What Is the Mean, and How Is It Computed?

The mean is the most commonly used measure of central tendency. It is the sum of all the values in a group divided by the number of values in the group. A more technical definition is that the mean is the point about which the sum of the deviations equals zero. The type of mean we are discussing here is also called the arithmetic mean.

The formula is quite simple, as follows.

$$\bar{X} = \frac{\Sigma X}{n}$$

where

$\bar{X}$ equals the mean,

ΣX is the sum of all the scores, and

n is the sample size.

Note: In statistics, a lowercase n is used to represent the sample size, and an uppercase N is used to represent the population size.

To compute the mean, follow these steps:

1. List all the values in the data set.

2. Sum the values.

3. Divide by the number of observations.

For example, the set of scores 7, 8, 4, 6, and 5 totals 30, and the mean is 30/5 or 6.

The mean is most often represented by an uppercase X with a bar over it, but it is often represented using M.

One caution about using the mean as a measure of central tendency is that it is not sensitive to extreme scores. For example, the mean of the scores 4, 6, 7, 8, and 20 is 9, but this number does not best represent the set of scores since the average is pulled toward the extreme data point of 20.

More questions? See questions #7, #15, and #16.