BM01

國立臺北科技大學108學年度碩士班招生考試

系所組別：4201、4202、4203、4204 經營管理系碩士班

第一節統計學試題

注意事項：

1. 本試題共 10 題單選題，每題 10 分，共 100 分。
2. 不必抄題，作答時請將試題題號及答案依照順序寫在答案卷上。
3. 全部答案均須在答案卷之答案欄內作答，否則不予計分。
4. 所需統計表共 7 頁，皆附在本試題之後。

一、A company that sells an online course aimed at helping high-school students improve their SAT scores has claimed that SAT scores will improve by more than 90 points on average if students successfully complete the course. To test this, a national school counseling organization plans to select a random sample of n = 100 students who have previously taken the SAT test. These students will take the company's course and then retake the SAT test. Assuming that the population standard deviation for improvement in test scores is thought to be 30 points and the level of significance for the hypothesis test is 0.05, what is the probability that the counseling organization will incorrectly "accept" the null hypothesis when, in fact, the true mean increase is actually 95 points?

(A) Approximately 0.508
(B) About 0.492
(C) Approximately 0.008
(D) Can't be determined without knowing the sample results.

二、If two events are independent, what is the probability that they both occur?

(A) 0
(B) 0.5
(C) 1
(D) Cannot be determined from the information given

三、A company has 2 machines that produce widgets. An older machine produces 23% defective widgets, while the new machine produces only 8% defective widgets. In addition, the new machine produces 3 times as many widgets as the old machine does. Given that a widget was produced by the new machine, what is the probability it is not defective?

(A) 0.06
(B) 0.5
(C) 0.92
(D) 0.94

四、A delicatessen is open 24 hours a day every day of the week. If, on average, 20 orders are received by fax every two hours through the day, find the probability that the time between two faxed order will be between 3 and 6 minutes.

(A) 0.9179
(B) 0.6703
(C) 0.3296
(D) 0.2386

五、Two researchers run identical experiments except researcher A collects twice as many samples as researcher B. For a specific value x, researcher A estimates a y value of y'_A and researcher B estimates a y value of y'_B . We would expect that researcher A's 95% prediction interval around y'_A to be, in general,

(A) wider than researcher B's 95% prediction interval around y'_B
(B) narrower than researcher B's 95% prediction interval around y'_B
(C) as same as researcher B's 95% prediction interval around y'_B
(D) wider than researcher B's 95% prediction interval around y'_B or wider than researcher B's 95% prediction interval around y'_B with equal probability

六、For the quadratic equation $\hat{y}=b_0+b_1x+b_2x^2$, which of the following expressions must be zero in order to minimize or maximize the predicted y?

(A) b_1+2b_2x
(B) $2b_1+b_2x$
(C) $-b_1/2b_2$
(D) $-b_2/2b_2$

注意：背面尚有試題

七、An over-the counter drug manufacturer wants to examine the effectiveness of a new drug in curing an illness most commonly found in older patients. Thirteen patients are given the new drug and 13 patients are given the old drug. To avoid bias in the experiment, they are not told which drug is given to them. To check how the effectiveness depends on the age of patients, the following data have been collected.

New Drug	Patient Age	19	23	67	56	45	37	27	47	29	59	51	63	28
	Effectiveness	28	25	71	62	50	46	34	59	36	71	62	71	35
Old Drug	Patient Age	21	28	33	33	38	43	48	53	53	58	63	67	52
	Effectiveness	56	55	61	54	58	65	64	61	69	71	66	70	60

The variables are

Effectiveness: the variable measured on a scale from 0 to100

Age: the age of a patient in years

Drug: a dummy variable that is 1 for the new drug and 0 for the old durg

The regression model, Effectiveness=$\beta_0+\beta_1$Age+β_2Drug+β_3Age×Drug, is estimated and the following results are obtained:

	Coefficients	Standard Error	t-state	p-value
Intercept	47.04	3.1479	14.9423	5.31E-13
Age	0.34	0.0665	5.0610	4.55E-05
Drug	-40.86	4.0798	-10.016	1.17E-09
Age×Drug	0.70	0.0879	7.9385	6.71E-08

For which age is the predicted effectiveness of the old and new drug about the same?

(A) 43

(B) 50

(C) 58

(D) The predicted effectiveness of the new drug is higher for any age

八、The first two columns of the table below give a percentage distribution for adults in one city by income group. The third column gives the percentage of people in each income group who plan to buy a new car next year. An adult is picked at random from the city. Given that the person selected plans to buy a new care next year, what is the probability that the person's income is between $5,000 and $9,999?

Income (dollars)	Percentage of Population	Percentage that will buy new car next year
0-4,999	5.2	2
5,000-9,999	6.4	3
10,000-14,999	5.4	6
15,000-19,999	8.7	7
20,000-24,999	9.4	9
25,000-29,999	10.2	10
30,000-34,999	13.8	11
35,000-39,999	10.7	13
40,000-49,999	15.5	15
50,000 and over	14.7	19

(A) 0.017

(B) 0.035

(C) 0.021

(D) 0.052

九、A golf ball manufacturer has three dimple patterns. It is interested in analyzing to see whether one results in longer driving distances. However, it also wishes to control for the cover material the ball is made from since it believes that the material might affect driving distance. Four materials can be used. The following data represent the results of tests in which each combination of dimple pattern and cover material were used and the length of the ball hit by a robot has been recorded. The test will be conducted using an alpha = 0.05 level.

	Pattern 1	Pattern 2	Pattern 3
Material A	257	248	260
Material B	250	247	255
Material C	230	260	240
Material D	266	256	280

Given these data, which of the following statements is true?

(A) There is no basis for concluding that mean driving distance is different for the different dimple patterns.

(B) There is no basis for concluding that mean driving distance is different for the different cover materials.

(C) Both A and B are true.

(D) Neither A nor B is true.

十、In an article entitled "Childhood Pastimes Are Increasingly Moving Indoors," Dennis Cauchon asserts that there have been huge declines in spontaneous outdoor activities such as bike riding, swimming, and touch football. In the article, he cites separate studies by the National Sporting Goods Association and American Sports Data that indicate bike riding alone is down 31% from 1995 to 2004. According to the surveys, 68% of 7- to 11-year-olds rode a bike at least six times in 1995 and only 47% did in 2004. Assume the sample sizes were 1,500 and 2,000, respectively. Calculate a 95% confidence interval to estimate the proportion of 7- to 11-year-olds who rode their bike at least six times in 2004.

(A) (0.4481, 0.4919)

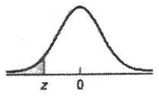
(B) (0.4324, 0.4676)

(C) (0.4021, 0.5179)

(D) (0.4712, 0.4888).

