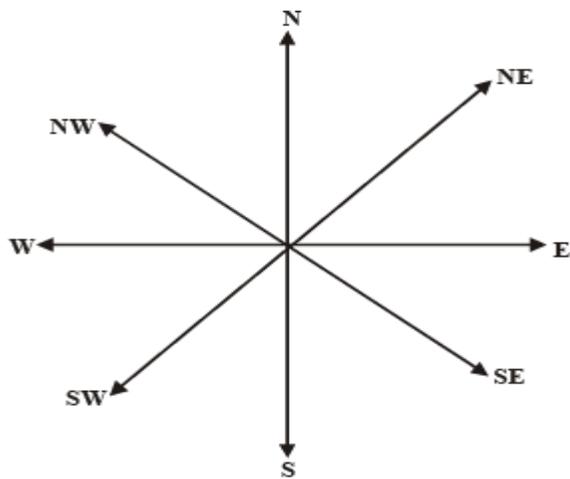# Direction Test

In our day to day life, we make our concept of direction after seeing the position of sun. In fact, this is a truth that sun rises in the East and goes down in the west. Thus when we stand facing sunrise, then our front is called East while our back is called West. At this position our left hand is in the Northward and the right hand is in the Southward.
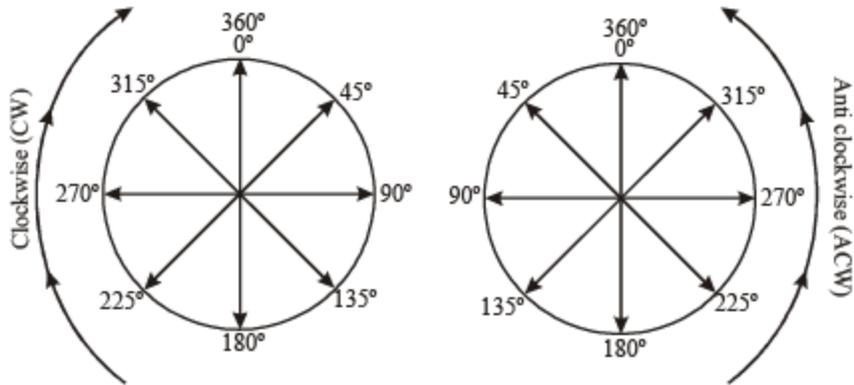
The adjoining diagram shows the four main directions (North N, South S, East E, and West W) and the four cardinal directions (North- East NE, North- West NW, South-East SE, and South - West SW) to help the candidates to know the directions.



## Concept of Degree

Let us see the following picture:
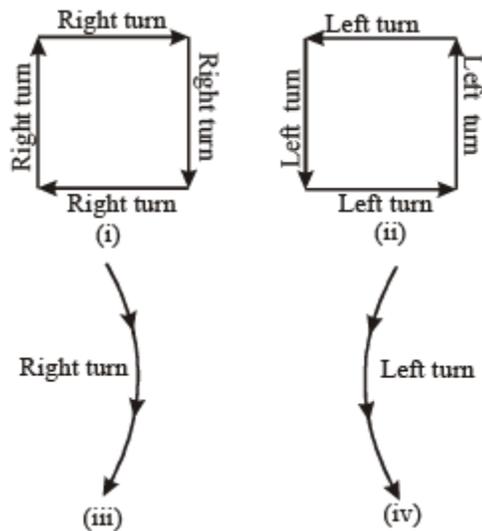
# Direction test

Concept of Turn

Left turn = clockwise turn

Right turn = Anticlockwise turn.

Let us understand it through pictorial representation:

## Points to Remember

- At the time of sunrise if a man stands facing the east, his shadow will be towards west, i.e. behind him.
- At the time of sunset the shadow of an object is always to the east.

- If a man stands facing the North, at the time of sunrise his shadow will be towards his left and at the time of sunset it will be towards his right.
- At 12:00 noon, the rays of the sun are vertically downward hence there will be no shadow.
- The shortest distance from a particular point after travelling a distance of x metres in the horizontal direction and a distance of y metres in the vertical direction is equal to:

$$\sqrt{x^2 + y^2}$$

- Angle between any two main (or cardinal) direction is 90° but the angle between one main and one cardinal direction is 45°.

