

**EXERCISE 3.4****PAGE: 76**

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

(i) You are older today than yesterday.

**Solution:-**

It is certain to happen.

(ii) A tossed coin will land heads up.

**Solution:-**

It can happen but not certain.

(iii) A die, when tossed, shall land up with 8 on top.

**Solution:-**

It is impossible because there are only six faces on a die marked as 1, 2, 3, 4, 5, and 6 on it.

(iv) The next traffic light seen will be green.

**Solution:-**

It can happen but not certain.

(v) Tomorrow will be a cloudy day.

**Solution:-**

It can happen but not certain.

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?

**Solution:-**

From the question, it is given that

There are 6 marbles in the box with numbers from 1 to 6 marked.

Probability of drawing a marble with number 2 =  $\frac{\text{Number of favourable outcomes}}{\text{Number of possible outcomes}}$

Number of possible outcomes

$$= (1/6)$$

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

**Solution:-**

From the question, it is given that

There are 6 marbles in the box with numbers from 1 to 6 marked.

Probability of drawing a marble with number 5 = Number of favourable outcomes /

Number of possible outcomes

$$= (1/6)$$

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

**Solution:-**

A coin has two faces: one is the Head, and the other one is the Tail.

Now, one team can choose either Head or Tail.

The probability of our team starting first= Number of favourable outcomes /

Number of possible outcomes

$$= \frac{1}{2}$$

