

Mean - Average

Definition - Mean

An average is a single value with the range of the data that is used to represent all the values in the series. Since, an average is some where within the range of the data it is called a measure of central value.

- Crokton & Groudown

Average is an atten to find one single figure to describe whole of figures Clark & Sekkada.

Objectes

- 1) Birds eye view of entire data
- 2) To facillitate Comparising Data
- 3) Universe from a Sample

Types of Average.

- (Average)
1. Arithmetic Mean $\begin{cases} \rightarrow \text{Simple} \\ \rightarrow \text{Weighted} \end{cases}$
 2. Median
 3. Mode
 4. Geometric Mean & Harmonic Mean

Calculation of Simple Arithmetic Mean

1. Simple \rightarrow Individual series (numbers)

a) Direct Method

\rightarrow (When there is no frequency)

Mean formula

$$\bar{x} \text{ Mean} = \frac{\text{Sum of all variables values}}{\text{No of values}}$$

$$\bar{x} = \frac{x_1 + x_2 + \dots + x_n}{N} \quad (\text{or}) \quad \bar{x} = \frac{\sum x}{N}$$

\sum = Sum of

\bar{x} = Arithmetic Mean

$\sum x$ = Sum of values

N = Number of values