Probability - A1

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Q-1 What is the probability of atleast one take when a coin is tossed 3 times?

Total outcomes = $8 (2^3)$

Sample Space = [HHH, HHT, HTH, THH, TTH, THT, HTT, TTT]

favourable outcome = [HHT, HTH, THH, TTH, THT, HTT, TTT]

= 7

Probability = 7/8

Q-2 Two dice are thrown, what is the probability of getting the sum = 12?

Total outcomes = $6^2 = 36$

Fav. outcomes = [6,6] = 1

Probability = 1/36

Q.3

What is the probability of getting a Red king when a card is picked from a deck of 52 cards?

Sol. Total outcomes = 52

Fav outcomes = 2 (king of hearts, king of diamonds)

Prob. = $\frac{2}{52} = 1/26$

Q-4 A bag contains 2 Red, 3 black 4 blue balls. what is the probability of getting atleast one blue ball when 2 balls are picked.

chance of getting ~~atleast~~ one blue ball

$= {}^4C_1 \cdot {}^5C_1$

chance of getting 2 blue ball

$= {}^4C_2$

$$\text{Probability} = \frac{{}^4C_1 {}^5C_1 + {}^4C_2}{{}^9C_2} = \frac{20+6}{36} = \frac{26}{36}$$

Q- A bag contains 10 red, 3 blue, 16 yellow, 4 black, 13 pink and 1 brown balls. What is the probability of getting a white ball when 1 ball is picked.

Ans

Total no of white ball = 0

Total balls = 47

Probability of getting white ball = $0/47 = 0$