MODE

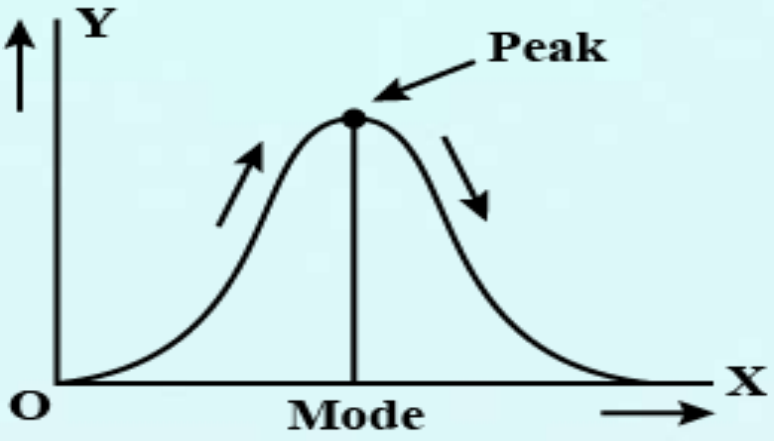
MODE

Mode is the value which occurs most frequently in a set of observations. Simply put, it is the number which is repeated most, i.e. the number with the highest frequency. In the field of statistics, it is an important tool to interpret data in a relevant manner. Now it is possible for the data set to be multimodal (has more than one mode) which means more than one observation has the same number of frequencies.

Example: Let us find the Mode of the following data

4, 89, 65, 11, 54, 11, 90, 56

Here in these varied observations the most occurring number is 11, hence the Mode = 11



CHARACTERISTICS

- It is the most frequent value in the distribution; it is the point of greatest density.
- The value of the mode is established by the predominant frequency, not by the value in the distribution.
- If a set has two modes then both of those numbers are said to be modes of the set. Thus, when this takes place, the set is referred to as bimodal.

Advantages

1. It is easy to understand and simple to calculate.
2. It is not affected by extremely large or small values.
3. It can be located just by inspection in ungrouped data and discrete frequency distribution.
4. It can be useful for qualitative data.
5. It can be computed in an open-end frequency table.
6. It can be located graphically.

Disadvantages

1. It is not well defined.
2. It is not based on all the values.
3. It is stable for large values so it will not be well defined if the data consists of a small number of values.
4. It is not capable of further mathematical treatment.

Mode from Ungrouped Data

Mode is calculated from ungrouped data by inspecting the given data. We pick out the value which occurs the greatest number of times in the data.

Mode from Grouped Data

As we know that Mode is the most frequently occurring number of a data set. This is easily recognizable in an ungrouped dataset, but if the data set is presented in class intervals, this can get a bit tricky

Steps to be followed to calculate the Mode are,

1. Create a table with two columns
2. In column 1 write your class intervals
3. In column 2 write the corresponding frequencies
4. Locate the maximum frequency denoted by f_m
5. Determine the class corresponding to f_m , this will be your Modal class

$$\text{Mode} = L + \frac{f_m - f_1}{(2f_m - f_1 - f_2)} \times h$$

1. Where,
2. L = lower limit of Modal Class
3. f_m = frequency of modal class
4. h = width of modal class
5. f_1 = frequency of pre modal class
6. f_2 = frequency of post modal class