

 Online Exams

Sri Lanka Institute of Information Technology

A researcher reports that mice will live an average of 45 months when their diets are sharply restricted and then enriched with vitamins and proteins. Assuming that the lifetimes of such mice are normally distributed with a standard deviation of 7.3 months, find the probability that a given mouse will live,

1. More than 30 months : 0.98 (Keep all the decimal places in the answer)

2. Between 38 and 47 months : 0.439 (Keep all the decimal places in the answer)

3. What is the life time (in months) of a mouse where 20% of all mice have less than this life time? 39 months
(Give your answer to the nearest integer)

Type your answers within the given spaces

Next page

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1 answered out of question

In an experiment, it is given that $P(A) = 0.3$ and $P(B) = 0.5$ and $P(A \cup B) = 0.8$. Are A and B mutually exclusive?

Select one:

Yes

No

Given information is not enough to decide.

$$P(B') = 1 - P(B)$$
$$0.5 = 1 - x$$
$$x = 1 - 0.5$$
$$x = 0.5$$

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In an experiment, $P(A) = 0.4$ and $P(B) = 0.7$ and $P(A \cup B)' = 0.2$. Are A and B independent?

Select one:

- Yes
- No
- Given information is not enough to decide.

$0.4 \times 0.7 = 0.28$

$0.2 = 1 - 0.8$

$0.8 = 1 - 0.2$

$A \cup B = 0.8$

0.3

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IT19391946 Wijerathne H

Question 10
Not yet answered
Marked out of 9.00
Flag question

A typist of a certain Book Publishing Company can type 7 pages per day. Without using any approximation, calculate the probability that.

a) The typist type more than 8 pages per day

b) The typist type fewer than 3 pages per day

c) Using a suitable approximation, find the probability that the typist type less than or equal to 4 pages per day.

Type your answers within the given spaces [Keep all decimal places of the final answer].

Quiz navigation

DECLARATION

QUESTIONS

FEEDBACK

Finish attempt

Time left: 0:19:23

$\lambda \geq 7$ $(x \geq 8)$
 $(x < 3) \rightarrow 1 - (x \geq 3)$

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A Manager of a certain super market is concerning about the number of customers arrive within the first hour since it is opened in the morning. On average 9 customers are coming within the first hour. Without using any approximation, calculate the probability that,

a) Fewer than 5 people are arriving to the Super Market. **0.94504**

b) At least 6 people are arriving to the Super Market. **0.88431**

c) Using suitable approximation, find the probability that more than 10 people are arriving to the Super Market.

Type your answers within the given spaces [Keep all decimal places of the final answer]. **0.29401**

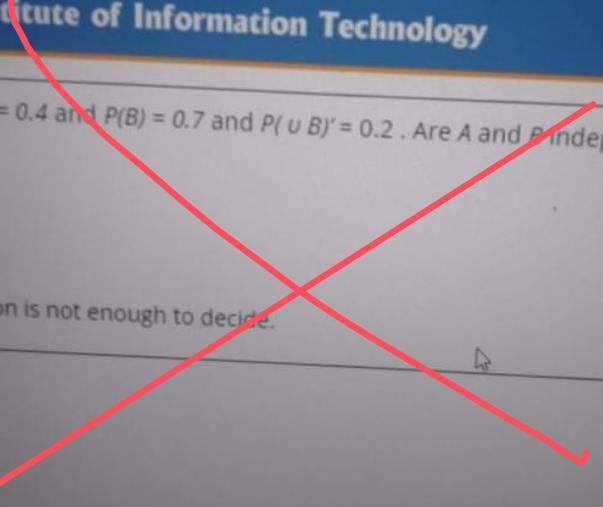
[Next page](#)

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In an experiment, $P(A) = 0.4$ and $P(B) = 0.7$ and $P(A \cup B)' = 0.2$. Are A and B independent?

Select one:

Yes
 No
 Given information is not enough to decide.



A online video store rents movies to members. Each movie in the store has a title and is identified by a movie number. A movie can be in VHS, VCD, or DVD or any other format. Each movie can be stored in multiple format types as well. Each movie belongs to one of a given set of categories like action, adventure, comedy , etc. There are two types of members, Golden Members who require their credit card and can rent more than one movie at a time. Bronze Members who don't require their credit card and can rent only one movie at a time.

Which of the following statements are correct with respect to the above description.

Select one or more:

- a. Categories can exist without movies
- b. The store is an entity in the EER diagram
- c. Movie types could be represented by an entity name format
- d. There are no descriptive attributes for relationships in the diagram
- e. Golden member and Bronze member cover Member



Next page

$E(X)$ and $E(X^2)$ of a discrete random variable are -1.4 & 2 respectively. What is $V[X]$?

Select one:

- 0.4
- 0.4
- 1.4
- 0.04
- None of the above

$$2 - (+ 1.96)$$

$$2 - 1.96$$

The number of industrial injuries per working week in a particular factory is known to follow a Poisson distribution with mean 0.5. Find the probability that,

in particular week there will be less than 2 accidents.

0.9098



in particular week there will be more than 5 accidents.

0.00001



in a 3 week period there will be no accidents.

0.22313



Let A and B be events with $P(A)=0.6$, $P(B)=0.3$ and $P(A \cap B)=0.2$. What is $P(A \cup B)$?

Select one:

- 0.7
- 0.9
- 0.6
- 0.5
- None of the above

Since the population size is always larger than the sample size, the sample statistic

Select one:

- can never be larger than the population parameter
- can never be equal to the population parameter
- some cases it can be equal to the population parameter
- can never be smaller than the population parameter
- None of the above

After studying a couple's family history, a doctor determines that the probability of any child born to this couple having a gene for disease X is 1 out of 4. If the couple has three children, what is the probability that exactly two of the children have the gene for disease X?

Select one:

- 9/64
- 10/64
- 12/64
- 7/64
- None of the above

$$\lambda = \frac{1}{4}$$

A garment factory produces large lots of a certain type of garments. What is the mean of the number of defective units found in a sample of 10 units if the lot is 2% defective?

Select one:

- 5
- 2
- 0.2
- 0.98
- None of the above

The average rate of telephone calls in a busy reception is 4 per minute. Calculate the probability that,

at least 2 telephone calls will be received in any minute

Choose...

any minute with free of telephone calls

Choose...

5 telephone calls will be received in any minute

✓ Choose...

0.01832

0.15629

0.90842

None of the above

0.37116

0.21487

$$\lambda = 4$$

$$x \geq 2$$

$$\lambda = 0$$

$$x = 5$$

Since the population size is always larger than the sample size, the sample statistic

Select one:

- can never be larger than the population parameter
- can never be equal to the population parameter
- some cases it can be equal to the population parameter
- can never be smaller than the population parameter
- None of the above

Let E be an event and E' is its complement. If $P(E) = 1/3$, what is $P(E')$?

Select one:

- $P(E') = P(E) = 1/3$
- $P(E') = P(E) - 1 = -2/3$
- $P(E') = 2 * P(E) = 2/3$
- $P(E') = 1 - P(E) = 2/3$
- None of the above

$$1 - \frac{1}{3}$$

After studying a couple's family history, a doctor determines that the probability of any child born to this couple having a gene for disease X is 1 out of 4. If the couple has three children, what is the probability that exactly two of the children have the gene for disease X?

Select one:

- 9/64
- 10/64
- 12/64
- 7/64
- None of the above

Three bulbs are chosen from 15 bulbs of which 5 are defective. The probability that none is defective is,

Select one:

- 1/125
- 8/27
- 27/125
- 1/27
- None of the above

The conditional probability of x given y is:

Select one:

- the probability that x and y occur jointly
- the probability that y occurs if x has already occurred
- the probability that x occurs if y has already occurred
- the marginal probability of x minus the marginal probability of y
- None of the above

Let A and B be events with $P(A^C) = 1/2$, $P(A \cup B) = 3/4$, $P(A|B) = 1/3$ and $P(B^C) = 5/8$ where A^C is the complement of A. The

Select one:

- 1/8
- 3/8
- 6/8
- 7/8
- None of the above

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Question 2
Not yet answered
Marked out of 1.00
Flag question

An example for a nominal categorical variable is,

Select one:

- Importance of culture to respondent (very, somewhat, or not very important)
- Opinion about a new political law (favor or oppose)
- Length of forearm from elbow to wrist (in centimeters)
- Number of songs on a digital music player**
- None of the above

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Question 1
Not yet answered
Marked out of 1.00
Flag question

Which of the following is **not** a form of non-probability sampling?

Select one:

- Quota sampling. ✓
- Convenience sampling. ✓
- Cluster sampling.
- Purposive/Judgement sampling. ✓
- They are all forms of non-probability sampling. ✓

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Select the **incorrect** statement?

Select one:

- Histogram can be used to describe numerical variables
- Pie chart can be used to describe one categorical variable
- Two way table can be used to describe two categorical variables
- Boxplot can be used to describe only one categorical variable
- Stem and leaf plot can be used to describe numerical variables.

Handwritten annotations: A blue circle is drawn around the first option. Three blue checkmarks are placed next to the second, third, and fifth options. A blue plus sign is placed next to the fourth option.

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The collection and summarization of the socioeconomic and physical characteristics of the employees of a particular firm is an example of

Select one:

- Inferential statistics.
- Descriptive statistics.
- A parameter.
- A statistic.
- None of the above.

Next page

Following is **not** an example for a survey error.

Select one:

- Sampling error
- Measurement error
- Selection bias
- Non-response bias

 None of the above



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Question 3

Not yet answered

Marked out of
1.00

Flag question

An example for a probability sampling method is.

Select one:

- Quota sampling method
- Convenience sampling method
- Stratified random sampling method
- Volunteer sampling method
- None of the above

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Q 1
25 unanswered
25 out of 50
question

Suppose in a town three candidates are running for the mayor's seat. To predict the winning candidate, a newspaper selects 25 registered voters randomly and the following info about each respondents' choice.

C C A B C C B C B A B C A B A C C A B A B C C

Choose the correct statement.

Select one:

- Population size is 25
- Sample size is not given
- Population is all registered voters in the town at the time of the study.
- Cannot identify a variable from the description
- None of the above

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Question 1
Not yet answered
Marked out of 3.00
Flag question

Assuming that the weekly demand for a video recorder is a poisson variable with mean 3, find the probability that the shop sells

at least 3 in a week.
at most 7 in a week.
more than 20 in a month.

