東海大學 99 學年度碩士班招生入學考試試題

考試科目：統計學 C　　應考系所：國際貿易學系

注意：本試題共 3 頁，第 1、2 及 3 題為每題 8 分，第 4 至 15 題為每題 6 分，第 16 題為 4 分，共 100 分。所有試題之題號及其答案皆須依序寫在答案卷上，否則不予計分。

試題 3 頁，附表 5 頁

1. The joint distribution function of two random variables X and Y is given by

$$F(x,y)=\begin{cases}(1-e^{-x})(1-e^{-y}) & for\ x>0\ and\ y>0\\ 0 & elsewhere\end{cases}$$

What is the value of P(1<X<3, 1<Y<2)= ?

2. If the joint probability density of X and Y is given by

$$f(x,y)=\begin{cases}\frac{1}{y} & for\ 0<x<y,\ 0<y<1\\ 0 & elsewhere\end{cases}$$

Determine whether the two random variables are independent.

3. If the joint probability density of X and Y is given by

$$f(x,y)=\begin{cases}\frac{1}{4}(2x+y) & for\ 0<x<1,\ 0<y<2\\ 0 & elsewhere\end{cases}$$

Find the conditional mean of Y given X = 1/4 .

4. A portfolio consists of three stocks (Cisco, Intel, and Microsoft) whose covariance matrix of returns is listed below. If the weights of these stocks in the portfolio are 0.2, 0.3, and 05, respectively, what is the risk (standard deviation) of this portfolio's return?

	Cisco	Intel	Microsoft
Cisco	0.018		
Intel	0.002	0.016	
Microsoft	0.008	0.005	0.007

5. The number of arrivals at a car wash station is Poisson distributed with a mean of 8 cars per hour. What is the probability that 10 cars will arrive in the next two hours?

6. The results of a customer satisfaction survey indicate that **10%** of customers were not satisfied with the service at their last visit to the store. Of those who are not satisfied, only **20%** return to the store within a year. Of those who are satisfied, **70%** return within a year. A customer has just entered the store. In response to your question, he informs you that it is less than 1 year since his last visit to the store. What is the probability that he was satisfied with the service he received?

7. You want to test the following hypothesis with $\sigma = 5$, $n = 25$, and $\alpha = 0.05$.

   H_0: $\mu \geq 40$ H_1: $\mu < 40$

   Find the probability of a Type II error if the true μ is 37.

8. It is been acknowledged that speed contributes to the severity of collisions. To reduce the variation in speeds, an experiment is conducted. In the first week, signs are posted indicating that the maximum speed is 70 mph and that the minimum speed is 60 mph. In the second week, signs are posted indicating the speed limit is 70 mph. Using a 5% significant level, can we infer that limiting the minimum and maximum speeds (the first week) has lower variation in speeds? (1: the first week; 2: the second week)

   $\bar{X}_1 = 70.55,\ \sum X_1^2 = 299,363,\ n_1 = 60$; $\bar{X}_2 = 70.84,\ \sum X_2^2 = 604,397,\ n_2 = 120$

9. Credit scorecards are used by financial institutions to help decide to whom loans should be granted. An analysis of the records of a random sample of loans at one bank produced the following results:

	Score under 600	Score over 600
The number of not defaulted	551	797
The number of defaulted	11	7

   Do these results allow us to conclude that those who score under 600 are more likely to default than those who score 600 or more? (Use a 5% significance level.)

10. A statistics practitioner believes that the office vacancy rate and the city's unemployment rate would affect the office rents. He ran a regression model and had the following results. Test the model's validity in explaining office rent. (Need to set up the hypothesis.)

	自由度	SS	MS	F
迴歸	*a*	199.65	*d*	*g*
殘差	*b*	c	*f*	
總和	29	326.09		

11. Based on the Question 10, what is standard error of estimate?

12. To improve the format of the tax return forms, thirty taxpayers are asked to fill out each of the four forms. However, they are divided into 3 groups. Ten taxpayers are in the lowest income bracket, 10 are in the next income bracket, and the rest 10 are in the highest income bracket. The amount of time needed to complete the form is recorded below.

