DIRECTION SENSE SHORT TRICKS & QUESTIONS WITH SOLUTIONS

BY

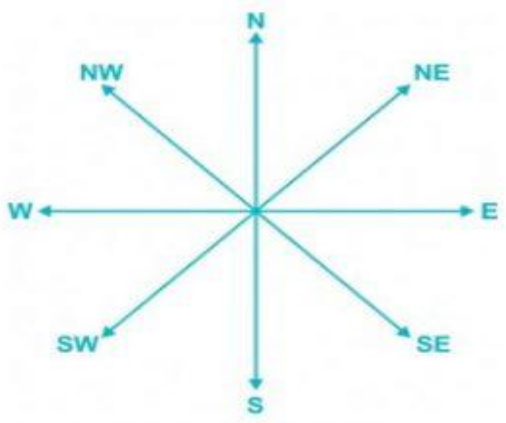
GOVERNMENTADDA.COM

PLEASE SUPPORT US BY JOINING BELOW GROUPS AND LIKE OUR PAGES WE WILL BE VERY THANKFUL TO YOU.

1. ***Facebook Page : https://www.facebook.com/governmentadda/***
2. ***Facebook Group : https://www.facebook.com/groups/governmentadda/***
3. ***Telegram Channels :***
    1. ***Official Channel : https://telegram.me/GovtAdda***
    2. ***Job Alert Channel :https://telegram.me/jobalert***
    3. ***English Novels Channel : https://telegram.me/EnglishNovelsZone***
    4. ***English Learning Channel : https://telegram.me/EnglishDose***
    5. ***Gk Gs Channel : https://telegram.me/GA_Buzz***
4. ***Telegram Groups :***
    1. ***Banking - https://telegram.me/IbpsZone***
    2. ***SSC - https://telegram.me/SscAdda***
    3. ***RBI - https://telegram.me/RbiZone***
    4. ***Railways - https://telegram.me/RailwayZone***
    5. ***IT Officer - https://telegram.me/IT_Officer***
    6. ***Insurance - https://telegram.me/InsuranceZone***
    7. ***SBI -https://telegram.me/SbiZone***
    8. ***Official Group- https://telegram.me/GovernmentAdda***
    9. ***Quiz Group-https://telegram.me/Quiz4Exam***
5. ***Twitter Page - https://twitter.com/GovtAdda***
6. ***Instagram Page - https://www.instagram.com/governmentadda/***
7. ***Google Group - https://plus.google.com/communities/101179260272404032205***
8. ***Pinterest Page - https://www.pinterest.com/governmentadda/***
9. ***Website - https://www.GovernmentAdda.com***

Now we are going to discuss how to solve direction sense questions along with the shortcuts and tricks to solve the question in less than a minute. The questions of which are asked under the reasoning section in various competitive exams like IBPS Clerk, SBI Clerk, SSC CGL, Placement Aptitude, IBPS PO, SBI PO, NICL AO, LIC AAO, SBI Associate Clerk, SBI Associate PO, CAT and others. The key factor to solve this type of questions are have your basics right. So be strong in the basics first because knowing the conventional method gives you an upper hand when you lost track of the shortcut method. After you have acquired the basics and have gone to a pro, try to learn the tricks of various shortcuts.The first step for solving the questions utilizing the concept of 'directions' is to understand the direction chart, which has 8 directions. Take an optical canvassing of the direction chart given below.

Basic Directions:



Note :- If not mentioned we always assume that the person is facing north.

Shortcut Approach:- To remember four main directions, always remember the word 'NEWS.'

Points to Remember :-

1. ***There are 8 directions in all i.e. N, S, E, W, NE, SE, SW, NW***
2. ***Angle between 2 crosses i.e. NW & NE or N and E etc is 90****

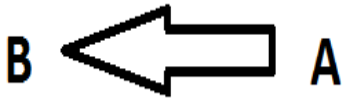
Questions that are asked:

1) Find the Final Direction.
2) Starting point direction with respect to the ending point.
3) Ending point direction with respect to starting point.

Some other basics:

1.B is to the east of A.

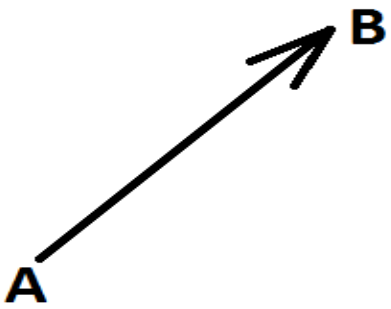
2. B is to the west of A.



