**Definition 1.1** The mean sample

**Definition 1.2** The variance sample of measurements

**Definition 1.3** The standard deviation of a sample measurement is the positive sqrt of variance

s =

**Definition 2.6**

Axiom 1: P(A) ≥ 0

Axiom 2: P(S) = 1

Axiom 3: If

**Definition 2.9** Given that event B has occurred, the conditional probability of event A is equal to

given that P(B) > 0. [P(A|B) stands for "probability of A given B."]

**Definition 2.10** If either one of the following is true, then occurrences A and B are considered independent

the occurrences are considered dependent otherwise

**Definition 2.11** Consider the sets B1, B2,..., Bk such that for a positive integer k

Then the partition of S is then defined as the set collection {B1, B2,..., Bk }.

**Definition 3.4** Let Y have the probability function p(y) and be a discrete random variable. Then, E(Y), the anticipated value of Y, is defined 2

**Definition 3.5** For a random variable Y, the variance is defined as the anticipated value of (Y − μ)2 if its mean is E(Y) = μ. Specifically,

The positive square root of V(Y) is the standard deviation of Y.

**Definition 3.7** An arbitrary variable Based on n trials with a success chance of p, Y is said to have a binomial distribution if and only if

**Definition 3.8** An arbitrary variable If and only if Y has a geometric probability distribution, then