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SUB.:MATHEMATICS

Extra Questions of Chapter 15 Probability. According to new CBSE Exam

Question-1

Find the probability of getting a number less than 5 in a single throw of a die.

Solution:

Possible outcomes={1, 2, 3, 4, 5, 6}

Favorable outcomes = Getting a number less than 5 = {1, 2, 3, 4}

$$\therefore P(\text{Getting a number} < 5) = \frac{4}{6} = \frac{2}{3}$$

Question-2

One card is drawn from a well-shuffled deck of 52 cards. Find the probability of drawing:

- (i) an ace.
- (ii) '2' of spades.
- (iii) '10' of a black suit

Solution:

One card is drawn from a well-shuffled deck of 52 cards.

- (i) An ace is drawn.

Number of possible outcomes = 52

Number of favorable outcomes = 4

$$P(\text{Drawing an ace}) = \frac{4}{52} = \frac{1}{13}$$

(ii) A '2' of spades is drawn.

Number of possible outcomes = 52

Number of favorable outcomes = 1

$$\therefore P(\text{Drawing a '2' of spades}) = \frac{1}{52}$$

(iii) A '10' of a black suit is drawn.

Number of possible outcomes = 52

Number of favorable outcomes = 2

$$\therefore P(\text{Drawing a '10' of a black suit}) = \frac{2}{52} = \frac{1}{26}$$

Question-3

17 cards numbered 1, 2, 3, ..., 16, 17 are put in a box and mixed thoroughly. One person draws a card from the box. Find the probability that the number on the card is

(i) odd.

(ii) a prime

(iii) divisible by 3

(iv) divisible by 3 and 2 both

Solution:

17 cards numbered 1, 2, 3, ..., 16, 17 are put in a box and mixed thoroughly.

One person draws a card from the box.

(i) The number on the card is odd

Number of possible outcomes = 17

Number of favorable outcomes = 9 [i.e 1, 3, 5, 7, 9, 11, 13, 15, 17]

$$\therefore P(\text{Getting an odd number on the card}) = \frac{9}{17}$$