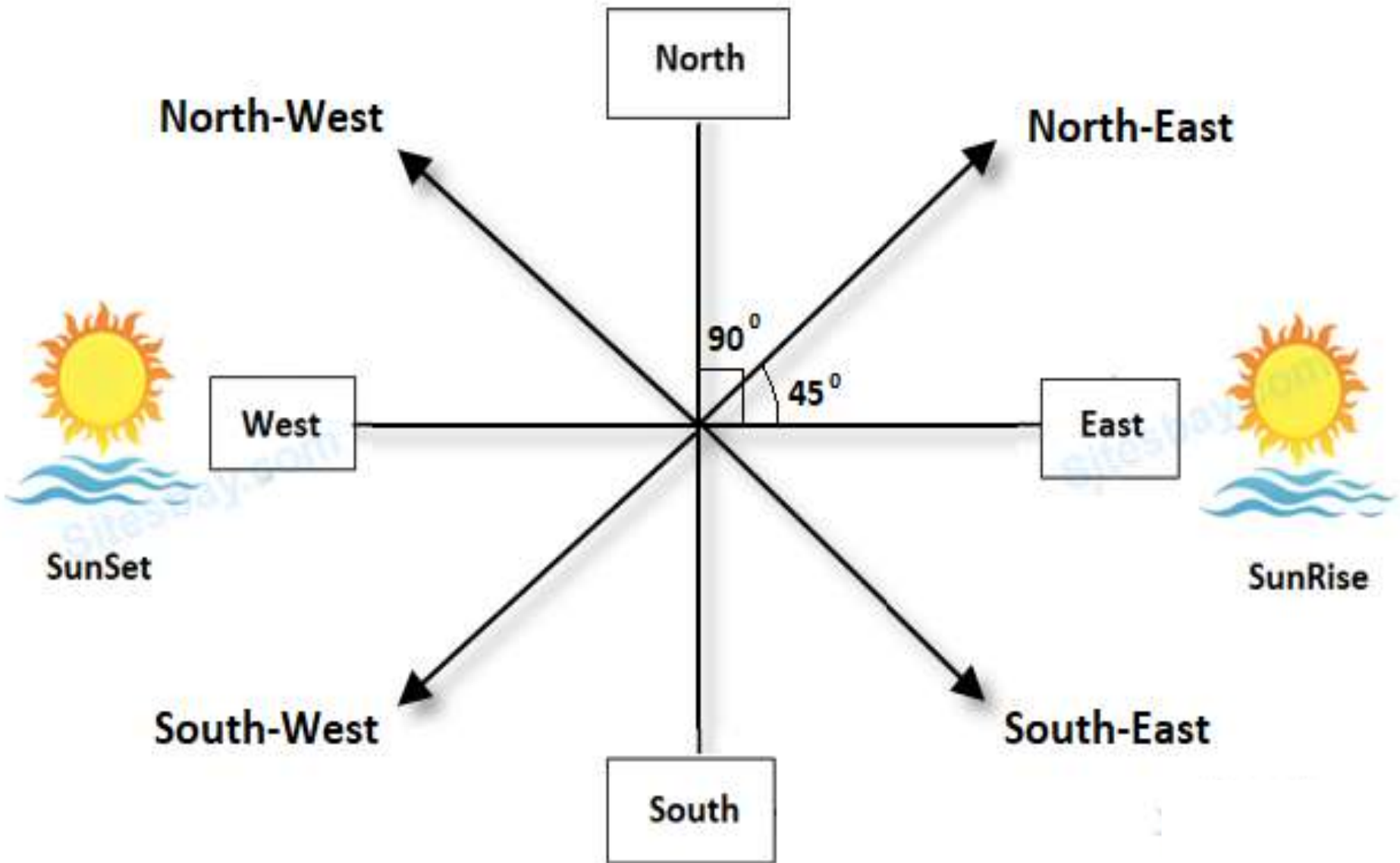


# Direction Sense

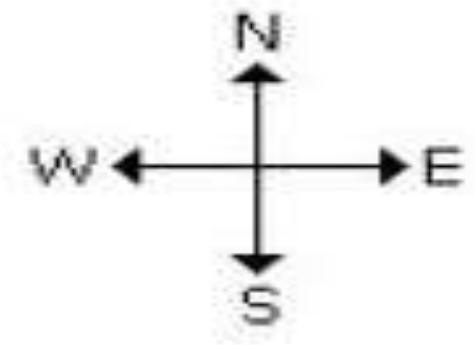
**Reasoning for Competitive Exams**

**By Rahul Agrahari**

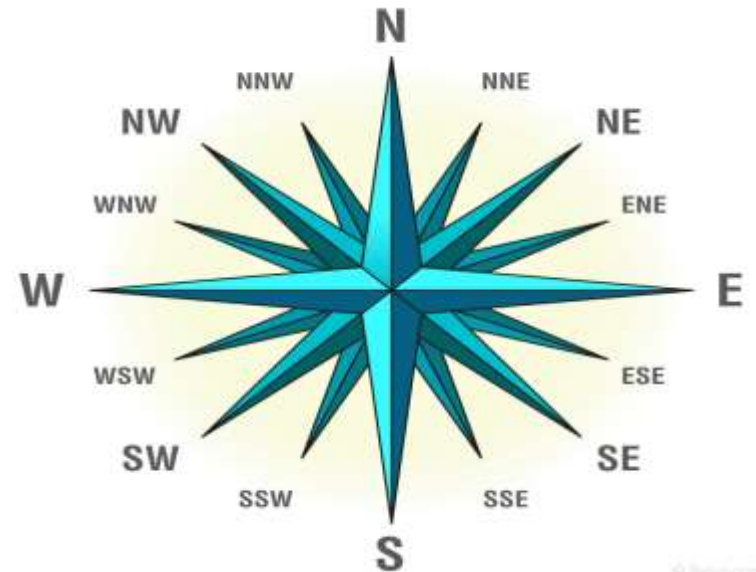
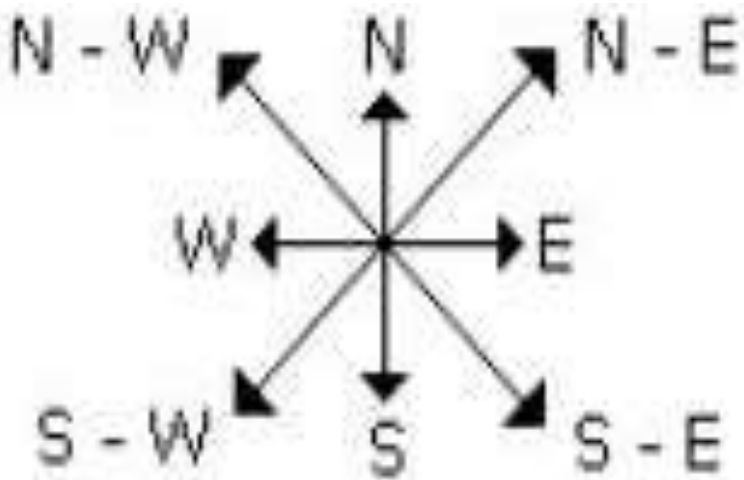
# Main and Cordinal Direction



There are four main directions –  
**North, South, East and West.**



There are four cardinal directions – **North-East(N-E), North-West(N-W), South-East (S-E), South-West(S-W).**



# IMPORTATN POINTS

- At the time of sunrise if a man stands facing the east, his shadow will be towards west.
- At the time of sunset the shadow of an object is always in 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.
- Always rainbow will occur opposite to the sun.
- Always shortest distance should be calculated.

# EXAMPLE

**Riya walks southwards, then takes a half right turn and then a left turn. In which direction is he walking now?**

- a) South-East**
- b) South-West**
- c) South**
- d) North**



# EXPLANATION

**ANS :- South-East**

# SSC CGL

**A man started walking positioning his back towards the sun. After sometime, he turned left, then turned right and then towards the left again. In which direction is he going now?**

- a) North or South**
- b) East or west**
- c) North or West**
- d) South or West**
- e) Data is not sufficient**

