附录II　常用统计表

附表 1　正态分布概率表

$$F(Z)=P\left(\left|x-\bar{x}\right|/\sigma<z\right)$$

Z	$F(Z)$	Z	$F(Z)$	Z	$F(Z)$	Z	$F(Z)$
0.00	0.0000	0.35	0.2737	0.70	0.5161	1.05	0.7063
0.01	0.0080	0.36	0.2812	0.71	0.5223	1.06	0.7109
0.02	0.0160	0.37	0.2886	0.72	0.5285	1.07	0.7154
0.03	0.0239	0.38	0.2961	0.73	0.5346	1.08	0.7199
0.04	0.0319	0.39	0.3035	0.74	0.5407	1.09	0.7243
0.05	0.0399	0.40	0.3108	0.75	0.5467	1.10	0.7287
0.06	0.0478	0.41	0.3182	0.76	0.5527	1.11	0.7330
0.07	0.0558	0.42	0.3255	0.77	0.5587	1.12	0.7373
0.08	0.0638	0.43	0.3328	0.78	0.5646	1.13	0.7415
0.09	0.0717	0.44	0.3401	0.79	0.5705	1.14	0.7457
0.10	0.0797	0.45	0.3473	0.80	0.5763	1.15	0.7499
0.11	0.0876	0.46	0.3545	0.81	0.5821	1.16	0.7540
0.12	0.0955	0.47	0.3616	0.82	0.5878	1.17	0.7580
0.13	0.1034	0.48	0.3688	0.83	0.5935	1.18	0.7620
0.14	0.1113	0.49	0.3759	0.84	0.5991	1.19	0.7660
0.15	0.1192	0.50	0.3829	0.85	0.6047	1.20	0.7699
0.16	0.1271	0.51	0.3899	0.86	0.6102	1.21	0.7737
0.17	0.1350	0.52	0.3969	0.87	0.6157	1.22	0.7775
0.18	0.1428	0.53	0.4039	0.88	0.6211	1.23	0.7813
0.19	0.1507	0.54	0.4108	0.89	0.6265	1.24	0.7850
0.20	0.1585	0.55	0.4177	0.90	0.6319	1.25	0.7887
0.21	0.1663	0.56	0.4245	0.91	0.6372	1.26	0.7923
0.22	0.1741	0.57	0.4313	0.92	0.6424	1.27	0.7959
0.23	0.1819	0.58	0.4381	0.93	0.6476	1.28	0.7995
0.24	0.1897	0.59	0.4448	0.94	0.6528	1.29	0.8030
0.25	0.1974	0.60	0.4515	0.95	0.6579	1.30	0.8064
0.26	0.2051	0.61	0.4581	0.96	0.6629	1.31	0.8098
0.27	0.2128	0.62	0.4647	0.97	0.6680	1.32	0.8132
0.28	0.2205	0.63	0.4713	0.98	0.6729	1.33	0.8165
0.29	0.2282	0.64	0.4778	0.99	0.6778	1.34	0.8198
0.30	0.2358	0.65	0.4843	1.00	0.6827	1.35	0.8230
0.31	0.2434	0.66	0.4907	1.01	0.6875	1.36	0.8262
0.32	0.2510	0.67	0.4971	1.02	0.6923	1.37	0.8293
0.33	0.2586	0.68	0.5035	1.03	0.6970	1.38	0.8324
0.34	0.2661	0.69	0.5098	1.04	0.7017	1.39	0.8355

