

## Exercise 3.4

### Question 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.

### Answer 1:

- (i) It is certain to happen.
- (ii) It can happen but not certain.
- (iii) It is impossible.
- (iv) It can happen but not certain.
- (v) It can happen but not certain.

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

### Answer 2:

Total marbles from 1 to 6 marked in a box = 6

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

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

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

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

### Question 3:

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

### Answer 3:

A coin has two possible outcomes Head and Tail.

Probability of getting Head or Tail is equal.

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