**Sample variance of a Data set**

**Standard deviation**

**Multiplicative law of probability**

P(

=

If A and B independent then

**Additive law of probability**

If A and B mutually exclusive

**Independence :**

Otherwise they are dependent.

Conditional Probability of event A, given B

**Combination :**

**Permutation :**

**Bayes’ Theorem :**

**Permutations for Discrete Random Variables**

**Variance of random Variable Y**

**Standard Deviation of Y**

**Probability Mass Function for Binomial Distribution**

E(Y) and V(Y) for Binomial Distribution

Expected

Variance

**Geometric Probability Distribution**

E(Y) / V(Y) for Geometric Distribution

=

**Hypergeometric Distribution**

**Negative Binomial Distribution**