KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI
KEMENTERIAN PENDIDIKAN TINGGI

JABATAN PERDAGANGAN

PEPERIKSAAN AKHIR

SESI II : 2025/2026

DPA10253: STATISTICS

TARIKH : 09 MEI 2026
MASA : 2.30 PETANG - 4.30 PETANG (2 JAM)

Kertas soalan ini mengandungi **SEBELAS (11)** halaman bercetak.
Struktur (4 soalan)
Dokumen sokongan yang disertakan :
1. Formula
2. z- Distribution Table
3. t-Table

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

INSTRUCTION:

This section consists of **FOUR (4)** structured questions. Answers **ALL** questions.

ARAHAN:

*Bahagian ini mengandungi **EMPAT (4)** soalan berstruktur. Jawab **SEMUA** soalan.*

QUESTION 1

CLO1 (a) List **THREE (3)** sources of primary data and **TWO (2)** sources of secondary data to obtain required data from the respondents. [5 marks]

CLO1 (b) Explain the terms of statistics below with an example :

(i) Quantitative Variable [2.5 marks]

(ii) Qualitative Variable [2.5 marks]

CLO1 (c) The table below shows the quantity of five different construction materials sold by a hardware supplier in the years 2025 and 2026:

Construction Material	Quantity Sold (2025)	Quantity Sold (2026)
Cement (bags)	500	650
Steel Bars (tons)	120	108
Bricks (units)	2000	2400
Sand (truckloads)	80	100
Paint (tins)	150	165

Table 1(c)

You are required to :

(i) Calculate the Quantity Relative Index for each material using 2025 as the base year. [10 marks]

(ii) Calculate the Average of Quantity Relative Index for the year 2026. [3 marks]

(iii) Interpret the value obtained in (ii). [2 marks]

SOALAN 1

CLO1 *(a)* *Senaraikan **TIGA (3)** sumber Data Primer dan **DUA (2)** sumber Data Sekunder*

[5 markah]

CLO1 *(b)* *Terangkan istilah statistik di bawah dengan satu contoh :*

(i) *Pembolehubah kuantitatif* *[2.5 markah]*

(ii) *Pembolehubah kualitatif* *[2.5 markah]*

CLO1 *(c)* *Jadual di bawah menunjukkan kuantiti 5 bahan binaan yang dijual oleh syarikat pembekal pada tahun 2025 dan 2026:*

Bahan Binaan	**Kuantiti yang dijual pada tahun 2025**	**Kuantiti yang dijual pada tahun 2026**
Simen (bag)	500	650
Besi (tan)	120	108
Bata (unit)	2000	2400
Pasir (tan)	80	100
Cat (tin)	150	165

Jadual 1 (c)

Anda dikehendaki untuk :

i) *Menentukan Indeks Relatif Kuantiti bagi setiap bahan dengan menggunakan tahun 2025 sebagai tahun asas*

[10 markah]

ii) *Menentukan Purata Indeks Relatif Kuantiti bagi tahun 2026.*

[3 markah]

iii) *Tafsirkan nilai yang diperoleh dalam (ii)* *[2 markah]*

QUESTION 2

CLO1 (a) A survey was conducted to study the amount of time (in minutes) spent by 50 students on a digital learning platform each day. The results are summarized in the frequency distribution table below:

Time Spent (Minutes)	Number of Students (Frequency)
10 – 19	4
20 – 29	10
30 – 39	18
40 – 49	11
50 – 59	5
60 – 69	2

Table 2 (a)

Based on the table above,

i) prepare calculation tables [8 marks]

ii) calculate Mean [3 marks]

iii) calculate Mode (including mode class) [4 marks]

iv) calculate Variance [3 marks]

v) calculate Standard Deviation [2 marks]

CLO1 (b) The following data summarizes the marks obtained by two different classes, Class Alpha and Class Beta, in a recent Statistics quiz.

Statistic	Class Alpha	Class Beta
Mean Score *(x)*	72	65
Standard Deviation	12	5

Table 2 (b)

You are required to analyze the performance of both classes with the relevant calculation path.