Group	Form 1	Form 2	Form 3	Form 4
1	43	84	72	81
---	---	---	---	---
2	53	115	111	95
-----	---	---	---	---
3	75	101	107	145
---	---	---	---	---

The excel output is listed below:

變源	SS	自由度	MS	F	P-值
樣本	6718.72	*a*	*e*	*j*	0.019
欄	6279.87	*b*	*f*	*k*	0.059
交互作用	5101.88	*c*	*g*	*m*	0.403
組內	88217	108	*h*		

What is F value of in the row of 樣本 (cell j)?

13. Based on the Question 13, can we conclude at the 5% significance level that differences exist between the four forms?

注意：第 14 及 15 題不必計算過程，只需（1）設立虛無假設與對立假設，並且（2）明確指出採用下列何種統計檢定方法：「ANOVA: Single Factor」、「ANOVA: Two-Factor with Replication」、「ANOVA: Two-Factor without Replication」、「Mann-Whitney test」、「Kruskal-Wallis test」、「Friedman test」、「Wilcoxon singed rank sum test」、「Pearson coefficient test」、「Spearman rank correlation test」或「χ^2 test of a contingency table」。必須（1）與（2）項同時答對才給分。

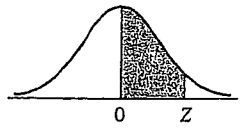
14. Predicted directions of change in exchange rates from 216 readers of Wall Street Journal, together with the subsequent actual directions of change, were record in the following way: Column 1: predicted change, where 1 = positive and 2 = negative; Column 2: actual change, where 1 = positive and 2 = negative. Can we infer at the 5% significance level that a relationship exists between the predicted and actual direction of change?

15. NBC surveyed a random sample of 30 registered Democrats in January, another 30 in February, and yet another 30 in March. All 90 Democrats were asked to rate the chance of winning the presidential election with the codes: 1 (poor), 2 (fair), 3 (good), and (4) excellent. Do these data infer that the ratings changes over the 3-month period?

16. 名詞解釋：95% confidence interval of μ

Areas of the Standard Normal Distribution

附表五之5頁，第1頁

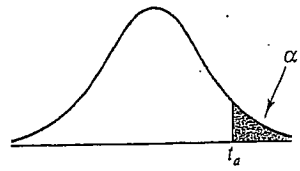


The entries in this table are the probabilities that a standard normal random variable is between 0 and Z (the shaded area).

Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	.0000	.0040	.0080	.0120	.0160	.0199	.0239	.0279	.0319	.0359
0.1	.0398	.0438	.0478	.0517	.0557	.0596	.0636	.0675	.0714	.0753
0.2	.0793	.0832	.0871	.0910	.0948	.0987	.1026	.1064	.1103	.1141
0.3	.1179	.1217	.1255	.1293	.1331	.1368	.1406	.1443	.1480	.1517
0.4	.1554	.1591	.1628	.1664	.1700	.1736	.1772	.1808	.1844	.1879
0.5	.1915	.1950	.1985	.2019	.2054	.2088	.2123	.2157	.2190	.2224
0.6	.2257	.2291	.2324	.2357	.2389	.2422	.2454	.2486	.2517	.2549
0.7	.2580	.2611	.2642	.2673	.2704	.2734	.2764	.2794	.2823	.2852
0.8	.2881	.2910	.2939	.2967	.2995	.3023	.3051	.3078	.3106	.3133
0.9	.3159	.3186	.3212	.3238	.3264	.3289	.3315	.3340	.3365	.3389
1.0	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1.1	.3643	.3665	.3686	.3708	.3729	.3749	.3770	.3790	.3810	.3830
1.2	.3849	.3869	.3888	.3907	.3925	.3944	.3962	.3980	.3997	.4015
1.3	.4032	.4049	.4066	.4082	.4099	.4115	.4131	.4147	.4162	.4177
1.4	.4192	.4207	.4222	.4236	.4251	.4265	.4279	.4292	.4306	.4319
1.5	.4332	.4345	.4357	.4370	.4382	.4394	.4406	.4418	.4429	.4441
1.6	.4452	.4463	.4474	.4484	.4495	.4505	.4515	.4525	.4535	.4545
1.7	.4554	.4564	.4573	.4582	.4591	.4599	.4608	.4616	.4625	.4633
1.8	.4641	.4649	.4656	.4664	.4671	.4678	.4686	.4693	.4699	.4706
1.9	.4713	.4719	.4726	.4732	.4738	.4744	.4750	.4756	.4761	.4767
2.0	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2.1	.4821	.4826	.4830	.4834	.4838	.4842	.4846	.4850	.4854	.4857
2.2	.4861	.4864	.4868	.4871	.4875	.4878	.4881	.4884	.4887	.4890
2.3	.4893	.4896	.4898	.4901	.4904	.4906	.4909	.4911	.4913	.4916
2.4	.4918	.4920	.4922	.4925	.4927	.4929	.4931	.4932	.4934	.4936
2.5	.4938	.4940	.4941	.4943	.4945	.4946	.4948	.4949	.4951	.4952
2.6	.4953	.4955	.4956	.4957	.4959	.4960	.4961	.4962	.4963	.4964
2.7	.4965	.4966	.4967	.4968	.4969	.4970	.4971	.4972	.4973	.4974
2.8	.4974	.4975	.4976	.4977	.4977	.4978	.4979	.4979	.4980	.4981
2.9	.4981	.4982	.4982	.4983	.4984	.4984	.4985	.4985	.4986	.4986
3.0	.4987	.4987	.4987	.4988	.4988	.4989	.4989	.4989	.4990	.4990
3.1	.4990	.4991	.4991	.4991	.4992	.4992	.4992	.4992	.4993	.4993
3.2	.4993	.4993	.4994	.4994	.4994	.4994	.4994	.4995	.4995	.4995
3.3	.4995	.4995	.4995	.4996	.4996	.4996	.4996	.4996	.4996	.4997
3.4	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4998
3.5	.4998									
4.0	.49997									
4.5	.499997									
5.0	.4999997									
6.0	.499999999									

