

Basic Statistics – General Terminology

Sampling

- Sample – A portion of the population selected for a study
- Sample size – Number of units in a sample
- Random sample – A sample drawn such that each element of the population has the same chance of being included in the sample

Measures of Central Tendency

- Mean – Sum of the observations divided by the number of observations
- Median – The middle number or center value of a set of data in which all the data are arranged in sequence
- Mode – The value or values that occur most frequently in a data set

Measures of Dispersion

- Range – The difference between the largest and smallest data value in a data set
- Normal distribution - A normal distribution of data means that most of the examples in a set of data are close to the "average," while relatively few examples tend to one extreme or the other
- Standard deviation - a statistic that tells you how tightly all the various examples are clustered around the mean in a set of data. When the examples are pretty tightly bunched together and the bell-shaped curve is steep, the standard deviation is small. When the examples are spread apart and the bell curve is relatively flat, that tells you that you have a relatively large standard deviation. About 68% of the data will fall within one standard deviation of the mean, 95% of the data will fall within two standard deviations of the mean and 99.7% of the data will fall within three standard deviations of the mean.

Source: Applied Statistics for the Six Sigma Green Belt, 2005.