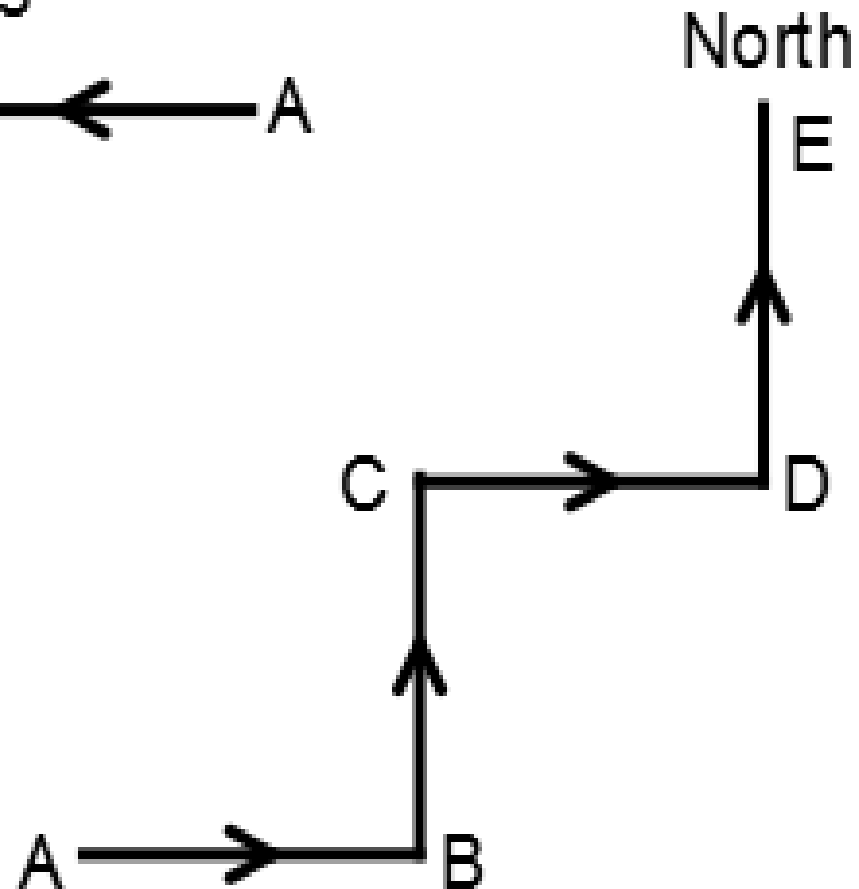
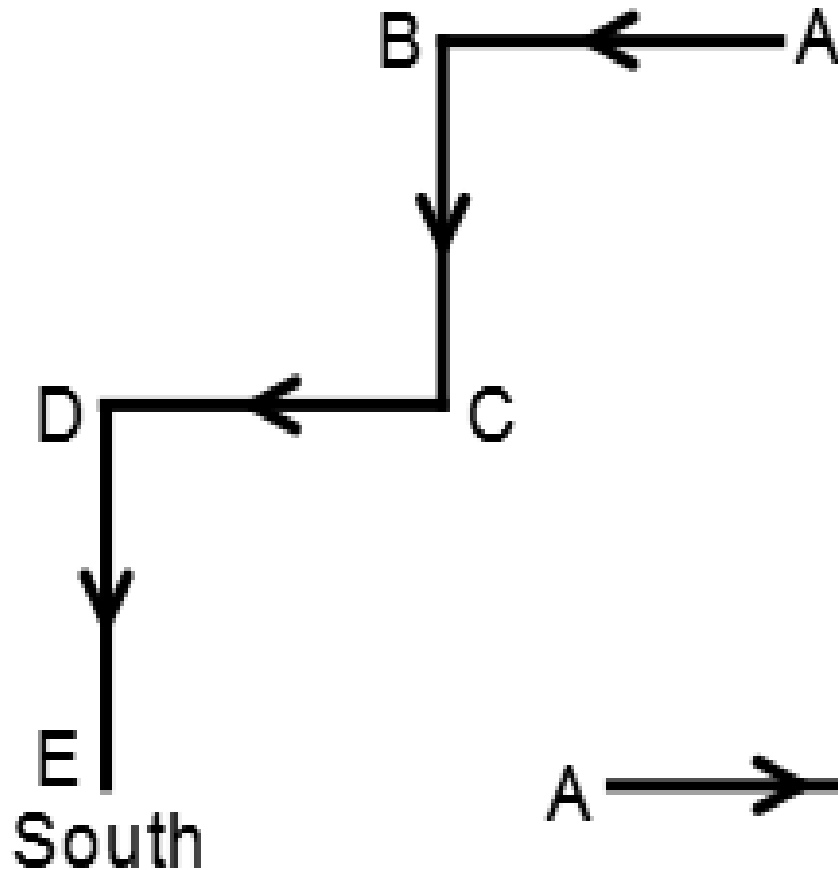
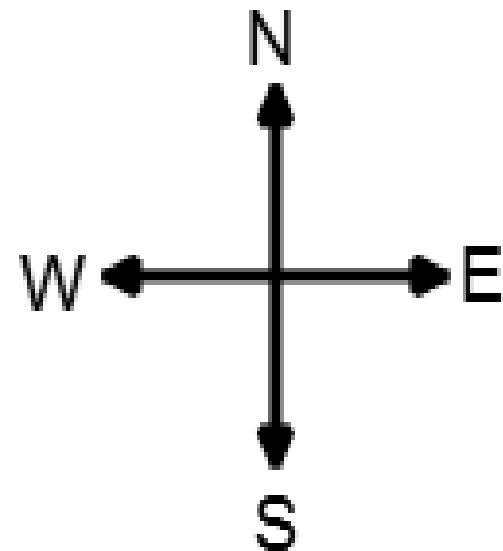


