يقدم لكم اتحاد طلبة قسم الرياضيات

بالتعاون مع فريق *Omega* أفضل ما يمكن

من أسئلة السنوات طادة :

اللهم علّمنا ما ينفعنا .. وانفعنا بما علّمتنا

18.5

17/20

مبادىء الأحصاء الامتحان الأول وقت المحاضره: ١١ – ١٢

الأسم: ..... الرقم الجامعي: .....

Part 1 : Fill in the rectangular box with the correct answer. Show your work. Answers without solution details are not accepted.

1) (2 marks) Find the 60th percentile P_{60} for following grouped sample data.

Class	Frequency	C.F
4–8	5	5
9–13	9	14
14–18	2	16
19–23	4	20
Total	20	

$\frac{nK}{100} = 12$ ..

$P_{60} = 8.5 + \frac{(12-5)}{9} * 5$

$= 8.5 + 3.89$

$= 12.39$

12.39

$P = a_o + \left(\frac{nK}{100} - F_c\right) * L$

$f_p \quad f_p$

2)

2) (2 marks) The mean of 50 observations is 85. If an observation was incorrectly recorded 150 instead of 15, then he correct mean equals

82.3

$\bar{x} = \frac{\Sigma x_i}{n} \Rightarrow 85 = \frac{\Sigma x_i}{50}$

$\Sigma x_i = 4250$

$\Sigma x_{i\,New} = 4115$

$\bar{x}_{new} = \frac{4115}{50} = 82.3$

3)(2 marks) If P(A)=0.65, P(B)=0.25 and P(A|B)=0.6, answer a and b

a) (2 marks) $P(A \cap B)$ =

0.15

$P(A/B) = \frac{P(A \cap B)}{P(B)}$

$P(A \cap B) = P(A/B) * P(B)$

$= 0.6 * 0.25 = 0.15$

4

b) (2 marks) $P(A \cup \bar{B})$ = ~~$P(A)+P(A/B)$~~

0.9

$= P(A) + P(\bar{B}) - P(A \cap \bar{B})$

$= P(A) + (1 - P(B)) - [P(A) - P(A \cap B)]$

$= 0.65 + (1 - 0.25) - [0.65 - 0.15]$

$= 0.65 + 0.75 - 0.5$

$= 0.9$

Part 2: *Identify the choice that best completes the statement or answers the question.*

9

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
a	a	a	a	a	a	a	a
b	b	b	b	b	b	b	b
c	c	c	c	c	c	c	c
d	d	d	d	d	d	d	d
e	e	e	e	e	e	e	e

1) Find the median of the sample represented by the following relative frequency table

X	relative frequency
1	0.15
2	0.25
3	0.40
4	0.10
5	0.10

a) 2 b) 1.5 c) 3 d) 4 e) 2.5

2) The grades of a Math test are bell shaped. If 95% of students grades are in the interval [48,72], then the mean and the standard deviation of the math grades are

a) $\bar{X} = 62, S = 6$ b) $\bar{X} = 60, S = 6$ c) $\bar{X} = 65, S = 5$ d) $\bar{X} = 60, S = 10$

e) $\bar{X} = 64, S = 8$

$\bar{x} + 2S = 72$

$\bar{x} - 2S = 48$

$2\bar{x} = 120$

$\bar{x} = 60$

$60 + 2S = 72$

$2S = 12$

$S = 6$

3) The mean and the standard deviation of a set of data are 30 and 5 respectively. If each observation is multiplied by 3 and then 4 is added to the result. Then, the mean and the standard deviation of the transformed data are:

a) $\bar{X} = 120, S = 20$ b) $\bar{X} = 30, S = 5$ c) $\bar{X} = 123, S = 20$
d) $\bar{X} = 120, S = 5$ e) $\bar{X} = 94, S = 15$

4) According to Chebyshev's rule, the proportion of observations within 2 standard deviations of the mean is:
a) At least 75% b) At most 75% c) At least 25% d) At most 25% e) Exactly 25%

