國立政治大學 114 學年度 碩士班暨碩士在職專班 招生考試試題

考試科目	基礎數學	系所別	統計學系	考試時間	2 月 12 日（三）第 一 節

Part I: Calculus

1. (15%) Use the ϵ-δ argument to show that $f(x) = \sqrt[3]{x},\ x \in \mathbb{R}$, is continuous at any arbitrary point $c \neq 0$. Hint: $a^3 - b^3 = (a-b)(a^2+ab+b^2)$.
2. (10%) Evaluate the following limits:

   (a) $\lim_{n\to\infty} \frac{1}{n^3}\left(\sum_{i=1}^{3n} \sqrt{i}\right)^2$;

   (b) $\lim_{x\to 1} \frac{\log x - x^x + 1}{\log x - x + 1}$.

3. (15%) Let $\{a_n\}_{n\geq 0}$ be a sequence of real numbers such that $a_0 > 0$ and $a_{n+1} = \frac{1+\sqrt{1+a_n^2}}{a_n}$. Let $\{b_n\}_{n\geq 0}$ with $b_0 \in \left(0, \frac{\pi}{2}\right)$ be a sequence satisfying $a_n = \tan(b_n)$. Find b_n in terms of b_0.
4. (10%) Evaluate the integral: $\int_0^\infty e^{-\frac{z^2}{2}}\,dz$. Hint: $\left(\int_0^\infty e^{-\frac{z^2}{2}}\,dz\right)^2 = \int_0^\infty \int_0^\infty e^{-\frac{(x^2+y^2)}{2}}\,dx\,dy$.

Part II: Calculus

1. (20%) For each of the following statements, determine whether it is true (O) or false (×). Do not give explanation.
   (a) If all the equations in one system of linear equations are linear combinations of the equations in another system of linear equations, then the solution sets of the two systems are necessarily identical.
   (b) A product of invertible matrices must be invertible.
   (c) The zero vector is always included in the basis of a vector space.
   (d) All rows of a invertible row-reduced echelon matrix form a basis for the row space of the matrix.
2. (10%) Let $\boldsymbol{A}$ be an $n \times n$ matrix with entries $A_{i,j}$ all real values. Prove that $\boldsymbol{A} = \boldsymbol{0}$ if and only if the trace value $\mathrm{tr}(\boldsymbol{A}^\top \boldsymbol{A}) = \boldsymbol{0}$.
3. (10%) If $\boldsymbol{A}$ is an $n \times n$ matrix, show that if $\mathrm{Null}(\boldsymbol{A}^\top) = \mathrm{Range}(\boldsymbol{A} - \boldsymbol{I})$, then $\boldsymbol{A} = \boldsymbol{A}^\top$.
4. (10%) If $\boldsymbol{A}$ is an $n \times n$ matrix with $\boldsymbol{A}^2 = \boldsymbol{A}$ and $\boldsymbol{A}^\top = \boldsymbol{A}$. Prove that
   (a) if $\boldsymbol{x} \in \mathrm{Null}(\boldsymbol{A}^\top)$, then $\boldsymbol{x} \in \mathrm{Range}(\boldsymbol{A} - \boldsymbol{I})$;
   (b) if $\boldsymbol{x} \in \mathrm{Range}(\boldsymbol{A} - \boldsymbol{I})$, then $\boldsymbol{x} \in \mathrm{Null}(\boldsymbol{A}^\top)$.

備註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。

國立政治大學 114 學年度 碩士班暨碩士在職專班 招生考試試題

考試科目	數理統計學	系所別	統計學系	考試時間	2 月 12 日（三）第 二 節

1. (15%) An electronic device has lifetime denoted by T. The device has value $V = 5$ if it fails before time $t = 3$; otherwise, it has value $V = 2T$. If T has probability density function (PDF) $f_T(t) = \frac{2}{3}\exp\left(-\frac{2t}{3}\right), t > 0$, find the cumulative distribution function (CDF) of V.

2. Let $X_1, X_2, \ldots, X_n$ be independently and identically distributed (i.i.d.) random samples from a gamma distribution with shape parameter $\alpha > 0$ and scale parameter $\beta > 0$, having the PDF

$$f_G(x) = \frac{x^{\alpha-1}\exp(-x/\beta)}{\Gamma(\alpha)\beta^{\alpha}}, x > 0, \alpha > 0, \beta > 0.$$

   i. (15%) Find the maximum likelihood estimator of ψ, denoted by $\hat{\psi}$, where $\psi = \alpha\beta$.

   ii. (15%) Solve for the smallest sample size such that the variance of $\hat{\psi}$ is smaller than a constant $c > 0$. The answer should be expressed in terms of α, β and c.

