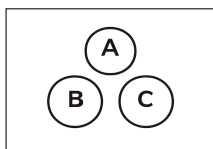


9

Discrete Distribution
Conditional Probabilities

G



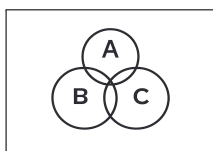
$$H = 60$$

$$U = 100$$

$$P(M \cap H) = 0.10$$

$$P(H) = 60/100 = 0.60$$

$$P(M|H) = ?$$



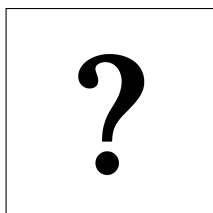
$$H = 60$$

$$U = 100$$

$$P(M \cap H) = 0.10$$

$$P(H) = 60/100 = 0.60$$

$$P(M|H) = P(M \cap H)/P(H) = 0.10/0.60 = 1/6 \approx 0.17$$



$$P(A) = 0.8$$

$$P(B) = 0.6$$

$$P(A \cup B) = 0.9$$

$$P(B|A) = ?$$

9

Discrete Distribution
Conditional Probabilities

G



$$P(A) = 0.8$$

$$P(B) = 0.6$$

$$P(A \cup B) = 0.9$$

$$P(B|A) = ?$$

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$0.9 = 0.8 + 0.6 - P(A \cap B)$$

$$P(A \cap B) = 0.8 + 0.6 - 0.9 = 0.5$$

$$P(B | A) = \frac{P(A \cap B)}{P(A)} = \frac{0.5}{0.8} = 0.625$$