

Name: _____

$$E(x) = \sum_{i=1}^n X_i \cdot P(x_i)$$

$$P(x) = {}_n C_r \cdot P^r \cdot Q^{n-r}$$

$${}_n P_r = \frac{n!}{(n-r)!}$$

$$E(x) = n \cdot P$$

$$P(x) = Q^{n-1}P$$

$${}_n C_r = \frac{n!}{r!(n-r)!}$$

$$E(x) = \frac{Q}{P}$$

$$P(x) = \frac{{}_a C_x \cdot {}_{n-a} C_{r-x}}{{}_n C_r}$$

$$E(x) = r \frac{a}{n}$$

divide standard deviation by \sqrt{n}
for hypothesis tests with continuous distributions

$$z = \frac{X - \mu}{\sigma}$$

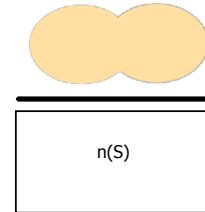
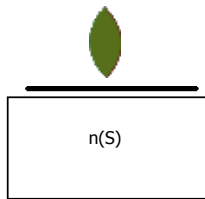
$$t = \frac{X - \bar{X}}{s}$$

$$\bar{x} \pm t \cdot \frac{s}{\sqrt{n}}$$

$$\bar{P} \pm t \cdot \frac{\sqrt{\bar{P} \cdot \bar{Q}}}{\sqrt{n}}$$

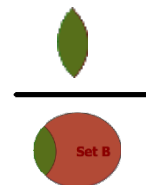
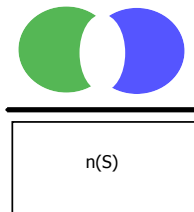
$n \cdot P > 5$
 $n \cdot Q > 5$

$\mu = n \cdot P$
 $\sigma = \sqrt{n \cdot P \cdot Q}$



$$P(A \cap B) = P(A) \times P(B)$$

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$



$$P(A \text{ XOR } B) = P(A) + P(B) - 2P(A \cap B)$$

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

Note: you may use the entire sheet, both sides, but everything must be handwritten. It may not be photocopied or word processed.