Choose...
0.57681
0.9881
0.03351
0.08392
0.0116

$\lambda = 3 \times 4 = 12$,
 $x \geq 3$
 $x \leq 7 \Rightarrow 1 - x > 7$
 $1 - x \geq 8$
 $x > 20$
 $x \geq 21$
 $1 - 0.01196$

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Question 1
Not yet answered
Marked out of 3.00
Flag question

The number of industrial injuries per working week in a particular factory is known to follow a Poisson distribution with mean 0.5. Find the probability that,

in particular week there will be less than 2 accidents.
in particular week there will be more than 5 accidents.
in a 3 week period there will be no accidents.

Choose...
0.54476
0.9098
0.77687
0.22313
0.00001

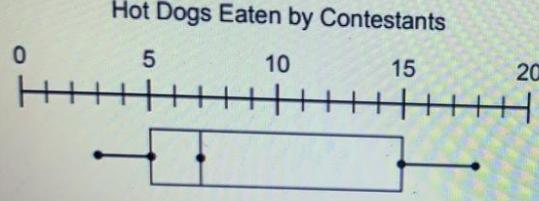
$\lambda = 0.5 \times 3$
 $x < 2 = 1 - x \geq 2$
 $1 - 0.09020$
 $x > 5$
 $x > 6$

1.5
 $x \geq 0$



1
Answered
out of
question

According to the box-and-whisker plot, what is the maximum number of hot dogs eaten in the hot dog eating contest?



Select one:

- 15
- 3
- 7
- 18
- 20



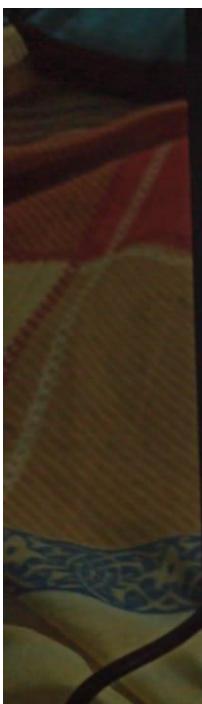
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if
tion

The statistic NOT required for a box plot is.

Select one:

- Mean
- 1st quartile
- Median
- 3rd quartile
- None of the above

Next p

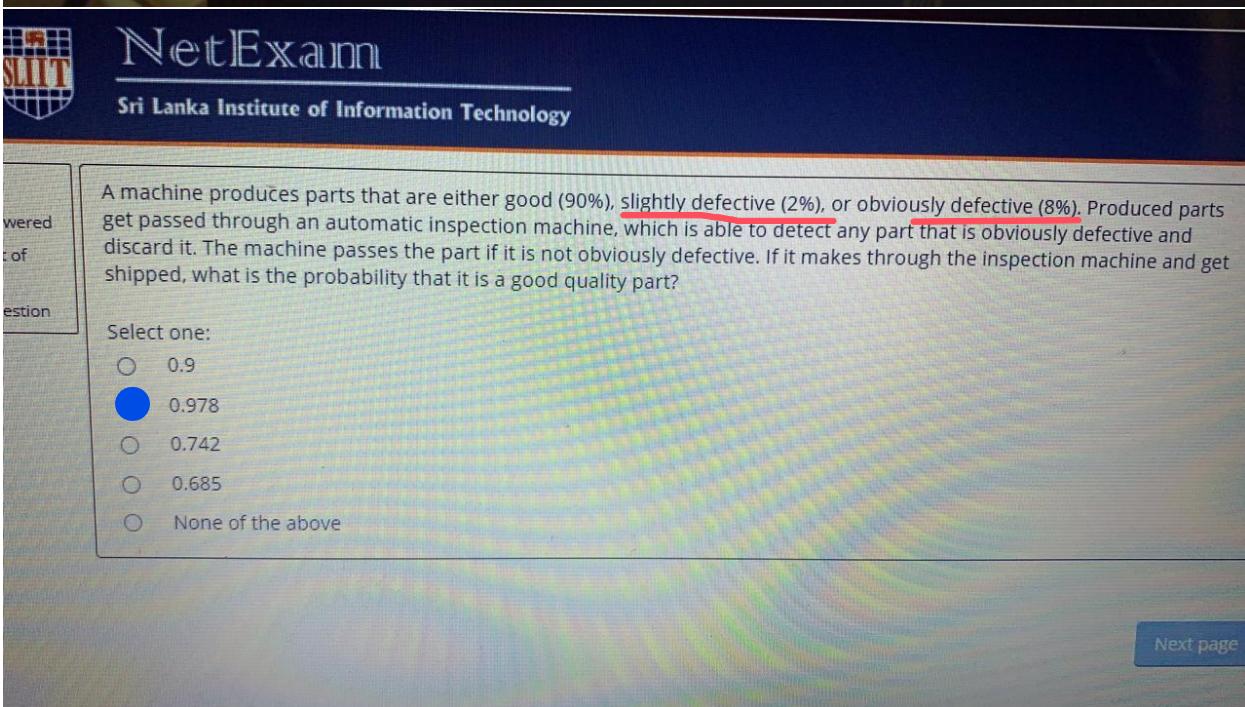
A screenshot of a computer screen displaying a NetExam interface. The title bar says "NetExam Sri Lanka Institute of Information Technology". A red "X" is drawn over the entire screenshot.

Question 3
Not yet answered
Marked out of 3.00
 Flag question

Consider a computer system with Poisson job-arrival stream at an average of 2 per minute. Determine the probability that in any one-minute interval there will be

0 jobs Choose...
exact 2 jobs Choose...
at least 3 arrivals Choose...
0.32332
0.27067
0.13534
0.59399
0.86466

[Next page](#)

A screenshot of a computer screen displaying a NetExam interface. The title bar says "NetExam Sri Lanka Institute of Information Technology". A red "X" is drawn over the entire screenshot.

A machine produces parts that are either good (90%), slightly defective (2%), or obviously defective (8%). Produced parts get passed through an automatic inspection machine, which is able to detect any part that is obviously defective and discard it. The machine passes the part if it is not obviously defective. If it makes through the inspection machine and get shipped, what is the probability that it is a good quality part?

Select one:

0.9
 0.978
 0.742
 0.685
 None of the above

[Next page](#)

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Which of the following would fit the definition of "statistical independence" of events A and B?

Select one:

- P(A | B) = P(A) + P(B) X
- P(A | B) = P(A and B)/P(B)
- P(A | B) = P(B)
- P(A and B) = P(A)
- None of the above

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NetExam

Sri Lanka Institute of Information Technology

What are the outliers for the given data set below.

7, 23, 26, 27, 28, 30, 31, 34, 34

Select one:

- 1,3
- 31,33
- 30,31
- 1,33
- No outliers

$\frac{1}{4} \times (n+1)$
 $\frac{1}{4} \times 10$
 $\frac{9}{4}$

$23 + 0.5 (26 - 23)$
 $31 + 0.5 (34 - 31)$
 24.5
 29
 32.5

$LQ = 24.5 - 1.5(8)$
 $UQ = 32.5 + 1.5(8)$
 $IQR = 32.5 - 24.5$
 $= 8$

[Next](#)



Find $E(X)$ for the random variable X with table:

values of X: 1	3	5
$P(X=x)$:	$1/6$	$1/6$

Select one:

- 4
- 1
- 10
- 8
- None of the above



The probability of a machine producing a defective part is 0.04.

What is the probability of having exactly 5 defective parts, if it is selected from a sample of 100? (Round your answer upto 5 decimal places)

What is the rate of the occurrence in this distribution?

What is the variance of this distribution?

Choose... ▾

Choose...

- 0.36926
- 0.15629
- 0.47116
- 3.84
- 4



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Sri Lanka Institute of Information Technology

Question 1
Not yet answered
Marked out of 1.00
 Flag question

Let A and B be events with $P(A^C) = 1/2$, $P(A \cup B) = 3/4$, $P(A|B) = 1/3$ and $P(B^C) = 5/8$ where A^C is the complement of A. Then $P(A^C \cap B^C)$ is:

Select one:

1/8
 3/8
 6/8
 7/8
 None of the above

[Next page](#)

 Sri Lanka Institute of Information Technology

To be an outlier for the following data set, data points should lie between,

18 44 47 55 61 62 78 79 83 145

Hint: Outlier is defined as a value x, holding the following conditions.
 $x > Q3 + 1.5 * (\text{Inter Quartile Range})$
 $x < Q1 - 1.5 * (\text{Inter Quartile Range})$

Lower bound

Upper bound

[Next page](#)

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A coin is tossed and a single 6-sided die is rolled. What is the probability of landing on the head side of the coin and rolling a 3 on the die?

Select one:

- 1/3
- 1/6
- 1/2
- 1/12
- None of the above

$\frac{1}{2} \times \frac{1}{6} = \dots \dots \dots$

Next page

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Question 1
Not yet answered
Marked out of 3.00
 Flag question

Assuming that the weekly demand for a video recorder is a poisson variable with mean 3, find the probability that the shop sells

at least 3 in a week.
at most 7 in a week.
more than 20 in a month.

Choose...

- 0.57681
- 0.08392
- 0.0116
- 0.9881
- 0.03351

Next page

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Sri Lanka Institute of Information Technology

5
Answered
out of
question

The probability that a patient recovers from a heart operation is 0.9. What is the probability that at least 2 of the next three patients who have this operation recover? (Don't use any approximation)

Select one:

- 0.8960
- 0.9720
- 0.7890
- 0.5960
- None of the above

${}^3C_2 \cdot 0.9$

$x \geq 2$

Next page

e X

X | i | + |

 NetExam
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Which of the following is **not** required for a binomial distribution?

Select one:

- Independent trials
- Constant probability of success
- At least fifty observations
- Fixed trials
- Only two outcomes

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Which of the following can be a probability function?

Select one:

- P(X)=1/2 for x=1,2,3
- P(x)=x/5 for x=1,2,3,4
- P(X)=x/2 for x=0,1,2
- P(x)=1/5 for x=0,2,3
- None of the above

NetExamination
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Determine the value of k so that the function $P(X=x) = kx$ for $x=1,2,3,4,5,6$ can serve as a probability distribution for discrete random variable X .

Select one:

- $3/21$
- $5/21$
- $1/21$
- $2/21$
- None of the above

Sri Lanka Institute of Information Technology

Question 4
Not yet answered
Marked out of 1.00
Flag question

According to the box-and-whisker plot, what is the third quartile of gallons of paint sold at John's Hardware Store in a month?

Paint Sold Per Month at John's (in gallons)

Select one:

- 66
- 61
- 60
- 62
- 58

Moodle

NetExam
Sri Lanka Institute of Information Technology

Question 3
Not yet answered
Marked out of 1.00
Flag question

A medical treatment has a success rate of 0.8. Two patients will be treated with this treatment. Assuming the results are independent for the two patients, what is the probability that neither one of them will be successfully cured?

