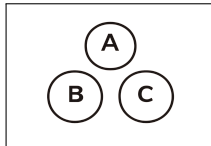
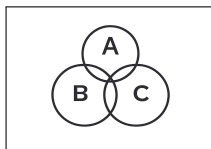


20 Discrete Distribution Exp Value / Variance

H



$$n = 6$$
$$p = \frac{1}{2}$$



$$E[X] = np = 6 \cdot \frac{1}{2} = \boxed{3}$$

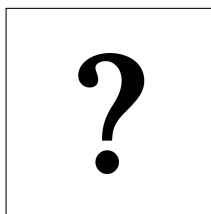
$$\text{Var}(X) = np(1 - p) = 3 \cdot \frac{1}{2} = \boxed{\frac{3}{2}}$$

$$E[X^2] = \text{Var}(X) + (E[X])^2$$

$$E[X^2] = \frac{3}{2} + 3^2$$

$$E[X^2] = \frac{3}{2} + 9$$

$$E[X^2] = \boxed{\frac{21}{2}}$$



$$p = 0.90$$

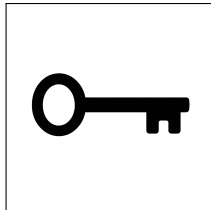
$$n = 15$$

$$E[X] = ?$$

$$\text{Var}(X) = ?$$

20 Discrete Distribution Exp Value / Variance

H



$$p = 0.90$$

$$n = 15$$

$$E[X] = ?$$

$$Var(X) = ?$$

$$E[X] = np = 15 \times 0.90 = 13.5$$

$$Var(X) = n \times p \times (1 - p) = 15 \times 0.90 \times 0.10 = 1.35$$