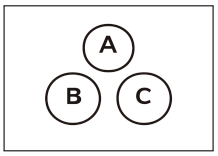
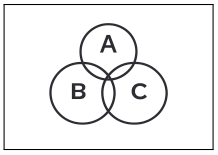
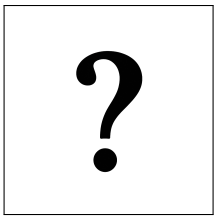
13 Discrete Distribution Random Variable B



$X(HHH) = 3$
$X(HHT) = 2$
$X(HTH) = 2$
$X(THH) = 2$
$X(HTT) = 1$
$X(THT) = 1$
$X(TTH) = 1$
$X(TTT) = 0$

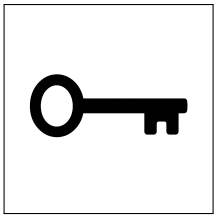


$X : \Omega \to 0, 1, 2, 3$
$P(X = 0) = \frac{1}{8}$
$P(X = 1) = \frac{3}{8}$
$P(X = 2) = \frac{3}{8}$
$P(X = 3) = \frac{1}{8}$



$S = \{(i,j) : 1 \le i,j \le 6\} \to |S| = 6 \times 6 = 36$
$X(i,j) = i + j$
$P(X = 6) = ?$

13 Discrete Distribution Random Variable B



$S = \{(i,j) : 1 \leq i,j \leq 6\} \rightarrow |S| = 6 \times 6 = 36$
$X(i,j) = i + j$
$P(X = 6) = ?$

$1 + 5 = 6$
$2 + 4 = 6$
$3 + 3 = 6$
$4 + 2 = 6$
$5 + 1 = 6$
$X : \Omega = 5$
$P(X = 6) = \frac{|\Omega|}{|S|} = \frac{5}{36} \approx 0.14$