附表1

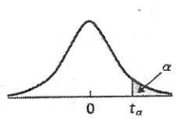
Areas under the standard normal curve



Second decimal place in z										
0.09	*0.08*	*0.07*	*0.06*	*0.05*	*0.04*	*0.03*	*0.02*	*0.01*	*0.00*	*z*
									0.0000†	*−3.9*
0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	*−3.8*
0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	*−3.7*
0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	*−3.6*
0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	*−3.5*
0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	*−3.4*
0.0003	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005	*−3.3*
0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007	*−3.2*
0.0007	0.0007	0.0008	0.0008	0.0008	0.0008	0.0009	0.0009	0.0009	0.0010	*−3.1*
0.0010	0.0010	0.0011	0.0011	0.0011	0.0012	0.0012	0.0013	0.0013	0.0013	*−3.0*
0.0014	0.0014	0.0015	0.0015	0.0016	0.0016	0.0017	0.0018	0.0018	0.0019	*−2.9*
0.0019	0.0020	0.0021	0.0021	0.0022	0.0023	0.0023	0.0024	0.0025	0.0026	*−2.8*
0.0026	0.0027	0.0028	0.0029	0.0030	0.0031	0.0032	0.0033	0.0034	0.0035	*−2.7*
0.0036	0.0037	0.0038	0.0039	0.0040	0.0041	0.0043	0.0044	0.0045	0.0047	*−2.6*
0.0048	0.0049	0.0051	0.0052	0.0054	0.0055	0.0057	0.0059	0.0060	0.0062	*−2.5*
0.0064	0.0066	0.0068	0.0069	0.0071	0.0073	0.0075	0.0078	0.0080	0.0082	*−2.4*
0.0084	0.0087	0.0089	0.0091	0.0094	0.0096	0.0099	0.0102	0.0104	0.0107	*−2.3*
0.0110	0.0113	0.0116	0.0119	0.0122	0.0125	0.0129	0.0132	0.0136	0.0139	*−2.2*
0.0143	0.0146	0.0150	0.0154	0.0158	0.0162	0.0166	0.0170	0.0174	0.0179	*−2.1*
0.0183	0.0188	0.0192	0.0197	0.0202	0.0207	0.0212	0.0217	0.0222	0.0228	*−2.0*
0.0233	0.0239	0.0244	0.0250	0.0256	0.0262	0.0268	0.0274	0.0281	0.0287	*−1.9*
0.0294	0.0301	0.0307	0.0314	0.0322	0.0329	0.0336	0.0344	0.0351	0.0359	*−1.8*
0.0367	0.0375	0.0384	0.0392	0.0401	0.0409	0.0418	0.0427	0.0436	0.0446	*−1.7*
0.0455	0.0465	0.0475	0.0485	0.0495	0.0505	0.0516	0.0526	0.0537	0.0548	*−1.6*
0.0559	0.0571	0.0582	0.0594	0.0606	0.0618	0.0630	0.0643	0.0655	0.0668	*−1.5*
0.0681	0.0694	0.0708	0.0721	0.0735	0.0749	0.0764	0.0778	0.0793	0.0808	*−1.4*
0.0823	0.0838	0.0853	0.0869	0.0885	0.0901	0.0918	0.0934	0.0951	0.0968	*−1.3*
0.0985	0.1003	0.1020	0.1038	0.1056	0.1075	0.1093	0.1112	0.1131	0.1151	*−1.2*
0.1170	0.1190	0.1210	0.1230	0.1251	0.1271	0.1292	0.1314	0.1335	0.1357	*−1.1*
0.1379	0.1401	0.1423	0.1446	0.1469	0.1492	0.1515	0.1539	0.1562	0.1587	*−1.0*
0.1611	0.1635	0.1660	0.1685	0.1711	0.1736	0.1762	0.1788	0.1814	0.1841	*−0.9*
0.1867	0.1894	0.1922	0.1949	0.1977	0.2005	0.2033	0.2061	0.2090	0.2119	*−0.8*
0.2148	0.2177	0.2206	0.2236	0.2266	0.2296	0.2327	0.2358	0.2389	0.2420	*−0.7*
0.2451	0.2483	0.2514	0.2546	0.2578	0.2611	0.2643	0.2676	0.2709	0.2743	*−0.6*
0.2776	0.2810	0.2843	0.2877	0.2912	0.2946	0.2981	0.3015	0.3050	0.3085	*−0.5*
0.3121	0.3156	0.3192	0.3228	0.3264	0.3300	0.3336	0.3372	0.3409	0.3446	*−0.4*
0.3483	0.3520	0.3557	0.3594	0.3632	0.3669	0.3707	0.3745	0.3783	0.3821	*−0.3*
0.3859	0.3897	0.3936	0.3974	0.4013	0.4052	0.4090	0.4129	0.4168	0.4207	*−0.2*
0.4247	0.4286	0.4325	0.4364	0.4404	0.4443	0.4483	0.4522	0.4562	0.4602	*−0.1*
0.4641	0.4681	0.4721	0.4761	0.4801	0.4840	0.4880	0.4920	0.4960	0.5000	*−0.0*

† For $z \leq -3.90$, the areas are 0.0000 to four decimal places.

附表2-1



df	$t_{0.10}$	$t_{0.05}$	$t_{0.025}$	$t_{0.01}$	$t_{0.005}$	df
1	3.078	6.314	12.706	31.821	63.657	*1*
2	1.886	2.920	4.303	6.965	9.925	*2*
3	1.638	2.353	3.182	4.541	5.841	*3*
4	1.533	2.132	2.776	3.747	4.604	*4*
5	1.476	2.015	2.571	3.365	4.032	*5*
6	1.440	1.943	2.447	3.143	3.707	*6*
7	1.415	1.895	2.365	2.998	3.499	*7*
8	1.397	1.860	2.306	2.896	3.355	*8*
9	1.383	1.833	2.262	2.821	3.250	*9*
10	1.372	1.812	2.228	2.764	3.169	*10*
11	1.363	1.796	2.201	2.718	3.106	*11*
12	1.356	1.782	2.179	2.681	3.055	*12*
13	1.350	1.771	2.160	2.650	3.012	*13*
14	1.345	1.761	2.145	2.624	2.977	*14*
15	1.341	1.753	2.131	2.602	2.947	*15*
16	1.337	1.746	2.120	2.583	2.921	*16*
17	1.333	1.740	2.110	2.567	2.898	*17*
18	1.330	1.734	2.101	2.552	2.878	*18*
19	1.328	1.729	2.093	2.539	2.861	*19*
20	1.325	1.725	2.086	2.528	2.845	*20*
21	1.323	1.721	2.080	2.518	2.831	*21*
22	1.321	1.717	2.074	2.508	2.819	*22*
23	1.319	1.714	2.069	2.500	2.807	*23*
24	1.318	1.711	2.064	2.492	2.797	*24*
25	1.316	1.708	2.060	2.485	2.787	*25*
26	1.315	1.706	2.056	2.479	2.779	*26*
27	1.314	1.703	2.052	2.473	2.771	*27*
28	1.313	1.701	2.048	2.467	2.763	*28*
29	1.311	1.699	2.045	2.462	2.756	*29*
30	1.310	1.697	2.042	2.457	2.750	*30*
31	1.309	1.696	2.040	2.453	2.744	*31*
32	1.309	1.694	2.037	2.449	2.738	*32*
33	1.308	1.692	2.035	2.445	2.733	*33*
34	1.307	1.691	2.032	2.441	2.728	*34*
35	1.306	1.690	2.030	2.438	2.724	*35*
36	1.306	1.688	2.028	2.434	2.719	*36*
37	1.305	1.687	2.026	2.431	2.715	*37*
38	1.304	1.686	2.024	2.429	2.712	*38*
39	1.304	1.685	2.023	2.426	2.708	*39*
40	1.303	1.684	2.021	2.423	2.704	*40*
41	1.303	1.683	2.020	2.421	2.701	*41*
42	1.302	1.682	2.018	2.418	2.698	*42*
43	1.302	1.681	2.017	2.416	2.695	*43*
44	1.301	1.680	2.015	2.414	2.692	*44*
45	1.301	1.679	2.014	2.412	2.690	*45*
46	1.300	1.679	2.013	2.410	2.687	*46*
47	1.300	1.678	2.012	2.408	2.685	*47*
48	1.299	1.677	2.011	2.407	2.682	*48*
49	1.299	1.677	2.010	2.405	2.680	*49*

