國立成功大學

114學年度碩士班招生考試試題

編　號：175

系　所：企業管理學系

科　目：統計學

日　期：0211

節　次：第 3 節

注　意：1.不可使用計算機
2.請於答案卷(卡)作答，於試題上作答，不予計分。

Part A

INSTRUCTIONS

- Each question is worth 4 marks, circle the best answer out of five in each.

Please refer to the following to help you answer questions 1 to 4.

Prior to the finals of the WBSC Premier12 baseball tournament of team Chinese Taipei, Japan, United States, and Venezuela, the following super round games were arranged to determine the teams to be advanced to the championship game with values in parentheses the probabilities each team winning their respective games.

Game 1:	TPE (5/10)	*vs.*	VEN (5/10)
Game 2:	USA (5/10)	*vs.*	JPN (5/10)
Game 3:	TPE (3/10)	*vs.*	USA (7/10)
Game 4:	VEN (1/10)	*vs.*	JPN (9/10)
Game 5:	USA (7/10)	*vs.*	VEN (3/10)
Game 6:	TPE (2/10)	*vs.*	JPN (8/10)

1. The outcome of interest is the set of winners for each of the six games. How many outcomes are contained in the appropriate sample space?

   (A) 12 (B) 32 (C) 48 (D) 64 (E) 1000

2. Assuming that the outcome of one game is independent of another, what is the probability that team JPN would beat all their opponents to be advanced to the championship game?

   (A) 23/30 (B) 23/300 (C) 23/100 (D) 360/1000 (E) 7/10

3. What is the probability that team TPE would beat two of their opponents in the three games they play?

   (A) 15/100 (B) 23/1000 (C) 9/30 (D) 9/10 (E) 220/1000

4. In a sports game, it is called an upset when the team with the lower probability of winning has defeated the other team. What is the probability that there is at least an upset in a series of the six games?

   (A) 0.9125 (B) 0.6472 (C) 0.2638 (D) 0.7428 (E) 0.0072

Please refer to the following to help you answer questions 5 to 7.

A racquet club has a total of 36 memberships for using the tennis courts, 28 for using the racquetball courts, and 18 for using the badminton courts. Of all, 22 memberships for using both tennis and racquetball courts, 12 for using both tennis and badminton courts, and 9 for using both racquetball and badminton courts. Furthermore, it is found out that 4 of all memberships are issued by the club for using all three types of courts

5. How many of the memberships issued by the club do you expect are for using the badminton or the racquetball courts?

(A) 39 (B) 46 (C) 37 (D) 24 (E) 10

6. How many of the memberships issued by the club do you expect are for using only the badminton courts but not for the other two sports, if the number of memberships for using badminton but not the tennis courts or for using badminton but not the racquetball courts is 11?

(A) None (B) 15 (C) 4 (D) 9 (E) 6

7. How many of the memberships issued by the club do you expect are for using at least one of the three types of courts?

(A) 78 (B) 36 (C) 12 (D) 82 (E) 42

Please refer to the following to help you answer questions 8 to 10.

The gatekeeper to the Hai-an avenue underground parking in Tainan was asked to keep track of the brand while each car enters the parking lot. The following is a frequency table made for a random sample of his observations in December, 2024.

Toyota	Lexus	Mazda	Mitsubishi	Subaru	Suzuki	Nissan	Honda
86	22	33	14	15	26	37	42

8. What is the mean of his observations?

(A) 34.375 (B) 535.125 (C) 23.133 (D) 25.415 (E) It can not be calculated.

9. What is the mode of his observations?

(A) 34.375 (B) Mitsubishi (C) 23.133 (D) Toyota (E) It can not be found.

10. Let p be the proportion of cars using the Hai-an avenue underground parking that is made by Toyota, and X be the number of Toyota cars that enter the same underground parking this month based on a random sample of his observations of the same size as that in December. What would be the rejection region for testing the null hypothesis H_o: $p \geq 1/2$ at the nominal type I error rate of 0.05?

(A) 137.5 (B) 269.5 (C) 123 (D) 152 (E) It can not be obtained.

Please refer to the following to help you answer question 11.

Experts agree that depression is best treated using a combination of medication and therapy. A psychiatrist plans to conduct an experiment to examine the effects of four different medications (Zoloft, Paxil, Prozac, and Effexor). Effects of medication are believed prior to the experiment to differ depending on the severity of a subject's depression. A subject's severity of depression depends on his or her response to a patient health questionnaire and is to be identified as low, moderate, or high. One subject each with mild, moderate, and severe depression condition is to try each of the different medications for the experiment. At the end of one year, the improvement of each subject's condition is evaluated with a score.

