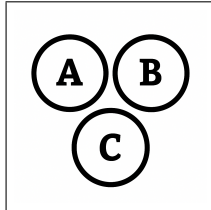


B Discrete Random Variables B



$$X(HHH) = 3$$

$$X(HHT) = 2$$

$$X(HTH) = 2$$

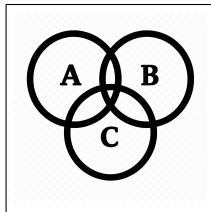
$$X(THH) = 2$$

$$X(HTT) = 1$$

$$X(THT) = 1$$

$$X(TTH) = 1$$

$$X(TTT) = 0$$



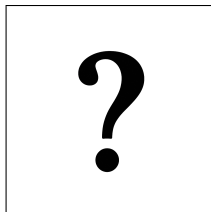
$$X : \Omega \rightarrow 0, 1, 2, 3$$

$$P(X = 0) = \frac{1}{8}$$

$$P(X = 1) = \frac{3}{8}$$

$$P(X = 2) = \frac{3}{8}$$

$$P(X = 3) = \frac{1}{8}$$

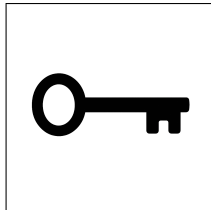


$$S = \{(i, j) : 1 \leq i, j \leq 6\} \rightarrow |S| = 6 \times 6 = 36$$

$$X(i, j) = i + j$$

$$P(X = 6) = ?$$

B Discrete Random Variables B



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

$$X(i, j) = i + j$$

$$P(X = 6) = ?$$

$$1 + 5 = 6$$

$$2 + 4 = 6$$

$$3 + 3 = 6$$

$$4 + 2 = 6$$

$$5 + 1 = 6$$

$$X : \Omega = 5$$

$$P(X = 6) = \frac{|\Omega|}{|S|} = \frac{5}{36} \approx 0.14$$