[5 marks]

SOALAN 2

CLO1 *(a)* *Satu tinjauan telah dijalankan untuk mengkaji jumlah masa (dalam minit) yang diluangkan oleh 50 orang pelajar di sebuah platform pembelajaran digital setiap hari. Keputusan tersebut diringkaskan dalam jadual taburan kekerapan di bawah:*

Masa yang diluangkan (Minit)	**Bilangan Pelajar (Frequency)**
10 - 19	4
20 - 29	10
30 - 39	18
40 - 49	11
50 - 59	5
60 - 69	2

Jadual 2 (a)

Berdasarkan jadual di atas,

i) *sediakan jadual pengiraan* *[8 markah]*

ii) *kira Min* *[3 markah]*

iii) *kira Mod (temasuk kelas mod)* *[4 markah]*

iv) *kira Varians* *[3 markah]*

v) *kira Sisihan piawai* *[2 markah]*

CLO1 *(b)* *Data berikut merupakan ringkasan markah yang diperoleh oleh dua kelas yang berbeza, iaitu Kelas Alfa dan Kelas Beta, dalam satu kuiz Statistik baru-baru ini:*

Statistik	***Kelas Alpha***	***Kelas Beta***
Skor min (x)	72	65
Sisihan piawai	12	5

Jadual 2 (b)

Anda dikehendaki untuk menganalisis prestasi kedua-dua kelas tersebut dengan jalan pengiraan yang berkaitan.

[5 markah]

QUESTION 3

CLO1 (a) The tree diagram below shows probability good light bulbs and defective light bulbs are selected at random from the box, one after another, without replacement.

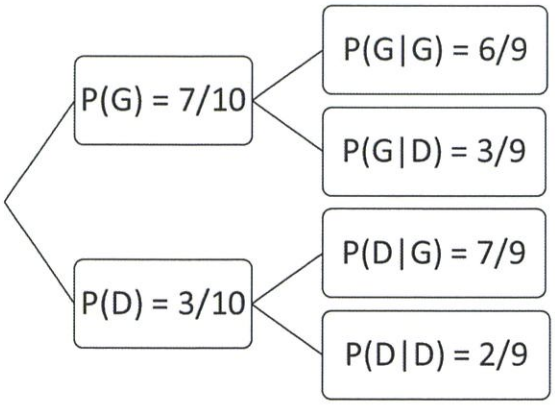


Diagram 3 (a)

Based on the tree diagram, you are required to calculate

i) P(G and G) [4 marks]

ii) P(G and D) [4 marks]

iii) P(First bulb is good) [2 marks]

CLO1 (b) A survey was conducted on 120 employees at a manufacturing company regarding their preferred mode of transportation to work. The data collected is as follows:

- Out of 70 male employees, 40 prefer driving their own car, and 10 prefer using public transport. The remaining males use motorcycles.
- For the female employees, 25 prefer using public transport and 5 use motorcycles.
- The number of female employees who drive their own car is half of the number of male employees who do the same.

i) You are required to construct a complete two-way table to represent the data above.

[4 marks]

ii) If an employee is selected at random, calculate the probability that:

a. The employee is a male.

[2 marks]

b. The employee is a female OR prefers using public transport.

[4 marks]

CLO1 (c) The discrete probability distribution of a random variable X is given in the table below:

X	1	2	3	4
P(X = x)	0.15	0.35	k	0.20

Table 3 (c)

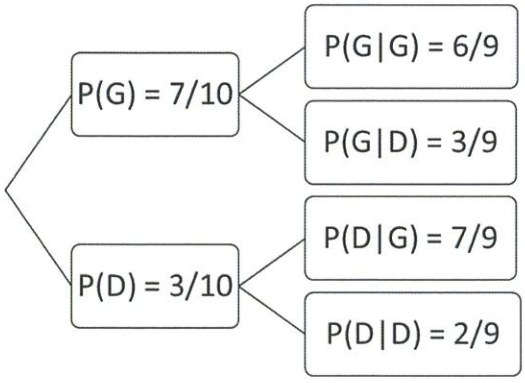
You are required to calculate :

i) The value of k [2 marks]

ii) $P(X \geq 3)$ [3 Marks]

SOALAN 3

CLO1 *(a) Gambarajah pokok di bawah menunjukkan kebarangkalian mentol yang baik dan mentol yang rosak dipilih secara rawak dari sebuah kotak, satu demi satu, tanpa pemulangan.*



Gambarajah 3 (a)

Anda dikehendaki untuk mengira :

i) P(G dan G) *[4markah]*

ii) P(G dan D) *[4 markah]*

iii) P(Mentol pertama adalah baik) *[2 markah]*

CLO1 (b) *Satu tinjauan telah dijalankan ke atas 120 orang pekerja di sebuah syarikat pembuatan mengenai mod pengangkutan pilihan mereka ke tempat kerja. Data yang dikumpul adalah seperti berikut:*

- *Daripada 70 orang pekerja lelaki, 40 orang memilih untuk memandu kereta sendiri dan 10 orang memilih pengangkutan awam. Bakinya menggunakan motosikal.*
- *Bagi pekerja perempuan, 25 orang memilih pengangkutan awam dan 5 orang menggunakan motosikal.*
- *Bilangan pekerja perempuan yang memandu kereta sendiri adalah separuh daripada bilangan pekerja lelaki yang melakukan perkara yang sama.*

i) Anda dikehendaki untuk membina jadual dua hala yang lengkap untuk mewakili data di atas.

