

Board – CBSE

Class – 10th

Topic – Probability

1. 20 tickets, on which numbers 1 to 20 are written, are mixed thoroughly and then a ticket is drawn at random out of them. Find the probability that the number on the drawn ticket is a multiple of 3 or 7.

Ans. $2/5$

2. In a single throw of a pair of different dice, what is the probability of getting

(i) a prime number on each dice?

(ii) a total of 9 or 11?

Ans. $1/4$

$1/6$

3. A box consists of 100 shirts of which 88 are good, 8 have minor defects and 4 have major defects. Ramesh, a shopkeeper will buy only those shirts which are good but 'Kewal' another shopkeeper will not buy shirts with major defects. A shirt is taken out of the box at random.

What is the probability that

(i) Ramesh will buy the selected shirt?

(ii) 'Kewal' will buy the selected shirt?

Ans. $22/25$

$24/25$

4. A number JC is selected at random from the numbers 1, 2, 3 and 4. Another number y is selected at random from the numbers 1, 4, 9 and 16. Find the probability that product of JC and y is less than 16.

Ans. $1/2$

5. A game of chance consists of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8 and these are equally likely outcomes. Find the probability that the arrow will point at any factor of 8.

Ans. $1/2$

6. All red face cards are removed from a pack of playing cards. The remaining cards were well shuffled and then a card is drawn at random from them. Find the probability that the drawn card is

- (i) a red card
- (ii) a face card

Ans. $\frac{10}{23}$
 $\frac{3}{23}$

7. A box contains 20 cards numbered from 1 to 20. A card is drawn at random from the box. Find the probability that the number on the drawn card is

- (i) divisible by 2 or 3.
- (ii) a prime number.

Ans. $\frac{13}{20}$
 $\frac{2}{5}$

8. Two different dice are tossed together. Find the probability

- (i) that the number on each die is even.
- (ii) that the sum of numbers appearing on the two dice is 5

Ans. $\frac{1}{4}$
 $\frac{1}{9}$

9. All the black face cards are removed from a pack of 52 playing cards. The remaining cards are well shuffled and then a card is drawn at random. Find the probability of getting a

- (i) face C
- (ii) red card
- (iii) black card
- (iv) king

Ans. $\frac{3}{23}$
 $\frac{13}{23}$
 $\frac{10}{23}$
 $\frac{1}{23}$

10. Two coins are tossed simultaneously. Find the probability of getting at least one head.

Ans. $\frac{3}{4}$

11. A box contains cards numbered 3,5,7,9,..., 35,37. A card is drawn at random from the box. Find the probability that the number on the drawn card is a prime number.

Ans. $\frac{11}{18}$

12. A box contains 100 red cards, 200 yellow cards and 50 blue cards. If a card is drawn at random from the box, then find the probability that it will be

a) a blue card

b) not a yellow card

c) Neither yellow nor a blue card.

Ans. $\frac{1}{7}$

$\frac{3}{7}$

$\frac{2}{7}$

13. A coin is tossed two times. Find the probability of getting both heads and both tails.

Ans. $\frac{1}{2}$

14. Two dice are rolled once. Find the probability of getting such numbers on the two dice, whose product is 12.

Ans. $\frac{1}{9}$

15. A die is thrown twice. What is the probability that the same number will come up either time?

Ans. $\frac{1}{6}$

16. Cards bearing numbers 1, 3, 5.....35 are kept in a bag. A card is drawn at random from the bag. Find the probability of getting a card bearing

(i) a prime number less than 15.

(ii) a number divisible by 3 and 5.

Ans. $5/18$
 $1/18$

- 17.** From a well-shuffled pack of playing cards, blackjacks, black kings and black aces are removed. A card is then drawn at random from the pack. Find the probability of getting
- (i) a red card
 - (ii) not a diamond card

Ans. $13/23$
 $33/46$

- 18.** A die is thrown once. What is the probability of getting a number greater than 4?

Ans. $1/3$

- 19.** A box contains 80 discs which are numbered from 1 to 80. If one disc is drawn at random from box, find the probability that it bears a perfect square number.

Ans. $1/10$