1 - 0.32 = 0.68

Select one:

- 0.5
- 0.36
- 0.2
- 0.04
- None of the above

x=0---> 0.4493

Next page

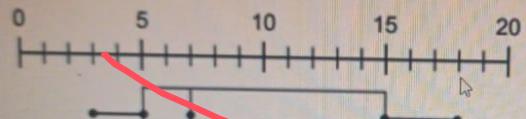


in 6
answered
out of

of question

According to the box-and-whisker plot, what is the maximum number of hot dogs eaten in the hot dog eating contest?

Hot Dogs Eaten by Contestants



Select one:

- 20
- 18
- 7
- 3
- 15



wered
of
estion

A and B are two events. $P(A \text{ and } B)'$ is equal to;

$$P(A \cap B)' =$$

- Select one:
- $P(A' \text{ or } B)$
 - $P(A \text{ and } B')$
 - $P(A' \text{ and } B')$
 - $P(A' \text{ or } B')$
 - None of the above.



Question 4

Not yet answered

Marked out of
1.00

Flag question

The best sample is one that is,

Select one:

- A systematic sample
- Representative of the population
- Convenient
- judgmentally selected
- Non-random sample

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Sri Lanka Institute of Information Technology

Question 6
Not yet answered
Marked out of 2.00
Flag question

When Joe bowls, he can get a strike (knock down all of the pins) 60% of the time. Assuming that all trials are independent and identical what is the probability for him to bowl zero strikes out of four tries?

Select one:

- 512/10000
- 256/1000
- 256/100000
- 128/10000
- None of the above

$\frac{60}{100} \times 4 = \frac{12}{5}$

Next page

NetExam
Sri Lanka Institute of Information Technology

This stem and leaf plot shows the number of cookies that Tia's Girl Scout troop sold each week. How many weeks did they sell cookies?

Time left
QUESTIONS

1	2	3	4
9	10	11	12
17	18	19	20
FEEDBACK			
21			

Next page

Stem | Leaf

Stem	Leaf
5	1 1 4
6	4 5 6
7	2 2
8	3 6 7 7

Select one:

- 4
- 87
- 12
- 51
- The Stem and leaf plot do not say.

The screenshot shows a computer monitor displaying a software application titled "NetExam" from "Sri Lanka Institute of Information Technology". The main content area of the application contains a question:

What are the outliers for the given data set below. It found that Q1 = 24.5, Q2 = 28 and Q3 = 32.5 for the data set.
7, 23, 26, 27, 28, 30, 31, 34, 34

Below the question, there is a label "Select one:" followed by five options, each preceded by a radio button:

- 23
- 7
- 34
- 26
- No outliers

In the bottom right corner of the application window, there is a small blue button with the text "Next".

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A study is under way in to determine the adult height of American pine trees. Specifically, the study is attempting to determine what factors aid a tree in reaching heights greater than 60 feet tall. It is estimated that the forest contains 25,000 adult American pines. The study involves collecting heights from 250 randomly selected adult American pine trees and analyzing the results. Identify the sample in the study.

Select one:

The 250 randomly selected adult American pine trees.
 The 25,000 adult American pine trees in the forest.
 All the adult American pine trees taller than 60 feet.
 All American pine trees, of any age, in the forest.
 None of the above.

Next page

The probability that a patient recovers from a heart operation is 0.9. What is the probability that at least 2 of the next three patients who have this operation recover? (Don't use any approximation)

Select one:

- 0.8960
- 0.9720
- 0.7890
- 0.5960
- None of the above

$p = 0.9$
 $n = 3$
 $x \geq 2$

Next page

it20236182 Bandara P...

Quiz navigation

Finish attempt ...
Time left 0:49:01
QUESTIONS
1 2 3 4 5
9 10 11 12 13
17 18 19 20
FEEDBACK
21

The type of sampling in which each member of the population selected for the sample is returned to the population before the next member is selected is called,

Select one:

- Sampling without replacement
- Sampling with replacement
- Simple random sampling
- Systematic sampling
- None of the above

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SLIT

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Moodle

NetExam

Sri Lanka Institute of Information Technology

Question 2
Not yet answered
Marked out of 2.00
Flag question

Which of the following is **not** required for a binomial distribution?

Select one:

- Independent trials
- At least fifty observations
- Fixed trials
- Only two outcomes
- Constant probability of success

Next p

NetExam

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on 7
t answered
d out of
g question

This stem and leaf plot shows the scores of students for a test given out of 100. How many students scored more than 75 marks?

Stem	Leaf
5	2, 6, 6, 8
6	0, 1, 4, 9
7	1, 1, 2, 4, 6, 6, 7
8	0, 0, 3, 4, 5, 5, 7, 8, 9
9	0, 1, 1, 2, 6, 9

Select one:

- 12
- 2
- 6
- 18
- 8



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A numerical value used as a summary measure for a sample, such as sample mean, is known as a,

Select one:

- Population parameter
- Sample parameter
- Sample statistic
- Population mean
- None of the above

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Sri Lanka Institute of Information Technology

Question 10
Not yet answered
Marked out of 1.00
Flag question

Suppose in a town three candidates are running for the mayor's seat. To predict the winning candidate, a newspaper selects 25 registered voters randomly and the following info about each respondents' choice.
C C A B C C B C B A B C A B A C C A B A B C C

Choose the correct statement.

Select one:

- Population size is 25
- Sample size is not given
- Population is all registered voters in the town at the time of the study.
- Cannot identify a variable from the description
- None of the above

Next page

Quiz navigation
Finish attempt ...
Time left 0:34:39
QUESTIONS

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	

FEEDBACK

21

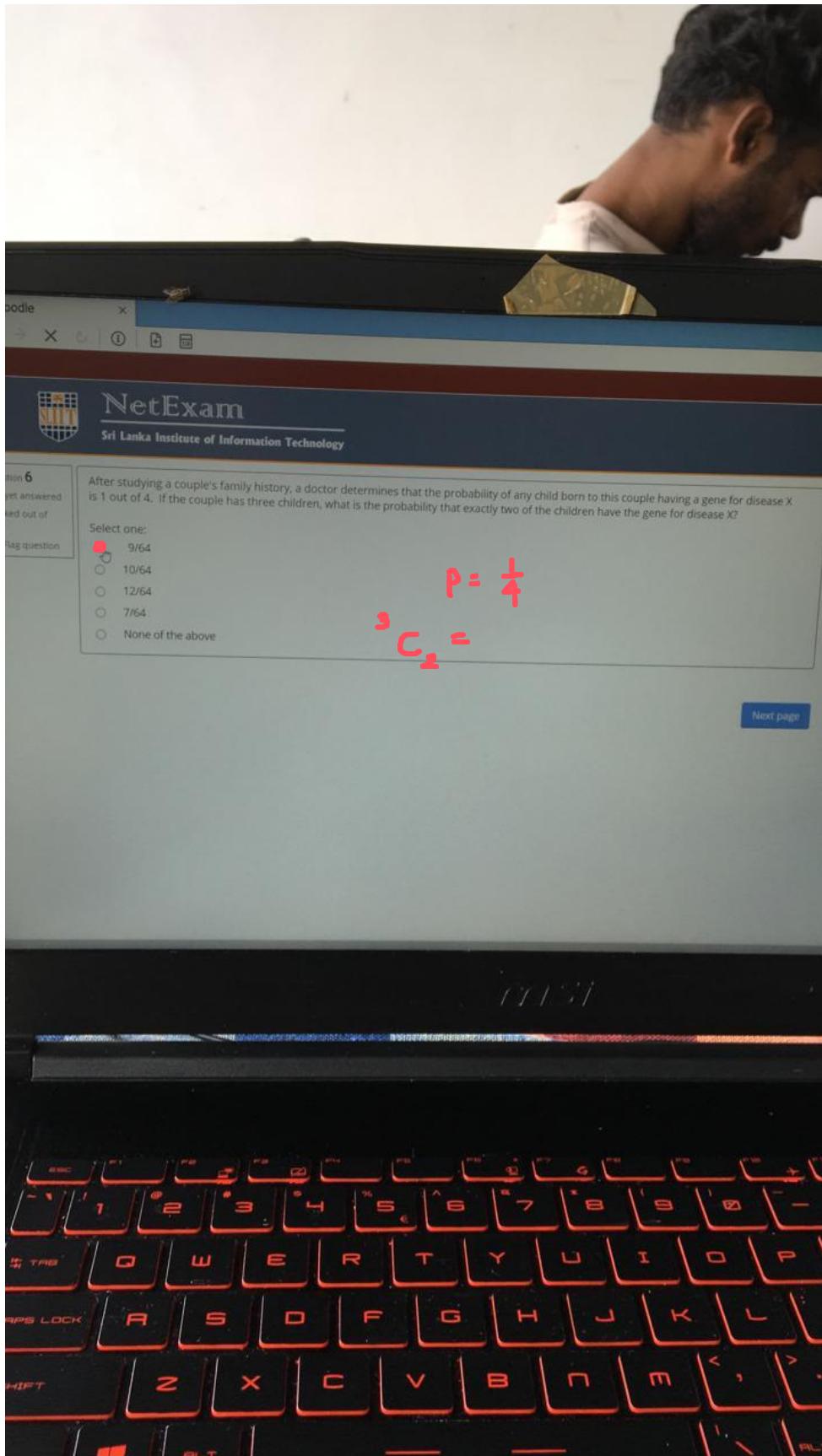
NetExam
Sri Lanka Institute of Information Technology

Question 9
Not yet answered
Marked out of 1.00
Flag question

The tallest bar in a histogram represents?

Select one:

- The class with the highest cumulative frequency
- The class with the lowest relative frequency
- The class with the highest frequency
- The class with the lowest frequency
- None of the above





A garment factory produces large lots of a certain type of garments. What is the mean of the number of defective units found in a sample of 10 units if the lot is 2% defective?

Select one:

- 5
- 2
- 0.2
- 0.98
- None of the above

10
C
4

0.02

e X

X ⌂ | ⓘ + 🖑

 NetExam
Sri Lanka Institute of Information Technology

When each member of a population has an equally likely chance of being selected, this is called:

Select one:

- A nonrandom sampling method.
- A quota sample.
- A judgement sampling
- A simple random sample.
- None of the above.

