The ***mean*** of the sample of “n” measured responses

The ***variance*** of a sample of measurements y1, y2, … yn is the sum of the square of the differences between the measurements and their mean, divided by n-1

The ***standard deviation*** of a sample is the square root of the variance

A ***Permutation*** is the ordered arrangement of *r* distinct objects

A ***Combination*** of *n* objects taken *r* at a time is the number of subsets, each of size *r,* that can be formed from the *n* objects.

The ***Conditional probability of an event A****,* given that an event *B* has occurred is equal to the following

Provided that P(B) > 0

*A* and *B* are **independent** if any of the following is true:

The ***Probability Distribution*** for a discrete variable *Y* can be represented by a formula, a table, or a graph that provides

for all *y*

A random variable *Y* is said to have a ***binomial distribution*** based on *n* trials with success probability *p* if and only if

A random variable *Y* is said to have a ***geometric probability distributio****n* if and only if

A random variable *Y* is said to have a ***hypergeometric probability distribution*** if and only if

A random variable *Y* is said to have a ***Poisson probability distribution*** if and only if

***Tchebysheff’s Theorem***

If a random variable *Y* is continuous and has a density function attached to it *f(y)*, then the ***probability of Y falling in a given interval*** can be displayed as so:

A random variable has a ***uniform probability distribution*** if the probability stays the same throughout a given interval