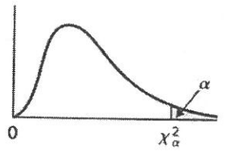
附表2-2

Values of t_α

df	$t_{0.10}$	$t_{0.05}$	$t_{0.025}$	$t_{0.01}$	$t_{0.005}$	df
50	1.299	1.676	2.009	2.403	2.678	50
51	1.298	1.675	2.008	2.402	2.676	51
52	1.298	1.675	2.007	2.400	2.674	52
53	1.298	1.674	2.006	2.399	2.672	53
54	1.297	1.674	2.005	2.397	2.670	54
55	1.297	1.673	2.004	2.396	2.668	55
56	1.297	1.673	2.003	2.395	2.667	56
57	1.297	1.672	2.002	2.394	2.665	57
58	1.296	1.672	2.002	2.392	2.663	58
59	1.296	1.671	2.001	2.391	2.662	59
60	1.296	1.671	2.000	2.390	2.660	60
61	1.296	1.670	2.000	2.389	2.659	61
62	1.295	1.670	1.999	2.388	2.657	62
63	1.295	1.669	1.998	2.387	2.656	63
64	1.295	1.669	1.998	2.386	2.655	64
65	1.295	1.669	1.997	2.385	2.654	65
66	1.295	1.668	1.997	2.384	2.652	66
67	1.294	1.668	1.996	2.383	2.651	67
68	1.294	1.668	1.995	2.382	2.650	68
69	1.294	1.667	1.995	2.382	2.649	69
70	1.294	1.667	1.994	2.381	2.648	70
71	1.294	1.667	1.994	2.380	2.647	71
72	1.293	1.666	1.993	2.379	2.646	72
73	1.293	1.666	1.993	2.379	2.645	73
74	1.293	1.666	1.993	2.378	2.644	74
75	1.293	1.665	1.992	2.377	2.643	75
80	1.292	1.664	1.990	2.374	2.639	80
85	1.292	1.663	1.988	2.371	2.635	85
90	1.291	1.662	1.987	2.368	2.632	90
95	1.291	1.661	1.985	2.366	2.629	95
100	1.290	1.660	1.984	2.364	2.626	100
200	1.286	1.653	1.972	2.345	2.601	200
300	1.284	1.650	1.968	2.339	2.592	300
400	1.284	1.649	1.966	2.336	2.588	400
500	1.283	1.648	1.965	2.334	2.586	500
600	1.283	1.647	1.964	2.333	2.584	600
700	1.283	1.647	1.963	2.332	2.583	700
800	1.283	1.647	1.963	2.331	2.582	800
900	1.282	1.647	1.963	2.330	2.581	900
1000	1.282	1.646	1.962	2.330	2.581	1000
2000	1.282	1.646	1.961	2.328	2.578	2000

附表3-1

Values of χ^2_α



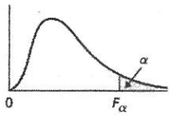
df	$\chi^2_{0.995}$	$\chi^2_{0.99}$	$\chi^2_{0.975}$	$\chi^2_{0.95}$	$\chi^2_{0.90}$
1	0.000	0.000	0.001	0.004	0.016
2	0.010	0.020	0.051	0.103	0.211
3	0.072	0.115	0.216	0.352	0.584
4	0.207	0.297	0.484	0.711	1.064
5	0.412	0.554	0.831	1.145	1.610
6	0.676	0.872	1.237	1.635	2.204
7	0.989	1.239	1.690	2.167	2.833
8	1.344	1.646	2.180	2.733	3.490
9	1.735	2.088	2.700	3.325	4.168
10	2.156	2.558	3.247	3.940	4.865
11	2.603	3.053	3.816	4.575	5.578
12	3.074	3.571	4.404	5.226	6.304
13	3.565	4.107	5.009	5.892	7.042
14	4.075	4.660	5.629	6.571	7.790
15	4.601	5.229	6.262	7.261	8.547
16	5.142	5.812	6.908	7.962	9.312
17	5.697	6.408	7.564	8.672	10.085
18	6.265	7.015	8.231	9.390	10.865
19	6.844	7.633	8.907	10.117	11.651
20	7.434	8.260	9.591	10.851	12.443
21	8.034	8.897	10.283	11.591	13.240
22	8.643	9.542	10.982	12.338	14.041
23	9.260	10.196	11.689	13.091	14.848
24	9.886	10.856	12.401	13.848	15.659
25	10.520	11.524	13.120	14.611	16.473
26	11.160	12.198	13.844	15.379	17.292
27	11.808	12.879	14.573	16.151	18.114
28	12.461	13.565	15.308	16.928	18.939
29	13.121	14.256	16.047	17.708	19.768
30	13.787	14.953	16.791	18.493	20.599
40	20.707	22.164	24.433	26.509	29.051
50	27.991	29.707	32.357	34.764	37.689
60	35.534	37.485	40.482	43.188	46.459
70	43.275	45.442	48.758	51.739	55.329
80	51.172	53.540	57.153	60.391	64.278
90	59.196	61.754	65.647	69.126	73.291
100	67.328	70.065	74.222	77.930	82.358

