**MEAN (SAMPLE SET)**

**VARIANCE (SAMPLE SET)**

**STANDARD DEVIATION (SAMPLE SET)**

**PERMUTATION**

**COMBINATION**

**CONDITIONAL PROBABILITY OF A GIVEN B**

, P(B) > 0

**MULTIPLICATIVE LAW OF PROBABILITY (DEPENDENT)**

**MULTIPLICATIVE LAW OF PROBABILITY (INDEPENDENT)**

**ADDITIVE LAW OF PROBABILITY**

**ADDITIVE LAW OF PROBABLITY (MUTUALLY EXCLUSIVE)**

**INVERSE PROBABILITY**

**THEOREM OF TOTAL PROBABILITY**

, P(Bi) > 0, for i = 1, 2, …, k

**BAYES’ RULE**

, P(Bi) > 0, for i = 1, 2, …, k

**EXPECTED VALUE OF RANDOM VARIABLE**

**VARIANCE OF RANDOM VARIABLE**

, where μ = E(Y)

**STANDARD DEVIATION OF RANDOM VARIABLE**

, where σ2 = V(Y)

**BINOMIAL DISTRIBUTION (EXPECTED VALUE AND VARIANCE)**

, where y = 0, 1, 2, …, n and 0 ≤ p ≤ 1

**GEOMETRIC DISTRIBUTION (EXPECTED VALUE AND VARIANCE)**

, where y = 0, 1, 2, …, n and 0 ≤ p ≤ 1

(on or before the nth trial)

(before the nth trial)

(on or after the nth trial)

(after the nth trial)

**HYPERGEOMETRIC DISTRIBUTION (EXPECTED VALUE AND VARIANCE)**

, where y = 0, 1, 2, …, n

**POISSON DISTRIBUTION (EXPECTED VALUE AND VARIANCE)**

, y = 0, 1, 2, …, λ > 0

**TCHEBYSHEFF’S THEOREM**

, k > 0

, k > 0

**DISTRIBUTION FUNCTION OF Y**

**PROBABILITY DENSITY FUNCTION FOR R.V. Y**

, wherever the derivative exists.

**INTERVAL PROBABILITY**

**CONTINUOUS RANDOM VARIABLE (EXPECTED VALUE)**

**UNIFORM DISTRIBUTION (EXPECTED VALUE AND VARIANCE)**

**NORMAL DISTRIBUTION (EXPECTED VALUE AND VARIANCE)**

**GAMMA DISTRIBUTION (EXPECTED VALUE AND VARIANCE)**

**BETA DISTRIBUTION (EXPECTED VALUE AND VARIANCE)**

**INCOMPLETE BETA FUNCTION**

**JOINT (BIVARIATE) PROBABILITY FUNCTION**

**JOINT (BIVARIATE) DISTRIBUTION FUNCTION**

**JOINT PROBABILITY DENSITY FUNCTION**

**MARGINAL PROBABILITY FUNCTIONS**

**MARGINAL DENSITY FUNCTIONS**

**CONDITIONAL DISCRETE PROBABILITY FUNCTIONS**

**CONDITIONAL DISTRIBUTION FUNCTION**