附表 1（续）

Z	*F*(*Z*)	*Z*	*F*(*Z*)	*Z*	*F*(*Z*)	*Z*	*F*(*Z*)
1.40	0.8385	1.75	0.9199	2.20	0.9722	2.90	0.9962
1.41	0.8415	1.76	0.9216	2.22	0.9736	2.92	0.9965
1.42	0.8444	1.77	0.9233	2.24	0.9749	2.94	0.9967
1.43	0.8473	1.78	0.9249	2.26	0.9762	2.96	0.9969
1.44	0.8501	1.79	0.9265	2.28	0.9774	2.98	0.9971
1.45	0.8529	1.80	0.9281	2.30	0.9786	3.00	0.9973
1.46	0.8557	1.81	0.9297	2.32	0.9797	3.20	0.9986
1.47	0.8584	1.82	0.9312	2.34	0.9807	3.40	0.9993
1.48	0.8611	1.83	0.9328	2.36	0.9817	3.60	0.99968
1.49	0.8638	1.84	0.9342	2.38	0.9827	3.80	0.99986
1.50	0.8664	1.85	0.9357	2.40	0.9836	4.00	0.99994
1.51	0.8690	1.86	0.9371	2.42	0.9845	4.50	0.999994
1.52	0.8715	1.87	0.9385	2.44	0.9853	5.00	0.999999
1.53	0.8740	1.88	0.9399	2.46	0.9861		
1.54	0.8764	1.89	0.9412	2.48	0.9869		
1.55	0.8789	1.90	0.9426	2.50	0.9876		
1.56	0.8812	1.91	0.9439	2.52	0.9883		
1.57	0.8836	1.92	0.9451	2.54	0.9889		
1.58	0.8859	1.93	0.9464	2.56	0.9895		
1.59	0.8882	1.94	0.9476	2.58	0.9901		
1.60	0.8904	1.95	0.9488	2.60	0.9907		
1.61	0.8926	1.96	0.9500	2.62	0.9912		
1.62	0.8948	1.97	0.9512	2.64	0.9917		
1.63	0.8969	1.98	0.9523	2.66	0.9922		
1.64	0.8990	1.99	0.9534	2.68	0.9926		
1.65	0.9011	2.00	0.9545	2.70	0.9931		
1.66	0.9031	2.02	0.9566	2.72	0.9935		
1.67	0.9051	2.04	0.9587	2.74	0.9939		
1.68	0.9070	2.06	0.9606	2.76	0.9942		
1.69	0.9090	2.08	0.9625	2.78	0.9946		
1.70	0.9109	2.10	0.9643	2.80	0.9949		
1.71	0.9127	2.12	0.9660	2.82	0.9952		
1.72	0.9146	2.14	0.9676	2.84	0.9955		
1.73	0.9164	2.16	0.9692	2.86	0.9958		
1.74	0.9181	2.18	0.9707	2.88	0.9960		

附表 2　t分布临界值表

$$P[|t(v)| > t_{\alpha}(v)] = \alpha$$

单侧	α =0.10	0.05	0.025	0.01	0.005
双侧	α =0.20	0.10	0.05	0.02	0.01
v = 1	3.078	6.314	12.706	31.821	63.657
2	1.886	2.920	4.303	6.965	9.925
3	1.638	2.353	3.182	4.541	5.841
4	1.533	2.132	2.776	3.747	4.604
5	1.476	2.015	2.571	3.365	4.032
6	1.440	1.943	2.447	3.143	3.707
7	1.415	1.895	2.365	2.998	3.499
8	1.397	1.860	2.306	2.896	2.355
9	1.383	1.833	2.262	2.821	3.250
10	1.372	1.812	2.228	2.764	3.169
11	1.363	1.796	2.201	2.718	3.106
12	1.356	1.782	2.179	2.681	3.055
13	1.350	1.771	2.160	2.650	3.012
14	1.345	1.761	2.145	2.624	2.977
15	1.341	1.753	2.131	2.602	2.947
16	1.337	1.746	2.120	2.583	2.921
17	1.333	1.740	2.110	2.567	2.898
18	1.330	1.734	2.101	2.552	2.878
19	1.328	1.729	2.093	2.539	2.861
20	1.325	1.725	2.086	2.528	2.845
21	1.323	1.721	2.080	2.518	2.831
22	1.321	1.717	2.074	2.508	2.819
23	1.319	1.714	2.069	2.500	2.807
24	1.318	1.711	2.064	2.492	2.797
25	1.316	1.708	2.060	2.485	2.787
26	1.315	1.706	2.056	2.479	2.779
27	1.314	1.703	2.052	2.473	2.771
28	1.313	1.701	2.048	2.467	2.763
29	1.311	1.699	2.045	2.462	2.756
30	1.310	1.697	2.042	2.457	2.750
40	1.303	1.684	2.021	2.423	2.704
50	1.299	1.676	2.009	2.403	2.678
60	1.296	1.671	2.000	2.390	2.660
70	1.294	1.667	1.994	2.381	2.648
80	1.292	1.664	1.990	2.374	2.639
90	1.291	1.662	1.987	2.368	2.632
100	1.290	1.660	1.984	2.364	2.626
125	1.288	1.657	1.979	2.357	2.616
150	1.287	1.655	1.976	2.351	2.609
200	1.286	1.653	1.972	2.345	2.601
∞	1.282	1.645	1.960	2.326	2.576