附表3-2

Values of χ^2_α

$\chi^2_{0.10}$	$\chi^2_{0.05}$	$\chi^2_{0.025}$	$\chi^2_{0.01}$	$\chi^2_{0.005}$	df
2.706	3.841	5.024	6.635	7.879	*1*
4.605	5.991	7.378	9.210	10.597	*2*
6.251	7.815	9.348	11.345	12.838	*3*
7.779	9.488	11.143	13.277	14.860	*4*
9.236	11.070	12.833	15.086	16.750	*5*
10.645	12.592	14.449	16.812	18.548	*6*
12.017	14.067	16.013	18.475	20.278	*7*
13.362	15.507	17.535	20.090	21.955	*8*
14.684	16.919	19.023	21.666	23.589	*9*
15.987	18.307	20.483	23.209	25.188	*10*
17.275	19.675	21.920	24.725	26.757	*11*
18.549	21.026	23.337	26.217	28.300	*12*
19.812	22.362	24.736	27.688	29.819	*13*
21.064	23.685	26.119	29.141	31.319	*14*
22.307	24.996	27.488	30.578	32.801	*15*
23.542	26.296	28.845	32.000	34.267	*16*
24.769	27.587	30.191	33.409	35.718	*17*
25.989	28.869	31.526	34.805	37.156	*18*
27.204	30.143	32.852	36.191	38.582	*19*
28.412	31.410	34.170	37.566	39.997	*20*
29.615	32.671	35.479	38.932	41.401	*21*
30.813	33.924	36.781	40.290	42.796	*22*
32.007	35.172	38.076	41.638	44.181	*23*
33.196	36.415	39.364	42.980	45.559	*24*
34.382	37.653	40.647	44.314	46.928	*25*
35.563	38.885	41.923	45.642	48.290	*26*
36.741	40.113	43.195	46.963	49.645	*27*
37.916	41.337	44.461	48.278	50.994	*28*
39.087	42.557	45.722	49.588	52.336	*29*
40.256	43.773	46.979	50.892	53.672	*30*
51.805	55.759	59.342	63.691	66.767	*40*
63.167	67.505	71.420	76.154	79.490	*50*
74.397	79.082	83.298	88.381	91.955	*60*
85.527	90.531	95.023	100.424	104.213	*70*
96.578	101.879	106.628	112.328	116.320	*80*
107.565	113.145	118.135	124.115	128.296	*90*
118.499	124.343	129.563	135.811	140.177	*100*

附表4-1 Values of F_α



dfd	α	dfn 1	2	3	4	5	6	7	8	9
	0.10	39.86	49.50	53.59	55.83	57.24	58.20	58.91	59.44	59.86
	0.05	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88	240.54
1	*0.025*	647.79	799.50	864.16	899.58	921.85	937.11	948.22	956.66	963.28
	0.01	4052.2	4999.5	5403.4	5624.6	5763.6	5859.0	5928.4	5981.1	6022.5
	0.005	16211	20000	21615	22500	23056	23437	23715	23925	24091
	0.10	8.53	9.00	9.16	9.24	9.29	9.33	9.35	9.37	9.38
	0.05	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38
2	*0.025*	38.51	39.00	39.17	39.25	39.30	39.33	39.36	39.37	39.39
	0.01	98.50	99.00	99.17	99.25	99.30	99.33	99.36	99.37	99.39
	0.005	198.50	199.00	199.17	199.25	199.30	199.33	199.36	199.37	199.39
	0.10	5.54	5.46	5.39	5.34	5.31	5.28	5.27	5.25	5.24
	0.05	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81
3	*0.025*	17.44	16.04	15.44	15.10	14.88	14.73	14.62	14.54	14.47
	0.01	34.12	30.82	29.46	28.71	28.24	27.91	27.67	27.49	27.35
	0.005	55.55	49.80	47.47	46.19	45.39	44.84	44.43	44.13	43.88
	0.10	4.54	4.32	4.19	4.11	4.05	4.01	3.98	3.95	3.94
	0.05	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00
4	*0.025*	12.22	10.65	9.98	9.60	9.36	9.20	9.07	8.98	8.90
	0.01	21.20	18.00	16.69	15.98	15.52	15.21	14.98	14.80	14.66
	0.005	31.33	26.28	24.26	23.15	22.46	21.97	21.62	21.35	21.14
	0.10	4.06	3.78	3.62	3.52	3.45	3.40	3.37	3.34	3.32
	0.05	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77
5	*0.025*	10.01	8.43	7.76	7.39	7.15	6.98	6.85	6.76	6.68
	0.01	16.26	13.27	12.06	11.39	10.97	10.67	10.46	10.29	10.16
	0.005	22.78	18.31	16.53	15.56	14.94	14.51	14.20	13.96	13.77
	0.10	3.78	3.46	3.29	3.18	3.11	3.05	3.01	2.98	2.96
	0.05	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10
6	*0.025*	8.81	7.26	6.60	6.23	5.99	5.82	5.70	5.60	5.52
	0.01	13.75	10.92	9.78	9.15	8.75	8.47	8.26	8.10	7.98
	0.005	18.63	14.54	12.92	12.03	11.46	11.07	10.79	10.57	10.39
	0.10	3.59	3.26	3.07	2.96	2.88	2.83	2.78	2.75	2.72
	0.05	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68
7	*0.025*	8.07	6.54	5.89	5.52	5.29	5.12	4.99	4.90	4.82
	0.01	12.25	9.55	8.45	7.85	7.46	7.19	6.99	6.84	6.72
	0.005	16.24	12.40	10.88	10.05	9.52	9.16	8.89	8.68	8.51
	0.10	3.46	3.11	2.92	2.81	2.73	2.67	2.62	2.59	2.56
	0.05	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39
8	*0.025*	7.57	6.06	5.42	5.05	4.82	4.65	4.53	4.43	4.36
	0.01	11.26	8.65	7.59	7.01	6.63	6.37	6.18	6.03	5.91
	0.005	14.69	11.04	9.60	8.81	8.30	7.95	7.69	7.50	7.34