	Zoloft	Paxil	Prozac	Effexor
mild	14	16	21	20
moderate	15	15	20	18
severe	14	16	19	16

11. The experiment is of

(A) a completely randomized design. (B) a randomized block design. (C) the 3^4 design.

(D) a randomized complete block design. (E) a factorial design.

Part B

- You must clearly explain your answers and show all of your work in order to receive full marks.

1. (22 marks) Continue from question 10 of part A, suppose the proportion of cars using the Hai-an avenue underground parking that is made by Toyota is p^* under the alternative hypothesis.

   (a) (5 marks) Construct a 95% confidence interval for the unknown p in question 10?

   (b) (8 marks) What is the power of the test?

   (c) (9 marks) What is the minimum required sample size in order to achieve the power of the test being 0.8 or higher?

2. (14 marks) Continue from question 10 of part A, carry out the test of goodness of fit, at the nominal type I error rate of 0.05, for the null hypothesis H_o: the proportions of all brands are equal for the cars entering Hai-an avenue underground parking in the month of December, 2024.

3. (20 marks) Continue from question 11 of part A, do the four medications have the same (mean) effect on patients going through the experiment? Carry out a testing of hypothesis, at the nominal type I error rate of 0.05, to answer the question. (Clearly define the notations you will be using and the model assumptions.)

Appendix 1

Table of standard normal cumulative distribution function $P(Z < z)$ where $Z \sim \mathrm{N}(0,1)$

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-3.4	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
-3.3	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
-3.2	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005
-3.1	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007
-3.0	0.0013	0.0013	0.0013	0.0012	0.0012	0.0011	0.0011	0.0011	0.0010	0.0010
-2.9	0.0019	0.0018	0.0018	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014
-2.8	0.0026	0.0025	0.0024	0.0023	0.0023	0.0022	0.0021	0.0021	0.0020	0.0019
-2.7	0.0035	0.0034	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026
-2.6	0.0047	0.0045	0.0044	0.0043	0.0041	0.0040	0.0039	0.0038	0.0037	0.0036
-2.5	0.0062	0.0060	0.0059	0.0057	0.0055	0.0054	0.0052	0.0051	0.0049	0.0048
-2.4	0.0082	0.0080	0.0078	0.0075	0.0073	0.0071	0.0069	0.0068	0.0066	0.0064
-2.3	0.0107	0.0104	0.0102	0.0099	0.0096	0.0094	0.0091	0.0089	0.0087	0.0084
-2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110
-2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143
-2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183
-1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233
-1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294
-1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367
-1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0.0475	0.0465	0.0455
-1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559
-1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681
-1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823
-1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985
-1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170
