

# Victoria University of Bangladesh

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Ans. to the Q. No - (1)

A single number out of list taken as a representative of all this numbers in the list, is a basic concept of average as it is clearly explained itself in this line.

Averages are used to represent a large number range with a single number. It is a graphical representation of all the numbers in the data set.

The major characteristics of a

good average.

1. Simplicity: The fundamental feature of the average is that it should be ~~easy~~ easy calculate simple to follow.

2. Representation: Average should ~~be~~ represent the entire mass of data.

3. Rigidly defined: Average should be rigidly defined. If it is so, instability in its value will be a definite figure.

4. Algebraic treatment: Averages are always capable of further algebraic treatment.

5. Clear and stable definition: A good average should have a clear and stable definition.

6. Absolute number: A good average should be an absolute number.

7. Effective fluctuations of sampling:

A good average should not be affected by variations of sampling. In other words, if different samples are taken from the production of rice.

8. Not affected by skewness: A good average is one which is not affected by skewness in the distribution.

9. Based on all values of a variable.

An average is said to be a true representation only when it is based on all the values of a variable.

10. No effect on extreme values:

For good average, it should not be unduly affected by extreme values. If it is so, it will not be a true representative.

11. Value can be found by

graphic method: A good average

is one which can be found by

arithmetic as well as graphic

method.



Ans to the Q 'No - 2

Difference between dependent and independent variable.

Independent variable is one whose values are deliberately changed by the researcher in order to obtain a desired outcome.

Dependent variable refers to a variable which changes its values in order in reciprocal change in the values of independent variable.

1. The variable whose values are deliberately changed by the researcher in order to obtain the desired outcome is called an independent variable. ~~the~~

2. The values of the independent variable can be changed as per requirement, by the researcher.

3. Manipulation can be done in the values of the independent variable.

4. In simple linear regression 'y' denotes dependent variable while 'x'.

denotes dependent variable while 'x' denotes independent variable, while 'x' denotes independent variable, which means 'y' depends on x.

Different categories of correlation -

1. Positive and negative correlation: Whether the correlation between the variables is positive or negative depends on its direction is positive when both the variables. The correlation is said to be negative when both the variables move in the opposite direction.



2. Simple, partial and multiple correlation: whether the correlation is simple, partial or multiple depends on the number of variables studied.

3. Linear and non-linear correlation: whether the correlation between the variables is linear or non-linear depends on the constancy of ratio of change between the variables. Ratio of change between the variables.

Ans. to the Q No (3)

A chi-square statistic is a test that measures how a model compares to actual observed data. The data used in calculating a chi-square statistic must be random, raw, mutually exclusive, drawn from a large enough sample. For example, the results of tossing a fair coin meet these criteria.

A chi-squared test is basically a data analysis on the ~~basis~~ basis of observations of a random set

of variables. Usually, it is a comparison of two statistical data sets. The chi-square test is used to estimate how likely the observations that are made would be, by considering the assumption of the null hypothesis as true.

The important properties of the chi-square test:

\* Two times the number of degrees of freedom is equal to the variance

\* The number of degree of freedom is equal to the mean distribution.

\* The chi-square distribution curve approaches the normal distribution when the degree of freedom increases.

The chi-squared test is done to check if there is any difference between the observed value and expected value. The formula for chi-square can be written as -

$$\chi^2 = \sum \frac{(\text{observed value} - \text{expected value})^2}{\text{Expected value}}$$

The chi-square test of independence also known as the chi-square test of association which is used to determine the association between the categorical variables.

It is considered as a non-parametric test. It is mostly used to test statistical independence.

So, it gives the probability of independent variables.



### Ans. to the Q. No (4)

Business reports as a planned, impartial and objective-based presentation of a fact to one person or more people and that too is for significant and specific business purpose.

Boone considered a business report as a document to organize some specific topics and information for a particular business purpose.

The features of any business report are as mentioned below.

1. Easily understandable: To hold the audience's attention, a business report should be easy to understand. ~~The~~

Complex terminology and detailed information can be included in business reports in case of a vast industry experienced audience.

2. Correct and unbiased facts: The business report must contain facts

or information that is accurate and impartial. If the information is ~~int~~ incorrect then desired results can't be achieved.

3. Clean and brief information: Too much lengthy or unnecessary information on content may loose the audience's interest and result in their time wastage.

4. Precise report: A good report is the one in which a report writer has a clear understanding

18

of the exact purpose of report writing.

6. Focus on the audience: The orientation of the business report towards the audience or readers who is about to read is also an important characteristics.

7. Use of easy or simple language:

Another feature of a good business report is the use of simple language while writing the report.

These are the features of a good business report.