Probability

Class 7th

1. A coin is tossed 1000 times with the following frequencies: Head: 445, Tail: 555

When a coin is tossed at random, what is the probability of getting

(i) A head? (ii) A tail?

2. Which of the following experiments have equally likely outcomes? Explain.
(i) A driver attempts to start a car. The car starts or does not start.
(ii) A player attempts to shoot a basketball. She/he shoots or misses the shot.
(iii) A trial is made to answer a true-false question. The answer is right or wrong.
(iv) A baby is born. It is a boy or a girl.

3. A bag contains 3 red balls and 5 black balls. A ball is drawn at random from the bag. What is the probability that the ball drawn is
(i) red?
(ii) not red?

4. A box contains 5 red marbles, 8 white marbles and 4 green marbles. One marble is taken out of the box at random. What is the probability that the marble taken out will be
(i) red?
(ii) white?
(iii) not green?

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 (see figure.), and these are equally likely outcomes. What is the probability that it will point at
(i) 8? (ii) an odd number? (iii) a number greater than 2? (iv) a number less than 9?.
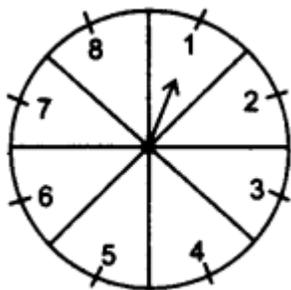
6. A die is thrown once. Find the probability of getting
(i) a prime number
(ii) a number lying between 2 and 6
(iII) an odd number

7. One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting
(i) a king of red colour   (ii) a face card
(iii) a red face card   (iv) the jack of hearts
(v) a spade   (vi) the queen of diamonds

8. 12 defective pens are accidentally mixed with 132 good ones. It is not possible to just look at a pen and tell whether or not it is defective. One pen is taken out at random from this lot. Determine the probability that the pen taken out is a good one.

9. A box contains 90 discs which are numbered from 1 to 90. If one disc is drawn at random from the box, find the probability that it bears
(i) a two digit number.
(ii) a perfect square number.
(iii) a number divisible by 5.

10. Suppose you drop a die at random on the rectangular region shown in figure. What is the probability that it will land inside the circle with diameter 1 m?

3 m

2 m