# EXPLANATION

ANS :-

In the morning

In the evening





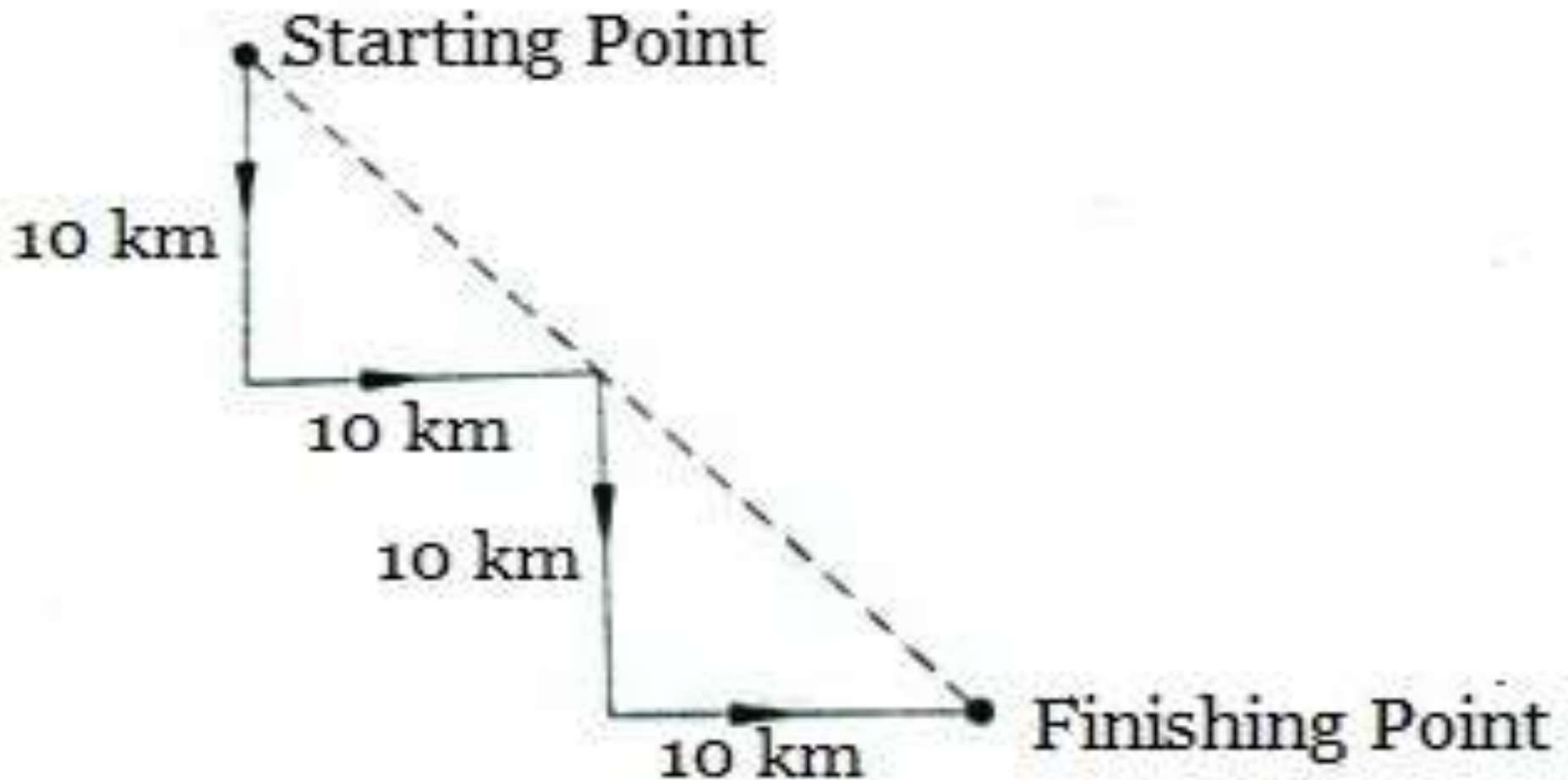
# TCS

**A man went 10 kms towards south. Then turned East and covered 10 kms and turned to the right. Again after 10 kms he turned to the left and covered 10kms to reach the destination. How far and in which direction is he to his starting point?**

- a)  $20\sqrt{2}$  km, South- East**
- b)  $20\sqrt{2}$  km, North- East**
- c)  $20\sqrt{2}$  m, South- East**
- d) 20 km, South East**

# EXPLANATION

ANS :-  $20\sqrt{2}$  m, South- East



# EXAMPLE

After his office hours in the evening, Digamber starts walking facing the sun. First he turns to his right, then he turns to his left and after walking for some meters he saw a girl and turned to his left to follow the girl suddenly he observed his Dad on same path and he again turned to his left. In what direction is he moving now?

- (A) South
- (B) North
- (C) East
- (D) West



# EXPLANATION

**ANS :- East**

# WIPRO

**Amit's office is situated 5 kilometres North of Ben's office. Ben starts from his office and walks 2 kilometres towards Amit's office. He then turns right and walks 3 kilometres and then turns left and walks 3 kilometres. To which direction will he turn to reach Amit's office?**

- a) West**
- b) North**
- c) South**
- d) East**

# EXPLANATION

**ANS :- West**

# ACCENTURE

**Swati walked 20 m towards the north. Then she turned right and walks 30 m. Then she turns right and walks 35 m. Then she turns left and walks 15 m. Finally she turns left and walks 15 m. In which direction and how many meters is she from the starting position?**

- A.15 m West**
