

Board – CBSE

Class – 7th

Topic – Data Handling 3.4

**Q.1** Tell whether the following is certain to happen, impossible, can happen but not certain.

- (i) You are older today than yesterday.
- (ii) A tossed coin will land heads up.
- (iii) A die when tossed shall land up with 8 on top.
- (iv) The next traffic light seen will be green.
- (v) Tomorrow will be a cloudy day.

**Sol:**

- (i) Certain
- (ii) Can happen but not certain
- (iii) Impossible as there are only six faces on a dice marked as 1, 2, 3, 4, 5, 6 on it.
- (iv) Can happen but not certain
- (v) Can happen but not certain

**Q.2** There are 6 marbles in a box with numbers from 1 to 6 marked on each of them.

- (i) What is the probability of drawing a marble with the number 2?
- (ii) What is the probability of drawing a marble with the number 5?

**Sol:** Total marbles from 1 to 6 marked in a box = 6

(i) The probability of drawing a marble with the number 2.

$$\Rightarrow P(\text{drawing one marble}) = \frac{1}{6}$$

(ii) The probability of drawing a marble with the number 5.

$$\Rightarrow P(\text{drawing one marble}) = \frac{1}{6}$$

**Q.3** A coin is flipped to decide which team starts the game. What is the probability that your team will start?

**Sol:** A coin has two possible outcomes Head and Tail.

The probability of getting Head or Tail is equal.

Now, one team can choose either Head or Tail.

Probability of our team starts first = Number of favorable outcomes/ Number of possible outcomes

$$\therefore P(\text{Starting game}) = \frac{1}{2}$$

**Q.4** A box contains pairs of socks of two colors (black and white). I have picked out a white sock. I pick out one more with my eyes closed. What is the probability that it will make a pair?

**Sol:** It can be observed that while closing the eyes, one can draw either a black sock or a white sock. Therefore, there are two possible cases.

$$\text{Probability (a pair of white socks will be formed)} = \frac{1}{2}$$