

The **skewness in statistics** is a measure of asymmetry or the deviation of a given random variable's distribution from a symmetric distribution (like normal Distribution).

In Normal Distribution, we know that: Median = Mode = Mean

Skewness in statistics can be divided into two categories. They are:

- Positive Skewness
- Negative Skewness

Positive Skewness

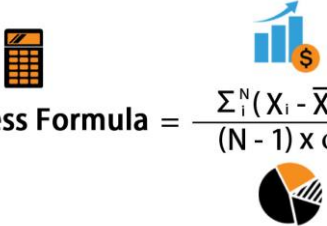
The extreme data values are higher in a positive skew distribution, which increases the mean value of the data set. To put it another way, a positive skew distribution has the tail on the right side.

It means that, Mean > Median > Mode in positive skewness

Negative Skewness

The extreme data values are smaller in negative skewness, which lowers the dataset's mean value. A negative skew distribution is one with the tail on the left side.

Hence, in negative Skewness, Mean < Median < Mode.


$$\text{Skewness Formula} = \frac{\sum_i^N (X_i - \bar{X})^3}{(N - 1) \times \sigma^3}$$