@ # \$ % ^ & * ()

3 4 5 € 6 7 8 9 0

/W /E R T Y U I O

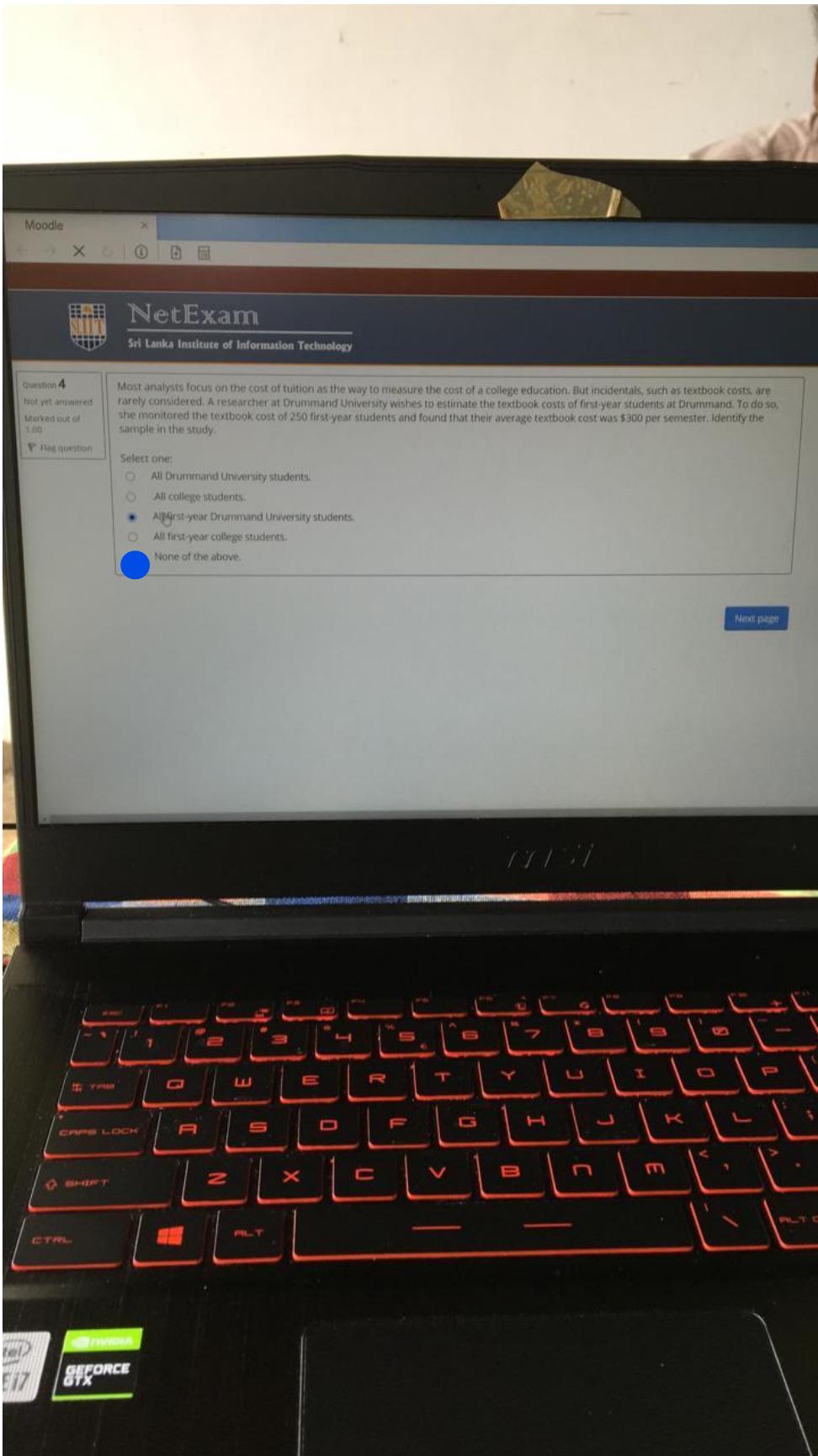
Roll a fair die twice. Let X be the random variable that gives the absolute value of the differences between the two numbers.

$$X = | \text{value of roll 1} - \text{value of roll 2} |$$

Then what is the $P(X=1)$?

Select one:

- 1/6
- 10/36
- 8/36
- 9/36
- 2/36



it19526430 Wijesiriwardena

NetExam
Sri Lanka Institute of Information Technology

A and B are two events. $P(A \text{ and } B)$ ' is equal to:

Select one:

- P(A' or B)
- P(A and B')
- P(A' and B')
- P(A' or B')
- None of the above.

Next page

Quiz navigation

Finish attempt ...
Time left 1:02:35
QUESTIONS
1 2 3 4
9 10 11 12
17 18 19 20
FEEDBACK
21

NetExam
Sri Lanka Institute of Information Technology

Question 2
Not yet answered
Marked out of 1.00
Flag question

Which of the following is not a form of non-probability sampling?

Select one:

- Quota sampling.
- Convenience sampling.
- Cluster sampling.
- Purposive/Judgement sampling.
- They are all forms of non-probability sampling.



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t of
estion

Sampling in which a sampling unit can be repeated more than once is called,

Select one:

- Sampling without replacement
- Simple sampling
- Sampling with replacement
- Repeated sampling
- None of the above



wered
t of
estion

Consider the following probability function

$P(X=x)=cx^2$; $x=3,4,5$, where c is positive constant. Find c.

Select one:

- 0.2
- 0.2
- 0.02
- 2
- None of the above

NetExam

Sri Lanka Institute of Information Technology

Your neighbor has 2 children. You learn that he has a son, Joe. What is the probability that Joe's sibling is a brother? (Assume that boys and girls are equally likely).

Select one:

1/4
 1/5
 1/3
 1/2
 None of the above

$\frac{1}{2}$

NetExam

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X	-10	-20	30
P(X)	1/5	3/10	1/2

Let X be a random variable with the probability distribution given above. The mean of $g(X) = 2X$ is:

Select one:

1
 7
 14
 -1
 None of the above

Consider the following discrete probability distribution for the random variable X .

X	0	1	2
$P(X=x)$	a	b	0.4

If the mean of X is 1 then,

$$a + b + 0.4 = 1$$

$$a + b = 0.6$$

$$0.4 + 1.6 + 0.8 = 1$$

$$0.4 + 1.6 = 0.2$$

?

Select one:

- $a=0.3$ and $b=0.1$
- $a=0.2$ and $b=0.4$
- $a=0.4$ and $b=0.2$
- $a=0.2$ and $b=0.2$
- $a=0.1$ and $b=0.5$

NetExam

Sri Lanka Institute of Information Technology

If the number of arrivals in a queue is 10 per hour on average, determine the probability that, in any hour there will be

- 0 arrivals
- 6 arrivals
- more than 6 arrivals

$$\lambda = 10$$

$$x = 0 \rightarrow x \geq 0 - 2 \geq 1$$

$$x = 6 \rightarrow x \geq 6 - 2 \geq 7$$

$$x > 6 \rightarrow x \geq 7$$

Next page

☰ Quiz n.

Finish attempt

Time left 0:27:5

QUESTIONS

1 2 3

9 10 11

17 18 19

FEEDBACK

21

NetExam
Sri Lanka Institute of Information Technology

it170

Question 5
Not yet answered
Marked out of 3.00
Flag question

In a district, the probability of having a power cut in a house will be 0.003.

What is the probability that 10 houses having the power cut, out of 1000 houses in this district? (Give your answer up to 5 decimal places)

What is the variance of this distribution?

What is the rate of the occurrence in this distribution?

Choose...
Choose...
0.20018
0.00081
4.5
3
0.61110

Next page

Sri Lanka Institute of Information Technology

Question 12
Not yet answered
Marked out of 2.00
Flag question

Consider the following discrete probability distribution for the random variable X .

X	1	2	3	4	5
$P(X=x)$	p	$2p$	$3p$	$4p$	$5p$

The mean of X is,

$$\cancel{\frac{1+2+3+4+5}{5}} = \frac{1}{5}$$

$p + 4p + 9p + 16p + 25p = 55p \times \frac{1}{5}$

Select one:

- 2
- 3
- 3.5
- 3.67
- 5.21

Next page

The screenshot shows a computer screen displaying a software application titled "NetExam" from "Sri Lanka Institute of Information Technology". The main window contains a question: "Which of the following is **not** required for a binomial distribution?". Below the question, the instruction "Select one:" is followed by five options, each preceded by a radio button. The fifth option, "At least fifty observations", has a blue circular selection marker next to it, indicating it is the chosen answer.

NetExam
Sri Lanka Institute of Information Technology

Which of the following is **not** required for a binomial distribution?

Select one:

- Fixed trials
- Constant probability of success
- Independent trials
- Only two outcomes
- At least fifty observations

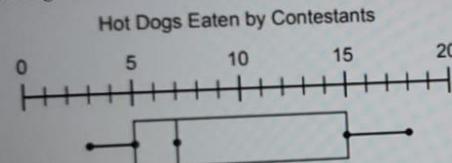


Question 4

Not yet answered

Marked out of
1.00 Flag question

According to the box-and-whisker plot, what is the maximum number of hot dogs eaten in the hot dog eating contest?



Select one:

- 18
- 7
- 3
- 20
- 15

[Next page](#)

Question 1

Not yet answered

Marked out of
2.00 Flag question

Consider the following probability

$$P(X=x) = (1/12)^x \text{ for } x=3,4,5$$

Find the expected value

Select one:

- 3
- 0.3
- 4.28
- 2.5
- None of the above

$$\frac{1}{12} \times 3 + \frac{1}{12} \times 4 + \frac{1}{12} \times 5$$

[Next page](#)



NetExam

Sri Lanka Institute of Information Technology

on 4

answered

out of

question

P(A)=3/8,P(B)=5/8, and P(AUB)=3/4, Find P(A∩B)

Select one:

- 1/5
- 1/4
- 1/8
- 3/8
- None of the above

$$\frac{3}{4} = \frac{3}{8} + \frac{5}{8} - x$$

$$0.75 = 0.375 + 0.625$$

$$0.25 = x$$



NetExam

Sri Lanka Institute of Information Technology

A numerical value used as a summary measure for a sample, such as sample mean, is known as a,

Select one:

- Population parameter
- Sample parameter
- Sample statistic
- Population mean
- None of the above

 NetExam
Sri Lanka Institute of Information Technology

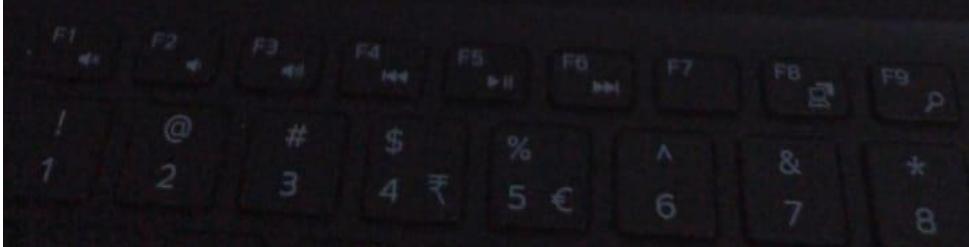
3 answered out of 5 question

Which of the following is a discrete quantitative variable?

