DIRECTION TEST

Learning Objectives

- Concept of Direction
- Concept of Turn
- Concept of Minimum Distance

Concept of Direction

In general we make our concept of direction after seeing the position of the Sun. it is an universal truth that Sun rises in the East and goes down in the West. Thus, when we stand facing sunrise our front is called East, and our back is called West. At this position our left hand is in the northward and the right hand is in the southward. Let us see the following direction map to make the concept more clear.



Note: On paper North is always on the top while South is always at the bottom.

Concept of Turn

Left turn	=	Anti clockwise turn
Right turn	=	Clockwise turn

Let us understand it through pictorial presentation:



Important Points Regarding Directions

- If our face is towards North, then after (left turn our face will be towards West while after right turn it will be towards East.
- If our face is towards South, then after left turn our face will be towards East and after right turn it will be towards West.
- If our face is towards East, then after left turn our face will be towards North and after right turn it will be towards South.
- If our face is towards West, then after left turn our face will be towards South and after right turn it will be towards North.
- If our face is towards North-West, then after left turn our face will be towards South-West and after right turn it will be towards North-East.
- If our face is towards South-West, then after left turn our face will be towards South-East and after right turn it will be towards North-West.
- If our face is towards South-East, then after left turn our face will be towards North-East and after right turn it will be towards South-West.
- If our face is towards North East, then after left turn our face will be towards North West and after right turn it will be towards South East.

Concept of Minimum Distance

Minimum distance between initial and last point



 $h^2 = b^2 + p^2$, where h = Hypotenuse b = Basep = Perpendicular

AB = BA is the minimum or shortest distance to reach A from B or to reach B from A. Remember this important rule is known as **'Pythagoras Theorem'**.

Example 1

Naveen starts moving from a point P towards East. After walking 1km he turns his left from T and after moving 2km up to R he again takes left turn and walks 1km up to a point Q. In this case, QP = RT; PT = QR and Q is located in North in respect of P.

Explanation: Pictorial presentation explains the truth.

Let us see:



Clearly, PT = QR = 1 km & PQ = RT 2 km.

Example 2

Lalit starts walking from a point P towards West. After some distance he takes right turn and Walks to a point A. Now, his direction from P is definitely towards North-West and shortest or minimum distance to reach A is PA.

Explanation: Pictorial presentation explains the truth.

Let us see:



N W = North WestN E = North EastS W = South WestS E = South East

Commonly Asked Questions

• Raja starts walking from a certain point towards North and after 2km he takes left turn and moves on. After moving 1km he again takes a left turn and walks 2km to reach S.

Find the distance of S from starting point, (a) 3 km (b) 4 km (c) 1 km (d) 2km (e) None of these

Answer (c)

Explanation: Option (c) is correct.

Let us see:

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Clearly, distance of S from starting point P is 1km. Rest of the options is incorrect because of the correctness of option (C).

Kasinath starts moving towards South from his house P. He walks some distance and then turns his left. He again takes left turn after certain distance and continues moving.

He takes a final turn rightward to reach a point M. Which direction did he move in final turn?

(a) East	(b) West
(c) North	(d) South
(e) None of these	

Answer (a)

Explanation: Option (a) is correct.

Let us see:



Clearly, Kasinath is moving towards East. Rest of the options is incorrect because of the correctness of option (A).

Kamal walks from his house T towards East and after walking some distance he takes left turn and reaches his office O. If he has to return home driving exactly opposite to office, which direction will he walk?

- (a) North-West (b) North-East
- (c) South-West (d) South-East
- (e) None of these

Answer (c)

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Explanation: Option (c) is correct.

Let us see:



Rest of the optionsss incorrect because of the correctness of option (C).

- Tulsi walks towards 'North from a certain point P and after reaching point Q she taken left turn and moves up to R. The shortest route to reach R is.....
 - (a) P to Q to R (b) P to R
 - (c) Q to P to R (d) Not possible

(e) None of these

Answer (b) Explanation: Option (b) is correct.

Let use see:



Clearly, shortest route is P to R.

Rest of the options is incorrect because of the correctness of option (B).

Rashmi's house is just opposite to Mansi's house. Rashmi goes towards North-East and reaches Mansi's house. If Mansi has to go Rashmi's house, then in which direction should Mansi go?

- (a) South-West (b) North-West
- (c) South-East (d) North-East
- (e) None of these

Answer (a)

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Explanation: Option (a) is correct because Rashmi's and Mansi's house are opposite to each other. To reach Mansi's house, Rashmi has to go straight towards North-East.

Therefore, clearly, to go Rashmi's house Mansi will have to go exactly opposite to North-East and that direction will be South-West.

Let us



M = Mansi's House

R = Rashmi's House

Rest of the options is incorrect because of the correctness of option (A).

Summary

- There are four main directions and they are EAST, WEST, NORTH and SOUTH.
- There are also four corner directions and they are 'NORTH EAST', 'NORTH WEST, 'SOUTH-EAST and 'SOUTH-WEST.
- East and West are exactly opposite directions.
- North-East is exactly opposite to 'South-West'.
- North-West is exactly opposite to 'South-East'.
- Sunrise and sunset give us the idea of direction.
- On paper. North is always on the top and South is always at the bottom while East is towards our right hand and West is towards our left hand.