3. Let $X_1, X_2, \ldots, X_n$ be i.i.d. random samples from a Poisson distribution with mean $\lambda > 0$, denoted as $Poisson(\lambda)$, having the probability mass function

$$P_X(i) = \frac{\lambda^i \exp(-\lambda)}{i!}, i = 0,1,2, \ldots.$$

   i. (15%) Show that $Y = \sum_{i=1}^{n} X_i \sim Poisson(n\lambda)$ and Y is sufficient for λ.

   ii. (10%) Using the fact that "$\Pr(Y \le y_0) = \Pr(Z > 2n\lambda)$, where $Z \sim \chi^2_{2y_0}$ follows a chi-square distribution with $2y_0$ degrees of freedom," show that the $100(1-\alpha)\%$ confidence interval for λ is $\left(\frac{1}{2n}\chi^2_{2y_0;1-\frac{\alpha}{2}}, \frac{1}{2n}\chi^2_{2y_0+2;\frac{\alpha}{2}}\right)$ when $Y = y_0 > 0$ is observed, where $\chi^2_{p;\alpha}$ is the chi-square α^{th} quantile for **upper tail** probability on p degrees of freedom.

4. Let $W_1, W_2, \ldots, W_n$ be i.i.d. random samples from a truncated normal distribution $TN(\mu, \sigma, a)$ with the PDF

$$f_W(w) = \frac{\frac{1}{\sigma}\phi\left(\frac{w-\mu}{\sigma}\right)}{1-\Phi\left(\frac{a-\mu}{\sigma}\right)}, w > a, \sigma > 0, \mu \in \boldsymbol{R}(real\ numbers), a \in \boldsymbol{R},$$

   where ϕ and Φ are the PDF and CDF of the standard normal distribution, respectively.

   i. (10%) Find a **minimal** sufficient statistic for the parameter a.

   ii. (10%) Give a $100(1-\alpha)\%$ rejection region for the null hypothesis $H_0: a > 0$.

   iii. (10%) If $W \sim TN(\mu, \sigma, a)$ and $U|W = w \sim Poisson(\lambda w)$ for any $w \ge a$, calculate the expectation value for W and U.

備註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。

國立政治大學 114 學年度 碩士班暨碩士在職專班 招生考試試題

考試科目	統計方法	系所別	統計學系	考試時間	2月12日(三)第4節

1. **(10%)** Suppose you are taking a multiple-choice test with m choices for each question. In answering a question on this test, the probability that you know the answer is p. If you don't know the answer, you choose one at random. What is the probability that you knew the answer to a question, given that you answered it correctly?

2. **(15%)** Suppose that buses arrive are scheduled to arrive at a bus stop at 8:00 but are always Y minutes late, where Y is an exponential random variable with parameter θ. Suppose that you arrive at the bus stop precisely at 8:00. (Note: $e^1 = 2.718$)
   (a) If you have already waiting for five minutes, compute the probability that you have to wait an additional five minutes or more. (7%)
   (b) Compute the median for the parameter θ of the exponential distribution. (8%)

3. **(25%)** You independently draw 23 data points from a normal distribution. The 23 data points have sample mean 4.1 and sample variance 4.
   (a) Please conduct a test with the null hypothesis H_0: μ=3.2 against the alternative hypothesis H_1: $\mu \neq 3.2$ at a significance level of $\alpha = 0.05$. (8%)
   (b) What is the p-value for part (a)? (7%)
   (c) Determine the probability of committing the test using the alternative H_1: μ=3.3. (10%)

4. **(20%)** A survey is conducted to examine the relationship between gender (male and female) and preference for three different brands (A, B, and C). The observed frequencies are shown as follows:

	Brand A	Brand B	Brand C
Male	30	50	25
Female	40	40	30

   Answer the following questions at the 0.01 significance level.

   (a) If p_A and p_C indicate the population proportions of male persons who prefer brands A and C, respectively, then conduct a test to decide where p_A and p_C are equal or not. (10%)
   (b) Conduct a test for independence between gender and brand preference. (10%)

考試科目	統計方法	系所別	統計學系	考試時間	2月12日(三)第4節

5. **(30%)** The grades of a class of 10 students on a midterm report (explanatory variable, X) and on the final examination (response variable, Y) are shown below:

Midterm (X)	77	55	70	73	83	92	94	93	85	68
Final (Y)	82	67	78	56	69	87	97	95	90	65

We also have obtained $\sum X_i = 790$, $\sum X_i^2 = 63870$, $\sum Y_i = 786$, $\sum Y_i^2 = 63522$, and $\sum X_i Y_i = 63301$. Below shows part of the estimation result based on these data.