Select one:

- The Dow Jones Industrial (stock market) average.
- The volume of water released from a dam.
- The distance you drove yesterday.
- The number of employees of an insurance company
- None of the above.

DELL





2
Answered
out of
question

Which of the following is **not** required for a binomial distribution?

Select one:

- Constant probability of success
- At least fifty observations
- Fixed trials
- Only two outcomes
- Independent trials

 NetExam
Sri Lanka Institute of Information Technology

Find $E(X)$ for the random variable X with table:

values of X :	1	3	5
$P(X=x)$:	$1/6$	$1/6$	$2/3$

Select one:

4
 1
 10
 8
 None of the above

 NetExam
Sri Lanka Institute of Information Technology

Consider the following probability
 $P(X=x) = (1/12) * x$, for $x=3,4,5$

Find the expected value

Select one:

- 3
- 0.3
- 4.28
- 2.5
- None of the above

The screenshot shows a computer screen displaying a software application titled "NetExam" from "Sri Lanka Institute of Information Technology". The main window contains a question: "Which of the following is a discrete quantitative variable?." Below the question, there is a list of five options, each preceded by a radio button. The fifth option, "The number of employees of an insurance company", has a blue circular marker next to it, indicating it is the selected answer.

ed

on

Which of the following is a discrete quantitative variable?.

Select one:

- The Dow Jones Industrial (stock market) average .
- The volume of water released from a dam.
- The distance you drove yesterday.
- The number of employees of an insurance company
- None of the above.

Question 7
yet answered
marked out of 1
Flag question

If we took the 500 people attending a school in Colombo, divided them by gender, and then took a random sample of the males and a random sampling of the females, the variable on which we would divide the population is called the.

Select one:

- Independent variable.
- Dependent variable.
- Stratification variable.
- Sampling variable.
- None of the above.

Next page

it20155520 Amanullah

Quiz navigation

Finish attempt ...
Time left 0:55:52
QUESTIONS
1 2 3 4
9 10 11 12
17 18 19 20
FEEDBACK
21

Question 4
yet answered
marked out of 1
Flag question

Sri Lanka Institute of Information Technology

X	-10	-20	30
P(X)	1/5	3/10	1/2

Let X be a random variable with the probability distribution given above. The mean of $g(X) = 2X$ is:

Select one:

- 1
- 7
- 14
- 1
- None of the above

X | O | I | H | C

 NetExam
Sri Lanka Institute of Information Technology

Which of the following sampling techniques is an **equal probability selection method** (EPSEM) in which every individual in the population has an equal chance of being selected?

Select one:

Simple random sampling.
 Systematic sampling.
 Proportional stratified sampling.
 Cluster sampling.
 All of the above are EPSEM.

[Next page](#)



Sri Lanka Institute of Information Technology

Suppose in a town three candidates are running for the mayor's seat. To predict the winning candidate, 100 voters randomly and the following info about each respondents' choice.

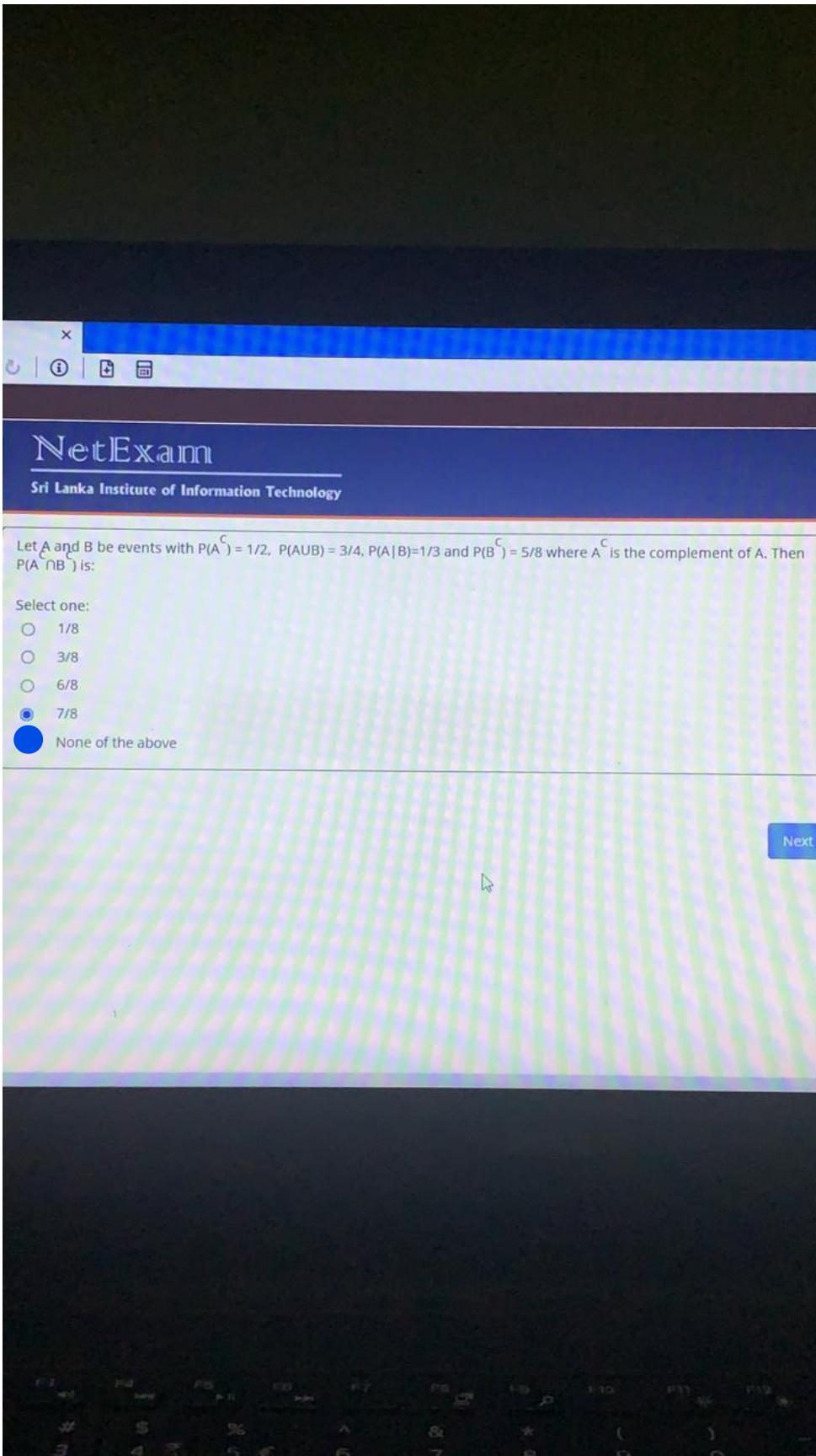
CC A B C C B C B A B C A B A C C A B A B C C

Choose the correct statement.

Select one:

- Population size is 25
- Sample size is not given
- Population is all registered voters in the town at the time of the study.
- Cannot identify a variable from the description
- None of the above

DELL

Let A and B be events with $P(A^C) = 1/2$, $P(A \cup B) = 3/4$, $P(A|B) = 1/3$ and $P(B^C) = 5/8$ where A^C is the complement of A . Then $P(A \cap B)$ is:

Select one:

1/8
 3/8
 6/8
 7/8
 None of the above

[Next page](#)

The class midpoint is

Select one:

- The center of the class
- The width of the class
- The upper limit of the class
- The number of observations in a class
- The lower limit of the class



Answered
at of
question

A number calculated with complete population data and quantifies a characteristic of the population is called which of the following?

Select one:

- A datum
- A parameter
- A statistic
- A population
- None of the above



Next page

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 NetExam
Sri Lanka Institute of Information Technology

5
Answered
out of
question

What are the outliers for the given data set below.
7, 23, 26, 27, 28, 30, 31, 34, 34

Select one:

1, 3
 31, 33
 30, 31
 1, 33
 No outliers

LB $Q_1 - 1.5(IQR)$
UB $Q_3 + 1.5(IQR)$

The image shows a computer monitor displaying a web-based examination system. The top part of the screen features a dark blue header with the text "NetExam" and "Sri Lanka Institute of Information Technology". Below this, the main content area has a light blue background. A math problem is presented: "Consider the following probability function $P(X=x)=cx^2$; $x=3,4,5$, where c is positive constant. Find c." To the left of the question, there is a list of five options for selection:

- 0.2
- 0.2
- 0.02
- 2
- None of the above

Handwritten calculations are written over the right side of the question and options:

$$c_3^2 + c_4^2 + c_5^2$$
$$9 + 16 + 25 = 1$$
$$50c = 1$$
$$c = \frac{1}{50}$$

NetExam
Sri Lanka Institute of Information Technology

If the number of arrivals in a queue is 10 per hour on average, determine the probability that, in any hour there will be

0 arrivals Choose... ▾

6 arrivals Choose... ▾

more than 6 arrivals Choose... ▾

Choose...
0.93291
0.06305
0.00005
0.86086

Next

NetExam
Sri Lanka Institute of Information Technology

Question 8
Not yet answered
Marked out of 1.00
Flag question

Since the population size is always larger than the sample size, the sample statistic

Select one:

can never be larger than the population parameter
 can never be equal to the population parameter
 some cases it can be equal to the population parameter
 can never be smaller than the population parameter
 None of the above

Next page

Finish attempt...
Time left 0:30:18
QUESTIONS
1 2 3
8 9 10
15 16 17
FEEDBACK
21



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t
ation

Most analysts focus on the cost of tuition as the way to measure the cost of a college education. But *incidentals*, such as textbook costs, are rarely considered. A researcher at Drummond University wishes to estimate the textbook costs of first-year students at Drummond. To do so, she monitored the textbook cost of 250 first-year students and found that their average textbook cost was \$300 per semester. Identify the variable of interest to the researcher.

Select one:

- The textbook cost of first-year Drummond University students.
- The year in school of Drummond University students.
- The age of Drummond University students.
- The cost of incidental expenses of Drummond University students.
- None of the above.

