705	3.597	3.508	3.434	3.371	3.269	3.190	3.128	3.077	2.983	2.919	2.835	2.784	2.678	2.641	2.623
19	8.185	5.926	5.010	4.500	4.171	3.939	3.765	3.631	3.523	3.434	3.360	3.297	3.195	3.116	3.054	3.003	2.909	2.844	2.761	2.709	2.602	2.565	2.547
20	8.096	5.849	4.938	4.431	4.103	3.871	3.699	3.564	3.457	3.368	3.294	3.231	3.130	3.051	2.989	2.938	2.843	2.778	2.695	2.643	2.535	2.498	2.479
21	8.017	5.780	4.874	4.369	4.042	3.812	3.640	3.506	3.398	3.310	3.236	3.173	3.072	2.993	2.931	2.880	2.785	2.720	2.636	2.584	2.475	2.438	2.419
22	7.945	5.719	4.817	4.313	3.988	3.758	3.587	3.453	3.346	3.258	3.184	3.121	3.019	2.941	2.879	2.827	2.733	2.667	2.583	2.531	2.422	2.384	2.365
23	7.881	5.664	4.765	4.264	3.939	3.710	3.539	3.406	3.299	3.211	3.137	3.074	2.973	2.894	2.832	2.781	2.686	2.620	2.535	2.483	2.373	2.335	2.316
24	7.823	5.614	4.718	4.218	3.895	3.667	3.496	3.363	3.256	3.168	3.094	3.032	2.930	2.852	2.789	2.738	2.643	2.577	2.492	2.440	2.329	2.291	2.271
25	7.770	5.568	4.675	4.177	3.855	3.627	3.457	3.324	3.217	3.129	3.056	2.993	2.892	2.813	2.751	2.699	2.604	2.538	2.453	2.400	2.289	2.250	2.230
26	7.721	5.526	4.637	4.140	3.818	3.591	3.421	3.288	3.182	3.094	3.021	2.958	2.857	2.778	2.715	2.664	2.569	2.503	2.417	2.364	2.252	2.213	2.193
27	7.677	5.488	4.601	4.106	3.785	3.558	3.388	3.256	3.149	3.062	2.988	2.926	2.824	2.746	2.683	2.632	2.536	2.470	2.384	2.330	2.218	2.179	2.159
28	7.636	5.453	4.568	4.074	3.754	3.528	3.358	3.226	3.120	3.032	2.959	2.896	2.795	2.716	2.653	2.602	2.506	2.440	2.354	2.300	2.187	2.147	2.127
29	7.598	5.420	4.538	4.045	3.725	3.499	3.330	3.198	3.092	3.005	2.931	2.868	2.767	2.689	2.626	2.574	2.478	2.412	2.325	2.271	2.158	2.118	2.097
30	7.562	5.390	4.510	4.018	3.699	3.473	3.304	3.173	3.067	2.979	2.906	2.843	2.742	2.663	2.600	2.549	2.453	2.386	2.299	2.245	2.131	2.091	2.070

$\alpha = 1.0\% \quad (\text{continuação})$ 

GL <sub>2</sub>	GL <sub>1</sub>																						
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	25	30	40	50	100	150	200
32	7.499	5.336	4.459	3.969	3.652	3.427	3.258	3.127	3.021	2.934	2.860	2.798	2.696	2.618	2.555	2.503	2.406	2.340	2.252	2.198	2.082	2.041	2.021
34	7.444	5.289	4.416	3.927	3.611	3.386	3.218	3.087	2.981	2.894	2.821	2.758	2.657	2.578	2.515	2.463	2.366	2.299	2.211	2.156	2.040	1.998	1.977
36	7.396	5.248	4.377	3.890	3.574	3.351	3.183	3.052	2.946	2.859	2.786	2.723	2.622	2.543	2.480	2.428	2.331	2.263	2.175	2.120	2.002	1.960	1.939
38	7.353	5.211	4.343	3.858	3.542	3.319	3.152	3.021	2.915	2.828	2.755	2.692	2.591	2.512	2.449	2.397	2.299	2.232	2.143	2.087	1.968	1.926	1.904
40	7.314	5.179	4.313	3.828	3.514	3.291	3.124	2.993	2.888	2.801	2.727	2.665	2.563	2.484	2.421	2.369	2.271	2.203	2.114	2.058	1.938	1.896	1.874
