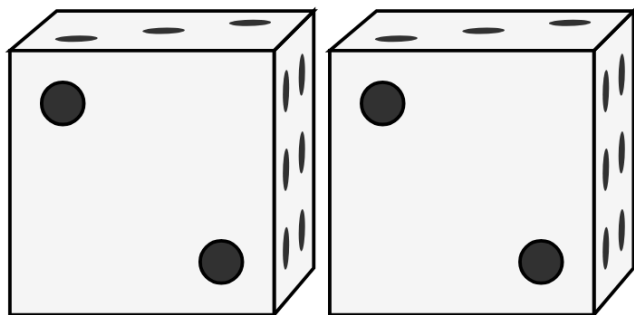




Determine probabilities of mutually exclusive events

- 1 What formula would give you the chance of rolling a 2 at least once given two tries?

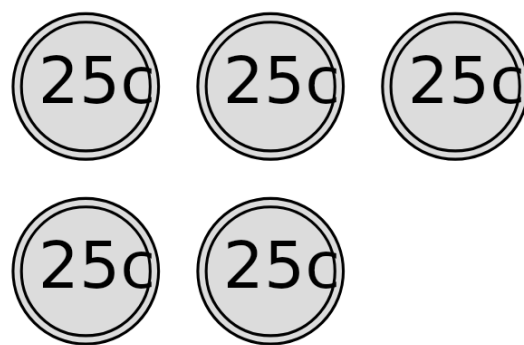


A $1 - P(2_1)$

B $P(2_1) + P(2_2) - P(2_1 \cap 2_2)$

C $P(2_1) \cdot P(2_2)$

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



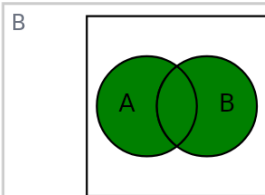
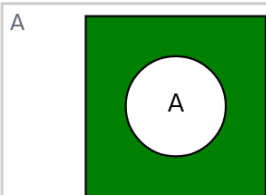
A $P(2 \text{ heads} \cap \text{first is heads})$

B $P(2 \text{ heads} | \text{first is heads})$

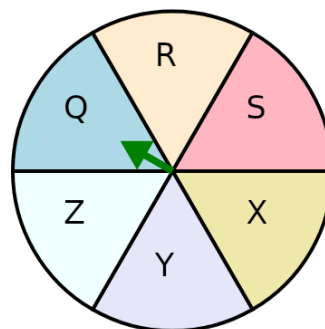
C $P(2 \text{ heads}')$

- 3 Which Venn diagram represents this probability formula

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



- 4 What formula would give you the chance of spinning 'Q' twice in a row?



A $\frac{P(Q_1 \cap Q_2)}{P(Q_2)}$

B $1 - P(Q_1)$

C $P(Q_1) \cdot P(Q_2)$

- 5 It is given that events A and B are mutually exclusive.

A Neither of these

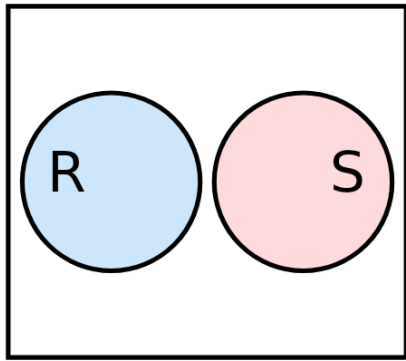
B $P(A \cup B) = P(A) + P(B)$

C $P(A \cup B) = P(A) + P(B) - P(A \cap B)$ (where $P(A \cap B) > 0$)



Determine probabilities of mutually exclusive events

- 6** Events R and S are mutually exclusive. Which equation gives the probability that R or S occurs?



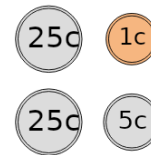
- A $P(R \cup S) = P(R) + P(S)$
- B $P(R \cup S) = P(R) \cdot P(S)$
- C $P(R \cup S) = P(R) + P(S) - P(R) \cdot P(S)$

- 7** What is the chance of flipping both heads or both tails on these coins?



- | | | |
|---------|--------|-------|
| A 1 | B 0.25 | C 0.2 |
| D 0.333 | E 0.5 | F 1 |

- 8** What is the chance of flipping all heads or all tails on these coins?



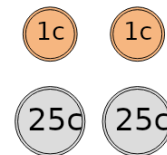
- | | | |
|---------|---------|---------|
| A 60% | B 50% | C 12.5% |
| D 16.7% | E 17.6% | F 11.8% |

- 9** What is the chance of flipping both heads or both tails on these coins?



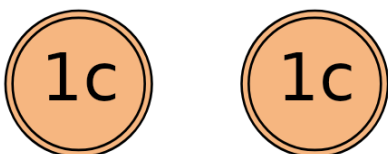
- | | | |
|---------|---------|--------|
| A 1 | B 0.429 | C 0.5 |
| D 0.333 | E 0.333 | F 0.25 |

- 10** What is the chance of flipping all heads or all tails on these coins?



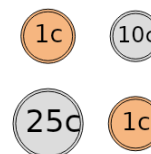
- | | | |
|---------|---------|---------|
| A 5.9% | B 7.7% | C 20% |
| D 22.2% | E 12.5% | F 15.4% |

- 11** What is the chance of flipping both heads or both tails on these coins?



- | | | |
|---------|--------|---------|
| A 0.333 | B 0.5 | C 0.6 |
| D 0.286 | E 0.25 | F 0.143 |

- 12** What is the chance of flipping all heads or all tails on these coins?



- | | | |
|---------|---------|---------|
| A 13.3% | B 15.4% | C 18.2% |
| D 12.5% | E 20% | F 20% |