[Next page](#)



Question 5

Not yet answered
Marked out of
0.00

[Flag question](#)

Select the correct answer from the below description

A survey conducted by a statistician interviewed 200 young men who didn't go to university. Of those who took restaurant jobs, one in two reached a higher level job and one in four reached a managerial position.

Select one:

- 200 young men are the population of interest
- The variable of interest is a qualitative variable.
- 25% is the population proportion of those who reached the managerial position.
- The sample size is not given in the description
- None of the above

[Next p](#)



A dresser drawer contains one pair of socks with each of the following colours: blue, brown, red, white and black. Each pair is folded together in a matching set. You reach into the sock drawer and choose a pair of socks without looking. You replace this pair and then choose another pair of socks. What is the probability that you will choose the red pair of socks both times?

Select one:

- 1/5
- 1/25
- 1/10
- 1/15
- None of the above



Next page



A personal computer user survey was conducted. Time of personal computer use per week is an example of a

Select one:

- Discrete numerical variable
- Continuous numerical variable
- Nominal categorical variable
- Ordinal categorical variable
- None of the above.



 NetExam
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The statistics course consists of two (2) online quizzes. 22% of the class passed both tests and 41% of the class passed the first test. About what percent of those who passed the first test also passed the second test? (Round up the answer to the nearest integer)

Select one:

- 54%
- 20%
- 3%
- 24%
- None of the above

Next page

it1702194

Quiz na

Finish attempt

Time left 0:28:0

QUESTIONS

1	2	3
9	10	11
17	18	19

FEEDBACK

21

 NetExam
Sri Lanka Institute of Information Technology

Question 15
Not yet answered
Marked out of 2.00
 Flag question

If A is the event, "The team wins at least 5 football games", then A' is:

Select one:

- The team wins more than 5 football games
- The team wins less than 5 football games
- The team does not win any football game
- There is no sufficient information to answer the question
- None of the above

Question 12

Let A and B be events with $P(A^C) = 1/2$, $P(A \cup B) = 3/4$, $P(A|B) = 1/3$ and $P(B^C) = 5/8$ where A^C is the complement of A. Then $P(A \cap B)$ is:

Select one:

- 1/8
- 3/8
- 6/8
- 7/8
- None of the above

Next page

FEEDBACK
21

SLIT NetExam
Sri Lanka Institute of Information Technology

lt20125066 Chandrasena A.P.M.

Question 13

Not yet answered

Marked out of 1.00

Flag question

At a certain school, 18% of all students play football and basketball and 32% of all students play football. What is the probability that a student plays basketball given that the student plays football? (Round up the answer to the nearest integer)

Select one:

- 56%
- 178%
- 50%
- 32%
- None of the above

18
32

Next page

Quiz navigation

Finish attempt ...

Time left 0:24:21

QUESTIONS

1	2	3	4
8	9	10	11
15	16	17	18

FEEDBACK
21

When Joe bowls, he can get a strike (knock down all of the pins) 60% of the time. Assuming that all trials are independent and identical what is the probability for him to bowl zero strikes out of four tries?

Select one:

- 512/10000
- 256/1000
- 256/10000
- 128/10000
- None of the above

 Next

A garment factory produces large lots of a certain type of garments. What is the mean of the number of defective units found in a sample of 10 units if the lot is 2% defective?

Select one:

- 5
- 2
- 0.2
- 0.98
- None of the above

 Next page

The purpose of stratified random sampling is to make certain that,

Select one:

- Every member of the population has an equal chance of being selected for the sample.
- The sample proportionately represents individuals from different categories of the population.
- The participants chosen for the study are the ones most likely to react to the treatment.
- The sample is more representative of the actual population than the accessible population.
- None of the above



A personal computer user survey was conducted. Time of personal computer use per week is an example of a

Select one:

- Discrete numerical variable
- Continuous numerical variable
- Nominal categorical variable
- Ordinal categorical variable
- None of the above.

[Next page](#)



Determine the value of k so that the function $P(X=x) = kx$ for $x=1,2,3,4,5,6$ can serve as a probability distribution of the discrete variable X.

Select one:

- 3/21
- 5/21
- 1/21
- 2/21
- None of the above

K



To be an outlier for the following data set, data points should lie between, 10.2, 14.1, 14.4, 14.4, 14.4, 14.5, 14.5, 14.6, 14.7, 14.7, 14.7, 14.7, 14.9, 15.1, 15.9, 16.4

Hint: Outlier is defined as a value x, holding the following conditions.

$$x > Q3 + 1.5 * (\text{Inter Quartile Range})$$

$$x < Q1 - 1.5 * (\text{Inter Quartile Range})$$

Upper bound

Lower bound

Choose... ▾

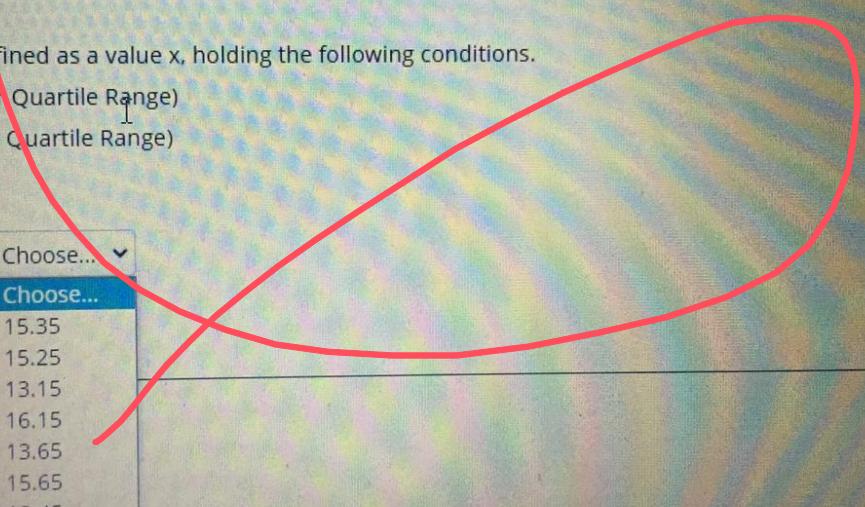
Choose...

15.35
15.25
13.15
16.15
13.65
15.65
12.45
13.45
15.45

red

:

ion



When each member of a population has an equally likely chance of being selected, this is called:

Select one:

- A nonrandom sampling method.
- A quota sample.
- A judgement sampling
- A simple random sample.
- None of the above.

The type of sampling in which each member of the population selected for the sample is returned to the population before the next member is selected is called,

Select one:

- Sampling without replacement
- Sampling with replacement
- Simple random sampling
- Systematic sampling
- None of the above

Let X be the number of passengers in a particular vehicle and it's probability distribution. Find the probability of having at least two passengers in a given vehicle ?

X	0	1	2	3	4
$P(X=x)$	0.2	0.1	a	0.3	0.1

$$x \geq 2$$

Select one:

- 0.5
- 0.7
- 0.6
- 0.2
- 0.4

$$\begin{aligned} a &= 1 - (0.1 + 0.2 + 0.3 + 0.1) \\ a &= 0.3 \end{aligned}$$

$$\begin{aligned} \text{ans} &= 0.1 + 0.3 + 0.3 \\ &= 0.7 \end{aligned}$$



Online Exams

Sri Lanka Institute of Information Technology

Patients arrive at a hospital accident and emergency department at a random rate of 6 per hour.

Find the probability that during 90 minutes period the number of patients arriving at the hospital accident and emergency department is .

At least 10

Choose...

Choose...

0.08392

0.41259

0.55029

0.39370

0.11712

0.13768

Exactly 7

$$\lambda = 6$$

$$\lambda = 9$$

$$x \geq 10$$

$$x = 7$$

$$x \geq 7 - x \geq 8$$

Next page



Online Exams

Sri Lanka Institute of Information Technology

Question 16

Not yet answered

Marked out of
1.00

Flag question

Following is **not** an example for a survey error.

?

Select one:

- Sampling error
- Measurement error
- Selection bias
- Non-response bias
- None of the above



Online Exams

Sri Lanka Institute of Information Technology

17

answered
Time left:
00:00:00

What is the probability that the sum of two die will be greater than 8, given that the first die is 6?

Select one:

- 1/2
- 3/4
- 2/3
- 7/12
- None of the above

$$\begin{aligned} A &\rightarrow \frac{10}{36} \\ B &\rightarrow \frac{6}{36} \\ = P(A \cap B) &= \frac{P(A \cap B)}{P(B)} \end{aligned}$$

$$= \frac{\frac{4}{36}}{\frac{6}{36}} = \frac{4}{6} = \frac{2}{3} //$$

The below transformation is applied to a data set.

$Y = 2X + 3$, where X is the old data and Y is the new data.

If the variance of the first data set is 7 then what is the variance of the new data set.

Select one:

- 24
- 28
- 14
- 7
- None of the above

$$\begin{aligned}V(Y) &= V(2X+3) \\&= 2^2 V(X) + 0 \\&\approx 4 V(X) \\&= 4 \times 7 \\&= 28\end{aligned}$$

Online Exams

Sri Lanka Institute of Information Technology

In an experiment of rolling two dice, the first die shows a ONE and the other die rolls under the table and you cannot see it. Now, what is the probability that both die show ONE?

Select one:

- 1/3
- 1/6
- 1/36
- 9/36
- None of the above

$$\frac{1}{36}$$

$$\frac{1}{36}$$

Next page

20

What is the correct statement regarding two Mutually Exclusive events (A & B).

- 1) outcome of one event does not affect the outcome of the other event. X
- 2) Two events cannot be occurred at the same time. ✓
- 3) $P(A \cap B) = P(A) * P(B)$ X
- 4) $P(A \cup B) = P(A) + P(B)$ ✓

Select one:

- None of the above are correct
- Only (2) is correct
- Only (1) and (3) are correct
- Only (1) is correct
- Only (2) and (4) are correct



Online Exams

Sri Lanka Institute of Information Technology

Question 1

Not yet answered

Marked out of
1.00

Flag question

Which of the following is **not** a form of non-probability sampling?

Select one:

- Quota sampling.
- Convenience sampling.
- Cluster sampling.
- Purposive/Judgement sampling.
- They are all forms of non-probability sampling.



