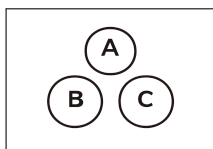


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Discrete Distribution Independant Events

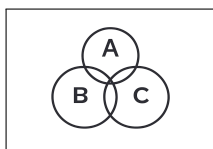
K



$$P(A) = 0.40$$

$$P(B) = 0.70$$

$$\square(A, B) = \text{thumbs up}$$



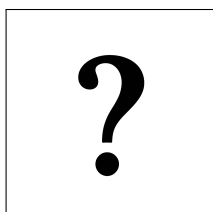
$$\square(A, B) \rightarrow P(A|B) = P(A)$$

$$\square(A, B) \rightarrow P(A \cap B) = P(A) \times P(B)$$

$$\square(A, B) \rightarrow P(A \cup B) = P(A) + P(B) - P(A) \times P(B)$$

$$\square(A, B) \rightarrow P(A \cup B) = 0.40 + 0.70 - 0.40 \times 0.70$$

$$\square(A, B) \rightarrow P(A \cup B) = 0.82$$



$$P(E) = 0.84$$

$$P(F) = 0.65$$

$$\square(E, F) = \text{thumbs up}$$

$$(E \cap F^c) \cup (E^c \cap F) = ?$$

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Discrete Distribution Independant Events

K



$$P(F^c) = 1 - P(F) = 1 - 0.65 = 0.35$$

$$P(E^c) = 1 - P(E) = 1 - 0.84 = 0.16$$

$$P(E \cap F^c) = P(E) \cdot P(F^c) = 0.84 \times 0.35 = 0.294$$

$$P(E^c \cap F) = P(E^c) \cdot P(F) = 0.16 \times 0.65 = 0.104$$

$$(E \cap F^c) \cup (E^c \cap F) = 0.294 + 0.104 = 0.398$$