	Coefficient	Standard error	T
Intercept	(A)	20.18	(C)
Midterm	(B)	0.25	(D)

(a) Compute the values (A) to (D) in details, and conclude whether the slope of the linear regression model is significantly different from zero at the 0.01 significance level. (10%)

(b) If we fit the regression model without the intercept term for these data, then find the estimate of the slope. (5%)

(c) If another explanatory variable, gender, is included in the analysis, then we obtain the following analysis of variance:

	Degree of freedom	SS	MS	F
Regression	(E)	(H)	(K)	(L)
Error	(F)	(I)	90.07	
Total	(G)	(J)		

Please compute the values (E) to (L) in details, and specify the required formulas. (10%)

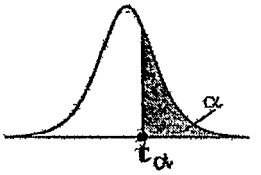
(d) Please show whether gender is a significant variable, given X is already in the model using $\alpha = 0.05$. (5%)

備註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。

考試科目	統計方法	系所別	統計學系	考試時間	2月12日(三)第4節

Percentage Points of the t Distribution; $t_{\nu,\alpha}$

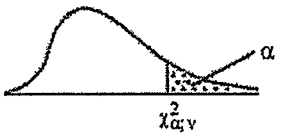
$P(T > t_{\nu,\alpha}) = \alpha$



	α													
ν	0.40	0.30	0.20	0.15	0.10	0.05	0.025	0.02	0.015	0.01	0.0075	0.005	0.0025	0.0005
1	0.325	0.727	1.376	1.963	3.078	6.314	12.706	15.895	21.205	31.821	42.434	63.657	127.322	636.590
2	0.289	0.617	1.061	1.386	1.886	2.920	4.303	4.849	5.643	6.965	8.073	9.925	14.089	31.598
3	0.277	0.584	0.978	1.250	1.638	2.353	3.182	3.482	3.896	4.541	5.047	5.841	7.453	12.924
4	0.271	0.569	0.941	1.190	1.533	2.132	2.776	2.999	3.298	3.747	4.088	4.604	5.598	8.610
5	0.267	0.559	0.920	1.156	1.476	2.015	2.571	2.757	3.003	3.365	3.634	4.032	4.773	6.869
6	0.265	0.553	0.906	1.134	1.440	1.943	2.447	2.612	2.829	3.143	3.372	3.707	4.317	5.959
7	0.263	0.549	0.896	1.119	1.415	1.895	2.365	2.517	2.715	2.998	3.203	3.499	4.029	5.408
8	0.262	0.546	0.889	1.108	1.397	1.860	2.306	2.449	2.634	2.896	3.085	3.355	3.833	5.041
9	0.261	0.543	0.883	1.100	1.383	1.833	2.262	2.398	2.574	2.821	2.998	3.250	3.690	4.781
10	0.260	0.542	0.879	1.093	1.372	1.812	2.228	2.359	2.527	2.764	2.932	3.169	3.581	4.587
11	0.260	0.540	0.876	1.088	1.363	1.796	2.201	2.328	2.491	2.718	2.879	3.106	3.497	4.437
12	0.259	0.539	0.873	1.083	1.356	1.782	2.179	2.303	2.461	2.681	2.836	3.055	3.428	4.318
13	0.259	0.538	0.870	1.079	1.350	1.771	2.160	2.282	2.436	2.650	2.801	3.012	3.372	4.221
14	0.258	0.537	0.868	1.076	1.345	1.761	2.145	2.264	2.415	2.624	2.771	2.977	3.326	4.140
15	0.258	0.536	0.866	1.074	1.341	1.753	2.131	2.249	2.397	2.602	2.746	2.947	3.286	4.073
16	0.258	0.535	0.865	1.071	1.337	1.746	2.120	2.235	2.382	2.583	2.724	2.921	3.252	4.015
17	0.257	0.534	0.863	1.069	1.333	1.740	2.110	2.224	2.368	2.567	2.706	2.898	3.222	3.965
18	0.257	0.534	0.862	1.067	1.330	1.734	2.101	2.214	2.356	2.552	2.689	2.878	3.197	3.922
19	0.257	0.533	0.861	1.066	1.328	1.729	2.093	2.205	2.346	2.539	2.674	2.861	3.174	3.883
20	0.257	0.533	0.860	1.064	1.325	1.725	2.086	2.197	2.336	2.528	2.661	2.845	3.153	3.850
21	0.257	0.532	0.859	1.063	1.323	1.721	2.080	2.189	2.328	2.518	2.649	2.831	3.135	3.819
22	0.256	0.532	0.858	1.061	1.321	1.717	2.074	2.183	2.320	2.508	2.639	2.819	3.119	3.792
23	0.256	0.532	0.858	1.060	1.319	1.714	2.069	2.177	2.313	2.500	2.629	2.807	3.104	3.768
24	0.256	0.531	0.857	1.059	1.318	1.711	2.064	2.172	2.307	2.492	2.620	2.797	3.091	3.745
25	0.256	0.531	0.856	1.058	1.316	1.708	2.060	2.167	2.301	2.485	2.612	2.787	3.078	3.725
26	0.256	0.531	0.856	1.058	1.315	1.706	2.056	2.162	2.296	2.479	2.605	2.779	3.067	3.707
27	0.256	0.531	0.855	1.057	1.314	1.703	2.052	2.158	2.291	2.473	2.598	2.771	3.057	3.690
28	0.256	0.530	0.855	1.056	1.313	1.701	2.048	2.154	2.286	2.467	2.592	2.763	3.047	3.674
29	0.256	0.530	0.854	1.055	1.311	1.699	2.045	2.150	2.282	2.462	2.586	2.756	3.038	3.659
30	0.256	0.530	0.854	1.055	1.310	1.697	2.042	2.147	2.278	2.457	2.581	2.750	3.030	3.646
40	0.255	0.529	0.851	1.050	1.303	1.684	2.021	2.123	2.250	2.423	2.542	2.704	2.971	3.551
60	0.254	0.527	0.848	1.045	1.296	1.671	2.000	2.099	2.223	2.390	2.504	2.660	2.915	3.460
120	0.254	0.526	0.845	1.041	1.289	1.658	1.980	2.076	2.196	2.358	2.468	2.617	2.860	3.373
∞	0.253	0.524	0.842	1.036	1.282	1.645	1.960	2.054	2.170	2.326	2.432	2.576	2.807	3.291