Online Exams

Sri Lanka Institute of Information Technology

An example for a nominal categorical variable is,

NOminal kiynne category ekaka
ex= gender , hair colour

Select one:

- Importance of culture to respondent (very, somewhat, or not very important)
- Opinion about a new political law (favor or oppose)
- Length of forearm from elbow to wrist (in centimeters)
- Number of songs on a digital music player
- None of the above



Online Exams

Sri Lanka Institute of Information Technology

Question 3

Not yet answered

Marked out of
1.00

Flag question

An example for a probability sampling method is,

Select one:

- Quota sampling method
- Convenience sampling method
- Stratified random sampling method
- Volunteer sampling method
- None of the above

random nisa waradi



Online Exams

Sri Lanka Institute of Information Technology

Find mean and standard deviation of the following data set.

13.5, 12.6, 14.6, 19.2, 11.6, 24.3, 17.7

Mean

Choose... ▾

16.2142 ✓

Standard deviation

Choose... ▾

4.4875 ✓



Online Exams

Sri Lanka Institute of Information Technology

Question 5

Not yet answered

Marked out of
1.00

Flag question

In a Car Sale an average of 3 out of every 5 customers would make a business. A random sample of 10 were selected. Find the probability that at least 9 people would make a business.

Select one:

- 0.2546
- 0.0146
- 0.0245
- 0.2145
- 0.0464

$$p = \frac{3}{5}$$

$$= 0.6,$$

$$n = 10$$

$$X \sim \text{Bin}(0.6, 10)$$

$$0.04031$$

$$\underline{\underline{0.00604}}$$

$$\underline{\underline{0.04635}}$$



Online Exams

Sri Lanka Institute of Information Technology

In a classroom, 30% of students are doing Mathematics while 60% are doing Statistics. 10% are doing both of these subjects. What percentage is doing none of these subjects?

Select one:

- 0.6
- 0.3
- 0.5
- 0.2
- 0.1

$$\begin{aligned} &= 0.3 + 0.6 - 0.1 \\ &= 0.8 \\ &= 1 - 0.8 \\ &= 0.2 \end{aligned}$$

Next page



Online Exams

Sri Lanka Institute of Information Technology

The collection and summarization of the socioeconomic and physical characteristics of the employees of a particular firm is an example of

Select one:

- Inferential statistics.
- Descriptive statistics.
- A parameter.
- A statistic.
- None of the above.

Next page

Online Exams

Sri Lanka Institute of Information Technology

Suppose that in a national survey of 500 randomly selected adults, each person is asked how important religion is to him or her (very, fairly, not very), and whether the person favors or opposes stricter regulation of what can be broadcast on network television.

How many variables are there?

Choose... 
Choose...

What is the sample size?

- 550
- 500
- Not given
- 600
- 3
- 4
- 2

thibboth 1 or not given

500

Next page



Select the **incorrect** statement?

Select one:

- Histogram can be used to describe numerical variables
- Pie chart can be used to describe one categorical variable
- Two way table can be used to describe two categorical variables
- Boxplot can be used to describe only one categorical variable numerical
- Stem and leaf plot can be used to describe numerical variables.

Online Exams

Sri Lanka Institute of Information Technology

Consider a computer system with Poisson job-arrival stream at an average of 2 per minute. Determine the probability that in any one-minute interval there will be 0 job arrivals.

Select one:

- 0.28811
- 0.41136
- 0.17492
- 0.03655
- 0.13534

$$\lambda = 2$$

$$x = 0$$



$$x \geq 0 - x > 1$$

Next page

Online Exams

Sri Lanka Institute of Information Technology

The probability of a machine producing a defective part is 0.04. Consider a sample of 100 parts.

What is the rate of the occurrence in this distribution?

$$\text{Rate} = n \times p
= 4$$

What is the probability of having exactly 5 defective parts? (Round your answer upto 5 decimal places)

$$x = 5
x \geq 5 - x \geq 6$$

What is the variance of this distribution?

$$\sigma^2 = np(1-p)
= 4 \times (1 - 0.04)$$

Choose...
Choose...
4.32
0.15926
3.84
0.15629
4
0.37116

Next page

Online Exams

Sri Lanka Institute of Information Technology

In a district, the probability of having a power cut in a house will be 0.003. There are 1000 houses in this district.

What is the rate of the occurrence in this distribution?

3

What is the variance of this distribution?

$$3 \times (1 - 0.003)$$

What is the probability that 10 houses having the power cut? (Give your answer upto 5 decimal places)

$$\lambda = 3$$

$$x = 10 - 3 = 7$$

$$\frac{e^{-\lambda} \lambda^x}{x!}$$

Choose... *

Choose...

4
0.00081
3
0.00018
0.00110
2.991

Next page

Quiz r

1	2
8	9
15	16

Finish attempt

Time left: 0:27



Online Exams

Sri Lanka Institute of Information Technology

Question 13

You answered

Mark out of

Flag question

The mean and the median of the set given below

11, 26, 43, 15, 60, 18, 25

11,15,18,25,26,43,60

Select one:

- Mean = 28.29 and Median = 25
- Mean = 25 and Median = 28.5
- Mean = 27.29 and Median = 26.5
- Mean = 28.5 and Median = 27
- None of the above

A measurement scale which includes true zero point is,

Select one:

- Nominal Scale
- Ordinal Scale
- Interval Scale
- Ratio Scale
- None of the above

lec 1





Sri Lanka Institute of Information Technology

Find mean and P_{18} (Using nearest rank method / round off the position of P_{18} upto nearest integer) for the following data set. (Don't use linear interpolation method to find P_{18})
7.8, 9.9, 10.2, 11.4, 13.6, 18.9, 20.3

Mean

Choose...

P_{18}

Choose...

13.157142

1.44

$$1.44 + = 7.8 + 0.44 \times (9.9 - 7.8)$$
$$= 8.724 //$$

13.157 14

$$pk = (n+1)/100 * k$$

Next page

Time
Final
15



Question 18

Not yet answered

Marked out of
1.00

Flag question

X	-1	0	1	2
P(X=x)	0.3	0.2	a	0.3

Find $P(0 \leq X \leq 2)$?

Select one:

- 0.7
- 0.9
- 0.8
- 0.3
- 0.6



Next page

≡ Quiz navigation

1	2	3	4
8	9	10	11
15	16	17	18

Finish attempt ...

Time left 0:01:33



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In a district, the probability of having a power cut in a house will be 0.0015. There are 3000 houses in this district.

What is the variance of this distribution? $4.5(1 - 0.0015) = 4.49925$ ✓

Choose... ▾

What is the rate of the occurrence in this distribution? 4.5 ✓

Choose... ▾

What is the probability that at most 12 houses having the power cut? (Give your answer upto 5 decimal places)

Choose... ▾

$$\begin{aligned}z \leq 12 &\rightarrow 1 - P(Z > 12) \\&= 1 - e^{-\lambda}\end{aligned}$$

$$0.99999 \checkmark$$

≡ Quiz

1	2
8	9
15	16

Finish attempt

Time left 0:5

Next page

Calculator

0 Close

Degrees Radiants Gradians

MC	MR	MS	M+	M-	Copy		
Inv	In	()	←	CE	C	+/-	\sqrt{x}



Question 1

yet answered
Marked out of

Flag question

In a class room, there are 50 students. You are asked to analyze the relationship between Age and Height of students. What is the **suitable graphical tool** which can be used to describe these two variables together ?

Select one:

- Pie Chart
- Scatter Plot
- Bar Chart
- Clustered Bar Chart
- Histogram

≡ Quiz navigation

1	2	3
8	9	10
15	16	17

Finish attempt ...

Time left 0:59:40

Next page



When selecting individuals for the sample, some individuals in the population have no chance of being selected to the sample (Or some individuals are excluded from the sampling frame). This survey error is known as,

Select one:

- Sampling error
- Measurement error
- Coverage error
- Non-response bias
- None of the above

≡ Quiz

1 2
8 9
15 16

Finish atte

Time left 0

Next page

Following is **not** an example for a survey error.

Select one:

- Sampling error
- Measurement error
- Selection bias
- Non-response bias
- None of the above





Online Exams

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Question 2

Not yet answered

Marked out of
1.00

Flag question

To assess passenger satisfaction, an airline distributed questionnaires to 50 passengers in the airline's frequent flyer lounge. All 50 individuals responded, and 40 respondents said that they had a high degree of satisfaction with the airline.

Select one:

- Simple random sampling
- Quota sampling
- Haphazard sampling
- Cluster sampling
- Convenience sampling

?



Next

X	2	3	4	5
P(X=x)	0.2	0.3	0.2	0.3

Find E(2X+5)

$$\begin{aligned}
 E(x) &= \sum_{x \in X} x \times P(x=x) \\
 &= (2 \times 0.2) + (3 \times 0.3) + (4 \times 0.2) + (5 \times 0.3) \\
 &= 3.6
 \end{aligned}$$

Select one:

- 15.2
- 11.2
- 12.2
- 12.5
- 10.5

$$\begin{aligned}
 &E(x) + 5 \\
 &2 \times 3.6 + 5 \\
 &= 12.2
 \end{aligned}$$



A man sells electronic devices in his shop at an average rate of 2 per day. What is the probability that the man sells at least 3 "electronic devices" in a week (7days) ?

$$\lambda = 14$$

$$x \geq 3$$

Select one:

- 0.99991
- 0.65412
- 0.85456
- 0.21454
- 0.75442





Online Exams

Sri Lanka Institute of Information Technology

Question 1

Not yet answered

Marked out of
1.00

Flag question

Find the probability of a 5 turning uppermost at least once in two tosses of a fair die.

Select one:

- 11/36
- 12/36
- 15/36
- 14/36
- None of the above

Next page

Select the correct answer.

Select one:

- Mode is unique for any data set.
- Quartiles divide a data set in to three equal parts.
- Variance is the positive square root of the standard deviation.
- The mean and the median can be equal for particular data sets.
- None of the above

Online Exams

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To estimate average normal body temperature of all pregnant women in Sri Lanka, a doctor measures the temperatures of 100 healthy pregnant women. The average temperature for that group is 97.2 degrees Fahrenheit.



What is the summary characteristic in this scenario?

static

What kind of statistical summary (parameter or statistic) does above summary characteristic have?

average

Choose...

Choose...

Statistic

Parameter

Average temperature

Temperature

Variance of temperature

mean ,mode

Next page



Online Exams

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Question 2

Not yet answered

Marked out of
1.00

Flag question

What is the correct statement regarding Sample Space (S)?

- 1) A set containing several outcomes of an experiment
- 2) A set containing all the outcomes of an experiment
- 3) $\Pr(S) = 1$
- 4) $P(S) < 1$

Select one:

- Only (1) is correct
- Only (2) is correct
- Only (1) and (3) are correct
- Only (2) and (3) are correct
- None of the above are correct

The set containing all possible outcomes of an experiment

Quiz navigation

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15

Finish attempt ...

