

STT205

A survey asked people how often they exceed speed limits. The data are then categorized into the following contingency table of counts showing the relationship between age group and response.

Among people with age over 30, what's the "risk" of always exceeding the speed limit?

0.20

The sample mean (\bar{X}) of first n natural numbers is:

Which mean is most affected by extreme values?

Arithmetic mean

Which measure of dispersion is least affected by extreme values?

Quartile deviation

In a survey of companies, it was found that 45 were in the mining sector, 72 were in the financial sector, 32 were in the IT sector and 110 were in the production sector. If a company is selected at random, what is the probability that this company is not in the production sector?

0.575

The mean of hypergeometric distribution is

There are 6 pupils and 4 cats. In how many can they be seated in a row so that no cats sit together:

$6! \times 7P4$

If the harmonic mean of the two numbers X_1 and X_2 is 6.4 if $X_2=16$, then X_1 is:

4

If all the items in a variable are non-zero and non-negative then:

Methods of organizing, summarizing, and presenting data in an informative way are called:

Descriptive statistics

_____ is used to determine something about a population on the basis of a sample

Inferential statistics

If quartile range is 24 then quartile deviation is

48

If arithmetic mean is multiplied by the coefficient of variation then the resulting value is classified as

standard deviation

If a value represents the 95th percentile, this means:

95% of all values are below this point

The difference between the first and third quartile is called the interquartile range

The mode is best described as:

the most frequently occurring value

Summary and presentation of data in tabular form with several non-overlapping classes is

frequency distribution

In a given sports activity, the annual rate of accidents is of about 4 per thousand people. An insurance company has 3000 insured clients that practice such sports activity. A good approximation of the number of accident compensations the insurance company will have to pay in a given year is given by the distribution

Type of probability distribution whose standard deviation is one and mean is equal to zero is classified as

standard normal probability distribution

Formula to calculate standardized normal random variable is

In binomial distribution, formula of calculating standard deviation is

square root of npq

In standard normal probability distribution, z-score of distribution will be zero if

If z-score of normal distribution is 2.5, mean of distribution is 45 and standard deviation of normal distribution is 3 then value of x for a normal distribution is

37.5

If value of failure in binomial probability distribution is 0.70 and success is 0.30 and number of values in distribution are 7 then moment coefficient of kurtosis is

0.18

If occurrence of a statistical event A does not affect occurrence of event B and vice versa then these events are classified as

statistically independent events

Conditional probability of two independent events Y and Z can be written as

Measure of chance of an uncertain event in form of numerical figures is classified as

probability

Tail or head, one or zero and girl and boy are examples of

complementary events

When the coefficient of skewness is zero, the frequency curve is

Bell shaped

Which of the following sets of figures has the greatest variability (range)?

-2, 5, 8, 12

In a group of 6 boys and 44 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there?

209

In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together?

50400

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50400

Kurtosis defines peakness of curve in region which is

around the mode

For Karl Pearson's skewness coefficient value of skewness must be in limits

Statistical measures such as deciles, percentiles, median and quartiles are classified as part of

quartile system

A set of scores is presented in a histogram. The histogram shows a series of bars that tend to decrease in height from left to right. What is the shape of the distribution?

Positively skewed

Which of the following statements is not correct?

The bar in a column chart touches each other

Discrete variables and continuous variables are two types of quantitative classification

Which of the following is a unit less measure of dispersion?

Coefficient of variation

If a constant 5 is added to each observation of a set, the mean is

Increased by 5

Which of the following statements is always correct?

Median = Q_2 = D_5 = P_{50}

The mean of 10 observations is 10. All the observations are increased by 10%. The mean of increased observations will be:

11

In a survey of companies, it was found that 45 were in the mining sector, 72 were in the financial sector, 32 were in the IT sector and 110 were in the production sector. What is the likelihood that a randomly selected company is either a mining company or an IT company?

0.297

If A and B are mutually exclusive events with $P(A) = 0.3$ and $P(B) = 0.5$, then $P(A \cup B) =$

0.80

In random experiment, observations of random variable are classified as

trials

Consider probability distribution as standard normal, if value of μ is 75, value of x is 120 with unknown standard deviation of distribution then value of z -statistic

will be positive

If mean of binomial probability distribution is 25 then mean of Poisson probability distribution is

25

The arithmetic mean height of 50 students of a college is 5'8''. The height of 30 of these is given in the frequency distribution below:

Approximately what is the arithmetic mean height of the remaining 20 students?