[4 markah]

ii) Jika seorang pekerja dipilih secara rawak, hitung kebarangkalian bahawa:

a. Pekerja itu seorang lelaki.

[2 markah]

b. Pekerja itu seorang wanita ATAU lebih suka menggunakan pengangkutan awam

[4 markah]

CLO1 (c) *Taburan kebarangkalian diskret bagi suatu pemboleh ubah rawak X diberikan dalam jadual di bawah:*

X	1	2	3	4
P(X = x)	0.15	0.35	k	0.20

Jadual 3 (c)

Anda dikehendaki untuk mengira:

i) nilai k *[2 markah]*

ii) $P(X \geq 3)$ *[3 markah]*

QUESTION 4

CLO1 (a) A local government officer wants to estimate the average daily water consumption among 15,000 households in a district. Instead of surveying every household, the officer selects a small group to represent the entire population. You are required to discuss the difference between a population and sample in the context of this study.

[5 marks]

CLO1 (b) A study was conducted to estimate the average monthly electricity bill for households in a specific residential area. A random sample of 64 households was selected, and it was found that their average monthly expenditure was RM125 with a standard deviation of RM24.
You are required to calculate the 99% confidence interval for the true mean monthly electricity expenditure of the households. Show all your calculations, including :

i)	Standard error	[2 marks]
ii)	Margin of error	[2 marks]
iii)	Confidence interval	[5 marks]
iv)	Conclusion	[1 mark]

(c) A student organization claims that university students spend an average of RM15 per week on mobile data top-ups. A random sample of 36 students shows an average expenditure of RM16.50 with a standard deviation of RM3.60.
Using a significance level of 0.05, demonstrate the validity of the claim through the steps below:

i)	State the null and alternative hypotheses	[2 marks]
ii)	Determine the critical value	[2 marks]
iii)	Calculate the test statistic (z-test)	[3 marks]
iv)	State the decision rule and make a decision	[2 marks]
v)	Make a conclusion	[1 mark]

SOALAN 4

CLO1 (a) *Seorang pegawai kerajaan tempatan ingin menganggarkan purata penggunaan air harian dalam kalangan 15,000 isi rumah di sebuah daerah. Daripada meninjau setiap isi rumah, pegawai tersebut memilih satu kumpulan kecil untuk mewakili keseluruhan populasi.*

Anda dikehendaki untuk membincangkan perbezaan di antara populasi dan sampel dalam konteks kajian ini.

[5 markah]

CLO1 (b) *Satu kajian telah dijalankan untuk menganggarkan purata bil elektrik bulanan bagi isi rumah di sebuah kawasan perumahan tertentu. Satu sampel rawak sebanyak 64 isi rumah telah dipilih, dan didapati purata perbelanjaan bulanan mereka adalah RM125 dengan sisihan piawai RM24.*

Anda dikehendaki untuk menentukan selang keyakinan 99% bagi purata sebenar perbelanjaan elektrik bulanan isi rumah tersebut. Tunjukkan semua langkah pengiraan anda, termasuk:

i) Ralat piawai *[2 markah]*

ii) Ralat margin *[2 markah]*

iii) Selang keyakinan *[5 markah]*

iv) Kesimpulan *[1 markah]*

(c) *Sebuah organisasi pelajar mendakwa bahawa pelajar universiti membelanjakan purata RM15 seminggu untuk penambahan data mudah alih. Sampel rawak seramai 36 pelajar menunjukkan purata perbelanjaan RM16.50 dengan sisihan piawai RM3.60.*

Dengan menggunakan aras keertian 0.05, tunjukkan kesahihan dakwaan tersebut melalui langkah-langkah di bawah:

i) Nyatakan hipotesis nol dan alternatif *[2 markah]*

ii) Tentukan nilai kritikal *[2 markah]*

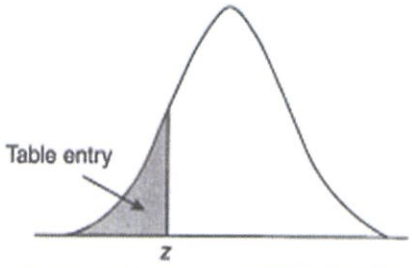
iii)	*Kira statistik ujian (ujian-z)*	*[3 markah]*
iv)	*Nyatakan peraturan keputusan dan buat keputusan*	*[2 markah]*
v)	*Buat kesimpulan*	*[1 markah]*