- B.30 m East**
- C.30 m West**
- D.45 m East**

# EXPLANATION

**ANS :- 45 m East**



# UPPSC AE

**Mrs.Veena wants to go to the Krishna Rajendra market. She moved northwards and after covering some distance turned left and moved 4 km and reached a crossing. The road in front of her led to Jaynagar while the road on to her left led to Bangalore Medical College and the road on to her right led to the Krishna Rajendra market. In which direction the Krishna Rajendra market is located with reference to the starting point?**

- A. West**
- B. North-West**
- C. South-West**
- D. East**

# EXPLANATION

**ANS :- B. North-West**

# CAPGEMINI

**At sunrise, Rohit and Mohit are having a conversation standing in front of each other. The shadow of Mohit is formed towards the right hand of Rohit. What direction is Mohit facing?**

**a) South-east**

**b) East**

**c) North**

**d) West**

**e) None of these**

# EXPLANATION

**ANS :- North**

# WIPRO

**At a crossing, there was a direction pole, which was showing all the four correct directions. But due to the wind, it turns in such a manner that now West pointer is showing South. Harish went in the wrong direction thinking that he was travelling East. In what direction he was actually travelling?**

- A. South**
- B. North**
- C. West**
- D. East**

# EXPLANATION

**ANS :-North**

# IB 2009

A clock is so placed that at 2:00 p.m. the minute hand points towards North-west. In which direction does the hour hand point at 6:00 p.m.?