-1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379
-0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611
-0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867
-0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148
-0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451
-0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776
-0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121
-0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483
-0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859
-0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247
-0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641
0.0	0.5000	0.5040	0.5080	0.5120	0.5160	0.5199	0.5239	0.5279	0.5319	0.5359
0.1	0.5398	0.5438	0.5478	0.5517	0.5557	0.5596	0.5636	0.5675	0.5714	0.5753
0.2	0.5793	0.5832	0.5871	0.5910	0.5948	0.5987	0.6026	0.6064	0.6103	0.6141
0.3	0.6179	0.6217	0.6255	0.6293	0.6331	0.6368	0.6406	0.6443	0.6480	0.6517
0.4	0.6554	0.6591	0.6628	0.6664	0.6700	0.6736	0.6772	0.6808	0.6844	0.6879
0.5	0.6915	0.6950	0.6985	0.7019	0.7054	0.7088	0.7123	0.7157	0.7190	0.7224
0.6	0.7257	0.7291	0.7324	0.7357	0.7389	0.7422	0.7454	0.7486	0.7517	0.7549
0.7	0.7580	0.7611	0.7642	0.7673	0.7704	0.7734	0.7764	0.7794	0.7823	0.7852
0.8	0.7881	0.7910	0.7939	0.7967	0.7995	0.8023	0.8051	0.8078	0.8106	0.8133
0.9	0.8159	0.8186	0.8212	0.8238	0.8264	0.8289	0.8315	0.8340	0.8365	0.8389
1.0	0.8413	0.8438	0.8461	0.8485	0.8508	0.8531	0.8554	0.8577	0.8599	0.8621
1.1	0.8643	0.8665	0.8686	0.8708	0.8729	0.8749	0.8770	0.8790	0.8810	0.8830
1.2	0.8849	0.8869	0.8888	0.8907	0.8925	0.8944	0.8962	0.8980	0.8997	0.9015
1.3	0.9032	0.9049	0.9066	0.9082	0.9099	0.9115	0.9131	0.9147	0.9162	0.9177
1.4	0.9192	0.9207	0.9222	0.9236	0.9251	0.9265	0.9279	0.9292	0.9306	0.9319
1.5	0.9332	0.9345	0.9357	0.9370	0.9382	0.9394	0.9406	0.9418	0.9429	0.9441
1.6	0.9452	0.9463	0.9474	0.9484	0.9495	0.9505	0.9515	0.9525	0.9535	0.9545
1.7	0.9554	0.9564	0.9573	0.9582	0.9591	0.9599	0.9608	0.9616	0.9625	0.9633
1.8	0.9641	0.9649	0.9656	0.9664	0.9671	0.9678	0.9686	0.9693	0.9699	0.9706
1.9	0.9713	0.9719	0.9726	0.9732	0.9738	0.9744	0.9750	0.9756	0.9761	0.9767
2.0	0.9772	0.9778	0.9783	0.9788	0.9793	0.9798	0.9803	0.9808	0.9812	0.9817
2.1	0.9821	0.9826	0.9830	0.9834	0.9838	0.9842	0.9846	0.9850	0.9854	0.9857
2.2	0.9861	0.9864	0.9868	0.9871	0.9875	0.9878	0.9881	0.9884	0.9887	0.9890
2.3	0.9893	0.9896	0.9898	0.9901	0.9904	0.9906	0.9909	0.9911	0.9913	0.9916
2.4	0.9918	0.9920	0.9922	0.9925	0.9927	0.9929	0.9931	0.9932	0.9934	0.9936
2.5	0.9938	0.9940	0.9941	0.9943	0.9945	0.9946	0.9948	0.9949	0.9951	0.9952
2.6	0.9953	0.9955	0.9956	0.9957	0.9959	0.9960	0.9961	0.9962	0.9963	0.9964
2.7	0.9965	0.9966	0.9967	0.9968	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974
2.8	0.9974	0.9975	0.9976	0.9977	0.9977	0.9978	0.9979	0.9979	0.9980	0.9981
2.9	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986
3.0	0.9987	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9989	0.9990	0.9990
3.1	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9992	0.9993	0.9993
3.2	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995
3.3	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997
3.4	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998

