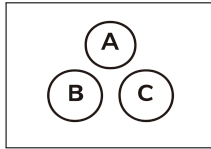


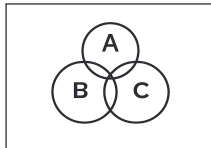
8

Discrete Distribution
Probability

F



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



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

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

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

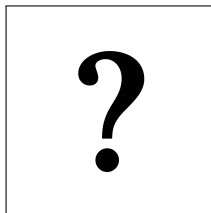
$$\mathbb{P}(S, RR) = \mathbb{P}(S, R) \times \mathbb{P}(S, R) = 0.60 \times 0.50 = 0.30$$

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

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

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

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



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

$$P(\mathbb{P}(S, WR)) + P(\mathbb{P}(S, RW)) = ?$$

8

Discrete Distribution
Probability

F



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

$$\mathbb{P}(S, WW) = \mathbb{P}(S, W) \times \mathbb{P}(S, W) = 3/5 \times 3/5 = 9/25$$

$$\mathbb{P}(S, WR) = \mathbb{P}(S, W) \times \mathbb{P}(S, R) = 3/5 \times 2/5 = 6/25$$

$$\mathbb{P}(S, RW) = \mathbb{P}(S, R) \times \mathbb{P}(S, W) = 2/5 \times 3/5 = 6/25$$

$$\mathbb{P}(S, RR) = \mathbb{P}(S, R) \times \mathbb{P}(S, R) = 2/5 \times 2/5 = 4/25$$

$$P(\mathbb{P}(S, WR)) + P(\mathbb{P}(S, RW)) = 12/25 \approx 0.48$$