附　　表

1. 标准正态分布表

本表列出了标准正态分布函数 $\Phi(x) = (\sqrt{2\pi})^{-1}\int_{-\infty}^{x} e^{-t^2/2}dt$ 当 $0 \leqslant x \leqslant 2.98$ 之值. 此范围内不能直接查出之值, 可用线性插值法. 对 $x < 0$ 可用 $\Phi(x) = 1 - \Phi(-x)$ 化为 $x > 0$ 的情况.

x	0.00	0.02	0.04	0.06	0.08
0.0	0.5000	0.5030	0.5160	0.5239	0.5319
0.1	0.5398	0.5478	0.5557	0.5636	0.5714
0.2	0.5793	0.5871	0.5948	0.6026	0.6103
0.3	0.6179	0.6255	0.6331	0.6406	0.6480
0.4	0.6554	0.6628	0.6700	0.6772	0.6844
0.5	0.6915	0.6985	0.7054	0.7123	0.7190
0.6	0.7257	0.7324	0.7389	0.7454	0.7517
0.7	0.7580	0.7642	0.7703	0.7764	0.7823
0.8	0.7881	0.7939	0.7995	0.8051	0.8106
0.9	0.8159	0.8212	0.8264	0.8315	0.8365
1.0	0.8413	0.8461	0.8508	0.8554	0.8599
1.1	0.8643	0.8686	0.8729	0.8770	0.8810
1.2	0.8849	0.8888	0.8925	0.8962	0.8997
1.3	0.90320	0.90658	0.90988	0.91809	0.91621
1.4	0.91924	0.92220	0.92507	0.92785	0.93056
1.5	0.93319	0.93574	0.93822	0.94062	0.94295
1.6	0.94520	0.94738	0.94950	0.95154	0.95352
1.7	0.95543	0.95728	0.95907	0.96080	0.96246
1.8	0.96407	0.96562	0.96712	0.96856	0.96995

x	0.00	0.02	0.04	0.06	0.08
1.9	0.97128	0.97257	0.97381	0.97500	0.97615
2.0	0.97725	0.97831	0.97932	0.98030	0.98124
2.1	0.98214	0.98300	0.98382	0.98461	0.98537
2.2	0.98610	0.98679	0.98745	0.98809	0.98870
2.3	0.98928	0.98988	0.99036	0.99086	0.99134
2.4	0.99180	0.99224	0.99266	0.99305	0.99343
2.5	0.99379	0.99413	0.99446	0.99477	0.99506
2.6	0.99534	0.99560	0.99586	0.99609	0.99632
2.7	0.99653	0.99674	0.99693	0.99711	0.99728
2.8	0.99745	0.99760	0.99774	0.99788	0.99801
2.9	0.99813	0.99825	0.99836	0.96846	0.99856

2. 标准正态分布双侧上分位点 $u_{\alpha/2}$ 表

本表列出满足条件 $P(|X| \geqslant u_{\alpha/2}) = a$ 的 $u_{\alpha/2}$，其中 X 服从标准正态分布.

a	0.0	0.1	0.2	0.3	0.4
0.00	—	1.6449	1.2816	1.0364	0.8416
0.01	2.5758	1.5982	1.2536	1.0152	0.8239
0.02	2.3268	1.5548	1.2265	0.9945	0.8064
0.03	2.1701	1.5141	1.2004	0.9741	0.7892
0.04	2.0537	1.4758	1.1750	0.9542	0.7722
0.05	1.9600	1.4395	1.1503	0.9346	0.7554
0.06	1.8808	1.4051	1.1264	0.9154	0.7388
0.07	1.8119	1.3722	1.1031	0.8965	0.7225
0.08	1.7507	1.3408	1.0808	0.8779	0.7063
0.09	1.6954	1.3106	1.0581	0.8596	0.6903

3. t 分布上侧分位点 $t_n(\alpha)$ 表

设随机变量 X 服从自由度为 n 的 t 分布, 本表列出满足条件 $P(X > t_n(\alpha)) = \alpha$ 的值 $t_n(\alpha)$.