5) A password consists of 4 digits is to be formed from the numbers 2, 3, 4, 5, 6, 7. What is the probability that the first digit in the password is even?
a) 1/2 b) 3/7 c) 1/7 d) 3/14 e) 1/6

6) If two balls are selected at random without replacement from a box containing 5 red and 7 black balls, then the probability that the two balls are of different colors is:
a) 70/132 b) 35/132 c) 70/144 d) 35/144 e) 62/132

7) If the upper class limits of the first two classes in a frequency table with equal class widths are 20 and 30, respectively, then, the midpoint (center) of the first class is
a) 14.5 b) 15 c) 15.5 d) 14 e) 26

8) If P(A) = 0.2, P(B) = 0.5, and if A and B are independent, then P(A ∪ B) equals
a) 0.5 b) 0.6 c) 0.9 d) 0.3 e) 0.7

$P(A \cup B) = P(A) + P(B) - P(A \cap B)$
$0.2 + 0.5 - 0.1$

11 20
25 30

$C = 10$

18

مبادىء الأحصاء — الامتحان الأول — وقت المحاضره: ٨٥٠ — ٩:٣٠

الأسم: ..... — الرقم الجامعي: ..... — .....

Part 1 : Fill in the rectangular box with the correct answer. Show your work. Answers without solution details are not accepted.

1) Based on the following grouped sample data, answer a and b

Class	Frequency	X_i	$X_i F_i$
3 – 9	4	6	24
10 – 16	8	13	104
17 – 23	10	20	200
24 – 30	3	27	81
Total	25		409

a) Find the mean of the sample.

$m = \frac{\Sigma X_i F_i}{n}$

$= \frac{409}{25} = 16.36$

2

16.36

b) Find the third quartile Q_3.

A.C	C.F.
2.5 – 9.5	4
9.5 – 16.5 ← Q_3	12 → 18.75
16.5 – 23.5	22
23.5 – 30.5	25

order $Q_3 = \frac{3}{4}(25) = 18.75$

$\frac{Q_3 - 16.5}{23.5 - 16.5} = \frac{18.75 - 12}{22 - 12}$

$\frac{Q_3 - 16.5}{7} = \frac{6.75}{10} \Rightarrow Q_3 = 21.225$

2

21.225

$Q_3 - 16.5 = \frac{27}{40}$

Math 161 Second Exam
18-12-2012

Name: Student number: Section: Row/Serial number:

Identify the choice that best completes the statement or answers the question.

2) In the latter parliament elections 53% of Jordanians who have the right to vote cast their votes, while in Ajloun this percentage was 72%. If Ajloun holds 5% of the total registered votes in the country, answer a and b:

في الانتخابات البرلمانية الأخيرة أدلى ٥٣% من الأردنيين بأصواتهم في حين ان هذه النسبة كانت في عجلون ٧٢%. إذا كانت نسبة التسجيل في عجلون هي ٥% من مجموع الأصوات في المملكة. أجب عن(a و b)

a. What is the proportion of voting in the other country areas?

ماهي نسبة الاقتراع في مناطق المملكة الأخرى

0.836

b. An individual is selected at random and asked if he voted, he answered yes. What is the probability that he is from Ajloun?

تم اختيار شخص عشوائيا وسئل فيم إذا أدلى بصوته فأجاب بـ نعم، فما احتمال انه من عجلون؟

0.375

Part 2: *Identify the choice that best completes the statement or answers the question.*

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
a	a	a	a	a	a	a	a
b	b	b	b	b	b	b	b
c	c	c	c	c	c	c	c
d	d	d	d	d	d	d	d
e	e	e	e	e	e	e	e

1) One of the following is not a measure of variation:

a) median b) standard deviation c) inter-quartile range d) mean deviation e) range

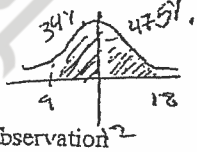
2) The median of the sample represented by the following frequency table is:

