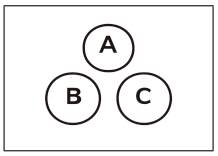
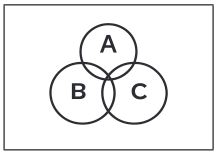
A Expected Value & Variance Binomial Distribution A



$n = 6$

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



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

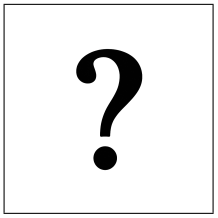
$\text{Var}(X) = np(1-p) = 3 \cdot \frac{1}{2} = \boxed{\frac{3}{2}}$

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

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

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

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

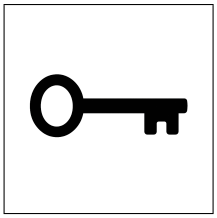


$n = 72$

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

$E[X] = ?$

A Expected Value & Variance Binomial Distribution A



$n = 72$
$p = \frac{1}{6}$
$E[X] = ?$

$E[X] = np = 72 \cdot \frac{1}{6} = 12$
$Var(X) = np(1-p) = 12 \cdot \frac{5}{6} = 10$

$E[X^2] = \text{Var}(X) + (E[X])^2$
$E[X^2] = 10 + 12^2$
$E[X^2] = 10 + 144$
$E[X^2] = \boxed{154}$