

Calculators, books, and notes are not allowed. You must show your work on each problem to receive credit.

$$P(B_r|A) = \frac{P(A|B_r)P(B_r)}{P(A)} \text{ where } P(A) = \sum_{i=1}^k P(A|B_i)P(B_i)$$

$$f(x) = \sum_{n=0}^{\infty} \frac{f^{(n)}(c)}{n!} (x - c)^n$$

$$P(|x - \mu| < k\sigma) \geq 1 - \frac{1}{k^2}, \sigma \neq 0$$

$$\frac{a}{1-r} = \sum_{n=0}^{\infty} ar^n, |r| < 1$$

$$\sum_{i=1}^n i = \frac{n(n+1)}{2}$$

$$\sum_{i=1}^n i^2 = \frac{n(n+1)(2n+1)}{6}$$

$$\mu'_r = E(X^r)$$

$$\mu_r = E((X - \mu)^r)$$