X	relative frequency	f_i	C.F
1	.30	30	30
2	.25	25	55
3	.15	15	70
4	.20	20	90
5	.10	10	100

a) 2 b) 1.5 c) 3 d) 4 e) 2.5

3) The average Calculus grade is 12 with standard deviation 3. Assuming that the grades are bell-shaped distributed, then the proportion of students with grades 9 to 18 is:

a) 0.185 b) 0.975 c) 0.84 d) 0.815 e) 0.475



4) The first and the third quartiles of a set of data are 15 and 45 respectively. If each observation is multiplied by -4 and then 200 is added to the result, then the first quartile of the transformed data is:

a) 120 b) 20 c) 80 d) -120 e) -80

5) If 2 red and 5 blue balls (all similar except for color) are randomly laid out in a row (وضعت في صف), then the probability that the red balls are next to each other is: _____

a) 3/7 b) 4/7 c) 1/7 d) 2/7 e) 4/21

6) If two balls are selected at random without replacement from a box containing 4 red and 6 black balls, then the probability that the two balls are of different colors is:

a) 48/90 b) 42/90 c) 24/100 d) 48/100 e) 21/90

7) If $P(A \cap \bar{B}) = 0.6, P(A|B) = 0.4$, and P(A)=0.7, then $P(A \cup B) =$

a) 0.65 b) 0.75 c) 0.85 d) 0.6 e) 0.9

8) If P(A) = 0.4, P(B) = 0.75, and if A and B are independent, then $P(A \cap \bar{B})$ equals

a) 0.1 b) 0.3 c) 0.2 d) 0.45 e) 0.25

Second Exam Math 131

Summer 10-11

30

Name ____ Student number 0101034 Section 10:30 – 11:30 Serial number

1. Given the bivariate distribution

X \ Y	−1	0	
−1	0.3	0.4	0.7
0	0.1	0.2	0.3
	0.4	0.6	

(a) (2 pts) Find $E(X)$. -0.7 $-1(0.7)+0(0.3)$ 2

(b) (2 pts) Find $E(Y)$. -0.4 $-1(0.4)+0(0.6)$ 2

(c) (2 pts) Covariance(X,Y) 0.02 $Cov(x,y) = E(xy) - E(x)E(y)$

$E(xy) \Rightarrow -1(-1)(0.3) + -1(0)(0.4) + 0(-1)(0.1) + 0(0)(0.2$ 2

$= 0.3$

$Cov = 0.3 - (0.4 \times -0.7)$

$0.3 - 0.28 = 0.02$

2. Assume that X is distributed as Binomial $(10, 0.3)$. Use the Binomial table to find

(a) (3 pts) $P(X = 2)$ 0.234 $P(X \le 2) - P(X \le 1) \Rightarrow 0.383 - 0.149$ $\Rightarrow 0.234$ 3

(b) (3 pts) $P(2 \le X < 5)$ 0.701 $P(X \le 4) - P(X \le 1) \Rightarrow 0.850 - 0.149$ 0.701 3

(c) (3 pts) $E(X) + Var(X)$ $3 + 2.1 = 5.1$ $E(x) = np = 10(0.3) = 3$

$Var = np(1-p) = 10(0.3)(0.7) = 2.1$

$3 + 2.1$ 3

24

Math 131 Second Exam
18-12 -2012

د. احمد الزعبي

Name _____ Student number _____ Section: 11 – 12 ع.ن Serial number

Identify the choice that best completes the statement or answers the question

Q1	Q2	Q3	Q4	Q5	Q6
a	a	a	a	a	a
b	b	b	b	b	b
c	c	c	c	c	c
d	d	d	d	d	d
e	e	e	e	e	e

1. Suppose that 10% of the students in University of Jordan own cars. In a random sample of 30 students, let $X = \#$ of students who own cars, then the distribution of X is