考試科目	統計方法	系所別	統計學系	考試時間	2月12日(三)第4節

Table of the Chi-square Distribution



$\alpha=$	0.995	0.99	0.98	0.975	0.95	0.90	0.80	0.20	0.10	0.05	0.025	0.02	0.01	0.005	0.001	$=\alpha$
$\nu=1$	0.0000393	0.000157	0.000628	0.000982	0.00393	0.0158	0.0642	1.642	2.706	3.841	5.024	5.412	6.635	7.879	10.827	$\nu=1$
2	0.0100	0.0201	0.0404	0.0506	0.103	0.211	0.446	3.219	4.605	5.991	7.378	7.824	9.210	10.597	13.815	2
3	0.0717	0.115	0.185	0.216	0.352	0.584	1.005	4.642	6.251	7.815	9.348	9.837	11.345	12.838	16.268	3
4	0.207	0.297	0.429	0.484	0.711	1.064	1.649	5.989	7.779	9.488	11.143	11.668	13.277	14.860	18.465	4
5	0.412	0.554	0.752	0.831	1.145	1.610	2.343	7.289	9.236	11.070	12.832	13.388	15.086	16.750	20.517	5
6	0.676	0.872	1.134	1.237	1.635	2.204	3.070	8.558	10.645	12.592	14.449	15.033	16.812	18.548	22.457	6
7	0.989	1.239	1.564	1.690	2.167	2.833	3.822	9.803	12.017	14.067	16.013	16.622	18.475	20.278	24.322	7
8	1.344	1.646	2.032	2.180	2.733	3.490	4.594	11.030	13.362	15.507	17.535	18.168	20.090	21.955	26.125	8
9	1.735	2.088	2.532	2.700	3.325	4.168	5.380	12.242	14.684	16.919	19.023	19.679	21.666	23.589	27.877	9
10	2.156	2.558	3.059	3.247	3.940	4.865	6.179	13.442	15.987	18.307	20.483	21.161	23.209	25.188	29.588	10
11	2.603	3.053	3.609	3.816	4.575	5.578	6.989	14.631	17.275	19.675	21.920	22.618	24.725	26.757	31.264	11
12	3.074	3.571	4.178	4.404	5.226	6.304	7.807	15.812	18.549	21.026	23.337	24.054	26.217	28.300	32.909	12
13	3.565	4.107	4.765	5.009	5.892	7.042	8.634	16.985	19.812	22.362	24.736	25.472	27.688	29.819	34.528	13
14	4.075	4.660	5.368	5.629	6.571	7.790	9.467	18.151	21.064	23.685	26.119	26.873	29.141	31.319	36.123	14
15	4.601	5.229	5.985	6.262	7.261	8.547	10.307	19.311	22.307	24.996	27.488	28.259	30.578	32.801	37.697	15

