

1. A number is selected at random from the numbers 1 to 20. The probability that the selected number is a multiple of 3 is _____.
2. Two friends A and B take their breakfast occasionally in a restaurant which prepares a speciality dish on Monday, Wednesday and Sunday. Each is equally likely to visit the restaurant on any day on which the speciality dish is made. Find the probability that both will enjoy taking the speciality dish on the (i) same day, and (ii) different days.
3. Two coins are tossed together. Find the probability of getting (i) both heads, and (ii) exactly one head.
4. A letter of English alphabet is chosen at random. What is the probability that the chosen letter is a consonant.
5. A die is thrown once. What is the probability of getting a number less than 3?
6. If the probability of winning a game is 0.07, what is the probability of losing it?
7. If a number x is chosen at random from the numbers $-3, -2, -1, 0, 1, 2, 3$. What is the probability that $x^2 \leq 4$?
8. A die is thrown once. What is the probability of getting an even prime number?
9. A pair of dice is thrown once. What is the probability of getting a doublet?
10. If a number x is chosen at random from the numbers $-3, -2, -1, 0, 1, 2, 3$, then find the probability of $x^2 < 4$.

11. What is the probability that a randomly taken leap year has 52 Sundays ?
12. A die is thrown once. What is the probability of getting a prime number.
13. A child has a die whose six faces show the letters as shown below :

| | | | | | |
|---|---|---|---|---|---|
| A | B | C | D | E | A |
|---|---|---|---|---|---|

The die is thrown once. What is the probability of getting (i) A, (ii) D ?

14. The probability that it will rain tomorrow is 0.85. What is the probability that it will not rain tomorrow ?
15. Find the probability that a leap year selected at random will contain 53 Sundays and 53 Mondays.
16. In a family of 3 children, find the probability of having at least one boy.
17. Two dice are thrown together once. Find the probability of getting a sum of more than 9.
18. **A bag contains 3 red, 5 black and 7 white balls. A ball is drawn from the bag at random. The probability that the drawn is not black, is**
19. **Two dice are thrown simultaneously. What is the probability that the sum of the two numbers appearing on the top is 13?**

20. **Tree Plantation Drive**

A group Housing Society has 600 members, who have their houses in the campus and decided to hold a Tree Plantation Drive on the occasion of New Year. Each household was given the choice of planting a sampling of its choice. The number of different types of samplings planted were:

- (i) Neem – 125**
- (ii) Peepal – 165**
- (iii) Creepers – 50**
- (iv) Fruit plants – 150**
- (v) Flowering plants – 110**

On the opening ceremony, one of the plants is selected randomly for a prize. After reading the above passage, answer the following questions.

What is the probability that the selected plant is

- (i) A fruit plant or a flowering plant?**
- (ii) Either a Neem plant or a Peepal plant?**

21. **Two dice are thrown simultaneously. What is the probability that the sum of the two numbers appearing on the top is 13?**
22. **Two dice are thrown simultaneously. What is the probability that the product of the numbers appearing on the top is 1?**

23. Read the following passage and answer the questions given at the end:

Diwali Fair

A game in booth at Diwali fair involves using of spinner first. Then, if the spinner stops at an even number, the player is allowed to pick a marble from bag. The spinner and the marbles in the bag are represented in Figure-8

Prizes are given, when a black marble is picked. Shweta plays the game once.

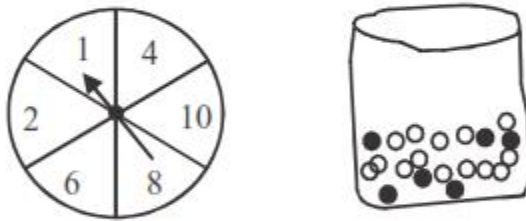


Figure 8

- (i) What is the probability that she will be allowed to pick a marble from the bag?
 - (ii) Suppose she is allowed to pick a marble from the bag, what is the probability of getting a prize, when it is given that the bag contains 20 balls out of which 6 are black?
24. The probability of an event that is sure to happen, is _____.
25. If the probability of an event E happening is 0.023, then $P(\bar{E}) =$ _____.
26. A number is chosen at random from the numbers -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5. Then the probability that square of this number is less than or equal to 1 is _____.
27. Jayanti throws a pair of dice and records the product of the numbers appearing on the dice. Pihu throws 1 dice and records the squares the number that appears on it. Who has the better chance of getting the number 36? Justify?
28. An integer is chosen between 70 and 100, Find the probability that it is
- (a) a prime number
 - (b) divisible by 7