附表4-2

Values of F_α

dfn										
10	*12*	*15*	*20*	*24*	*30*	*40*	*60*	*120*	**α**	**dfd**
60.19	60.71	61.22	61.74	62.00	62.26	62.53	62.79	63.06	*0.10*	
241.88	243.91	245.95	248.01	249.05	250.10	251.14	252.20	253.25	*0.05*	
968.63	976.71	984.87	993.10	997.25	1001.41	1005.60	1009.80	1014.02	*0.025*	*1*
6055.8	6106.3	6157.3	6208.7	6234.6	6260.6	6286.7	631.9	6339.4	*0.01*	
24224	24426	24630	24836	24940	25044	25148	25253	25359	*0.005*	
9.39	9.41	9.42	9.44	9.45	9.46	9.47	9.47	9.48	*0.10*	
19.40	19.41	19.43	19.45	19.45	19.46	19.47	19.48	19.49	*0.05*	
39.40	39.41	39.43	39.45	39.46	39.46	39.47	39.48	39.49	*0.025*	*2*
99.40	99.42	99.43	99.45	99.46	99.47	99.47	99.48	99.49	*0.01*	
199.40	199.42	199.43	199.45	199.46	199.47	199.47	199.48	199.49	*0.005*	
5.23	5.22	5.20	5.18	5.18	5.17	5.16	5.15	5.14	*0.10*	
8.79	8.74	8.70	8.66	8.64	8.62	8.59	8.57	8.55	*0.05*	
14.42	14.34	14.25	14.17	14.12	14.08	14.04	13.99	13.95	*0.025*	*3*
27.23	27.05	26.87	26.69	26.60	26.50	26.41	26.32	26.22	*0.01*	
43.69	43.39	43.08	42.78	42.62	42.47	42.31	42.15	41.99	*0.005*	
3.92	3.90	3.87	3.84	3.83	3.82	3.80	3.79	3.78	*0.10*	
5.96	5.91	5.86	5.80	5.77	5.75	5.72	5.69	5.66	*0.05*	
8.84	8.75	8.66	8.56	8.51	8.46	8.41	8.36	8.31	*0.025*	*4*
14.55	14.37	14.20	14.02	13.93	13.84	13.75	13.65	13.56	*0.01*	
20.97	20.70	20.44	20.17	20.03	19.89	19.75	19.61	19.47	*0.005*	
3.30	3.27	3.24	3.21	3.19	3.17	3.16	3.14	3.12	*0.10*	
4.74	4.68	4.62	4.56	4.53	4.50	4.46	4.43	4.40	*0.05*	
6.62	6.52	6.43	6.33	6.28	6.23	6.18	6.12	6.07	*0.025*	*5*
10.05	9.89	9.72	9.55	9.47	9.38	9.29	9.20	9.11	*0.01*	
13.62	13.38	13.15	12.90	12.78	12.66	12.53	12.40	12.27	*0.005*	
2.94	2.90	2.87	2.84	2.82	2.80	2.78	2.76	2.74	*0.10*	
4.06	4.00	3.94	3.87	3.84	3.81	3.77	3.74	3.70	*0.05*	
5.46	5.37	5.27	5.17	5.12	5.07	5.01	4.96	4.90	*0.025*	*6*
7.87	7.72	7.56	7.40	7.31	7.23	7.14	7.06	6.97	*0.01*	
10.25	10.03	9.81	9.59	9.47	9.36	9.24	9.12	9.00	*0.005*	
2.70	2.67	2.63	2.59	2.58	2.56	2.54	2.51	2.49	*0.10*	
3.64	3.57	3.51	3.44	3.41	3.38	3.34	3.30	3.27	*0.05*	
4.76	4.67	4.57	4.47	4.41	4.36	4.31	4.25	4.20	*0.025*	*7*
6.62	6.47	6.31	6.16	6.07	5.99	5.91	5.82	5.74	*0.01*	
8.38	8.18	7.97	7.75	7.64	7.53	7.42	7.31	7.19	*0.005*	
2.54	2.50	2.46	2.42	2.40	2.38	2.36	2.34	2.32	*0.10*	
3.35	3.28	3.22	3.15	3.12	3.08	3.04	3.01	2.97	*0.05*	
4.30	4.20	4.10	4.00	3.95	3.89	3.84	3.78	3.73	*0.025*	*8*
5.81	5.67	5.52	5.36	5.28	5.20	5.12	5.03	4.95	*0.01*	
7.21	7.01	6.81	6.61	6.50	6.40	6.29	6.18	6.06	*0.005*	

附表4-3

Values of F_α

dfd	α	dfn								
		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
	0.10	3.36	3.01	2.81	2.69	2.61	2.55	2.51	2.47	2.44
	0.05	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18
9	*0.025*	7.21	5.71	5.08	4.72	4.48	4.32	4.20	4.10	4.03
	0.01	10.56	8.02	6.99	6.42	6.06	5.80	5.61	5.47	5.35
	0.005	13.61	10.11	8.72	7.96	7.47	7.13	6.88	6.69	6.54
	0.10	3.29	2.92	2.73	2.61	2.52	2.46	2.41	2.38	2.35
	0.05	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02
10	*0.025*	6.94	5.46	4.83	4.47	4.24	4.07	3.95	3.85	3.78
	0.01	10.04	7.56	6.55	5.99	5.64	5.39	5.20	5.06	4.94
	0.005	12.83	9.43	8.08	7.34	6.87	6.54	6.30	6.12	5.97
	0.10	3.23	2.86	2.66	2.54	2.45	2.39	2.34	2.30	2.27
	0.05	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90
11	*0.025*	6.72	5.26	4.63	4.28	4.04	3.88	3.76	3.66	3.59
	0.01	9.65	7.21	6.22	5.67	5.32	5.07	4.89	4.74	4.63
	0.005	12.23	8.91	7.60	6.88	6.42	6.10	5.86	5.68	5.54
	0.10	3.18	2.81	2.61	2.48	2.39	2.33	2.28	2.24	2.21
	0.05	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80
12	*0.025*	6.55	5.10	4.47	4.12	3.89	3.73	3.61	3.51	3.44
	0.01	9.33	6.93	5.95	5.41	5.06	4.82	4.64	4.50	4.39
	0.005	11.75	8.51	7.23	6.52	6.07	5.76	5.52	5.35	5.20
	0.10	3.14	2.76	2.56	2.43	2.35	2.28	2.23	2.20	2.16
	0.05	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71
13	*0.025*	6.41	4.97	4.35	4.00	3.77	3.60	3.48	3.39	3.31
	0.01	9.07	6.70	5.74	5.21	4.86	4.62	4.44	4.30	4.19
	0.005	11.37	8.19	6.93	6.23	5.79	5.48	5.25	5.08	4.94
	0.10	3.10	2.73	2.52	2.39	2.31	2.24	2.19	2.15	2.12
	0.05	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65
14	*0.025*	6.30	4.86	4.24	3.89	3.66	3.50	3.38	3.29	3.21
	0.01	8.86	6.51	5.56	5.04	4.69	4.46	4.28	4.14	4.03
	0.005	11.06	7.92	6.68	6.00	5.56	5.26	5.03	4.86	4.72
	0.10	3.07	2.70	2.49	2.36	2.27	2.21	2.16	2.12	2.09
	0.05	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59
15	*0.025*	6.20	4.77	4.15	3.80	3.58	3.41	3.29	3.20	3.12
	0.01	8.68	6.36	5.42	4.89	4.56	4.32	4.14	4.00	3.89
	0.005	10.80	7.70	6.48	5.80	5.37	5.07	4.85	4.67	4.54
	0.10	3.05	2.67	2.46	2.33	2.24	2.18	2.13	2.09	2.06
	0.05	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54
16	*0.025*	6.12	4.69	4.08	3.73	3.50	3.34	3.22	3.12	3.05
	0.01	8.53	6.23	5.29	4.77	4.44	4.20	4.03	3.89	3.78
	0.005	10.58	7.51	6.30	5.64	5.21	4.91	4.69	4.52	4.38