考試科目	統計方法	系所別	統計學系	考試時間	2月12日(三)第4節

Table of Probabilities for the F Distribution

Alpha = 0.05

D/N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	20	24	30	40	60	120
1	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88	240.54	241.88	242.98	243.91	244.69	245.36	245.95	248.01	249.05	250.10	251.14	252.20	253.25
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40	19.40	19.41	19.42	19.42	19.43	19.45	19.45	19.46	19.47	19.48	19.49
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79	8.76	8.74	8.73	8.71	8.70	8.66	8.64	8.62	8.59	8.57	8.55
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96	5.94	5.91	5.89	5.87	5.86	5.80	5.77	5.75	5.72	5.69	5.66
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74	4.70	4.68	4.66	4.64	4.62	4.56	4.53	4.50	4.46	4.43	4.40
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06	4.03	4.00	3.98	3.96	3.94	3.87	3.84	3.81	3.77	3.74	3.70
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64	3.60	3.57	3.55	3.53	3.51	3.44	3.41	3.38	3.34	3.30	3.27
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35	3.31	3.28	3.26	3.24	3.22	3.15	3.12	3.08	3.04	3.01	2.97
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14	3.10	3.07	3.05	3.03	3.01	2.94	2.90	2.86	2.83	2.79	2.75
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98	2.94	2.91	2.89	2.86	2.85	2.77	2.74	2.70	2.66	2.62	2.58
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85	2.82	2.79	2.76	2.74	2.72	2.65	2.61	2.57	2.53	2.49	2.45
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75	2.72	2.69	2.66	2.64	2.62	2.54	2.51	2.47	2.43	2.38	2.34
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67	2.63	2.60	2.58	2.55	2.53	2.46	2.42	2.38	2.34	2.30	2.25
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60	2.57	2.53	2.51	2.48	2.46	2.39	2.35	2.31	2.27	2.22	2.18
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54	2.51	2.48	2.45	2.42	2.40	2.33	2.29	2.25	2.20	2.16	2.11
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49	2.46	2.42	2.40	2.37	2.35	2.28	2.24	2.19	2.15	2.11	2.06
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45	2.41	2.38	2.35	2.33	2.31	2.23	2.19	2.15	2.10	2.06	2.01
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41	2.37	2.34	2.31	2.29	2.27	2.19	2.15	2.11	2.06	2.02	1.97
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38	2.34	2.31	2.28	2.26	2.23	2.16	2.11	2.07	2.03	1.98	1.93
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35	2.31	2.28	2.25	2.22	2.20	2.12	2.08	2.04	1.99	1.95	1.90
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32	2.28	2.25	2.22	2.20	2.18	2.10	2.05	2.01	1.96	1.92	1.87
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30	2.26	2.23	2.20	2.17	2.15	2.07	2.03	1.98	1.94	1.89	1.84
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	2.27	2.24	2.20	2.18	2.15	2.13	2.05	2.01	1.96	1.91	1.86	1.81
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25	2.22	2.18	2.15	2.13	2.11	2.03	1.98	1.94	1.89	1.84	1.79
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	2.24	2.20	2.16	2.14	2.11	2.09	2.01	1.96	1.92	1.87	1.82	1.77
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22	2.18	2.15	2.12	2.09	2.07	1.99	1.95	1.90	1.85	1.80	1.75
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20	2.17	2.13	2.10	2.08	2.06	1.97	1.93	1.88	1.84	1.79	1.73
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19	2.15	2.12	2.09	2.06	2.04	1.96	1.91	1.87	1.82	1.77	1.71
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18	2.14	2.10	2.08	2.05	2.03	1.94	1.90	1.85	1.81	1.75	1.70
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16	2.13	2.09	2.06	2.04	2.01	1.93	1.89	1.84	1.79	1.74	1.68
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08	2.04	2.00	1.97	1.95	1.92	1.84	1.79	1.74	1.69	1.64	1.58
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04	1.99	1.95	1.92	1.89	1.86	1.84	1.75	1.70	1.65	1.59	1.53	1.47
120	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.83	1.80	1.78	1.75	1.66	1.61	1.55	1.50	1.43	1.35

Right Tailed, D/N = df in denominator = down the rows, df in numerator = across the columns

Note: Table is for an alpha of 0.05

備註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。