PROBABILITY

VOCABULARY - standard deck of cards
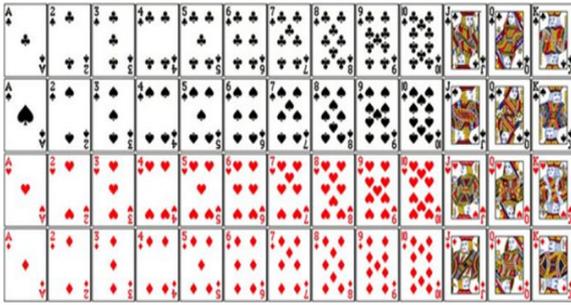
It consists of 52 cards organized into 4 suits: clubs (♣), diamonds (♦), hearts (♥) and spades (♠).

Each suit contains 13 ranks: Ace, 2, 3, 4, 5, 6, 7, 8, 9, 10, Jack, Queen and King.

Jacks, Queens and Kings are called face cards.

VOCABULARY

To roll a die

To toss a coin

To draw a card/a card is drawn

The probability of getting the King of spades is....

EVENTS

A card is chosen at random from a deck of 52 playing cards. Consider the following events:

A: "The card is red."
B: "The card is an ace."
C: "The card is the King of spades."
D: "The card is a face card."
E: "The card is an heart."

1) Which outcomes are in event B ?

2) How many outcomes are in A ?

3) Describe the following events in words:

$D \cap E$

$\bar{A}$

$C \cap D$

$C \cap E$

$A \cup C$

$A \cup E$

4) Which of the following pairs are mutually exclusive ?
A and E, A and C, B and C, B and D, B and E

5) Complete:

$P(A) =$ $P(D \cap E) =$

$P(B) =$ $P(\bar{A}) =$

$P(C) =$ $P(C \cap D) =$

$P(D) =$ $P(C \cap E) =$

$P(E) =$ $P(A \cup C) =$

                   $P(A \cup E) =$

MUTUALLY EXCLUSIVE EVENTS

Tell whether the events A and B are mutually exclusive or not.
1) A: "Toss a coin and get "heads"."
B: "Toss a coin and get "tails"."

2) A: "Roll a die and get 1."
B: "Roll a die and get 6."

3) A: "Roll a die and get 2."
B: "Roll a die and get an even number."

4) A bag contains 2 yellow balls and 3 blue balls. A ball is drawn from it.
A: "You get a yellow ball."
B: "You get a blue ball."

5) A card is drawn from a deck of standard playing cards.
A: "A spade is drawn."
B: "A heart is drawn."

6) A card is drawn from a deck of standard playing cards.
A: "A heart is drawn."
B: "A King is drawn."

If you choose an answer to this question at random, what is the chance you will be correct?
A) 25%
B) 50%
C) 60%
D) 25%