



Calculate conditional probabilities

1

(A) intersect (B)

A Both A and B happening

B Either A or B happening

C Event A happening, given that B has happened

D Event A not happening

2

Both A and B happening

A (A) conditional on (B)

B (A) intersect (B)

C (A) union (B)

D Complement of (A)

3

Complement of (A)

A $P(A')$ B $P(A|B)$ C $P(A \cup B)$ **4**

Event A not happening

A $P(A \cup B)$ B $P(A \cap B)$ C $P(A')$ **5**

This set operation gives the probability of what?

$$P(A \cup B)$$

A Event A happening, given that B has happened

B Event A not happening

C Either A or B happening

D Both A and B happening

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(A) intersect (B)

A $P(A) \cdot P(B)$ B $P(A) + P(B) - P(A \cap B)$



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Both A and B happening

A $\frac{P(A \cap B)}{P(B)}$

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

C $P(A) \cdot P(B)$

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Select the formula for this probability operation if the events are independent

$$P(A \cap B)$$

A

$$P(A) \cdot P(B)$$

B

$$\frac{P(A \cap B)}{P(B)}$$

C

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

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Select what this probability formula calculates for independent events

$$P(A) \cdot P(B)$$

A (A) conditional on (B)

B (A) intersect (B)

C Complement of (A)

D (A) union (B)

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This formula calculates the probability of what?

$$\frac{P(A \cap B)}{P(B)}$$

A Event A happening, given that B has happened

B Event B happening, given that A has happened

C Event A not happening

D Both A and B happening

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Select the set operation that this probability formula calculates

$$1 - P(A)$$

A $P(A')$

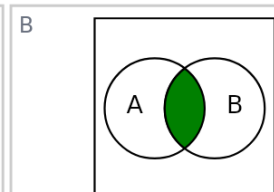
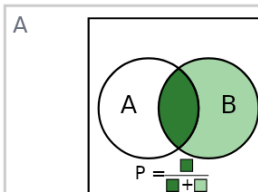
B $P(A \cup B)$

C $P(A|B)$

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Which Venn diagram represents this probability formula for independent events

$$P(A) \cdot P(B)$$

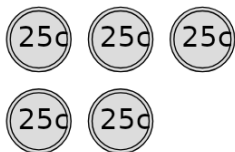




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What set operation would give you the probability of getting exactly 2 tails when flipping 5 coins, given that the first flip was tails?



A (2 tails) conditional on (first is tails)

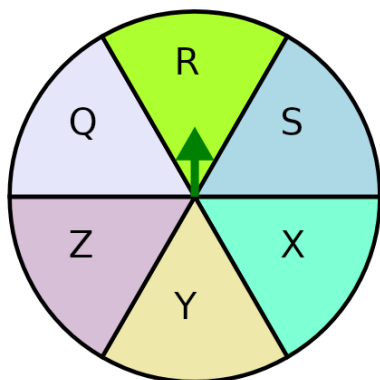
B (2 tails) intersect (first is tails)

C (2 tails) union (first is tails)

D (first is tails) conditional on (2 tails)

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What set operation would give you the probability of not spinning 'R'?



A $P(R \cap R)$

B $P(R \cup R)$

C $P(R')$

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In a survey of students, 8% take both, 32% are in the French group but not the music group, and 48% are in the music group but not the French group.

A $\frac{22}{25}$

B $\frac{24}{25}$

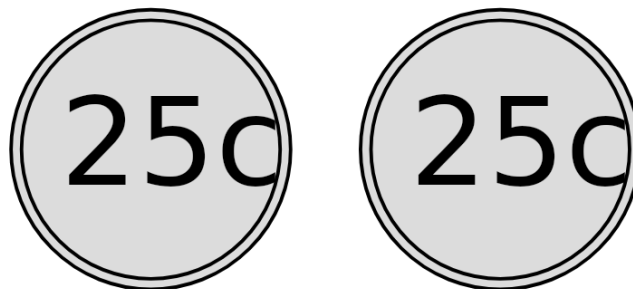
C $\frac{26}{25}$

D $\frac{12}{25}$

E $\frac{23}{25}$

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What set operation would give you the probability of flipping tails twice in a row?



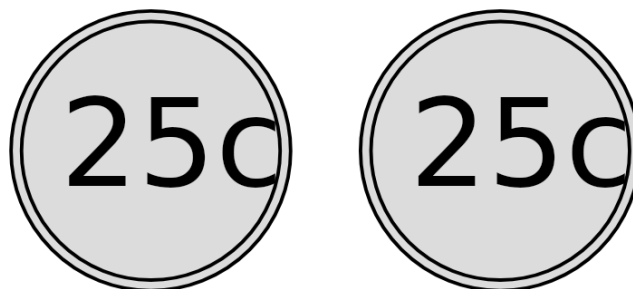
A $P(T_1')$

B $P(T_1 \cup T_2)$

C $P(T_1 \cap T_2)$

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What formula would give you the chance of flipping tails at least once given two tries?



A $P(T_1) + P(T_2) - P(T_1 \cap T_2)$

B $1 - P(T_1)$

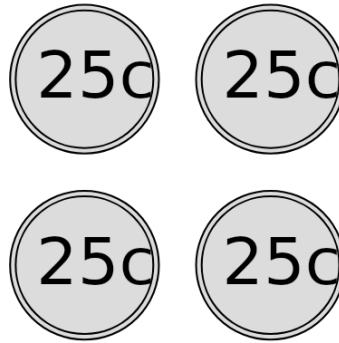
C $\frac{P(T_1 \cap T_2)}{P(T_2)}$



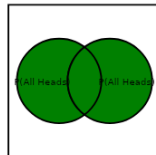
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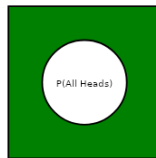
Which Venn diagram represents the probability of flipping at least one tails in 4 tries?



A

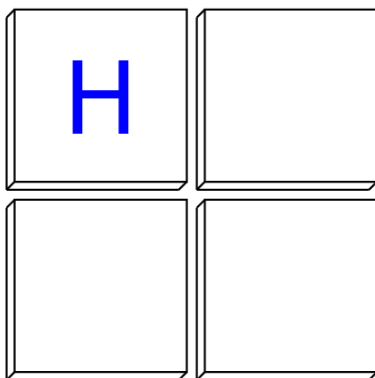


B



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What set operation would give you the probability of not drawing an 'H'?



A

$$P(H \cap H)$$

B

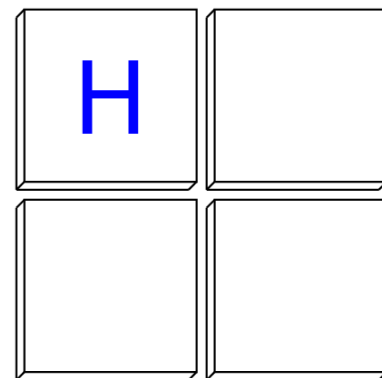
$$P(H')$$

C

$$P(H|H)$$

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What formula would give you the chance of not drawing an 'H'?



A

$$P(H) + P(H) - P(H \cap H)$$

B

$$P(H) \cdot P(H)$$

C

$$1 - P(H)$$