n \ α	0.05	0.025	0.01	0.005	n \ α	0.05	0.025	0.01	0.005
1	6.314	12.706	31.821	63.657	16	1.746	2.120	2.583	2.921
2	2.970	4.303	6.965	9.925	17	1.740	2.110	2.567	2.898
3	2.353	3.182	4.541	5.841	18	1.734	2.101	2.552	2.878
4	2.132	2.776	3.747	4.604	19	1.729	2.093	2.539	2.861
5	2.015	2.571	3.365	4.032	20	1.725	2.086	2.528	2.845
6	1.943	2.447	3.143	3.701	21	1.721	2.080	2.518	2.831
7	1.895	2.365	2.998	3.499	22	1.717	2.074	2.508	2.819
8	1.860	2.306	2.896	3.355	23	1.714	2.069	2.500	2.807
9	1.833	2.262	2.821	3.250	24	1.711	2.064	2.492	2.797
10	1.812	2.208	2.764	3.169	25	1.708	2.060	2.485	2.787
11	1.796	2.201	2.718	3.106	26	1.706	2.056	2.479	2.779
12	1.782	2.179	2.861	3.055	27	1.703	2.052	2.473	2.771
13	1.771	2.160	2.650	3.012	28	1.701	2.048	2.467	2.763
14	1.761	2.145	2.624	2.977	29	1.699	2.045	2.462	2.756
15	1.753	2.131	2.602	2.947	30	1.697	2.042	2.457	2.750

4. 普阿松分布表 $P(X=r) = \dfrac{\lambda^r}{r!}e^{-\lambda}$

r	λ							
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
0	.90483	.81873	.74081	.67032	.60653	.54881	.49658	.44932
1	.09048	.16374	.22224	.26812	.30326	.32928	.34761	.35946
2	.00452	.01637	.03333	.05362	.07581	.09878	.12166	.14378
3	.00015	.00109	.00333	.00715	.01263	.01975	.02838	.03834
4	.00000	.00005	.00025	.00071	.00158	.00296	.00496	.00766
5		.00000	.00001	.00005	.00015	.00035	.00069	.00122
6			.00000	.00000	.00001	.00003	.00008	.00016
7					.00000	.00000	.00000	.00001
8							.00001	.00000

r	λ							
	0.9	1.0	1.5	2.0	2.5	3.0	3.5	4.0
0	.40657	.36787	.22313	.13533	.08208	.04978	.03019	.01831
1	.36591	.36787	.33469	.27067	.20521	.14936	.10569	.07326
2	.16466	.18394	.25102	.27067	.25651	.22404	.18495	.14652
3	.04939	.06131	.12551	.18044	.21376	.22404	.21578	.19536
4	.01111	.01532	.04706	.09022	.13360	.16803	.18881	.19536
5	.00200	.00306	.01412	.03608	.06680	.10081	.13216	.15629
6	.00030	.00051	.00353	.01203	.02783	.05040	.07709	.10419
7	.00003	.00007	.00075	.00343	.00994	.02160	.03854	.05954
8	.00000	.00000	.00014	.00085	.00310	.00810	.01686	.02977
9		.00000	.00002	.00019	.00086	.00270	.00655	.01323
10			.00000	.00003	.00021	.00081	.00229	.00529
11				.00000	.00004	.00022	.00073	.00192
12				.00000	.00001	.00005	.00021	.00064
13					.00000	.00001	.00005	.00019
14						.00000	.00001	.00005
15						.00000	.00000	.00001
16							.00000	.00000
17								.00000

5. 卡方分布上侧分位点 $\chi_n^2(\alpha)$ 表

设随机变量 X 服从自由度为 n 的卡方分布, 本表列出满足条件 $P(X > \chi_n^2(\alpha)) = \alpha$ 的值 $\chi_n^2(\alpha)$.