Critical Values from the *t* Distribution

附表共5页，第2页

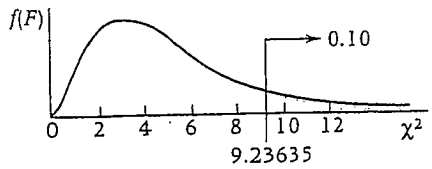


Values of α for one-tailed test and $\alpha/2$ for two-tailed test						
df	$t_{.100}$	$t_{.050}$	$t_{.025}$	$t_{.010}$	$t_{.005}$	$t_{.001}$
1	3.078	6.314	12.706	31.821	63.656	318.289
2	1.886	2.920	4.303	6.965	9.925	22.328
3	1.638	2.353	3.182	4.541	5.841	10.214
4	1.533	2.132	2.776	3.747	4.604	7.173
5	1.476	2.015	2.571	3.365	4.032	5.894
6	1.440	1.943	2.447	3.143	3.707	5.208
7	1.415	1.895	2.365	2.998	3.499	4.785
8	1.397	1.860	2.306	2.896	3.355	4.501
9	1.383	1.833	2.262	2.821	3.250	4.297
10	1.372	1.812	2.228	2.764	3.169	4.144
11	1.363	1.796	2.201	2.718	3.106	4.025
12	1.356	1.782	2.179	2.681	3.055	3.930
13	1.350	1.771	2.160	2.650	3.012	3.852
14	1.345	1.761	2.145	2.624	2.977	3.787
15	1.341	1.753	2.131	2.602	2.947	3.733
16	1.337	1.746	2.120	2.583	2.921	3.686
17	1.333	1.740	2.110	2.567	2.898	3.646
18	1.330	1.734	2.101	2.552	2.878	3.610
19	1.328	1.729	2.093	2.539	2.861	3.579
20	1.325	1.725	2.086	2.528	2.845	3.552
21	1.323	1.721	2.080	2.518	2.831	3.527
22	1.321	1.717	2.074	2.508	2.819	3.505
23	1.319	1.714	2.069	2.500	2.807	3.485
24	1.318	1.711	2.064	2.492	2.797	3.467
25	1.316	1.708	2.060	2.485	2.787	3.450
26	1.315	1.706	2.056	2.479	2.779	3.435
27	1.314	1.703	2.052	2.473	2.771	3.421
28	1.313	1.701	2.048	2.467	2.763	3.408
29	1.311	1.699	2.045	2.462	2.756	3.396
30	1.310	1.697	2.042	2.457	2.750	3.385
40	1.303	1.684	2.021	2.423	2.704	3.307
50	1.299	1.676	2.009	2.403	2.678	3.261
60	1.296	1.671	2.000	2.390	2.660	3.232
70	1.294	1.667	1.994	2.381	2.648	3.211
80	1.292	1.664	1.990	2.374	2.639	3.195
90	1.291	1.662	1.987	2.368	2.632	3.183
100	1.290	1.660	1.984	2.364	2.626	3.174
150	1.287	1.655	1.976	2.351	2.609	3.145
200	1.286	1.653	1.972	2.345	2.601	3.131
∞	1.282	1.645	1.960	2.326	2.576	3.090

附表 5 頁，第 3 頁

The Chi-Square Table

Values of χ^2 for Selected Probabilities

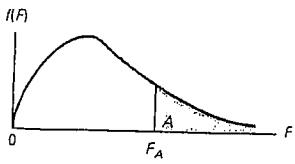


Example: df (Number of degrees of freedom) = 5, the tail above $\chi^2 = 9.23635$ represents 0.10 or 10% of the area under the curve.