42	7.280	5.149	4.285	3.802	3.488	3.266	3.099	2.968	2.863	2.776	2.703	2.640	2.539	2.460	2.396	2.344	2.246	2.178	2.088	2.032	1.911	1.868	1.846
44	7.248	5.123	4.261	3.778	3.465	3.243	3.076	2.946	2.840	2.754	2.680	2.618	2.516	2.437	2.374	2.321	2.223	2.155	2.065	2.008	1.887	1.843	1.821
46	7.220	5.099	4.238	3.757	3.444	3.222	3.056	2.925	2.820	2.733	2.660	2.598	2.496	2.417	2.353	2.301	2.203	2.134	2.044	1.987	1.864	1.820	1.797
48	7.194	5.077	4.218	3.737	3.425	3.204	3.037	2.907	2.802	2.715	2.642	2.579	2.478	2.399	2.335	2.282	2.184	2.115	2.024	1.967	1.844	1.799	1.776
50	7.171	5.057	4.199	3.720	3.408	3.186	3.020	2.890	2.785	2.698	2.625	2.562	2.461	2.382	2.318	2.265	2.167	2.098	2.007	1.949	1.825	1.780	1.757
60	7.077	4.977	4.126	3.649	3.339	3.119	2.953	2.823	2.718	2.632	2.559	2.496	2.394	2.315	2.251	2.198	2.098	2.028	1.936	1.877	1.749	1.703	1.678
70	7.011	4.922	4.074	3.600	3.291	3.071	2.906	2.777	2.672	2.585	2.512	2.450	2.348	2.268	2.204	2.150	2.050	1.980	1.886	1.826	1.695	1.647	1.622
80	6.963	4.881	4.036	3.563	3.255	3.036	2.871	2.742	2.637	2.551	2.478	2.415	2.313	2.233	2.169	2.115	2.015	1.944	1.849	1.788	1.655	1.605	1.579
90	6.925	4.849	4.007	3.535	3.228	3.009	2.845	2.715	2.611	2.524	2.451	2.389	2.286	2.206	2.142	2.088	1.987	1.916	1.820	1.759	1.623	1.572	1.546
100	6.895	4.824	3.984	3.513	3.206	2.988	2.823	2.694	2.590	2.503	2.430	2.368	2.265	2.185	2.120	2.067	1.965	1.893	1.797	1.735	1.598	1.546	1.518
125	6.842	4.779	3.942	3.473	3.167	2.950	2.786	2.657	2.552	2.466	2.393	2.330	2.228	2.147	2.082	2.028	1.926	1.853	1.756	1.693	1.551	1.498	1.469
150	6.807	4.749	3.915	3.447	3.142	2.924	2.761	2.632	2.528	2.441	2.368	2.305	2.203	2.122	2.057	2.003	1.900	1.827	1.729	1.665	1.520	1.465	1.435
200	6.763	4.713	3.881	3.414	3.110	2.893	2.730	2.601	2.497	2.411	2.338	2.275	2.172	2.091	2.026	1.971	1.868	1.794	1.694	1.629	1.481	1.423	1.391
300	6.720	4.677	3.848	3.382	3.079	2.862	2.699	2.571	2.467	2.380	2.307	2.244	2.142	2.061	1.995	1.940	1.836	1.761	1.660	1.594	1.441	1.380	1.346
500	6.686	4.648	3.821	3.357	3.054	2.838	2.675	2.547	2.443	2.356	2.283	2.220	2.117	2.036	1.970	1.915	1.810	1.735	1.633	1.566	1.408	1.344	1.308

## Números Aleatórios (Independentes e Equiprováveis)

89	40	49	90	96	59	75	44	45	78	29	98	08	89	43	65	30	33	31	80
86	69	06	51	91	59	89	95	60	80	03	54	94	45	32	08	59	10	09	01
47	84	71	53	72	36	08	72	52	35	84	37	20	47	35	84	80	66	82	18
32	35	53	57	13	44	19	42	26	83	73	37	73	30	13	84	96	15	68	70
34	14	02	75	33	81	37	63	23	79	90	44	59	37	74	89	34	55	13	21
57	71	12	20	19	04	73	40	50	72	10	54	48	21	05	83	23	41	85	54