   A) $Bin(20, 0.1)$ B) $Bin(30, 0.2)$ C) $Bin(30, 0.1)$ D) $Bin(20, 0.15)$ E) $P(20)$

2. Let $X \sim N(24, 25)$. Then $P(27 < X < 38) =$

   A) $P(1 < Z < 3.2)$
   B) $P(0.6 < Z < 2.8)$
   C) $P(-0.6 < Z < 1.6)$
   D) $P(0.2 < Z < 2.4)$
   E) None

3. Which of the following is (or are) not a probability function of a random variable X

(I)

X	1	2	3	4
$P(X)$	0.2	0.3	0.3	0.1

(II)

X	1	2	3	4
$P(X)$	0.2	0.3	0.3	0.2

(III)

X	1	2	3	4
$P(X)$	0.2	0.3	0.3	0.3

A) (I) only B) (II) and (III) C) (I) and (III) D) (III) only E) all of them

4. Consider the following bivariate probability density

$X \backslash Y$	1	2	3
0	0.2	0.3	0.1
1	0.2	0.1	0.1

find $P(X + Y < 3)$

A) 0.5 B) 0.6 C) 0.4 D) 0.7 E) None

5. A box contains 4 white balls, 3 black ball and 3 red balls. If we draw 4 balls without replacement, then the probability of getting 3 white ball is

   A) $\frac{\binom{4}{3}\binom{6}{3}}{\binom{10}{4}}$ B) $\frac{\binom{4}{0}\binom{6}{4}}{\binom{10}{4}}$ C) $\frac{\binom{4}{3}\binom{6}{1}}{\binom{10}{4}}$ D) $\frac{\binom{4}{1}\binom{6}{3}}{\binom{10}{4}}$ E) None

6. Let $X \sim Poisson(4)$ and $Y \sim Bi(10, 0.2)$. Find $E(XY)$

   A) 16 B) 8 C) 12 D) 4 E) None

Binomial table

Q7	Q8	Q9	Q10	Q11
a	a	a	a	a
b	b	b	b	b
c	c	c	c	c
d	d	d	d	d
e	e	e	e	e

p =	0.01	0.9	0.25	0.3	0.35	0.4	0.45	0.5
n = 2 x = 0	0.9801	0.96	0.5625	0.7200	0.4225	0.5600	0.3025	0.2500
	0.9999	0.99	0.9375	0.9744	0.8775	0.9400	0.7975	0.7500
	1.0000	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

)e random variables such that $Var(X) = 2, Var(Y) = 4, Cov(X, -Y) = 3$, then $Var(2X+Y-1) =$

B) 4 C) 12 D) 8 E) 0

$= 3, Var(X) = 9, Var(Y) = 4$, then $Corr(1 - 3X, 3Y - 1) =$

B) $\frac{1}{2}$ C) $-\frac{2}{3}$ D) $-\frac{1}{6}$ E) $-\frac{1}{3}$

the number of accidents on a highway follows a poisson distribution with an average of 2 accidents nd the probability of having at least 4 accidents on this highway during 3 week period.

B) 0.849 C) 0.143 D) 0.567 E) 0.958

ns (10)-(11). Let X and Y be random variables such that $Cov(X, Y) = 16$, $E(XY) = 18$, $E(X^2 - 1) = 36$,

B) 2 C) 3 D) 4 E) None

B) 33 C) 28 D) 21 E) None

Q12	Q13	Q14	Q15	Q16	Q17
a	a	a	a	a	a
b	b	b	b	b	b
c	c	c	c	c	c
d	d	d	d	d	d
e	e	e	e	e	e

12. If X is distributed as *Binomial*$(40, 0.2)$. Use normal approximation to find $P(10 \leq X < 12)$ change the answers using tables

A) 0.1236 *B*) 0.2874 *C*) 0.1938 *D*) 0.4024 *E*) None

For questions (13)-(14). Suppose X is normally distributed with mean $\mu = 50$ and standard deviation $\sigma = 4$ then