附表 3　χ^2 分布临界值表

$$P[\chi^2(\nu) > \chi^2_\alpha(\nu)] = \alpha$$

ν	显　著　性　水　平（α）												
	0.99	0.98	0.95	0.90	0.80	0.70	0.50	0.30	0.20	0.10	0.05	0.02	0.01
1	0.0002	0.0006	0.0039	0.0158	0.0642	0.148	0.455	1.074	1.642	2.706	3.841	5.412	6.635
2	0.0201	0.0404	0.103	0.211	0.446	0.713	1.386	2.403	3.219	4.605	5.991	7.824	9.210
3	0.115	0.185	0.352	0.584	1.005	1.424	2.366	3.665	4.642	6.251	7.815	9.837	11.341
4	0.297	0.429	0.711	1.064	1.649	2.195	3.357	4.878	5.989	7.779	9.488	11.668	13.277
5	0.554	0.752	1.145	1.610	2.343	3.000	4.351	6.064	7.289	9.236	11.070	13.388	15.068
6	0.872	1.134	1.635	2.204	3.070	3.828	5.348	7.231	8.558	10.645	12.592	15.033	16.812
7	1.239	1.564	2.167	2.833	3.822	4.671	6.346	8.383	9.803	12.017	14.067	16.622	18.475
8	1.646	2.032	2.733	3.490	4.594	5.527	7.344	9.524	11.030	13.362	15.507	18.168	20.090
9	2.088	2.532	3.325	4.168	5.380	6.393	8.343	10.656	12.242	14.684	16.919	19.679	21.666
10	2.558	3.059	3.940	4.865	6.179	7.267	9.342	11.781	13.442	15.987	18.307	21.161	23.209
11	3.053	3.609	4.575	5.578	6.989	8.148	10.341	12.899	14.631	17.275	19.675	22.618	24.725
12	3.571	4.178	5.226	6.304	7.807	9.304	11.340	14.011	15.812	18.549	21.026	24.054	26.217
13	4.107	4.765	5.892	7.042	8.634	9.926	12.340	15.119	16.985	19.812	22.362	25.472	27.688
14	4.660	5.368	6.571	7.790	9.467	10.821	13.339	16.222	18.151	21.064	23.685	26.873	29.141
15	5.229	5.985	7.261	8.547	10.307	11.721	14.339	17.322	19.311	22.307	24.996	28.259	30.578
16	5.812	6.614	7.962	9.312	11.152	12.624	15.338	18.413	20.465	23.542	26.296	29.633	32.000
17	6.408	7.255	8.672	10.035	12.002	13.531	16.338	19.511	21.615	24.769	27.587	30.995	33.409
18	7.015	7.906	9.390	10.865	12.857	14.440	17.338	20.601	22.760	25.989	28.869	32.346	34.805
19	7.633	8.567	10.117	11.651	13.716	15.352	18.338	21.689	23.900	27.204	30.144	33.687	36.191
20	8.260	9.237	10.851	12.443	14.578	16.266	19.337	22.775	25.038	28.412	31.410	35.020	37.566
21	8.897	9.915	11.591	13.240	15.445	17.182	20.337	23.858	26.171	29.615	32.671	36.343	38.932
22	9.542	10.600	12.338	14.041	16.314	18.101	21.337	24.939	27.301	30.813	33.924	37.659	40.289
23	10.196	11.293	13.091	14.848	17.187	19.021	22.337	26.018	28.429	32.007	35.172	37.968	41.638
24	10.856	11.992	13.848	15.659	18.062	19.943	23.337	27.096	29.553	33.196	36.415	40.270	42.980
25	11.524	12.697	14.611	16.473	18.940	20.867	24.337	28.172	30.675	34.382	37.652	41.566	44.314
26	12.198	13.409	15.379	17.292	19.820	21.792	25.336	29.246	31.795	35.563	38.885	42.856	45.642
27	12.897	14.125	16.151	18.114	20.703	22.719	26.336	30.319	32.912	36.741	40.113	44.140	46.963
28	13.565	14.847	16.928	18.930	21.588	23.647	27.336	31.391	34.027	37.916	41.337	45.419	48.278
29	14.256	15.574	17.708	19.768	22.475	24.577	28.336	32.461	35.139	39.087	42.557	46.693	49.588
30	14.593	16.306	18.493	20.599	23.364	25.508	29.336	33.530	36.250	40.256	43.773	47.962	50.892

