

**WANDOOR GANITHAM SSLC MATHEMATICS STUDY MATERIAL : 2023**  
**MATHEMATICS OF CHANCE**

**QUESTION –1**

Numbers from 1 to 25 are written on slips of paper and put in a box . A slip is to be drawn from it .

- a) What is the probability that the number written in it is an even number ?
- b) What is the probability that the number written in it is an odd number ?
- c) What is the probability that the number written in it is a perfect square ?

**QUESTION –2**

A bag contains 20 black and 30 red beads . Take one bead from this

- a) What is the probability of getting a black bead ?
- b) What is the probability of getting a red bead ?
- c) How many more black beads are to be put in the box to make the probability of getting a red bead is  $\frac{1}{2}$  ?

**QUESTION –3**

A box contains four slips numbered 1 , 2 , 3 , 4 and another box contains four slips -1 , -2 , -3 , -4 . One slip is taken from each box .

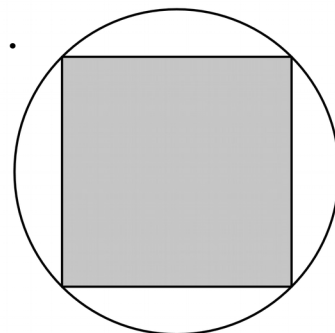
- a) How many pairs of slips are there ?
- b) What is the probability of the sum of the numbers being zero ?
- c) What is the probability of the sum of the numbers being positive ?
- d) What is the probability of the sum of the numbers being negative ?

#### QUESTION – 4

In the figure a square is drawn with all the vertices on the circle .

Put a dot in this figure without looking .

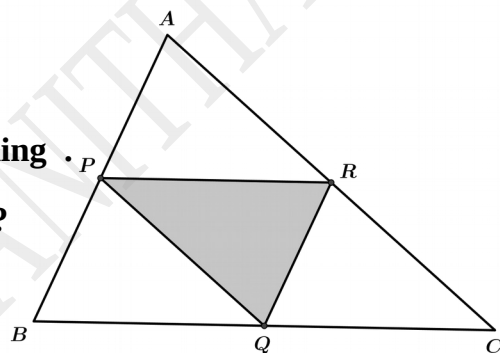
- If the side of the square is taken as  $2x$  ,what is the diameter of the circle ?
- What is the probability that the dot would be within the square ?
- What is the probability that the dot would be outside the square ?



#### QUESTION – 5

In the figure P, Q, R are the midpoints of the sides of the triangle ABC . Put a dot in this figure without looking .

- If  $BC = 10$  centimetres , what is the length of PR ?
- Check whether the sides of the triangle BPQ are equal to the sides of the triangle PQR or not .
- Find three triangles having the area same as that of the triangle PQR ?
- What is the probability that the dot would be within the triangle PQR ?
- What is the probability that the dot would be outside the triangle PQR ?



#### QUESTION - 6

In class 10 A there are 30 boys and 20 girls .In class 10 B there are 40 boys and 30 girls .

One student is to be selected from each class .

- In how many different ways we can select a pair of students ?
- What is the probability of both being girls ?
- What is the probability of getting one boy and one girl ?
- What is the probability of getting at least one girl ?