5'9''

Age distribution of 200 employees of a firm is given below:

The mean wage rate is: _____ (correct to 2 decimal places)

59.00

The frequency distribution of the hourly wage rate of 60 employees of a paper mill is as follows:

The mean wage rate is: _____ (correct to 2 decimal places)

59.00

18

Data based on workers salary is given as: 2500, 2700, 2600, 2800, 2200, 2100, 2000, 2900, 3000, 2800, 2200, 2500, 2700, 2800, 2600; and number of classes desired is 10 then width of class interval is _____

100

The number of clients that enter a given store each hour follows a Poisson distribution with mean 3.25. We assume independence between the different hours. The probability that in a given hour exactly 5 clients enter the store is _____

0.1172

In a given sports activity, the annual rate of accidents is of about 4 per thousand people. An insurance company has 3000 insured clients that practice such sports activity. A good approximation of the number of accident compensations the insurance company will have to pay in a given year is given by _____ distribution

Poisson

Mean of 10 items is 50 and S.D is 14. What is the sum of squares of all items? _____

26960

A box of nine golf gloves contains two left-handed and seven right handed gloves. If three gloves are selected without replacement, what is the probability that all of them are left handed? _____

Zero

The mean and variance of 7 observations are 8 and 16. If 5 of the observations are 2, 4, 10, 12, 14 the remaining 2 observations are? _____

6 and 8

The number of partition values in case of quartiles is _____

Three

Which measure of dispersion ensures highest degree of reliability? _____

Standard deviation

The mode of a frequency distribution can be determined graphically by _____

Histogram

Mean deviation is Minimum when deviations are taken from _____

Median

Sampling is simply a process of learning about the _____ on the basis of a sample drawn from it

Population

The mean deviation about median from the data: 340, 150, 210, 240, 300, 310, 320 _____(correct to 1 decimal place)

52.9

A _____ variable is a variable whose values can theoretically take on an infinite number of values within a given range of values

Continuous

Out of all the 2-digit integers between 1 and 200, a 2- digit number has to be selected at random. What is the probability that the selected number is not divisible by 7?

77/90

A researcher is interested in the travel time of Utrecht University students to college. A group of 50 students is interviewed. Their mean travel time is 16.7 minutes. For this study the mean of 16.7 minutes is an example of a(n) ____

Statistic

The mean of 10 observations is 10. All the observations are increased by 10%. The mean of increased observations will be_____

11

An arrangement of finite numbers of objects taken some or all at a time is called their_____

Permutation

If the harmonic mean of the two numbers X_1 and X_2 is 6.4 if $X_2=16$, then X_1 is ____

4

If quartile range is 24 then quartile deviation is_____

48

Suppose that a histogram of a data set is approximately symmetric and "bell shaped". Approximately percent of the observations are within one standard deviation of the mean

68

Suppose that a histogram of a data set is approximately symmetric and "bell shaped". Approximately percent of the observations are within two standard deviation of the mean

95

Histograms, pie charts and frequency polygons are all types of ____ dimension diagrams

One

Probability of success increases in binomial probability distribution if the value of probability of failure _____

decreases

If the value of x for normal distribution is 35, mean of normal distribution is 65 and standard deviation is 25 then standardized random variable is ____

-1.2

If mean of binomial probability distribution is 25 then mean of Poisson probability distribution is _____

25

If value of failure in binomial probability distribution is 0.70 and number of values in distribution are 7 then moment coefficient of kurtosis is _____

0.18

The set of all possible outcomes of a random experiment is known as _____

Sample space

A well-defined collection of objects is known as _____

set

If occurrence of one event prevents the occurrence of other event then the two events are classified as _____ events

Mutually exclusive

If occurrence of one event affects or explains occurrence of other event then events are classified as _____

Dependent events

If a bag contains three fruits, 16 percent are apples, 30 percent are oranges and 20 percent some other fruit that is neither oranges nor apples then probability of selecting an orange randomly is _____

0.3

Around central value of observations, extent to which values depart from normal distribution is classified as _____

skewness

Mean of binomial probability distribution is 857.6 and probability of success is 64%. The number of trials in this binomial distribution is _____

81340

Approach in probability in which all outcomes from an experiment are equally likely to occur or are mutually exclusive is called _____ approach

Classical

If value of success in binomial probability distribution is 0.40 and failure is 0.60 and number of trials in this distribution are 5 then moment coefficient of skewness is _____

0.167

Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed? _____

25200

The probability of success changes from trial to trial in _____ distribution

hypergeometric

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0.297

Hypergeometric distribution has _____ parameters

Three

Poisson distribution has _____ parameters

One

In kurtosis, frequency curve which looks more peaked than normal curve of bell shaped distribution is classified as _____

leptokurtic

2600 applications for home mortgage are received by a bank and probability of approval is 0.78 then standard deviation of binomial probability distribution is_____

446.16

Zero

The average of the sum of squares of the deviations about mean is called_____

Variance

A card is drawn from a well shuffled pack of playing cards. What is the probability that it is either a diamond or a king? _____

4/13

0.8