

Statistics

Arithmetic Mean - The mean is the sum of the value of each observation in a dataset divided by the number of observations.

Mean of ungrouped data -

If n observations in data $x_1, x_2, x_3, \dots, x_n$, then the arithmetic mean \bar{x} is given by -

$$\bar{x} = \frac{x_1 + x_2 + \dots + x_n}{n} = \frac{1}{n} \sum_{i=1}^n x_i$$

Median - The median is the middle value in distribution when the values are arranged in ascending or descending order.

Median of ungrouped data.

• If n is odd,

$$\text{Median} = \text{Value of } \left(\frac{n+1}{2}\right)^{\text{th}} \text{ observation}$$

• If n is even,

$$\text{Median} = \frac{\text{Value of } \left(\frac{n}{2}\right)^{\text{th}} \text{ obs} + \text{Value of } \left(\frac{n}{2} + 1\right)^{\text{th}} \text{ obs}}{2}$$

Range :- Difference b/w max^m & min^m value in a data

$$\text{Range} = \left| \text{Max}^m \text{ value} - \text{Min}^m \text{ value} \right|$$