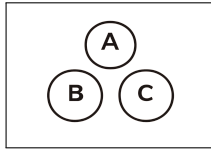


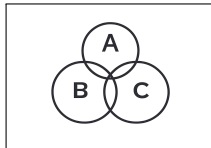
8

Discrete Distribution
Probability

Q



$$S = \{B, B, R, R, R\}$$



$$\mathbb{P}(S, BB) = \mathbb{P}(S, B) \times \mathbb{P}(S, B) = 0.40 \times 0.25 = 0.10$$

$$\mathbb{P}(S, BR) = \mathbb{P}(S, B) \times \mathbb{P}(S, R) = 0.40 \times 0.75 = 0.30$$

$$\mathbb{P}(S, RB) = \mathbb{P}(S, R) \times \mathbb{P}(S, B) = 0.60 \times 0.50 = 0.30$$

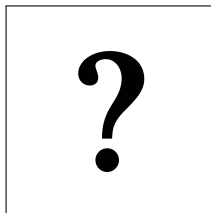
$$\mathbb{P}(S, RR) = \mathbb{P}(S, R) \times \mathbb{P}(S, R) = 0.60 \times 0.50 = 0.30$$

$$\mathbb{P}(S, BB) = \mathbb{P}(S, B) \times \mathbb{P}(S, B) = 0.40 \times 0.40 = 0.16$$

$$\mathbb{P}(S, BR) = \mathbb{P}(S, B) \times \mathbb{P}(S, R) = 0.40 \times 0.60 = 0.24$$

$$\mathbb{P}(S, RB) = \mathbb{P}(S, R) \times \mathbb{P}(S, B) = 0.60 \times 0.40 = 0.24$$

$$\mathbb{P}(S, RR) = \mathbb{P}(S, R) \times \mathbb{P}(S, R) = 0.60 \times 0.60 = 0.36$$



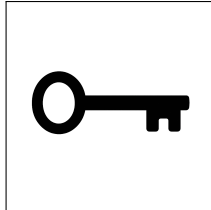
$$S = \{W, W, H, H, H, H, A, A, A, A, A, A, A\}$$

$$P(\mathbb{P}(S, W)) \times P(\mathbb{P}(S, HH)) \times P(\mathbb{P}(S, AAA)) = ?$$

8

Discrete Distribution
Probability

Q



$$S = \{W, W, H, H, H, H, A, A, A, A, A, A, A\}$$

$$\mathfrak{C}(S, 6) = \binom{13}{6} = 1,716$$

$$\mathfrak{C}(S, W) = \binom{2}{1} = 2$$

$$\mathfrak{C}(S, HH) = \binom{4}{2} = 6$$

$$\mathfrak{C}(S, AAA) = \binom{7}{3} = 35$$

$$P(\mathfrak{C}(S, W)) \times P(\mathfrak{C}(S, HH)) \times P(\mathfrak{C}(S, AAA)) =$$

$$(\mathfrak{C}(S, W) \times \mathfrak{C}(S, HH) \times \mathfrak{C}(S, AAA)) / \mathfrak{C}(S, 6) = (2 \times 6 \times 35) / 1,716 = 420 / 1716 \approx 0.24$$