Degrees of Freedom	Area in Upper Tail									
	.995	.99	.975	.95	.9	.1	.05	.025	.01	.005
1	0.0000393	0.0001571	0.0009821	0.0039322	0.0157907	2.7055	3.8415	5.0239	6.6349	7.8794
2	0.010025	0.020100	0.050636	0.102586	0.210721	4.6052	5.9915	7.3778	9.2104	10.5965
3	0.07172	0.11483	0.21579	0.35185	0.58438	6.2514	7.8147	9.3484	11.3449	12.8381
4	0.20698	0.29711	0.48442	0.71072	1.06362	7.7794	9.4877	11.1433	13.2767	14.8602
5	0.41175	0.55430	0.83121	1.14548	1.61031	9.2363	11.0705	12.8325	15.0863	16.7496
6	0.67573	0.87208	1.23734	1.63538	2.20413	10.6446	12.5916	14.4494	16.8119	18.5475
7	0.98925	1.23903	1.68986	2.16735	2.83311	12.0170	14.0671	16.0128	18.4753	20.2777
8	1.34440	1.64651	2.17972	2.73263	3.48954	13.3616	15.5073	17.5345	20.0902	21.9549
9	1.73491	2.08789	2.70039	3.32512	4.16816	14.6837	16.9190	19.0228	21.6660	23.5893
10	2.15585	2.55820	3.24696	3.94030	4.86518	15.9872	18.3070	20.4832	23.2093	25.1881
11	2.60320	3.05350	3.81574	4.57481	5.57779	17.2750	19.6752	21.9200	24.7250	26.7569
12	3.07379	3.57055	4.40378	5.22603	6.30380	18.5493	21.0261	23.3367	26.2170	28.2997
13	3.56504	4.10690	5.00874	5.89186	7.04150	19.8119	22.3620	24.7356	27.6882	29.8193
14	4.07466	4.66042	5.62872	6.57063	7.78954	21.0641	23.6848	26.1189	29.1412	31.3194
15	4.60087	5.22936	6.26212	7.26093	8.54675	22.3071	24.9958	27.4884	30.5780	32.8015
16	5.14216	5.81220	6.90766	7.96164	9.31224	23.5418	26.2962	28.8453	31.9999	34.2671
17	5.69727	6.40774	7.56418	8.67175	10.08518	24.7690	27.5871	30.1910	33.4087	35.7184
18	6.26477	7.01490	8.23074	9.39045	10.86494	25.9894	28.8693	31.5264	34.8052	37.1564
19	6.84392	7.63270	8.90651	10.11701	11.65091	27.2036	30.1435	32.8523	36.1908	38.5821
20	7.43381	8.26037	9.59077	10.85080	12.44260	28.4120	31.4104	34.1696	37.5663	39.9969
21	8.03360	8.89717	10.28291	11.59132	13.23960	29.6151	32.6706	35.4789	38.9322	41.4009
22	8.64268	9.54249	10.98233	12.33801	14.04149	30.8133	33.9245	36.7807	40.2894	42.7957
23	9.26038	10.19569	11.68853	13.09051	14.84795	32.0069	35.1725	38.0756	41.6383	44.1814
24	9.88620	10.85635	12.40115	13.84842	15.65868	33.1962	36.4150	39.3641	42.9798	45.5584
25	10.51965	11.52395	13.11971	14.61140	16.47341	34.3816	37.6525	40.6465	44.3140	46.9280
26	11.16022	12.19818	13.84388	15.37916	17.29188	35.5632	38.8851	41.9231	45.6416	48.2898
27	11.80765	12.87847	14.57337	16.15139	18.11389	36.7412	40.1133	43.1945	46.9628	49.6450
28	12.46128	13.56467	15.30785	16.92788	18.93924	37.9159	41.3372	44.4608	48.2782	50.9936
29	13.12107	14.25641	16.04705	17.70838	19.76774	39.0875	42.5569	45.7223	49.5878	52.3355
30	13.78668	14.95346	16.79076	18.49267	20.59924	40.2560	43.7730	46.9792	50.8922	53.6719
40	20.70658	22.16420	24.43306	26.50930	29.05052	51.8050	55.7585	59.3417	63.6908	66.7660
50	27.99082	29.70673	32.35738	34.76424	37.68864	63.1671	67.5048	71.4202	76.1538	79.4898
60	35.53440	37.48480	40.48171	43.18797	46.45888	74.3970	79.0820	83.2977	88.3794	91.9518
70	43.27531	45.44170	48.75754	51.73926	55.32894	85.5270	90.5313	95.0231	100.4251	104.2148
80	51.17193	53.53998	57.15315	60.39146	64.27784	96.5782	101.8795	106.6285	112.3288	116.3209
90	59.19633	61.75402	65.64659	69.12602	73.29108	107.5650	113.1452	118.1359	124.1162	128.2987
100	67.32753	70.06500	74.22188	77.92944	82.35813	118.4980	124.3421	129.5613	135.8069	140.1697

附表5頁，第4頁

Table 6(a) Critical Values of F: $A = .05$



DENOMINATOR DEGREES OF FREEDOM ν_2 \ NUMERATOR DEGREES OF FREEDOM ν_1	1	2	3	4	5	6	7	8	9
1	161.4	199.5	215.7	224.6	230.2	234.0	236.8	238.9	240.5
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04
120	3.92	3.07	2.68	2.45	2.29	2.17	2.09	2.02	1.96
∞	3.84	3.00	2.60	2.37	2.21	2.10	2.01	1.94	1.88

SOURCE: From M. Merrington and C. M. Thompson, "Tables of Percentage Points of the Inverted Beta (F)-Distribution," *Biometrika* 33 (1943): 73–88. Reproduced by permission of the Biometrika Trustees.

