Some Formulas You May Need for Exam 1

$$\bar{x} = \frac{\sum x_i}{n}$$

$$\hat{y} = a + bx$$

$$b = r\frac{s_y}{s_x}$$

$$a = \bar{y} - b\bar{x}$$

$$\text{residual} = y - \hat{y}$$

$$\text{margin of error} = \frac{1}{\sqrt{n}}$$

$$P(A \text{ and } B) = P(A)P(B) \text{ (if independent)}$$

$$P(A|B) = \frac{P(A \text{ and } B)}{P(B)}$$

$$\mu = \sum xP(x)$$

$$\binom{n}{x} = \frac{n!}{x!(n-x)!}$$

$$P(x) = \binom{n}{x}p^x(1-p)^{n-x}$$

$$\mu = np$$

$$\sigma = \sqrt{np(1-p)}$$