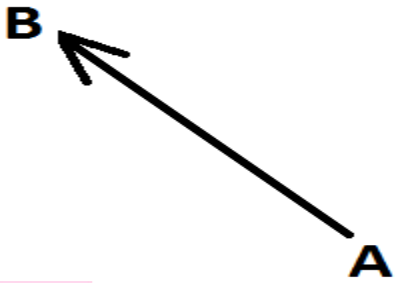
3. B is to the north of A.

4. B is to the south of A.

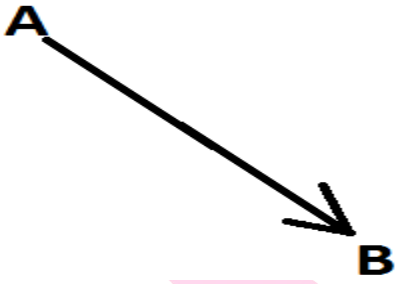
5. B is to the North East of A.



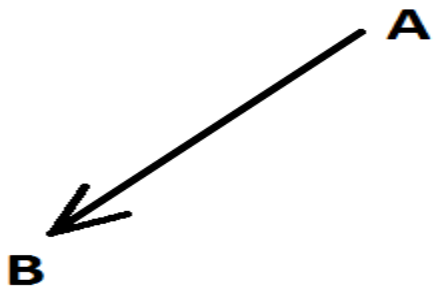
6. B is to the North West of A.



7. B is to the South East of A.

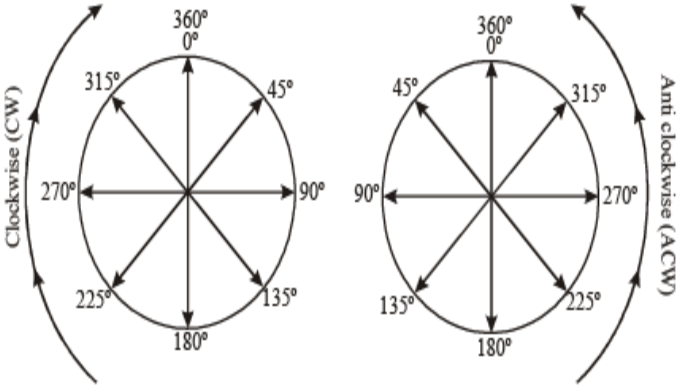


8. B is to the South West of A.



Concept of Degree

Let us see the following picture:

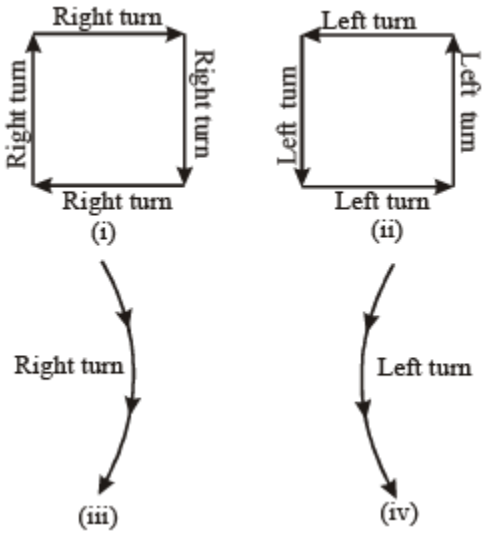


Concept of Turn

Left turn = clockwise turn

Right turn = Anticlockwise turn.

Let us understand it through pictorial representation:



Important Points To Keep In Mind In Left Right Movement:

1. *A person facing north, on taking left will face towards west and on taking the right turn towards east.*

2. *A person facing west, on taking left will face towards south and on taking right turn towards north.*
3. *A person facing east, on taking left will face towards north and on taking the right turn towards south.*
4. *A person facing south, on taking left will face towards east and on taking the right turn towards west.*

Note: *When a question says moved towards left or right side, we assume that the movement is at an angle of 90 degrees.*

Keep in mind that when a person moves to his left side, he will move towards anti-clockwise direction and when a person moves to his right side, he will move towards clockwise direction.

When a question says if someone move towards left or right side, we assume that the movement is at an angle of 90 degrees.