13. The 90^{th} percentile of the distribution of X

A) 56.4 *B*) 57.68 *C*) 55.12 *D*) 53.84 *E*)None

14. For a random sample of size 25, $P(53 < \bar{X} < 54) =$

A) 0.1359 *B*) 0.0413 *C*) 0.000 *D*) 0.0471 E) None

15. Let $X \sim$ *Binomial*$(3, 0.1)$, then $p(X = 3|X \geq 1) =$

A) 0.004 *B*) 0.027 *C*) 0.010 *D*) 0.069 *E*) None

16. Let X has a poisson distribution such that $p(x = 0) = 3p(x = 1)$, then $p(x = 0) =$

A) $e^{-1/2}$ *B*) $e^{-1/3}$ *C*) $e^{-1/4}$ *D*) $e^{-1/5}$ *E*) None

17. Suppose $X \sim N(10, 16)$ and $Y \sim$ *Geometric*(p) where $p = P(X < 10)$, then $P(Y = 4) =$

A) 1/16 *B*) 1/32 *C*) 1/4 *D*) 1/8 *E*) None

Binomial Tables

$p=$		0.01	0.02	0.09	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
$n=2$	$x=0$	0.9801	0.9604	0.8281	0.8100	0.7225	0.6400	0.5625	0.4900	0.4225	0.3600	0.3025	0.2500
	1	0.9999	0.9996	0.9919	0.9900	0.9775	0.9600	0.9375	0.9100	0.8775	0.8400	0.7975	0.7500
	2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
$n=3$	$x=0$	0.9703	0.9412	0.7536	0.7290	0.6141	0.5120	0.4219	0.3430	0.2746	0.2160	0.1664	0.1250
	1	0.9997	0.9988	0.9772	0.9720	0.9393	0.8960	0.8438	0.7840	0.7183	0.6480	0.5748	0.5000
	2	1.0000	1.0000	0.9993	0.9990	0.9966	0.9920	0.9844	0.9730	0.9571	0.9360	0.9089	0.8750
	3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
$n=4$	$x=0$	0.9606	0.9224	0.6857	0.6561	0.5220	0.4096	0.3164	0.2401	0.1785	0.1296	0.0915	0.0625
	1	0.9994	0.9977	0.9570	0.9477	0.8905	0.8192	0.7383	0.6517	0.5630	0.4752	0.3910	0.3125
	2	1.0000	1.0000	0.9973	0.9963	0.9880	0.9728	0.9492	0.9163	0.8735	0.8208	0.7585	0.6875
	3	1.0000	1.0000	0.9999	0.9999	0.9995	0.9984	0.9961	0.9919	0.9850	0.9744	0.9590	0.9375
	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
$n=5$	$x=0$	0.9510	0.9039	0.6240	0.5905	0.4437	0.3277	0.2373	0.1681	0.1160	0.0778	0.0503	0.0313
	1	0.9990	0.9962	0.9326	0.9185	0.8352	0.7373	0.6328	0.5282	0.4284	0.3370	0.2562	0.1875
	2	1.0000	0.9999	0.9937	0.9914	0.9734	0.9421	0.8965	0.8369	0.7648	0.6826	0.5931	0.5000
	3	1.0000	1.0000	0.9997	0.9995	0.9978	0.9933	0.9844	0.9692	0.9460	0.9130	0.8688	0.8125
	4	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9990	0.9976	0.9947	0.9898	0.9815	0.9688
	5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