附表 4　*F*分布临界值表（α =0. 05）

$$P[F(\nu_1,\nu_2)>F_\alpha(\nu_1,\nu_2)]=\alpha$$

ν_2 \ ν_1	1	2	3	4	5	6	8	10	15
1	161.4	199.5	215.7	224.6	230.2	234.0	238.9	241.9	245.9
2	18.51	19.00	19.16	19.25	19.30	19.33	19.37	19.40	19.43
3	10.13	9.55	9.28	9.12	9.01	8.94	8.85	8.79	8.70
4	7.71	6.94	6.59	6.39	6.26	6.16	6.04	5.96	5.86
5	6.61	5.79	5.41	5.19	5.05	4.95	4.82	4.74	4.62
6	5.99	5.14	4.76	4.53	4.39	4.28	4.15	4.06	3.94
7	5.59	4.74	4.35	4.12	3.97	3.87	3.73	3.64	3.51
8	5.32	4.46	4.07	3.84	3.69	3.58	3.44	3.35	3.22
9	5.12	4.26	3.86	3.63	3.48	3.37	3.23	3.14	3.01
10	4.96	4.10	3.71	3.48	3.33	3.22	3.07	2.98	2.85
11	4.84	3.98	3.59	3.36	3.20	3.09	2.95	2.85	2.72
12	4.75	3.89	3.49	3.26	3.11	3.00	2.85	2.75	2.62
13	4.67	3.81	3.41	3.18	3.03	2.92	2.77	2.67	2.53
14	4.60	3.74	3.34	3.11	2.96	2.85	2.70	2.60	2.46
15	4.54	3.68	3.29	3.06	2.90	2.79	2.64	2.54	2.40
16	4.49	3.63	3.24	3.01	2.85	2.74	2.59	2.49	2.35
17	4.45	3.59	3.20	2.96	2.81	2.70	2.55	2.45	2.31
18	4.41	3.55	3.16	2.93	2.77	2.66	2.51	2.41	2.27
19	4.38	3.52	3.13	2.90	2.74	2.63	2.48	2.38	2.23
20	4.35	3.49	3.10	2.87	2.71	2.60	2.45	2.35	2.20
21	4.32	3.47	3.07	2.84	2.68	2.57	2.42	2.32	2.18
22	4.30	3.44	3.05	2.82	2.66	2.55	2.40	2.30	2.15
23	4.28	3.42	3.03	2.80	2.64	2.53	2.37	2.27	2.13
24	4.26	3.40	3.01	2.78	2.62	2.51	2.36	2.25	2.11
25	4.24	3.39	2.99	2.76	2.60	2.49	2.34	2.24	2.09
26	4.23	3.37	2.98	2.74	2.59	2.47	2.32	2.22	2.07
27	4.21	3.35	2.96	2.73	2.57	2.46	2.31	2.20	2.06
28	4.20	3.34	2.95	2.71	2.56	2.45	2.29	2.19	2.04
29	4.18	3.33	2.93	2.70	2.55	2.43	2.28	2.18	2.03
30	4.17	3.32	2.92	2.69	2.53	2.42	2.27	2.16	2.01
40	4.08	3.23	2.84	2.61	2.45	2.34	2.18	2.08	1.92
50	4.03	3.18	2.79	2.56	2.40	2.29	2.13	2.03	1.87
60	4.00	3.15	2.76	2.53	2.37	2.25	2.10	1.99	1.84
70	3.98	3.13	2.74	2.50	2.35	2.23	2.07	1.97	1.81
80	3.96	3.11	2.72	2.49	2.33	2.21	2.06	1.95	1.79
90	3.95	3.10	2.71	2.47	2.32	2.20	2.04	1.94	1.78
100	3.94	3.09	2.70	2.46	2.31	2.19	2.03	1.93	1.77
125	3.92	3.07	2.68	2.44	2.29	2.17	2.01	1.91	1.75
150	3.90	3.06	2.66	2.43	2.27	2.16	2.00	1.89	1.73
200	3.89	3.04	2.65	2.42	2.26	2.14	1.98	1.88	1.72
∞	3.84	3.00	2.60	2.37	2.21	2.10	1.94	1.83	1.67

