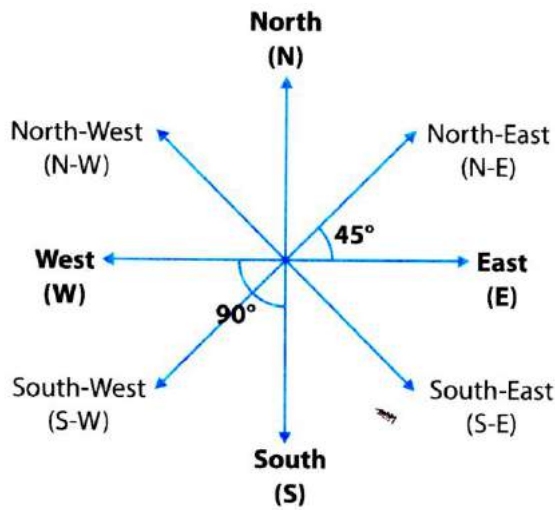# Direction Sense Test

DIRECTIONS
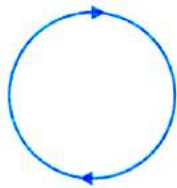
There are eight directions. These are:

East (E), West (W), North (N), South (S), North-East (N-E), North-West (N-W), South-East (S-E), and South-West (S-W)
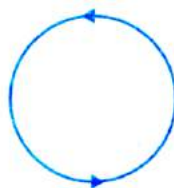

The angle between (East and North) or (North and West) or (South and East) or (South and West) is $90°$

.

Clockwise : The direction in which the clock moves.

Anticlockwise : The opposite direction of the movement of the hands of a clock.

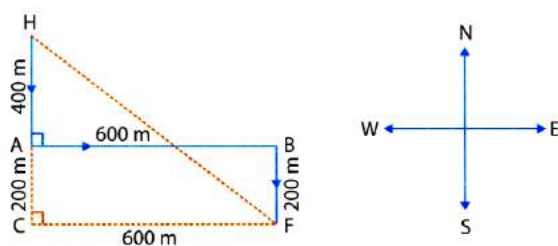**Figure :** Clockwise direction   **Figure :** Anticlockwise direction

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EXAMPLE

1.   **A farmer everyday goes to his farm from his home. He walks 400 m towards South. He turns to his left and walks 600 m. He then turns to his right and walks 200 m and reach his farm. How far is the farm from the home and in which direction?**

(a) $600\sqrt{2}$ m, North-East   (b) $600\sqrt{2}$ m, South-East

(c) 800 m, North-East   (d) 800 m, South-East

Explanation (b):

Let the home be at H.

The farmer first walks 400 m from H to A, then A to B 600 m and then B to F 200 m. F be the position of farmer's farm

In ΔHCF, HC = 400 + 200 = 600 m

CF = 600 m

$\angle HCF = 90^{\circ}$

Using Pythagoras theorem,

$HF^2 = HC^2 + CF^2 = 2HC^2$

$\Rightarrow HF = \sqrt{2 \times 600 \times 600} = 600\sqrt{2}\ m$

Hence farm is $600\sqrt{2}\ m$ away from the home in South-East direction.

2. **A rat runs 20' towards East and turns to right, runs 10' and turns to right, runs 9' and again turns to left, runs 5" and then turns to left, runs 12' and finally turns to left and runs 6'. Now, in which direction is the rat facing?**
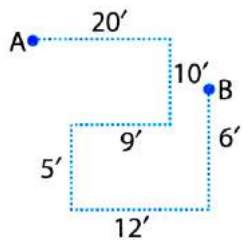
(a) East   (b) West   (c) North   (d) South

Explanation (c):

A is initial position & B is final position. Rat is now facing in north direction.