附表4-4

Values of F_α

dfn										
10	*12*	*15*	*20*	*24*	*30*	*40*	*60*	*120*	**α**	**dfd**
2.42	2.38	2.34	2.30	2.28	2.25	2.23	2.21	2.18	*0.10*	
3.14	3.07	3.01	2.94	2.90	2.86	2.83	2.79	2.75	*0.05*	
3.96	3.87	3.77	3.67	3.61	3.56	3.51	3.45	3.39	*0.025*	*9*
5.26	5.11	4.96	4.81	4.73	4.65	4.57	4.48	4.40	*0.01*	
6.42	6.23	6.03	5.83	5.73	5.62	5.52	5.41	5.30	*0.005*	
2.32	2.28	2.24	2.20	2.18	2.16	2.13	2.11	2.08	*0.10*	
2.98	2.91	2.85	2.77	2.74	2.70	2.66	2.62	2.58	*0.05*	
3.72	3.62	3.52	3.42	3.37	3.31	3.26	3.20	3.14	*0.025*	*10*
4.85	4.71	4.56	4.41	4.33	4.25	4.17	4.08	4.00	*0.01*	
5.85	5.66	5.47	5.27	5.17	5.07	4.97	4.86	4.75	*0.005*	
2.25	2.21	2.17	2.12	2.10	2.08	2.05	2.03	2.00	*0.10*	
2.85	2.79	2.72	2.65	2.61	2.57	2.53	2.49	2.45	*0.05*	
3.53	3.43	3.33	3.23	3.17	3.12	3.06	3.00	2.94	*0.025*	*11*
4.54	4.40	4.25	4.10	4.02	3.94	3.86	3.78	3.69	*0.01*	
5.42	5.24	5.05	4.86	4.76	4.65	4.55	4.45	4.34	*0.005*	
2.19	2.15	2.10	2.06	2.04	2.01	1.99	1.96	1.93	*0.10*	
2.75	2.69	2.62	2.54	2.51	2.47	2.43	2.38	2.34	*0.05*	
3.37	3.28	3.18	3.07	3.02	2.96	2.91	2.85	2.79	*0.025*	*12*
4.30	4.16	4.01	3.86	3.78	3.70	3.62	3.54	3.45	*0.01*	
5.09	4.91	4.72	4.53	4.43	4.33	4.23	4.12	4.01	*0.005*	
2.14	2.10	2.05	2.01	1.98	1.96	1.93	1.90	1.88	*0.10*	
2.67	2.60	2.53	2.46	2.42	2.38	2.34	2.30	2.25	*0.05*	
3.25	3.15	3.05	2.95	2.89	2.84	2.78	2.72	2.66	*0.025*	*13*
4.10	3.96	3.82	3.66	3.59	3.51	3.43	3.34	3.25	*0.01*	
4.82	4.64	4.46	4.27	4.17	4.07	3.97	3.87	3.76	*0.005*	
2.10	2.05	2.01	1.96	1.94	1.91	1.89	1.86	1.83	*0.10*	
2.60	2.53	2.46	2.39	2.35	2.31	2.27	2.22	2.18	*0.05*	
3.15	3.05	2.95	2.84	2.79	2.73	2.67	2.61	2.55	*0.025*	*14*
3.94	3.80	3.66	3.51	3.43	3.35	3.27	3.18	3.09	*0.01*	
4.60	4.43	4.25	4.06	3.96	3.86	3.76	3.66	3.55	*0.005*	
2.06	2.02	1.97	1.92	1.90	1.87	1.85	1.82	1.79	*0.10*	
2.54	2.48	2.40	2.33	2.29	2.25	2.20	2.16	2.11	*0.05*	
3.06	2.96	2.86	2.76	2.70	2.64	2.59	2.52	2.46	*0.025*	*15*
3.80	3.67	3.52	3.37	3.29	3.21	3.13	3.05	2.96	*0.01*	
4.42	4.25	4.07	3.88	3.79	3.69	3.58	3.48	3.37	*0.005*	
2.03	1.99	1.94	1.89	1.87	1.84	1.81	1.78	1.75	*0.10*	
2.49	2.42	2.35	2.28	2.24	2.19	2.15	2.11	2.06	*0.05*	
2.99	2.89	2.79	2.68	2.63	2.57	2.51	2.45	2.38	*0.025*	*16*
3.69	3.55	3.41	3.26	3.18	3.10	3.02	2.93	2.84	*0.01*	
4.27	4.10	3.92	3.73	3.64	3.54	3.44	3.33	3.22	*0.005*	

附表4-5

Values of F_α

		dfn								
dfd	**α**	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
	0.10	3.03	2.64	2.44	2.31	2.22	2.15	2.10	2.06	2.03
	0.05	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49
17	*0.025*	6.04	4.62	4.01	3.66	3.44	3.28	3.16	3.06	2.98
	0.01	8.40	6.11	5.18	4.67	4.34	4.10	3.93	3.79	3.68
	0.005	10.38	7.35	6.16	5.50	5.07	4.78	4.56	4.39	4.25
	0.10	3.01	2.62	2.42	2.29	2.20	2.13	2.08	2.04	2.00
	0.05	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46
18	*0.025*	5.98	4.56	3.95	3.61	3.38	3.22	3.10	3.01	2.93
	0.01	8.29	6.01	5.09	4.58	4.25	4.01	3.84	3.71	3.60
	0.005	10.22	7.21	6.03	5.37	4.96	4.66	4.44	4.28	4.14
	0.10	2.99	2.61	2.40	2.27	2.18	2.11	2.06	2.02	1.98
	0.05	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42
19	*0.025*	5.92	4.51	3.90	3.56	3.33	3.17	3.05	2.96	2.88
	0.01	8.18	5.93	5.01	4.50	4.17	3.94	3.77	3.63	3.52
	0.005	10.07	7.09	5.92	5.27	4.85	4.56	4.34	4.18	4.04
	0.10	2.97	2.59	2.38	2.25	2.16	2.09	2.04	2.00	1.96
	0.05	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39
20	*0.025*	5.87	4.46	3.86	3.51	3.29	3.13	3.01	2.91	2.84
	0.01	8.10	5.85	4.94	4.43	4.10	3.87	3.70	3.56	3.46
	0.005	9.94	6.99	5.82	5.17	4.76	4.47	4.26	4.09	3.96
	0.10	2.96	2.57	2.36	2.23	2.14	2.08	2.02	1.98	1.95
	0.05	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37
21	*0.025*	5.83	4.42	3.82	3.48	3.25	3.09	2.97	2.87	2.80
	0.01	8.02	5.78	4.87	4.37	4.04	3.81	3.64	3.51	3.40
	0.005	9.83	6.89	5.73	5.09	4.68	4.39	4.18	4.01	3.88
	0.10	2.95	2.56	2.35	2.22	2.13	2.06	2.01	1.97	1.93
	0.05	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34
22	*0.025*	5.79	4.38	3.78	3.44	3.22	3.05	2.93	2.84	2.76
	0.01	7.95	5.72	4.82	4.31	3.99	3.76	3.59	3.45	3.35
	0.005	9.73	6.81	5.65	5.02	4.61	4.32	4.11	3.94	3.81
	0.10	2.94	2.55	2.34	2.21	2.11	2.05	1.99	1.95	1.92
	0.05	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32
23	*0.025*	5.75	4.35	3.75	3.41	3.18	3.02	2.90	2.81	2.73
	0.01	7.88	5.66	4.76	4.26	3.94	3.71	3.54	3.41	3.30
	0.005	9.63	6.73	5.58	4.95	4.54	4.26	4.05	3.88	3.75
	0.10	2.93	2.54	2.33	2.19	2.10	2.04	1.98	1.94	1.91
	0.05	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30
24	*0.025*	5.72	4.32	3.72	3.38	3.15	2.99	2.87	2.78	2.70
	0.01	7.82	5.61	4.72	4.22	3.90	3.67	3.50	3.36	3.26
	0.005	9.55	6.66	5.52	4.89	4.49	4.20	3.99	3.83	3.69

