

Board – CBSE

Class – 10

Topic – Probability

- 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. [2/5]
- In a single throw of a pair of different dice, what is the probability of getting
 - a prime number on each dice? [1/4]
 - a total of 9 or 11? [1/6]
- 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
 - Ramesh will buy the selected shirt? [22/25]
 - 'Kewal' will buy the selected shirt? [24/25]
- A number J 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 J and y is less than 16. [1/2]
- 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. [1/2]
- 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
 - a red card [10/23]
 - a face card [3/23]
- 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
 - divisible by 2 or 3. [13/20]
 - a prime number. [2/5]
- Two different dice are tossed together. Find the probability
 - that the number on each die is even. [1/4]
 - that the sum of numbers appearing on the two dice is 5 [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 [3/23]
 - (ii) red card [13/23]
 - (iii) black card [10/23]
 - (iv) king [1/23]
10. Two coins are tossed simultaneously. Find the probability of getting at least one head. [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. [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 [1/7]
 - b) not a yellow card [3/7]
 - c) Neither yellow nor a blue card. [2/7]
13. A coin is tossed two times. Find the probability of getting both heads and both tails. [1/2]
14. Two dice are rolled once. Find the probability of getting such numbers on the two dice, whose product is 12. [1/9]
15. A die is thrown twice. What is the probability that the same number will come up either time? [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. [5/18]
 - (ii) a number divisible by 3 and 5. [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 [13/23]
 - (ii) not a diamond card [33/46]
18. A die is thrown once. What is the probability of getting a number greater than 4? [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. [1/10]