SOALAN TAMAT

FORMULA STATISTICS		
Sturges Rule	$k = 1 + 3.3\, log_{10}\, n$	
Range	$R = Highest\ value - Lowest\ value$	
Class Width	$c = \frac{Range}{k}$	
Mean	$\bar{x} = \frac{\sum x}{n}$	$\bar{x} = \frac{\sum fx}{\sum f}$
Mode	$\hat{x} = L_{Mo} + \left[\frac{d_1}{d_1 + d_2}\right] c$	
Median	$\tilde{x} = L_M + \left[\frac{\frac{\sum f}{2} - F_{M-1}}{f_M}\right] c$	
Quartile	$Q_k = L_{Q_k} + \left[\frac{\frac{kN}{4} - F_{Q_k - 1}}{f_{Q_k}}\right] c \quad ; k = 1, 2, 3$	
Percentile	$P_k = L_{P_k} + \left[\frac{\frac{kN}{100} - F_{P_k - 1}}{f_{p_k}}\right] c \quad ; k = 1, 2, 3, \ldots, 99$	
Mean Deviation	$E = \frac{\sum \lvert x - \bar{x} \rvert}{n}$	$E = \frac{\sum (\lvert x - \bar{x} \rvert f)}{\sum f}$
Variance	$s^2 = \frac{\sum (x - \bar{x})^2}{n}$	$s^2 = \frac{\sum_{i=1}^{n} {x_i}^2 - n\bar{x}^2}{n}$
	$s^2 = \frac{\sum [(x - \bar{x})^2 f]}{\sum f}$	$s^2 = \frac{\sum fx^2}{\sum f} - \left[\frac{\sum fx}{\sum f}\right]^2$
Standard Deviation	$s = \sqrt{\text{variance}}$	
Lower Outlier Boundary	$\hat{x} = \bar{x} - 3(\bar{x} - \tilde{x})$	

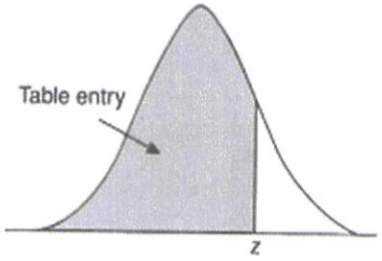
FORMULA STATISTICS		
Pearson's Coefficient of Skewness (PCS)	$PCS\ 1 = \frac{mean - mode}{standard\ deviation} = \frac{\bar{x} - \hat{x}}{s}$	
	$PCS\ 2 = \frac{3(mean - median)}{standard\ deviation} = \frac{\bar{x} - \tilde{x}}{s}$	
Coefficient of Variation (CV)	$CV = \frac{standard\ deviation}{mean} \times 100\% = \frac{s}{\bar{x}} \times 100\%$	
Probability	$P(A) = \frac{n(A)}{n(S)}$	$P(A \cup B) = P(A) + P(B)$
	$P(A') = 1 - P(A)$	$P(A \cup B) = P(A) + P(B) - P(A \cap B)$
	$P(A \cap B) = P(A) \cdot P(B)$	$P(A \cap B) = P(A) \cdot P(B\|A)$
	$P(A\|B) = \frac{P(B\|A) \cdot P(A)}{P(B)}$	$P(B\|A) = \frac{P(A \cap B)}{P(A)}$
Confidence Interval	$CI = \bar{x} \pm Z\alpha_{/2} \cdot \frac{\sigma}{\sqrt{n}}$	
Statistical test	$t = \frac{\bar{x} - \mu}{\frac{s}{\sqrt{n}}}$	$z = \frac{\bar{x} - \mu}{\frac{\sigma}{\sqrt{n}}}$
Chi-Square (χ^2) Tests	$\chi^2 = \sum \frac{(O - E)^2}{E}$	
Index Numbers	$\frac{P_t}{P_o} * 100$	$\frac{1}{n}\left[\sum \left(\frac{P_t}{P_o} * 100\right)\right]$
	$\frac{\sum P_t}{\sum P_o} * 100$	$P_L = \frac{\sum(P_t * Q_o)}{\sum(P_o * Q_o)} * 100$
	$P_P = \frac{\sum(P_t * Q_t)}{\sum(P_o * Q_t)} * 100$	