附表4-6

Values of F_α

dfn										
10	*12*	*15*	*20*	*24*	*30*	*40*	*60*	*120*	**α**	**dfd**
2.00	1.96	1.91	1.86	1.84	1.81	1.78	1.75	1.72	*0.10*	
2.45	2.38	2.31	2.23	2.19	2.15	2.10	2.06	2.01	*0.05*	
2.92	2.82	2.72	2.62	2.56	2.50	2.44	2.38	2.32	*0.025*	*17*
3.59	3.46	3.31	3.16	3.08	3.00	2.92	2.83	2.75	*0.01*	
4.14	3.97	3.79	3.61	3.51	3.41	3.31	3.21	3.10	*0.005*	
1.98	1.93	1.89	1.84	1.81	1.78	1.75	1.72	1.69	*0.10*	
2.41	2.34	2.27	2.19	2.15	2.11	2.06	2.02	1.97	*0.05*	
2.87	2.77	2.67	2.56	2.50	2.44	2.38	2.32	2.26	*0.025*	*18*
3.51	3.37	3.23	3.08	3.00	2.92	2.84	2.75	2.66	*0.01*	
4.03	3.86	3.68	3.50	3.40	3.30	3.20	3.10	2.99	*0.005*	
1.96	1.91	1.86	1.81	1.79	1.76	1.73	1.70	1.67	*0.10*	
2.38	2.31	2.23	2.16	2.11	2.07	2.03	1.98	1.93	*0.05*	
2.82	2.72	2.62	2.51	2.45	2.39	2.33	2.27	2.20	*0.025*	*19*
3.43	3.30	3.15	3.00	2.92	2.84	2.76	2.67	2.58	*0.01*	
3.93	3.76	3.59	3.40	3.31	3.21	3.11	3.00	2.89	*0.005*	
1.94	1.89	1.84	1.79	1.77	1.74	1.71	1.68	1.64	*0.10*	
2.35	2.28	2.20	2.12	2.08	2.04	1.99	1.95	1.90	*0.05*	
2.77	2.68	2.57	2.46	2.41	2.35	2.29	2.22	2.16	*0.025*	*20*
3.37	3.23	3.09	2.94	2.86	2.78	2.69	2.61	2.52	*0.01*	
3.85	3.68	3.50	3.32	3.22	3.12	3.02	2.92	2.81	*0.005*	
1.92	1.87	1.83	1.78	1.75	1.72	1.69	1.66	1.62	*0.10*	
2.32	2.25	2.18	2.10	2.05	2.01	1.96	1.92	1.87	*0.05*	
2.73	2.64	2.53	2.42	2.37	2.31	2.25	2.18	2.11	*0.025*	*21*
3.31	3.17	3.03	2.88	2.80	2.72	2.64	2.55	2.46	*0.01*	
3.77	3.60	3.43	3.24	3.15	3.05	2.95	2.84	2.73	*0.005*	
1.90	1.86	1.81	1.76	1.73	1.70	1.67	1.64	1.60	*0.10*	
2.30	2.23	2.15	2.07	2.03	1.98	1.94	1.89	1.84	*0.05*	
2.70	2.60	2.50	2.39	2.33	2.27	2.21	2.14	2.08	*0.025*	*22*
3.26	3.12	2.98	2.83	2.75	2.67	2.58	2.50	2.40	*0.01*	
3.70	3.54	3.36	3.18	3.08	2.98	2.88	2.77	2.66	*0.005*	
1.89	1.84	1.80	1.74	1.72	1.69	1.66	1.62	1.59	*0.10*	
2.27	2.20	2.13	2.05	2.01	1.96	1.91	1.86	1.81	*0.05*	
2.67	2.57	2.47	2.36	2.30	2.24	2.18	2.11	2.04	*0.025*	*23*
3.21	3.07	2.93	2.78	2.70	2.62	2.54	2.45	2.35	*0.01*	
3.64	3.47	3.30	3.12	3.02	2.92	2.82	2.71	2.60	*0.005*	
1.88	1.83	1.78	1.73	1.70	1.67	1.64	1.61	1.57	*0.10*	
2.25	2.18	2.11	2.03	1.98	1.94	1.89	1.84	1.79	*0.05*	
2.64	2.54	2.44	2.33	2.27	2.21	2.15	2.08	2.01	*0.025*	*24*
3.17	3.03	2.89	2.74	2.66	2.58	2.49	2.40	2.31	*0.01*	
3.59	3.42	3.25	3.06	2.97	2.87	2.77	2.66	2.55	*0.005*	