3代表5項，第5項

Table 6(a)
continued

ν_2 \ ν_1	NUMERATOR DEGREES OF FREEDOM									
DENOMINATOR DEGREES OF FREEDOM	10	12	15	20	24	30	40	60	120	∞
1	241.9	243.9	245.9	248.0	249.1	250.1	251.1	252.2	253.3	254.3
2	19.40	19.41	19.43	19.45	19.45	19.46	19.47	19.48	19.49	19.50
3	8.79	8.74	8.70	8.66	8.64	8.62	8.59	8.57	8.55	8.53
4	5.96	5.91	5.86	5.80	5.77	5.75	5.72	5.69	5.66	5.63
5	4.74	4.68	4.62	4.56	4.53	4.50	4.46	4.43	4.40	4.36
6	4.06	4.00	3.94	3.87	3.84	3.81	3.77	3.74	3.70	3.67
7	3.64	3.57	3.51	3.44	3.41	3.38	3.34	3.30	3.27	3.23
8	3.35	3.28	3.22	3.15	3.12	3.08	3.04	3.01	2.97	2.93
9	3.14	3.07	3.01	2.94	2.90	2.86	2.83	2.79	2.75	2.71
10	2.98	2.91	2.85	2.77	2.74	2.70	2.66	2.62	2.58	2.54
11	2.85	2.79	2.72	2.65	2.61	2.57	2.53	2.49	2.45	2.40
12	2.75	2.69	2.62	2.54	2.51	2.47	2.43	2.38	2.34	2.30
13	2.67	2.60	2.53	2.46	2.42	2.38	2.34	2.30	2.25	2.21
14	2.60	2.53	2.46	2.39	2.35	2.31	2.27	2.22	2.18	2.13
15	2.54	2.48	2.40	2.33	2.29	2.25	2.20	2.16	2.11	2.07
16	2.49	2.42	2.35	2.28	2.24	2.19	2.15	2.11	2.06	2.01
17	2.45	2.38	2.31	2.23	2.19	2.15	2.10	2.06	2.01	1.96
18	2.41	2.34	2.27	2.19	2.15	2.11	2.06	2.02	1.97	1.92
19	2.38	2.31	2.23	2.16	2.11	2.07	2.03	1.98	1.93	1.88
20	2.35	2.28	2.20	2.12	2.08	2.04	1.99	1.95	1.90	1.84
21	2.32	2.25	2.18	2.10	2.05	2.01	1.96	1.92	1.87	1.81
22	2.30	2.23	2.15	2.07	2.03	1.98	1.94	1.89	1.84	1.78
23	2.27	2.20	2.13	2.05	2.01	1.96	1.91	1.86	1.81	1.76
24	2.25	2.18	2.11	2.03	1.98	1.94	1.89	1.84	1.79	1.73
25	2.24	2.16	2.09	2.01	1.96	1.92	1.87	1.82	1.77	1.71
26	2.22	2.15	2.07	1.99	1.95	1.90	1.85	1.80	1.75	1.69
27	2.20	2.13	2.06	1.97	1.93	1.88	1.84	1.79	1.73	1.67
28	2.19	2.12	2.04	1.96	1.91	1.87	1.82	1.77	1.71	1.65
29	2.18	2.10	2.03	1.94	1.90	1.85	1.81	1.75	1.70	1.64
30	2.16	2.09	2.01	1.93	1.89	1.84	1.79	1.74	1.68	1.62
40	2.08	2.00	1.92	1.84	1.79	1.74	1.69	1.64	1.58	1.51
60	1.99	1.92	1.84	1.75	1.70	1.65	1.59	1.53	1.47	1.39
120	1.91	1.83	1.75	1.66	1.61	1.55	1.50	1.43	1.35	1.25
∞	1.83	1.75	1.67	1.57	1.52	1.46	1.39	1.32	1.22	1.00