Standard Normal Probabilities



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

Standard Normal Probabilities



z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
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

t-Table

cum. prob	$t_{.50}$	$t_{.75}$	$t_{.80}$	$t_{.85}$	$t_{.90}$	$t_{.95}$	$t_{.975}$	$t_{.99}$	$t_{.995}$	$t_{.999}$	$t_{.9995}$
one-tail	0.50	0.25	0.20	0.15	0.10	0.05	0.025	0.01	0.005	0.001	0.0005
two-tails	1.00	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01	0.002	0.001
df											
1	0.000	1.000	1.376	1.963	3.078	6.314	12.71	31.82	63.66	318.31	636.62
2	0.000	0.816	1.061	1.386	1.886	2.920	4.303	6.965	9.925	22.327	31.599
3	0.000	0.765	0.978	1.250	1.638	2.353	3.182	4.541	5.841	10.215	12.924
4	0.000	0.741	0.941	1.190	1.533	2.132	2.776	3.747	4.604	7.173	8.610
5	0.000	0.727	0.920	1.156	1.476	2.015	2.571	3.365	4.032	5.893	6.869
6	0.000	0.718	0.906	1.134	1.440	1.943	2.447	3.143	3.707	5.208	5.959
7	0.000	0.711	0.896	1.119	1.415	1.895	2.365	2.998	3.499	4.785	5.408
8	0.000	0.706	0.889	1.108	1.397	1.860	2.306	2.896	3.355	4.501	5.041
9	0.000	0.703	0.883	1.100	1.383	1.833	2.262	2.821	3.250	4.297	4.781
10	0.000	0.700	0.879	1.093	1.372	1.812	2.228	2.764	3.169	4.144	4.587
11	0.000	0.697	0.876	1.088	1.363	1.796	2.201	2.718	3.106	4.025	4.437
12	0.000	0.695	0.873	1.083	1.356	1.782	2.179	2.681	3.055	3.930	4.318
13	0.000	0.694	0.870	1.079	1.350	1.771	2.160	2.650	3.012	3.852	4.221
14	0.000	0.692	0.868	1.076	1.345	1.761	2.145	2.624	2.977	3.787	4.140
15	0.000	0.691	0.866	1.074	1.341	1.753	2.131	2.602	2.947	3.733	4.073
16	0.000	0.690	0.865	1.071	1.337	1.746	2.120	2.583	2.921	3.686	4.015
17	0.000	0.689	0.863	1.069	1.333	1.740	2.110	2.567	2.898	3.646	3.965
18	0.000	0.688	0.862	1.067	1.330	1.734	2.101	2.552	2.878	3.610	3.922
19	0.000	0.688	0.861	1.066	1.328	1.729	2.093	2.539	2.861	3.579	3.883
20	0.000	0.687	0.860	1.064	1.325	1.725	2.086	2.528	2.845	3.552	3.850
21	0.000	0.686	0.859	1.063	1.323	1.721	2.080	2.518	2.831	3.527	3.819
22	0.000	0.686	0.858	1.061	1.321	1.717	2.074	2.508	2.819	3.505	3.792
23	0.000	0.685	0.858	1.060	1.319	1.714	2.069	2.500	2.807	3.485	3.768
24	0.000	0.685	0.857	1.059	1.318	1.711	2.064	2.492	2.797	3.467	3.745
25	0.000	0.684	0.856	1.058	1.316	1.708	2.060	2.485	2.787	3.450	3.725
26	0.000	0.684	0.856	1.058	1.315	1.706	2.056	2.479	2.779	3.435	3.707
27	0.000	0.684	0.855	1.057	1.314	1.703	2.052	2.473	2.771	3.421	3.690
28	0.000	0.683	0.855	1.056	1.313	1.701	2.048	2.467	2.763	3.408	3.674
29	0.000	0.683	0.854	1.055	1.311	1.699	2.045	2.462	2.756	3.396	3.659
30	0.000	0.683	0.854	1.055	1.310	1.697	2.042	2.457	2.750	3.385	3.646
40	0.000	0.681	0.851	1.050	1.303	1.684	2.021	2.423	2.704	3.307	3.551
60	0.000	0.679	0.848	1.045	1.296	1.671	2.000	2.390	2.660	3.232	3.460
80	0.000	0.678	0.846	1.043	1.292	1.664	1.990	2.374	2.639	3.195	3.416
100	0.000	0.677	0.845	1.042	1.290	1.660	1.984	2.364	2.626	3.174	3.390
1000	0.000	0.675	0.842	1.037	1.282	1.646	1.962	2.330	2.581	3.098	3.300
z	0.000	0.674	0.842	1.036	1.282	1.645	1.960	2.326	2.576	3.090	3.291
	0%	50%	60%	70%	80%	90%	95%	98%	99%	99.8%	99.9%
	Confidence Level										