61	03	48	13	10	60	13	86	04	71	71	47	66	48	82	36	63	61	12	14
16	20	48	63	90	78	22	31	03	44	00	00	93	54	07	67	30	17	77	93
22	25	42	34	74	39	47	66	58	59	77	09	02	09	56	88	31	24	73	23
50	28	34	69	62	39	37	26	95	96	68	40	39	11	60	56	55	55	84	45
28	52	39	50	31	75	66	87	57	13	52	17	54	22	49	67	27	32	31	61
22	61	88	05	33	08	31	33	19	80	59	66	23	10	94	52	26	17	10	31
77	52	27	63	50	79	30	14	98	20	49	64	36	63	38	39	00	89	47	75
23	13	75	75	36	76	59	19	65	52	37	71	53	63	68	92	34	68	46	20
99	29	41	33	56	63	95	12	30	81	62	62	75	79	28	68	60	29	20	20
70	11	75	46	05	69	09	38	40	55	86	86	24	12	85	32	42	32	04	57
81	00	19	96	64	46	27	98	11	47	86	88	05	98	96	54	93	46	01	21
04	11	94	12	76	55	68	98	05	59	79	34	79	95	73	87	54	99	61	92
87	91	92	15	45	65	32	91	81	32	41	35	92	96	97	79	90	98	44	00
74	83	41	87	40	72	56	32	13	59	17	47	09	26	81	76	26	53	99	92
89	81	68	84	73	16	13	35	46	55	62	37	80	80	51	21	44	19	52	66
66	59	42	16	93	27	48	12	86	63	51	77	82	13	86	73	40	57	23	72
27	76	26	80	60	66	10	29	00	33	36	99	30	19	72	35	76	59	19	98
25	34	29	36	23	27	14	70	44	11	34	27	00	33	39	77	80	93	54	10
30	30	39	96	62	42	38	14	05	84	12	37	48	02	08	92	88	82	31	33
13	39	18	85	94	64	26	27	10	38	67	96	82	67	16	55	86	35	40	93
33	95	65	74	43	65	45	53	24	27	79	95	65	02	70	08	83	43	03	61
53	44	12	04	90	12	48	40	55	02	18	56	92	18	10	63	11	56	53	77
57	03	28	34	12	39	21	34	52	69	00	09	21	27	66	92	98	49	12	78
29	26	25	31	48	63	75	16	12	32	64	35	47	00	23	96	94	36	44	69
32	54	86	32	16	86	84	29	87	69	04	90	51	86	48	45	72	32	42	21
68	63	04	67	36	58	70	37	07	62	31	96	36	96	33	69	49	32	45	09
64	76	66	32	54	12	93	06	95	11	23	04	89	63	51	61	10	34	76	65
00	26	04	37	73	77	47	74	51	56	17	48	13	59	91	12	05	48	43	85
59	84	27	54	39	59	59	71	68	82	49	55	78	73	78	49	65	62	58	38
21	47	87	81	25	73	59	25	75	14	63	97	32	42	33	56	30	17	38	05
26	13	36	29	15	94	60	38	87	10	32	81	25	67	00	75	59	47	22	23
12	74	48	49	33	74	69	22	90	47	58	28	55	10	58	62	73	34	36	73
34	42	24	49	07	69	70	90	78	83	40	73	96	24	27	27	48	58	51	85
09	06	00	47	97	29	46	85	89	97	62	59	25	48	59	97	49	86	86	39
97	06	31	43	10	48	15	44	74	49	49	29	84	40	40	52	34	89	40	00
84	43	59	86	03	82	07	37	88	41	18	21	70	41	39	73	11	90	86	06
69	83	43	27	07	64	18	68	79	63	39	90	90	52	31	29	60	83	66	96
53	70	18	35	51	74	43	99	96	56	83	25	80	01	67	34	42	42	21	92
85	35	86	64	74	67	20	83	33	84	89	50	85	22	37	66	39	03	91	71
82	87	23	02	85	26	83	01	04	51	96	26	08	94	89	76	40	87	68	66
68	86	68	61	15	71	35	82	10	70	08	71	81	45	08	04	73	86	17	55
37	62	84	62	81	06	36	38	25	02	68	96	76	39	17	91	36	91	93	29
18	48	67	76	79	34	09	83	65	28	92	46	92	89	15	28	63	84	94	68
01	14	27	80	87	94	98	76	36	46	95	71	07	93	00	51	58	67	10	24