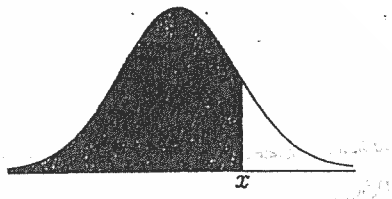
Poisson Tables

$\mu=$	2.0	3.8	4.0	4.5	6.0	6.5	8.0	8.5	9.0	9.5	
$x=0$	0.1353	0.0224	0.0183	0.0111	0.0025	0.0015	0.0003	0.0002	0.0001	0.0001	0
1	0.4060	0.1074	0.0916	0.0611	0.0174	0.0113	0.0030	0.0019	0.0012	0.0008	0
2	0.6767	0.2689	0.2381	0.1736	0.0620	0.0430	0.0138	0.0093	0.0062	0.0042	0
3	0.8571	0.4735	0.4335	0.3423	0.1512	0.1118	0.0424	0.0301	0.0212	0.0149	0
4	0.9473	0.6678	0.6288	0.5321	0.2851	0.2237	0.0996	0.0744	0.0550	0.0403	0
5	0.9834	0.8156	0.7851	0.7029	0.4457	0.3690	0.1912	0.1496	0.1157	0.0885	0
6	0.9955	0.9091	0.8893	0.8311	0.6063	0.5265	0.3134	0.2562	0.2068	0.1649	0
7	0.9989	0.9599	0.9489	0.9134	0.7440	0.6728	0.4530	0.3856	0.3239	0.2687	0
8	0.9998	0.9840	0.9786	0.9597	0.8472	0.7916	0.5925	0.5231	0.4557	0.3918	0
9	1.0000	0.9942	0.9919	0.9829	0.9161	0.8774	0.7166	0.6530	0.5874	0.5218	0
10	1.0000	0.9981	0.9972	0.9933	0.9574	0.9332	0.8159	0.7634	0.7060	0.6453	0
11	1.0000	0.9994	0.9991	0.9976	0.9799	0.9661	0.8881	0.8487	0.8030	0.7520	0.
12	1.0000	0.9998	0.9997	0.9992	0.9912	0.9840	0.9362	0.9091	0.8758	0.8364	0.
13	1.0000	1.0000	0.9999	0.9997	0.9964	0.9929	0.9658	0.9486	0.9261	0.8981	0.
14	1.0000	1.0000	1.0000	0.9999	0.9986	0.9970	0.9827	0.9726	0.9585	0.9400	0.
15	1.0000	1.0000	1.0000	1.0000	0.9995	0.9988	0.9918	0.9862	0.9780	0.9665	0.
16	1.0000	1.0000	1.0000	1.0000	0.9998	0.9996	0.9963	0.9934	0.9889	0.9823	0.
17	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9984	0.9970	0.9947	0.9911	0.

Table III: Normal Distribution

The following table presents the standard normal distribution. The probabilities tabled are

$$P(X \leq x) = \Phi(x) = \int_{-\infty}^{x} \frac{1}{\sqrt{2\pi}} e^{-w^2/2} dw$$



Note that only the probabilities for $x \geq 0$ are tabled. To obtain the probabilities for $x < 0$, use the identity $\Phi(-x) = 1 - \Phi(x)$.

x	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
0.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
0.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
0.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
0.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
0.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
0.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
0.7	.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823	.7852
0.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
0.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	.9306	.9319
1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429	.9441
1.6	.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
1.8	.9641	.9649	.9656	.9664	.9671	.9678	.9686	.9693	.9699	.9706
1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761	.9767
2.0	.9772	.9778	.9783	.9788	.9793	.9798	.9803	.9808	.9812	.9817
2.1	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
2.2	.9861	.9864	.9868	.9871	.9875	.9878	.9881	.9884	.9887	.9890
2.3	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
2.4	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
2.5	.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9951	.9952
2.6	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
2.7	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
2.8	.9974	.9975	.9976	.9977	.9977	.9978	.9979	.9979	.9980	.9981
2.9	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
3.0	.9987	.9987	.9987	.9988	.9988	.9989	.9989	.9989	.9990	.9990
3.1	.9990	.9991	.9991	.9991	.9992	.9992	.9992	.9992	.9993	.9993
3.2	.9993	.9993	.9994	.9994	.9994	.9994	.9994	.9995	.9995	.9995
3.3	.9995	.9995	.9995	.9996	.9996	.9996	.9996	.9996	.9996	.9997
3.4	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9998