



The skewness statistic is 0 for a perfectly symmetric distribution, positive for a positively skew distribution (skewed to the right), and negative for a negatively skewed distribution (skewed to the left).

Typically, for unimodal distributions, if it is skewed to the left,

$$\text{mean} < \text{median} < \text{mode},$$

and if it is skewed to the right,

$$\text{mode} < \text{median} < \text{mean}.$$

If you set a distribution on a fulcrum, the mean is where it balances. The median is the point that divides the area in half, and the mode is the highest point.

**Measures of Dispersion** – describe the variation, spread, and scatter of the distribution.

Range – the difference between the largest and smallest values in a set of observations.

$$\text{Range} = x_L - x_S.$$

This conveys minimal information and is a poor measure for large samples.

Variance - measures dispersion based on how the data points are scattered about the mean.