- A. North-West
- B. West
- C. North-East
- D. South-East



# EXPLANATION

**ANS :- South-East**



# CAT

J,K,L,M,N,O,P and R are eight huts. L is 2 km east of K. J is 1 km north of K and Q is 2 km south of J. P is 1 km west of Q while M is 3 km east of P and O is 2 km north of P. R is situated right in the middle of K and L while N is just in the middle of Q and M. Distance between K and P is

- A. 1.0km
- B. 1.23 km
- C. 1.41 km
- D. 1.5 km

# EXPLANATION

**ANS :- 1.41 km**

# GATE 2015

**Aman starts from his house and walks 2 km east up to his class and turns southwards and walks 1 km up to his friend's house. At the friend's house, he turns to east and walks 2 km up to his school. He then turns northwards and walks 4 km to the garden. How far is he from his house?**

- a. 5 km**
- b. 7 km**
- c. 4 km**
- d. 2.5 km**

# EXPLANATION

**ANS :- 5 km**

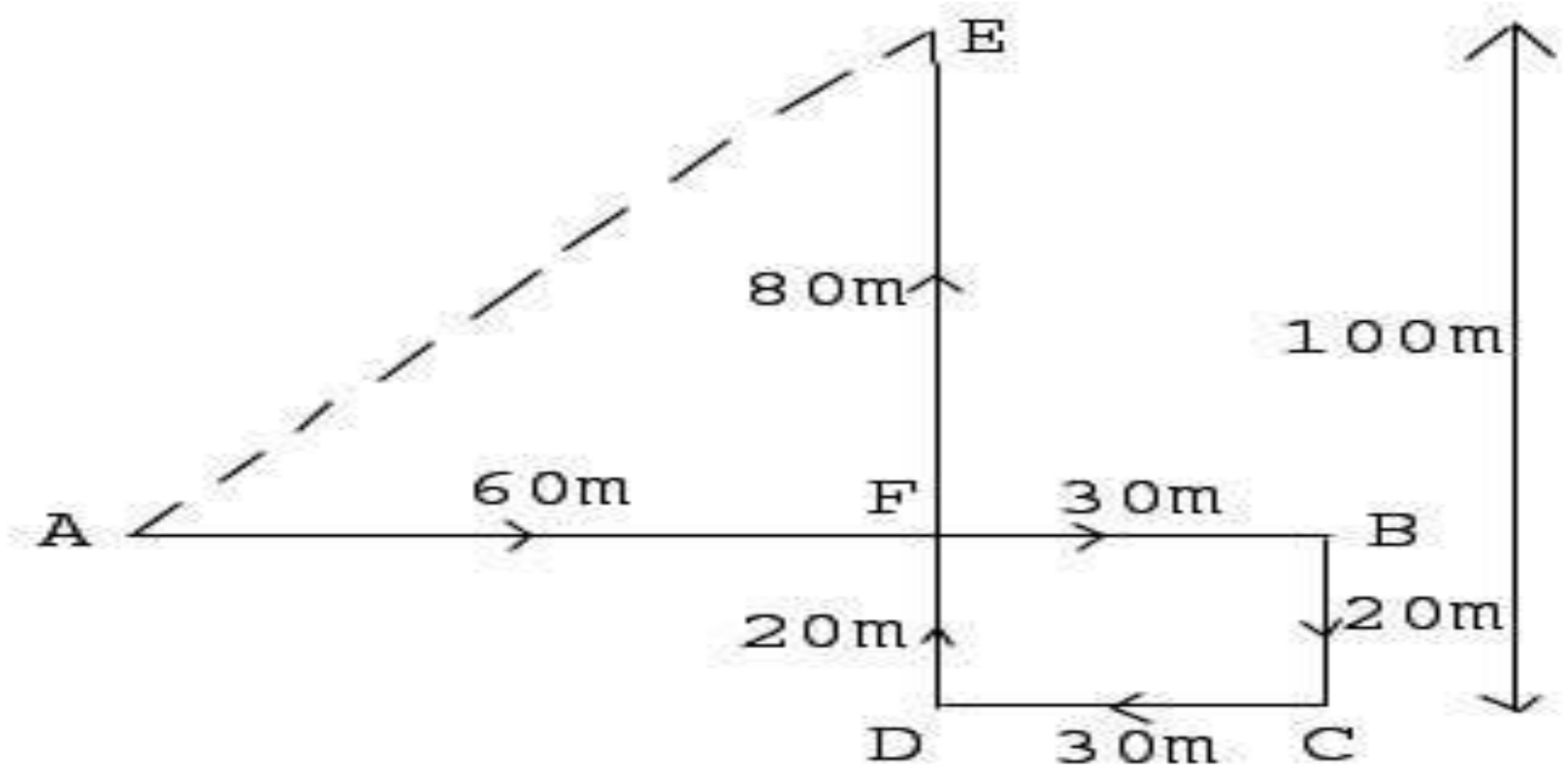
# SBI PO

A child is looking for his father. He went 90 meters in the East before turning to his right. He went 20 meters before turning to his right again to look for his father at his uncle's place 30 meters from this point. His father was not there. From here he went 100 meters to the North before meeting his father in a street. What is the smallest distance between the starting point and his father's position?

- a) 120 m
- b) 150 m
- c) 100 m
- d) NOT

# EXPLANATION

ANS :- 100 m



# **Directions for next 3 question:**

**Read the following information carefully and answer the questions given below it:**

- i.  $M?N$  means N is to the right of M at a distance of two meter.**
- ii.  $M*N$  means N is to the North of M at a distance of two meter.**
- iii.  $M+N$  means N is to the left of M at a distance of two meter.**
- iv.  $M\%N$  means N is to the South of M at a distance of two meter.**
- v. In each of the following questions all persons face North.**

# QUESTION

i). If  $P\%Q+R*S$  then S is in which direction with respect to P?

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

ii). If  $X?R\%Y?Z$  then Z is in which direction with respect to R?

- a) North
- b) West
- c) South-east
- d) South-west
- e) None of these

iii). If  $T ? U + V* W$ , then V is in which direction with respect to T?

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



# QUESTION

Read the following information carefully and answer the questions given below it:

- i.  $M ? N$  means N is to the right of M at a distance of two meter.
- ii.  $M * N$  means N is to the North of M at a distance of two meter.
