Definition 1.1 $y' = \frac{1}{n}\sum_{i=1}^{n} y_i$

Definition: 1.2 $s^2 = \frac{1}{n-1}\sum_{i=1}^{n} (y_i - y')^2$

Definition: 1.3 $s = \sqrt{s^2}$

Definition 2.6: $P(A_1 \cup A_2 \cup A_3 \cup \ldots) = \sum_{i=1}^{\infty} P(A_i)$

Definition 2.7: $P_r^n = \frac{n!}{(n-r)!}$

Definition: 2.8: C_r^n

Definition 2.9: $\frac{P(A \cap B)}{P(B)}$

Definition 2.10 $P(A \cap B) = P(A)P(B)$

Definition 2.11 $P(A) = \sum_{i=1}^{k} P(A|B_i)P(B_i)$

Bayes Rule $P(B_j|A) = \frac{P(A \cap B_j)}{P(A)}$

Definition 3.4 $E(Y) = \sum_y yp(y)$

Definition 3.5 $V(Y) = E[(Y - \mu)^2]$

Definition 3.7 $p(y) = \binom{n}{y} p^y q^{n-y}, \quad y = 0,1,2,\ldots,n \text{ and } 0 \leq p \leq 1$