## Mode.

Mode:The mode or model value of a distribution is that value of the variable for which the frequency is maximum. For continuous series, mode is calculated as, Mode
$=l_{1}+\left[\frac{f_{1}-f_{0}}{2 f_{1}-f_{0}-f_{2}}\right] \times i$
Where, $l_{1}=$ The lower limit of the model class
$f_{1}=$ The frequency of the model class
$f_{0}=$ The frequency of the class preceding the model class
$f_{2}=$ The frequency of the class succeeding the model class
$\mathrm{i}=$ The size of the model class.

Symmetric distribution:A symmetric is a symmetric distribution if the values of mean, mode and median coincide. In a symmetric distribution frequencies are symmetrically distributed on both sides of the centre point


A distribution which is not symmetric is called a skewed-distribution. In a moderately asymmetric the interval between the mean and the median is approximately one-third of the interval between the mean and the mode i.e. we have the following empirical relation between them Mean - Mode $=3($ Mean - Median $) \Rightarrow$ Mode $=3$ Median -2 Mean. It is known as Empirical relation.

## Important Tips

- Some points about arithmetic mean
- Of all types of averages the arithmetic mean is most commonly used average.
- It is based upon all observations.
- If the number of observations is very large, it is more accurate and more reliable basis for comparison.
$\sigma$ Some points about geometric mean
- It is based on all items of the series.
- It is most suitable for constructing index number, average ratios, percentages etc.
- G.M. cannot be calculated if the size of any of the items is zero or negative.
$\sigma$ Some points about H.M.
- It is based on all item of the series.
- This is useful in problems related with rates, ratios, time etc.
- A.M. $\geq$ G.M. $\geq$ H.M. and also $(\text { G.M. })^{2}=($ A.M. $)($ H.M. $)$


## ๑- Some points about median

- It is an appropriate average in dealing with qualitative data, like intelligence, wealth etc.
- The sum of the deviations of the items from median, ignoring algebraic signs, is less than the sum from any other point.


## $\sigma$ Some points about mode

- It is not based on all items of the series.
- As compared to other averages mode is affected to a large extent by fluctuations of sampling,.
- It is not suitable in a case where the relative importance of items have to be considered.