Time left 0:49:56

Next page

Question 8

Not yet answered

Marked out of
1.00

Flag question

If $E(X^2 + 2) = 10$ and $E(X) = 2$, find $\text{Var}(X)$

$$\begin{aligned}V(x) &= E(x^2) - [E(x)]^2 \\&= 8 - 4 \\&= 6\end{aligned}$$

Select one:

- 2
- 5
- 6
- 4
- 8

Following table describes about the leisure time activities of 100 students in a class.

	Reading	Watching TV	Listen to music	other
Male	15	25	10	10
Female	20	5	<u>10</u>	5

According to the two way table, what is the percentage of female students who listen to music?

Select one:

- 10%
- 15%
- 20%
- 5%
- None of the above



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Question 5

Not yet answered

Marked out of
1.00

Flag question

Consider a computer system with Poisson job-arrival stream at an average of 2 per minute. Determine the probability that in any one-minute interval there will be at least 3 job arrivals.

Select one:

- 0.41223
- 0.32332
- 0.27764
- 0.21163
- 0.11638

$$\lambda = 1$$

$$x \geq 3$$

Next page





Sri Lanka Institute of Information Technology

What is mean by a statistic?

Select one:

- Characteristic about all the individuals in a population
- Characteristic about all the individuals in a sample
- Summary characteristic about all the individuals in a sample
- Summary characteristic about all the individuals in a population
- None of the above

Next page



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Question 6

Not yet answered

Marked out of
1.00

 Flag question

People who are available, or can be easily recruited are used in the sampling method called,

Select one:

- Simple random sampling.
- Cluster sampling.
- Systematic sampling.
- Convenience sampling
- None of the above,



Next page



Sri Lanka Institute of Information Technology

An example for a non-probability sampling method is,

Select one:

- Quota sampling method
- Simple random sampling method
- Stratified random sampling method
- Cluster sampling method
- None of the above





Online Exams

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Question 9

yet answered

Mark out of

1

Flag question

Most analysts focus on the cost of tuition as the way to measure the cost of a college education. But incidentals, such as textbook costs, are rarely considered. A researcher at Drummond University wishes to estimate the textbook costs of first-year students at Drummond. To do so, she monitored the textbook cost of 250 first-year students and found that their average textbook cost was \$300 per semester. Identify the sample in the study.

Select one:

- All Drummond University students.
- All college students.
- All first-year Drummond University students.
- All first-year college students.
- None of the above.





Question 12

Not yet answered

Marked out of

0.00

Flag question

Sample mean and the median of the following data are respectively given by
-1, 2, 0, 3, 3, 4, 2

Select one:

- 2 and 1.875
- 1.8571 and 2
- 1.7209 and 1.9863
- 1.574 and 2
- None of the above



Next page

In a study there were 15 males and 34 females. What is the graphical tool which **cannot** be used to describe this information?

Select one:

- One-way frequency table
- Box plot
- Pie chart
- Bar chart
- All the above cannot be used

Consider the variable, number of coins in a purse. What type of variable is it?

Select one:

- Nominal Variable
- Ordinal Variable
- Discrete Variable
- Continuous Variable float value
- None of the above

categorical





14

Answered
out of
question

Which of the statements is false?

Select one:

- Variance is a measurement of dispersion.
- The units being used in the variance are not meaningful always.
- Variance is highly effected by the extreme values of the data set.
- Variance can be zero for some data sets. when data set's value equal
- None of the above

This is a measurement of dispersion/spread of the data. This describes how the data has dispersed around its mean

Next p



Online Exams

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Question 11

Not yet answered

Marked out of
2.00

Flag question

To estimate average normal body temperature of all pregnant women in Sri Lanka, a doctor measures the temperatures of 100 healthy pregnant women. The average temperature for that group is 97.2 degrees Fahrenheit.

What is the summary characteristic in this scenario?

Choose...

What kind of statistical summary (parameter or statistic) does above summary characteristic have?

Choose...



Next page



Online EXAMINING

Sri Lanka Institute of Information Technology

Consider two events (A & B)
 $P(A \cup B)' = 0.1$, $P(A) = 0.5$, $P(B) = 0.7$, find $P(A'|B)$

Select one:

- 0.164
- 0.245
- 0.654
- 0.842
- 0.571

Question 7
Not yet answered
Marked out of
1.00

Flag question



Online Exams

Sri Lanka Institute of Information Technology

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estion

What is mean by central tendency?

Select one:

- This gives an idea about the asymmetry of the data as a whole
- This gives an idea about whether the distribution is peaked or flat
- This is a measurement of dispersion/spread of the data
- This gives an idea about the location of the data as a whole
- None of the above

Quiz r

1	2
8	9
15	16

Finish attempt

Time left 0:09

Next page

Question 19

Not yet answered

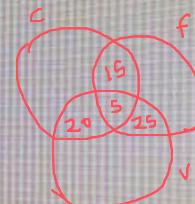
Marked out of
0

Flag question

In a school there are 120 students, 55 students are playing cricket. 50 students are playing football and 50 students are playing volleyball. 15 students are playing both cricket and football. 25 students are playing both football and volleyball. 20 students are playing both cricket and volleyball. 5 students are playing all three games. What is the probability that a randomly selected student play any of this game?

Select one:

- 0.932
- 0.445
- 0.245
- 0.333
- 0.554



$$100/120$$

$$P(C \cap F) = 15$$

$$P(F \cap V) = 25$$

$$P(C \cap V) = 20$$

$$P(C \cap F \cap V) = 5$$

$$P(C \cup F \cup V) = 0.4583 + 0.4166 + 0.4166 - ($$

Quiz navigation

1	2	3	4
8	9	10	11
15	16	17	18
19	20	21	22

Finish attempt ...

Time left 0:07:22

Next page



20

answered

out of

question

Which of the statements is false?

Select one:

- Variance is a measurement of dispersion.
- The units being used in the variance are not meaningful always.
- Variance is highly effected by the extreme values of the data set.
- Variance can be zero for some data sets.
- None of the above

Finish attempt -



Online Exams

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Question 12

Not yet answered

Marked out of

.00

Flag question

Mode and the median of the following data set respectively

6, 5, 5, 4, 3, 5

Select one:

- 6 and 6
- 5 and 6
- 5 and 5.5
- 5 and 5
- None of the above

3,4,5,5,5,6



it19158600 Vitharanagamage A.T

Online Exams

Sri Lanka Institute of Information Technology

In the 2000 census of Sri Lanka, it was determined that the average household size was 2.59 persons per household.

What is the summary characteristic in this scenario?

Choose: static

What kind of statistical summary (parameter or statistic) does above summary characteristic have?

Choose: average



Next page

≡ Quiz navigation

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

Finish attempt ...

Time left 0:02:13

Which of the following is not a form of non-probability sampling?

Select one:

- Quota sampling.
- Convenience sampling.
- Cluster sampling.
- Purposive/Judgement sampling.
- They are all forms of non-probability sampling.

A telephone survey of 500 residences was conducted. People refused to talk to the interviewer in 200 of the residences. What is the potential error in this scenario?

Select one:

- Sampling error
- Measurement error
- Coverage error
- Non-response bias
- None of the above

Next page

In a production line on average there are 4 defective bulbs from 10 bulbs. A random sample of 20 bulbs were chosen. Calculate the average number of defective bulbs and variance.

Select one:

- Average= 5, variance=6.8
- Average= 7, variance=4.8
- Average= 8, variance=4.8
- Average= 8, variance=7.8
- Average= 5, variance=5.8

$$E(x) = np = 8,$$

$$P = \frac{4}{10} = 0.4 //$$

$$\begin{aligned} V(x) &= np(1-p) \\ &= 8(1-0.4) \\ &= 8 \times 0.6 \\ &\Rightarrow 4.8 // \end{aligned}$$

$$n = 20 //$$

≡ Quiz navigation

1	2	3	4
8	9	10	11
15	16	17	18

Finish attempt ...

Time left 0:37:38

Next page

$$P(A \cap B) = 0.22$$
$$P(A) = 0.41$$

The statistics course consists of two (2) online quizzes. 22% of the class passed both tests and 41% of the class passed the first test. About what percent of those who passed the first test also passed the second test? (Round up the answer to the nearest integer)

Select one:

- 54%
- 20%
- 3%
- 24%
- None of the above

22/41 * 100

≡ Quiz navigation

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20				



AT19072724 Roshan Jayakody P.L.D at19072724

Next page

Finish attempt
Time left: 0:46:22



Online Exams

Sri Lanka Institute of Information Technology

Which of the following sampling techniques is an **equal probability selection method** (EPSEM) in which every individual in the population has an equal chance of being selected?

≡ Quiz

Select one:

- Simple random sampling.
- Systematic sampling.
- Proportional stratified sampling.
- Cluster sampling using the PPS technique.
- All of the above are EPSEM.

1	2
8	9
15	16

Finish attempt

Time left 0:



Next page

Sampling or Information Technology

To assess passenger satisfaction, an airline distributed questionnaires to 50 passengers in the airline's frequent flyer lounge. All 50 individuals responded, and 40 respondents said that they had a high degree of satisfaction with the airline.

Select one:

- Convenience sampling
- Cluster sampling
- Haphazard sampling
- Quota sampling
- Simple random sampling

Next page

Quiz na

1	2	
8	9	1
15	16	1

Finish attempt

Time left 0:23:0



Online Exams

Sri Lanka Institute of Information Technology

Question 10

Not yet answered

Marked out of
1.00

Flag question

Suppose 2% of the bolts produced by a factory are defective. In a shipment of 3600 bolts from the factory, find the mean number of defective bolts and the standard deviation without using any approximation.

Select one:

- Mean = 72, standard deviation = 70.56
- Mean = 72, standard deviation = 8.4
- Mean = 720, standard deviation = 24
- Mean = 720, standard deviation = 576
- None of the above

$$p = 0.02$$

$$n = 3600$$

$$E(x) = 720$$

$$\sigma(x) = \sqrt{720(1-0.02)}$$

$$= 70.56 //$$

Next page



Online Exams

Sri Lanka Institute of Information Technology

Question 13

Not yet answered

Marked out of

1.00

Flag question

X	0	1	2	3
P(X=x)	0.2	0.3	a	0.3

Find the expected value of X ?

$$\begin{aligned}E(x) &= 0 \times 0.2 + 1 \times 0.3 + 2 \times 0.2 + 3 \times 0.3 \\&= 1.6\end{aligned}$$

Select one:

- 0.16
- 2.1
- 1.6
- 0.12
- 1.2



Next page