## Solved Examples

**1. Pravin walked 30 metres towards East, took a right turn and walked 20 metres, again took a right turn and walked 30 metres. How far was he from the starting point ?**

1. 30 metres
2. 80 metres
3. 50 metres
4. 20 metres

**Solution. (4):** Diagram of Pravin walking direction is as follows:
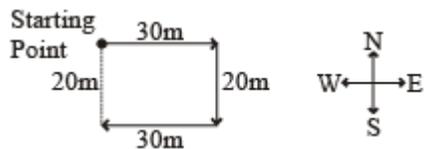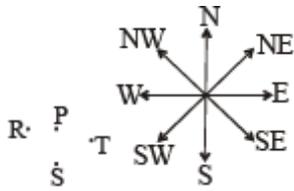


**2. R is to the West of P. T is to the East of S. P is to the north of S. T is in which direction with reference to R?**

1. West
2. East
3. North
4. South
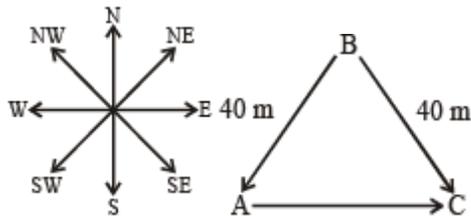5. None of these

**Solution. (5):** According to question,

Hence, T is in south-east direction with respect to R

**3. A is 40 m south-west of B. C is 40 m south-east of B. Then, C is in which direction of A?**

1. East
2. West
3. North-east
4. South

**Solution. (1):** As clear from the adjoining diagram, C lies to the east of A.



**4. Gaurav walks 20 metres towards North. He then turns left and walks 40 metres. He again turns left and walks 20 metres. Further, he moves 20 metres after turning to the right. How far is he from his original position?**
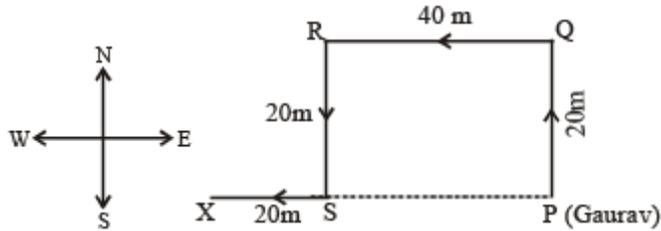
1. 20 metres
2. 30 metres
3. 50 metres
4. 60 metres

**Solution.(4):** The movements for Gaurav are as shown in figure.

Clearly, Gaurav's distance from his initial position
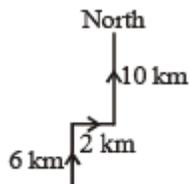
P = PX = (PS + SX) = (QR + SX) = (40 + 20) m = 60 m.

**5. After walking 6 km, I turned right and covered a distance of 2 km, then turned left and covered a distance of 10 km. In the end, I was moving towards the north. From which direction did I start my journey?**

1. North
2. South
3. East
4. West

**Solution. (2):** The route is as shown in the adjoining diagram.



Thus, the man started his journey from the south and moved northwards.

**6. If A is to the south of B and C is to the east of B, in what direction is A with respect to C?**

1. North-east
2. North- west
3. South-east
4. South-west

**Solution. (4):** Clearly, comparing the direction of A with respect to clock in the second diagram with that in the first diagram, A will be south-west of C.
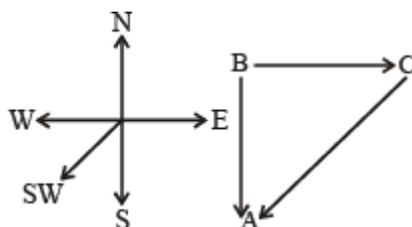
**7. This year, Balu's birthday is on 27th January i.e. Wednesday. Balu remembers that Mohan's birthday is exactly on the fifth Friday after his birthday. How much younger is Mohan than Balu?**

1. Data inadequate
2. By 30 days
3. By 3 days
4. By 29 days

**Solution. (2):** First Friday will be two days after Wednesday.

Total number of days = 2 + (7 × 4) = 30 days

**8. Shailesh saw the movie on Monday. Nitin saw the movie two days prior to Vikas but three days after Shailesh. On which day did Vikas see the movie?**

1. Monday
2. Saturday
3. Tuesday
4. Sunday

**Solution. (2):** Nitin saw the film on Monday + 3 = Thursday Vikas saw the film on Thursday + 2 = Saturday