n \ α	0.995	0.99	0.975	0.95	0.90	0.75	0.50
1	—	0.0002	0.001	0.004	0.016	0.102	0.455
2	0.010	0.020	0.051	0.103	0.211	0.575	1.386
3	0.072	0.115	0.216	0.352	0.584	1.213	2.366
4	0.207	0.297	0.484	0.711	1.064	1.923	3.357
5	0.412	0.554	0.831	1.145	1.610	2.675	4.351
6	0.676	0.872	1.237	1.635	2.204	3.455	5.348
7	0.989	1.239	1.690	2.167	2.833	4.255	6.346
8	1.344	1.646	2.180	2.733	3.490	5.071	7.344
9	1.735	2.088	2.700	3.325	4.168	5.899	8.343
10	2.156	2.558	3.247	3.940	4.865	6.737	9.342
11	2.603	3.053	3.816	4.575	5.578	7.584	10.341
12	3.074	3.571	4.404	5.226	6.304	8.438	11.340
13	3.565	4.107	5.009	5.892	7.042	9.299	12.340
14	4.075	4.660	5.629	6.571	7.790	10.165	13.339
15	4.601	5.229	6.262	7.261	8.547	11.037	14.339
16	5.142	5.812	6.908	7.962	9.312	11.912	15.338
17	5.697	6.408	7.564	8.672	10.085	12.792	16.338
18	6.265	7.015	8.231	9.390	10.865	13.675	17.338
19	6.844	7.633	8.907	10.117	11.651	14.562	18.338
20	7.434	8.260	9.591	10.851	12.443	15.452	19.337
21	8.034	8.897	10.283	11.591	13.240	16.344	20.337
22	8.643	9.542	10.982	12.338	14.042	17.240	21.337
23	9.260	10.196	11.689	13.091	14.848	18.137	22.337
24	9.886	10.856	12.401	13.848	15.659	19.037	23.337
25	10.520	11.524	13.120	14.611	16.473	19.939	24.337
26	11.160	12.198	13.844	15.379	17.292	20.843	25.336
27	11.808	12.879	14.573	16.151	18.114	21.749	26.336
28	12.461	13.565	15.308	16.928	18.939	22.657	27.336
29	13.121	14.257	16.047	17.708	19.768	23.567	28.336
30	13.787	14.954	16.791	18.493	20.599	24.478	29.336

n＼α	0.30	0.25	0.10	0.05	0.025	0.01	0.005
1	1.074	1.323	2.706	3.841	5.024	6.635	7.879
2	2.408	2.773	4.605	5.991	7.378	9.210	10.597
3	3.665	4.108	6.251	7.815	9.348	11.345	12.838
4	4.878	5.385	7.779	9.488	11.143	13.277	14.860
5	6.064	6.626	9.236	11.071	12.833	15.086	16.750
6	7.231	7.841	10.645	12.592	14.449	16.812	18.548
7	8.383	9.037	12.017	14.067	16.013	18.475	20.278
8	9.524	10.219	13.362	15.507	17.535	20.090	21.955
9	10.656	11.389	14.684	16.919	19.023	21.666	23.589
10	11.781	12.549	15.987	18.307	20.483	23.209	25.188
11	12.899	13.701	17.275	19.675	21.920	24.725	26.757
12	14.011	14.845	18.549	21.026	23.337	26.217	28.299
13	15.119	15.984	19.812	22.362	24.736	27.688	29.819
14	16.222	17.117	21.064	23.685	26.119	29.141	31.319
15	17.322	18.245	22.307	24.996	27.488	30.578	32.801
16	18.418	19.369	23.542	26.296	28.845	32.000	34.267
17	19.511	20.489	24.769	27.587	30.191	33.409	35.718
18	20.601	21.605	25.989	28.869	31.526	34.805	37.156
19	21.689	22.718	27.204	30.144	32.852	36.191	38.582
20	22.775	23.828	28.412	31.410	34.170	37.566	39.997
21	23.858	24.935	29.615	32.671	35.479	38.932	41.401
22	24.939	26.039	30.813	33.924	36.781	40.289	42.796
23	26.018	27.141	32.007	35.172	38.076	41.638	44.181
24	27.096	28.241	33.196	36.415	39.364	42.980	45.559
25	28.172	29.339	34.382	37.652	40.646	44.314	46.928
26	29.246	30.435	35.563	38.885	41.923	45.642	48.290
27	30.319	31.528	36.741	40.113	43.194	46.963	49.645
28	31.391	32.620	37.916	41.337	44.461	48.278	50.993
29	32.461	33.711	39.087	42.557	45.722	49.588	52.336
30	33.530	34.800	40.256	43.773	46.979	50.892	53.672