- iii.  $M + N$  means N is to the left of M at a distance of two meter.
- iv.  $M \% N$  means N is to the South of M at a distance of two meter.
- v. In each of the following questions all persons face North.

i). If  $P \% Q + R * S$  then S is in which direction with respect to P?

- a) South-east      b) East
- c) North              d) West

ii). If  $X ? R \% Y ? Z$  then Z is in which direction with respect to R?

- a) North              b) West
- c) South-east      d) South-west

iii). If  $T ? U + V * W$ , then V is in which direction with respect to T?

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

# EXPLANATION

**ANS :- (i) West**

**(ii) South East**

**(iii) NOT**

# GATE 2014

X is 1 km northeast of Y. Y is 1 km southeast of Z. W is 1 km west of Z. P is 1 km south of W. Q is 1 km east of P. what is the distance between X and Q in km?

(a) 1

(b)  $\sqrt{2}$

(c)  $\sqrt{3}$

(d) 2

# EXPLANATION

**ANS :- (C)**

# UPSC

**Two car A and B which are at a distance of 100 km from each other, started travelling in opposite direction on straight main road.**

**A, 10 km along the main road then he turns towards right and travel 10 km. then he turns towards left and travel 10 km then he again turns towards its left and reaches back the main road straight.**

**B, 10 km along the main road.**

**What is the distance between the two car at this particular point**

- (a) 70**
- (c) 130**

- (b) 120**
- (d) NOT**

# EXPLANATION

Two car A and B which are at a distance of 100 km from each other, **ANS:-**  
started travelling in opposite direction on straight main road.

A, 10 km along the main road then he turns towards right and travel 10 km. then he turns towards left and travel 10 km then he again turns towards its left and reaches back the main road straight.

B, 10 km along the main road.

What is the distance between the two car at this particular point

- (a) 70                      (b) 120
- (c) 130                    (d) NOT

Thank You

The text "Thank You" is rendered in a highly stylized, cursive script. The letters are primarily black with a thick, glossy 3D effect, featuring a gold outline and a gold shadow. The 'T' is particularly large and has a long, sweeping horizontal stroke. The 'Y' and 'o' have long, elegant descenders. The text is decorated with clusters of gold stars and dots: a group of four stars and dots is positioned above the 'o', and another group of three stars and dots is located below the 'T'. The entire graphic is set against a plain white background.