Excel terms: Cell, row, column
Excel Functions: to write a Formula (use =), Sum, Count, Average (Mean), Median, Sort
Variance, Standard Deviation, Square a number, Square Root.

Absolute reference or Relative Reference in an equation

Mean - The mean is the average of the numbers: a calculated "central" value of a set of numbers.

Median - The middle number (in a sorted list of numbers). To find the Median, place the numbers you are given in value order and find the middle number.

Data Point Value minus the Mean (of all the data points). Add those up and you get the Sum of Squares. Divide the Sum of Squares by (n-1) and you get the Variance.

Variance - The Variance is a measure of how spread out numbers are. It is the average of the squared differences from the Mean, except that you use (n-1) to divide the Sum of Squares, not n.

When you take the Square Root of the Variance, you calculate the Standard Deviation.

Standard Deviation - a "standard" way of knowing what is normal, and what is extra large or extra small. Deviation just means how far from the norm, or Mean, a data point value is.

Standard Error of the Mean – How different is the sample mean from the mean of the population? Divide the Standard Deviation calculated above by the Square Root of (n). (see also http://davidmlane.com/hyperstat/A103735.html) Use the Standard Error of the Mean to calculate the 95% Confidence Interval.

95% Confidence Interval gives us a range of data points that we can have 95% confidence that they are correct, compared to data from a whole population. Most of the time, it is not possible to sample the entire population, so we use these calculations to decide what data point values are believable and which are so far from the mean that they are not believable.

95% Confidence Interval – multiply (1.96)(Standard Error of the Mean). Add and Subtract this number from the mean to calculate the range of data that we can have 95% confidence in.

Bar Graph with Error Bars – Presenting your data!