Example Based on Basics Direction :-

Example:- *A Person is walking towards east 50 meters then he turned towards his right and walks 100 meters. Later in the journey he turned towards his right direction and walks for 150 meters finally he turns right and walks 100 meters.What is his final direction?*

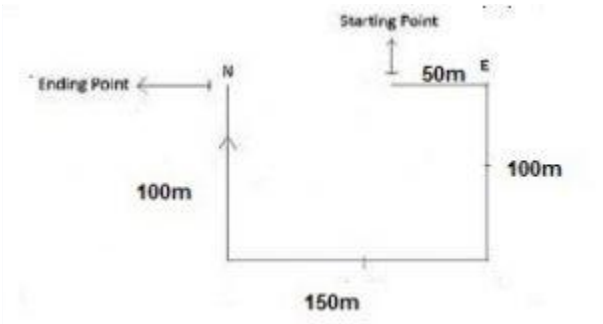
Solution :-

1) The 1st line in the question says that person walks 50m east.

2) The 2nd line says that he turns right and walks 100m since he is facing east so his right would be 'SOUTH' direction therefore he walks 100m south.

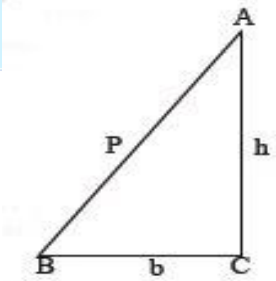
3) The 3rd line says that he turns right again and walks 150m so right of south is west.

4) Further the question says that he finally turns right and walks 100 m so right of west direction is north



CONCEPT OF MINIMUM DISTANCE

Minimum distance between initial and last point.



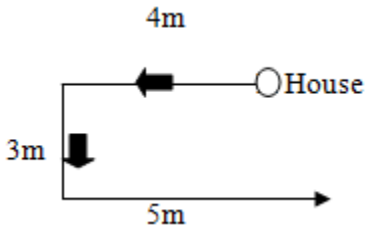
h2 = b2 +P2

where,
h = Hypotenuse
b = Base
P = Perpendicular

Remember this important rule is known as ***'Pythogoras Theorem'***

Example : *Aarthi walked 4 km west of her house and then turned south covering 3 km. Finally, She moved 5 km towards east. In which direction she is now with respect to starting point?*

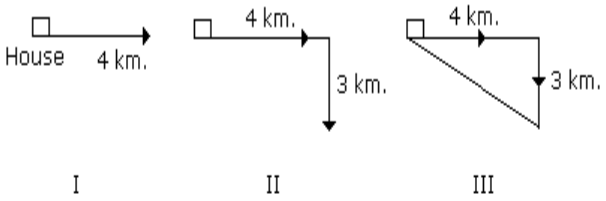
***Solution**: From the above diagram, we can find that she is South East to her starting point.*



***Example** : Sandhya starting from her house, goes 4 km in the East, then she turns to her right and goes 3 km. What is the shortest distance to reach her house?*

Solution:

In order to find the minimum distance between these points. We know that the shortest distance between these points will lie along the hypotenuse of the right-angled triangle formed by these points



$$\text{Minimum distance} = \sqrt{(4)^2 + (3)^2}$$

$$= \sqrt{16 + 9}$$

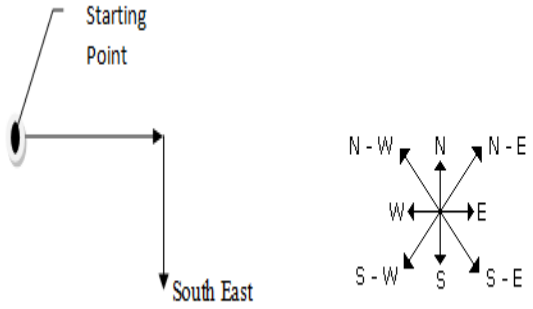
$$= \sqrt{25}$$

$$= 5 \text{ km.}$$

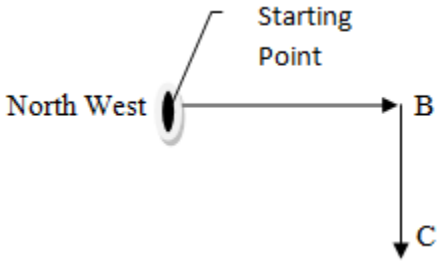
Now applying Pythagoras theorem, the distance between the starting point A and final point C is 5 kms i.e. the square root of the sum of squares of 3 and 4.

Other Possible Questions

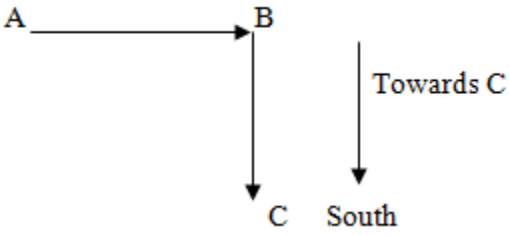
An important point to learn from this question could be the fact that you might be asked to specify the direction of the specific point, for example, the question might state: "in which direction is she with respect to the starting point". The answer would be South-east.