6. F 分布上侧分位数 $F_{m,n}(\alpha)$ 表

设随机变量 X 服从自由度为 m 和 n 的 F 分布,本表列出满足条件 $P(X > F_{m,n}(\alpha)) = \alpha$ 的值 $F_{m,n}(\alpha)$.

A. $\alpha = 0.05$

n \ m	1	2	3	4	5	6	7	8
1	161	200	216	225	230	234	237	239
2	18.5	19.0	19.2	19.2	19.3	19.3	19.4	19.4
3	10.1	9.55	9.28	9.12	9.01	8.94	8.89	8.85
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27

B. = 0.01

m\n	1	2	3	4	5	6	7	8
1	405	500	540	563	576	586	593	598
2	98.5	99.0	99.2	99.2	99.3	99.3	99.4	99.4
3	34.1	30.8	29.5	28.7	28.2	27.9	27.7	27.5
4	21.2	18.0	16.7	16.0	15.5	15.2	15.0	14.8
5	16.3	13.3	12.1	11.4	11.0	10.7	10.5	10.3
6	13.7	10.9	9.78	9.15	8.75	8.47	8.26	8.10
7	12.2	9.55	8.45	7.85	7.46	7.19	6.99	6.84
8	11.3	8.65	7.59	7.01	6.63	6.37	6.18	6.03
9	10.6	8.02	6.99	6.42	6.06	5.80	5.61	5.47
10	10.0	7.56	6.55	5.99	5.64	5.39	5.20	5.06
11	9.65	7.21	6.22	5.67	5.32	5.07	4.89	4.74
12	9.33	6.98	5.95	5.41	5.06	4.82	4.64	4.50
13	9.07	6.70	5.74	5.21	4.86	4.62	4.44	4.30
14	8.86	6.51	5.56	5.04	4.70	4.46	4.23	4.14
15	8.68	6.36	5.42	4.89	4.56	4.32	4.14	4.00
16	8.53	6.23	5.29	4.77	4.44	4.20	4.03	3.89
17	8.40	6.11	5.18	4.67	4.34	4.10	3.93	3.79
18	8.29	6.01	5.09	4.58	4.25	4.01	3.84	3.71
19	8.18	5.93	5.01	4.50	4.17	3.94	3.77	3.63
20	8.10	5.83	4.94	4.43	4.10	3.87	3.70	3.56
21	8.02	5.78	4.87	4.37	4.04	3.81	3.64	3.51
22	7.95	5.72	4.82	4.31	3.99	3.76	3.59	3.45
23	7.88	5.66	4.76	4.26	3.94	3.71	3.54	3.41
24	7.82	5.61	4.72	4.22	3.90	3.67	3.50	3.36
25	7.77	5.57	4.68	4.18	3.86	3.63	3.46	3.32
26	7.72	5.53	4.64	4.14	3.82	3.59	3.42	3.29
27	7.68	5.49	4.60	4.11	3.78	3.56	3.39	3.26
28	7.64	5.45	4.57	4.07	3.75	3.53	3.36	3.23
29	7.60	5.42	4.54	4.04	3.73	3.50	3.33	3.20
30	7.56	5.39	4.51	4.02	3.70	3.47	3.30	3.17