Appendix 2

Table of $(1-\alpha)$th quantiles such that $P(X < x_{1-\alpha}) = 1-\alpha$, where $X \sim$ the chi-square distribution associated with degrees of freedom *df*

	$(1-\alpha)=$	0.005	0.025	0.05	0.8	0.9	0.95	0.975	0.98	0.99	0.995
$df=2$		0.01	0.051	0.103	3.219	4.605	5.991	7.378	7.824	9.21	10.597
3		0.0717	0.216	0.352	4.642	6.251	7.815	9.348	9.837	11.345	12.838
4		0.207	0.484	0.711	5.989	7.779	9.488	11.143	11.668	13.277	14.86
5		0.412	0.831	1.145	7.289	9.236	11.07	12.833	13.388	15.086	16.75
6		0.676	1.237	1.635	8.558	10.645	12.592	14.449	15.033	16.812	18.548
7		0.989	1.690	2.167	9.803	12.017	14.067	16.013	16.622	18.475	20.278
8		1.344	2.180	2.733	11.03	13.362	15.507	17.535	18.168	20.09	21.955
9		1.735	2.700	3.325	12.242	14.684	16.919	19.023	19.679	21.666	23.589
10		2.156	3.247	3.940	13.442	15.987	18.307	20.483	21.161	23.209	25.188
11		2.603	3.816	4.575	14.631	17.275	19.675	21.92	22.618	24.725	26.757
12		3.074	4.404	5.226	15.812	18.549	21.026	23.337	24.054	26.217	28.3
13		3.565	5.009	5.892	16.985	19.812	22.362	24.736	25.472	27.688	29.819
14		4.075	5.629	6.571	18.151	21.064	23.685	26.119	26.873	29.141	31.319
15		4.601	6.262	7.261	19.311	22.307	24.996	27.488	28.259	30.578	32.801
16		5.142	6.908	7.962	20.465	23.542	26.296	28.845	29.633	32	34.267
17		5.697	7.564	8.672	21.615	24.769	27.587	30.191	30.995	33.409	35.718
18		6.265	8.231	9.390	22.76	25.989	28.869	31.526	32.346	34.805	37.156
19		6.844	8.907	10.117	23.9	27.204	30.144	32.852	33.687	36.191	38.582
20		7.434	9.591	10.851	25.038	28.412	31.41	34.17	35.02	37.566	39.997
21		8.034	10.283	11.591	26.171	29.615	32.671	35.479	36.343	38.932	41.401
22		8.643	10.982	12.338	27.301	30.813	33.924	36.781	37.659	40.289	42.796
23		9.26	11.689	13.091	28.429	32.007	35.172	38.076	38.968	41.638	44.181
24		9.886	12.401	13.848	29.553	33.196	36.415	39.364	40.27	42.98	45.559
25		10.52	13.120	14.611	30.675	34.382	37.652	40.646	41.566	44.314	46.928
26		11.16	13.844	15.379	31.795	35.563	38.885	41.923	42.856	45.642	48.29
27		11.808	14.573	16.151	32.912	36.741	40.113	43.195	44.14	46.963	49.645
28		12.461	15.308	16.928	34.027	37.916	41.337	44.461	45.419	48.278	50.993
29		13.121	16.047	17.708	35.139	39.087	42.557	45.722	46.693	49.588	52.336
30		13.787	16.791	18.493	36.25	40.256	43.773	46.979	47.962	50.892	53.672
31		14.458	17.539	19.281	37.359	41.422	44.985	48.232	49.226	52.191	55.003
32		15.134	18.291	20.072	38.466	42.585	46.194	49.48	50.487	53.486	56.328
33		15.815	19.047	20.867	39.572	43.745	47.4	50.725	51.743	54.776	57.648
34		16.501	19.806	21.664	40.676	44.903	48.602	51.966	52.995	56.061	58.964
35		17.192	20.569	22.465	41.778	46.059	49.802	53.203	54.244	57.342	60.275
36		17.887	21.336	23.269	42.879	47.212	50.998	54.437	55.489	58.619	61.581
37		18.586	22.106	24.075	43.978	48.363	52.192	55.668	56.73	59.893	62.883
38		19.289	22.878	24.884	45.076	49.513	53.384	56.896	57.969	61.162	64.181
39		19.996	23.654	25.695	46.173	50.66	54.572	58.12	59.204	62.428	65.476
40		20.707	24.433	26.509	47.269	51.805	55.758	59.342	60.436	63.691	66.766
41		21.421	25.215	27.326	48.363	52.949	56.942	60.561	61.665	64.95	68.053
42		22.138	25.999	28.144	49.456	54.09	58.124	61.777	62.892	66.206	69.336
43		22.859	26.785	28.965	50.548	55.23	59.304	62.99	64.116	67.459	70.616
44		23.584	27.575	29.787	51.639	56.369	60.481	64.201	65.337	68.71	71.893
45		24.311	28.366	30.612	52.729	57.505	61.656	65.41	66.555	69.957	73.166

Appendix 3

Table of $(1-\alpha)$th quantiles such that $P(X < x_{1-\alpha}) = 1-\alpha$, where $X \sim$ Snedecor's f-distribution associated with $df1$ degrees of freedom in the numerator and $df2$ in the denominator