附表4-7

Values of F_α

		dfn								
dfd	**α**	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
	0.10	2.92	2.53	2.32	2.18	2.09	2.02	1.97	1.93	1.89
	0.05	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28
25	*0.025*	5.69	4.29	3.69	3.35	3.13	2.97	2.85	2.75	2.68
	0.01	7.77	5.57	4.68	4.18	3.85	3.63	3.46	3.32	3.22
	0.005	9.48	6.60	5.46	4.84	4.43	4.15	3.94	3.78	3.64
	0.10	2.91	2.52	2.31	2.17	2.08	2.01	1.96	1.92	1.88
	0.05	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27
26	*0.025*	5.66	4.27	3.67	3.33	3.10	2.94	2.82	2.73	2.65
	0.01	7.72	5.53	4.64	4.14	3.82	3.59	3.42	3.29	3.18
	0.005	9.41	6.54	5.41	4.79	4.38	4.10	3.89	3.73	3.60
	0.10	2.90	2.51	2.30	2.17	2.07	2.00	1.95	1.91	1.87
	0.05	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25
27	*0.025*	5.63	4.24	3.65	3.31	3.08	2.92	2.80	2.71	2.63
	0.01	7.68	5.49	4.60	4.11	3.78	3.56	3.39	3.26	3.15
	0.005	9.34	6.49	5.36	4.74	4.34	4.06	3.85	3.69	3.56
	0.10	2.89	2.50	2.29	2.16	2.06	2.00	1.94	1.90	1.87
	0.05	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24
28	*0.025*	5.61	4.22	3.63	3.29	3.06	2.90	2.78	2.69	2.61
	0.01	7.64	5.45	4.57	4.07	3.75	3.53	3.36	3.23	3.12
	0.005	9.28	6.44	5.32	4.70	4.30	4.02	3.81	3.65	3.52
	0.10	2.89	2.50	2.28	2.15	2.06	1.99	1.93	1.89	1.86
	0.05	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22
29	*0.025*	5.59	4.20	3.61	3.27	3.04	2.88	2.76	2.67	2.59
	0.01	7.60	5.42	4.54	4.04	3.73	3.50	3.33	3.20	3.09
	0.005	9.23	6.40	5.28	4.66	4.26	3.98	3.77	3.61	3.48
	0.10	2.88	2.49	2.28	2.14	2.05	1.98	1.93	1.88	1.85
	0.05	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21
30	*0.025*	5.57	4.18	3.59	3.25	3.03	2.87	2.75	2.65	2.57
	0.01	7.56	5.39	4.51	4.02	3.70	3.47	3.30	3.17	3.07
	0.005	9.18	6.35	5.24	4.62	4.23	3.95	3.74	3.58	3.45
	0.10	2.79	2.39	2.18	2.04	1.95	1.87	1.82	1.77	1.74
	0.05	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04
60	*0.025*	5.29	3.93	3.34	3.01	2.79	2.63	2.51	2.41	2.33
	0.01	7.08	4.98	4.13	3.65	3.34	3.12	2.95	2.82	2.72
	0.005	8.49	5.79	4.73	4.14	3.76	3.49	3.29	3.13	3.01
	0.10	2.75	2.35	2.13	1.99	1.90	1.82	1.77	1.72	1.68
	0.05	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96
120	*0.025*	5.15	3.80	3.23	2.89	2.67	2.52	2.39	2.30	2.22
	0.01	6.85	4.79	3.95	3.48	3.17	2.96	2.79	2.66	2.56
	0.005	8.18	5.54	4.50	3.92	3.55	3.28	3.09	2.93	2.81

附表 4-8

Values of F_α

dfn										
10	*12*	*15*	*20*	*24*	*30*	*40*	*60*	*120*	**α**	**dfd**
1.87	1.82	1.77	1.72	1.69	1.66	1.63	1.59	1.56	*0.10*	
2.24	2.16	2.09	2.01	1.96	1.92	1.87	1.82	1.77	*0.05*	
2.61	2.51	2.41	2.30	2.24	2.18	2.12	2.05	1.98	*0.025*	*25*
3.13	2.99	2.85	2.70	2.62	2.54	2.45	2.36	2.27	*0.01*	
3.54	3.37	3.20	3.01	2.92	2.82	2.72	2.61	2.50	*0.005*	
1.86	1.81	1.76	1.71	1.68	1.65	1.61	1.58	1.54	*0.10*	
2.22	2.15	2.07	1.99	1.95	1.90	1.85	1.80	1.75	*0.05*	
2.59	2.49	2.39	2.28	2.22	2.16	2.09	2.03	1.95	*0.025*	*26*
3.09	2.96	2.81	2.66	2.58	2.50	2.42	2.33	2.23	*0.01*	
3.49	3.33	3.15	2.97	2.87	2.77	2.67	2.56	2.45	*0.005*	
1.85	1.80	1.75	1.70	1.67	1.64	1.60	1.57	1.53	*0.10*	
2.20	2.13	2.06	1.97	1.93	1.88	1.84	1.79	1.73	*0.05*	
2.57	2.47	2.36	2.25	2.19	2.13	2.07	2.00	1.93	*0.025*	*27*
3.06	2.93	2.78	2.63	2.55	2.47	2.38	2.29	2.20	*0.01*	
3.45	3.28	3.11	2.93	2.83	2.73	2.63	2.52	2.41	*0.005*	
1.84	1.79	1.74	1.69	1.66	1.63	1.59	1.56	1.52	*0.10*	
2.19	2.12	2.04	1.96	1.91	1.87	1.82	1.77	1.71	*0.05*	
2.55	2.45	2.34	2.23	2.17	2.11	2.05	1.98	1.91	*0.025*	*28*
3.03	2.90	2.75	2.60	2.52	2.44	2.35	2.26	2.17	*0.01*	
3.41	3.25	3.07	2.89	2.79	2.69	2.59	2.48	2.37	*0.005*	
1.83	1.78	1.73	1.68	1.65	1.62	1.58	1.55	1.51	*0.10*	
2.18	2.10	2.03	1.94	1.90	1.85	1.81	1.75	1.70	*0.05*	
2.53	2.43	2.32	2.21	2.15	2.09	2.03	1.96	1.89	*0.025*	*29*
3.00	2.87	2.73	2.57	2.49	2.41	2.33	2.23	2.14	*0.01*	
3.38	3.21	3.04	2.86	2.76	2.66	2.56	2.45	2.33	*0.005*	
1.82	1.77	1.72	1.67	1.64	1.61	1.57	1.54	1.50	*0.10*	
2.16	2.09	2.01	1.93	1.89	1.84	1.79	1.74	1.68	*0.05*	
2.51	2.41	2.31	2.20	2.14	2.07	2.01	1.94	1.87	*0.025*	*30*
2.98	2.84	2.70	2.55	2.47	2.39	2.30	2.21	2.11	*0.01*	
3.34	3.18	3.01	2.82	2.73	2.63	2.52	2.42	2.30	*0.005*	
1.71	1.66	1.60	1.54	1.51	1.48	1.44	1.40	1.35	*0.10*	
1.99	1.92	1.84	1.75	1.70	1.65	1.59	1.53	1.47	*0.05*	
2.27	2.17	2.06	1.94	1.88	1.82	1.74	1.67	1.58	*0.025*	*60*
2.63	2.50	2.35	2.20	2.12	2.03	1.94	1.84	1.73	*0.01*	
2.90	2.74	2.57	2.39	2.29	2.19	2.08	1.96	1.83	*0.005*	
1.65	1.60	1.55	1.48	1.45	1.41	1.37	1.32	1.26	*0.10*	
1.91	1.83	1.75	1.66	1.61	1.55	1.50	1.43	1.35	*0.05*	
2.16	2.05	1.94	1.82	1.76	1.69	1.61	1.53	1.43	*0.025*	*120*
2.47	2.34	2.19	2.03	1.95	1.86	1.76	1.66	1.53	*0.01*	
2.71	2.54	2.37	2.19	2.09	1.98	1.87	1.75	1.61	*0.005*	