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Collection and Organisation of data in a particular manner makes it easier for us to understand and interpret data.

Before collecting data, we need to know what we would use it for.

Examples

- Performance of your class in Mathematics.
- Performance of India in football or in cricket.
- Female literacy rate in a given area, or
- The number of children below the age of five in the families around you.

Average is a number that represents or shows the central tendency of a group of observations of data.

Arithmetic Mean:-

The arithmetic mean (AM) or simply mean is defined as follows:

Arithmetic Mean = $\frac{\text{Sum of all observations}}{\text{No. of observations}}$.

Mean always lies between the greatest and smallest observation of the data.

Range:-

Range is the difference between the highest and the lowest observation of the data. i.e. Range = Highest observation – Lowest observation.

Mode:-

Mode of a set of observation is the observation that occurs, the most often e.g. 2 is the mode of a set of numbers 1, 1, 2, 4, 3, 2, 1, 2, 2, 4.

Median:-Median refers to the value which lies in the middle of the data with half of the observations above it and the other half below it.

e.g. 24, 36, 46, 17, 18, 25, 35 is given data.

Firstly, data is to arranged in ascending order i.e. 17, 18, 24, 25, 35, 36, 46.

Since the median is the middle observation, therefore 25 is the median.

If the data has an odd number of items, then the median is the middle number.

If the data has an even number of items, then the median is mean of two middle numbers.