given $\alpha = 0.05$

	$df1=1$	2	3	4	5	6	7	8	9	10	12	15	20	∞
$df2=1$	161.4476	199.5	215.7073	224.5832	230.1619	233.986	236.7684	238.8827	240.5433	241.8817	243.906	245.9499	248.0131	254.3144
2	18.5128	19	19.1643	19.2468	19.2964	19.3295	19.3532	19.371	19.3848	19.3959	19.4125	19.4291	19.4458	19.4957
3	10.128	9.5521	9.2766	9.1172	9.0135	8.9406	8.8867	8.8452	8.8123	8.7855	8.7446	8.7029	8.6602	8.5264
4	7.7086	6.9443	6.5914	6.3882	6.2561	6.1631	6.0942	6.041	5.9988	5.9644	5.9117	5.8578	5.8025	5.6281
5	6.6079	5.7861	5.4095	5.1922	5.0503	4.9503	4.8759	4.8183	4.7725	4.7351	4.6777	4.6188	4.5581	4.365
6	5.9874	5.1433	4.7571	4.5337	4.3874	4.2839	4.2067	4.1468	4.099	4.06	3.9999	3.9381	3.8742	3.6689
7	5.5914	4.7374	4.3468	4.1203	3.9715	3.866	3.787	3.7257	3.6767	3.6365	3.5747	3.5107	3.4445	3.2298
8	5.3177	4.459	4.0662	3.8379	3.6875	3.5806	3.5005	3.4381	3.3881	3.3472	3.2839	3.2184	3.1503	2.9276
9	5.1174	4.2565	3.8625	3.6331	3.4817	3.3738	3.2927	3.2296	3.1789	3.1373	3.0729	3.0061	2.9365	2.7067
10	4.9646	4.1028	3.7083	3.478	3.3258	3.2172	3.1355	3.0717	3.0204	2.9782	2.913	2.845	2.774	2.5379
11	4.8443	3.9823	3.5874	3.3567	3.2039	3.0946	3.0123	2.948	2.8962	2.8536	2.7876	2.7186	2.6464	2.4045
12	4.7472	3.8853	3.4903	3.2592	3.1059	2.9961	2.9134	2.8486	2.7964	2.7534	2.6866	2.6169	2.5436	2.2962
13	4.6672	3.8056	3.4105	3.1791	3.0254	2.9153	2.8321	2.7669	2.7144	2.671	2.6037	2.5331	2.4589	2.2064
14	4.6001	3.7389	3.3439	3.1122	2.9582	2.8477	2.7642	2.6987	2.6458	2.6022	2.5342	2.463	2.3879	2.1307
15	4.5431	3.6823	3.2874	3.0556	2.9013	2.7905	2.7066	2.6408	2.5876	2.5437	2.4753	2.4034	2.3275	2.0658
16	4.494	3.6337	3.2389	3.0069	2.8524	2.7413	2.6572	2.5911	2.5377	2.4935	2.4247	2.3522	2.2756	2.0096
17	4.4513	3.5915	3.1968	2.9647	2.81	2.6987	2.6143	2.548	2.4943	2.4499	2.3807	2.3077	2.2304	1.9604
18	4.4139	3.5546	3.1599	2.9277	2.7729	2.6613	2.5767	2.5102	2.4563	2.4117	2.3421	2.2686	2.1906	1.9168
19	4.3807	3.5219	3.1274	2.8951	2.7401	2.6283	2.5435	2.4768	2.4227	2.3779	2.308	2.2341	2.1555	1.878
20	4.3512	3.4928	3.0984	2.8661	2.7109	2.599	2.514	2.4471	2.3928	2.3479	2.2776	2.2033	2.1242	1.8432
21	4.3248	3.4668	3.0725	2.8401	2.6848	2.5727	2.4876	2.4205	2.366	2.321	2.2504	2.1757	2.096	1.8117
22	4.3009	3.4434	3.0491	2.8167	2.6613	2.5491	2.4638	2.3965	2.3419	2.2967	2.2258	2.1508	2.0707	1.7831
23	4.2793	3.4221	3.028	2.7955	2.64	2.5277	2.4422	2.3748	2.3201	2.2747	2.2036	2.1282	2.0476	1.757
24	4.2597	3.4028	3.0088	2.7763	2.6207	2.5082	2.4226	2.3551	2.3002	2.2547	2.1834	2.1077	2.0267	1.733
25	4.2417	3.3852	2.9912	2.7587	2.603	2.4904	2.4047	2.3371	2.2821	2.2365	2.1649	2.0889	2.0075	1.711
26	4.2252	3.369	2.9752	2.7426	2.5868	2.4741	2.3883	2.3205	2.2655	2.2197	2.1479	2.0716	1.9898	1.6906
27	4.21	3.3541	2.9604	2.7278	2.5719	2.4591	2.3732	2.3053	2.2501	2.2043	2.1323	2.0558	1.9736	1.6717
28	4.196	3.3404	2.9467	2.7141	2.5581	2.4453	2.3593	2.2913	2.236	2.19	2.1179	2.0411	1.9586	1.6541
29	4.183	3.3277	2.934	2.7014	2.5454	2.4324	2.3463	2.2783	2.2229	2.1768	2.1045	2.0275	1.9446	1.6376
30	4.1709	3.3158	2.9223	2.6896	2.5336	2.4205	2.3343	2.2662	2.2107	2.1646	2.0921	2.0148	1.9317	1.6223
40	4.0847	3.2317	2.8387	2.606	2.4495	2.3359	2.249	2.1802	2.124	2.0772	2.0035	1.9245	1.8389	1.5089
60	4.0012	3.1504	2.7581	2.5252	2.3683	2.2541	2.1665	2.097	2.0401	1.9926	1.9174	1.8364	1.748	1.3893
120	3.9201	3.0718	2.6802	2.4472	2.2899	2.175	2.0868	2.0164	1.9588	1.9105	1.8337	1.7505	1.6587	1.2539
∞	3.8415	2.9957	2.6049	2.3719	2.2141	2.0986	2.0096	1.9384	1.8799	1.8307	1.7522	1.6664	1.5705	1