附表 4（续）（α =0. 01）

ν_2 \ ν_1	1	2	3	4	5	6	8	10	15
1	4052	4999	5403	5625	5764	5859	5981	6056	6157
2	98.50	99.00	99.17	99.25	99.30	99.33	99.37	99.40	99.43
3	34.12	30.82	29.46	28.71	28.24	27.91	27.49	27.23	26.87
4	21.20	18.00	16.69	15.98	15.52	15.21	14.80	14.55	14.20
5	16.26	13.27	12.06	11.39	10.97	10.67	10.29	10.05	9.72
6	13.75	10.92	9.78	9.15	8.75	8.47	8.10	7.87	7.56
7	12.25	9.55	8.45	7.85	7.46	7.19	6.84	6.62	6.31
8	11.26	8.65	7.59	7.01	6.63	6.37	6.03	5.81	5.52
9	10.56	8.02	6.99	6.42	6.06	5.80	5.47	5.26	4.96
10	10.04	7.56	6.55	5.99	5.64	5.39	5.06	4.85	4.56
11	9.65	7.21	6.22	5.67	5.32	5.07	4.74	4.54	4.25
12	9.33	6.93	5.95	5.41	5.06	4.82	4.50	4.30	4.01
13	9.07	6.70	5.74	5.21	4.86	4.62	4.30	4.10	3.82
14	8.86	6.51	5.56	5.04	4.69	4.46	4.14	3.94	3.66
15	8.86	6.36	5.42	4.89	4.56	4.32	4.00	3.80	3.52
16	8.53	6.23	5.29	4.77	4.44	4.20	3.89	3.69	3.41
17	8.40	6.11	5.19	4.67	4.34	4.10	3.79	3.59	3.31
18	8.29	6.01	5.09	4.58	4.25	4.01	3.71	3.51	3.23
19	8.18	5.93	5.01	4.50	4.17	3.94	3.63	3.43	3.15
20	8.10	5.85	4.94	4.43	4.10	3.87	3.56	3.37	3.09
21	8.02	5.78	4.87	4.37	4.04	3.81	3.51	3.31	3.03
22	7.95	5.72	4.82	4.31	3.99	3.76	3.45	3.26	2.98
23	7.88	5.66	4.76	4.26	3.94	3.71	3.41	3.21	2.93
24	7.82	5.61	4.72	4.22	3.90	3.67	3.36	3.17	2.89
25	7.77	5.57	4.68	4.18	3.85	3.63	3.32	3.13	2.85
26	7.72	5.53	4.64	1.14	3.82	3.59	3.29	3.09	2.81
27	7.68	5.49	4.60	4.11	3.78	3.56	3.26	3.06	2.78
28	7.64	5.45	4.57	4.07	3.75	3.53	3.23	3.03	2.75
29	7.60	5.42	4.54	4.04	3.73	3.50	3.20	3.00	2.73
30	7.56	5.39	4.51	4.02	3.70	3.47	3.17	2.98	2.70
40	7.31	5.18	4.31	3.83	3.51	3.29	2.99	2.80	2.52
50	7.17	5.06	4.20	3.72	3.41	3.19	2.89	2.70	2.42
60	7.08	4.98	4.13	3.65	3.34	3.12	2.82	2.63	2.35
70	7.01	4.92	4.07	3.60	3.29	3.07	2.78	2.59	2.31
80	6.96	4.88	4.04	3.56	3.26	3.04	2.74	2.55	2.27
90	6.93	4.85	4.01	3.53	3.23	3.01	2.72	2.52	2.42
100	6.90	4.82	3.98	3.51	3.21	2.99	2.69	2.50	2.22
125	6.84	4.78	3.94	3.47	3.17	2.95	2.66	2.47	2.19
150	6.81	4.75	3.91	3.45	3.14	2.92	2.63	2.44	2.16
200	6.76	4.71	3.88	3.41	3.11	2.89	2.60	2.41	2.13
∞	6.63	4.61	3.78	3.32	3.02	2.80	2.51	2.23	2.04