Now, in case the question was: "In which direction is the starting point with respect to C"; the answer would be North-west.



Another question could be: "In which direction is he walking towards point C"; the answer would be South.



Direction Sense

Q1. A person starts from point T in east direction. Walks 6 m and turns right. Next walks 4 m and turns left. Next walks 3m and turns right. Now cycles for 8 km and stops. Find his distance from T.

a) 17 m
b) $2\sqrt{131}$ m
c) 15 m
d) $7\sqrt{121}$ m
e) 12 m

Directions (2-4): Point A is 8 m north of point B. Point B is 10 m west of point C. Point C is 11 m north of point D. Point F is 4 m north of point E which is 6m west of point D.

Q2. A person starts from point F, reaches point G, then takes a left and then a right turn to reach point B. Find FG + BC.
a) 13 km
b) 12 km
c) 15 km
d) 14 km
e) None of these

Q3. Point T is 5m north of point C. Find AT.

a) 29 m
b) $2\sqrt{29}$ m
c) $5\sqrt{26}$ m
d) $29\sqrt{2}$ m
e) None of these

Q4. Point H is 6 m west of point F. Point J is 3 m south of point D. A person starts from point H in south direction, reaches a point K, takes a left turn and reaches point J. Find KE.

a) 15 m
b) $3\sqrt{10}$ m
c) $2\sqrt{5}$ m
d) $3\sqrt{2}$ m
e) $3\sqrt{5}$ m

Q5. A person starts from a point in east direction. He walks 10 m and takes a right turn. Now he walks 5m and again takes a right turn. Next he walks 3 m and takes a left turn. Now he walks 6 m and takes a right turn. He finally stops after walking 8m. In which direction is the starting point with respect to the ending point?

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

Q6. A person starts from point A, walks 10 m in south direction. Now he takes a left turn and walks 8m before turning left again. Next he walks 16 m and takes a right turn. Now he walks 4 m and takes a right turn again. He stops after walking 10 m. Find his distance from point A.
a) 20 km
b) $3\sqrt{10}$ km
c) $4\sqrt{10}$ km
d) $4\sqrt{5}$ km
e) 10 km

***Directions (7-9)**: Point A is 10 m west of point B. Point B is 6 m south of point C and also 7 m north of point D. Point E is 4 m west of point D. Point C is 6 m east of point F.*

Q7. A person starts from point F, walks 2 m in south direction and reaches a point T. He

takes a right turn and reaches point K, north of point A. Find TK + BD – DE.

a) 8 *m*
b) 7 *m*
c) 9 *m*
d) 6 *m*
e) 5 *m*

Q8. Find distance AE

a) $7\sqrt{5}$ *m*
b) 8 *m*
c) 10 *m*
d) $8\sqrt{3}$ *m*
e) $5\sqrt{8}$ *m*

Q9. A person starts from point D, walks 10 m in north direction and reaches point S. He takes a right turn, walks 2 m and reaches point X. Find distance XE.

a) $2\sqrt{24}$ *m*
b) $5\sqrt{13}$ *m*
c) $2\sqrt{13}$ *m*
d) $3\sqrt{29}$ *m*
e) $2\sqrt{26}$ *m*

Q10. A person starts his journey by walking in West direction. He walks for 7 m and takes a left turn. Next after travelling a distance of 10 m, he turned to his right and travelled 4 m. Next he walks for 3 m towards North direction and turns 45o in clockwise direction. In what direction is he travelling now?

a) South-west
b) North-east
c) North-west
d) South-east
e) East

Q11. From a point, Sahil starts walking in east direction. After walking for 15 m he takes a right turn. Now he walks for 12 m before turning to his right again. Next he walks 5 m and again turns in same direction as before. He now walks for 20 m before stopping at a point. How far is this point from the point where Sahil started?

a) $4\sqrt{10}$ *m*
b) $3\sqrt{22}$ *m*
c) 7 *m*
d) $2\sqrt{41}$ *m*
e) 12 *m*

Q12. Abhi and Asha start cycle race from point A. They both start in east direction. After cycling for 7 m, Abhi continues straight while Asha takes a left turn. They both cycle for 6 m before turning right and left directions respectively. Next
(1) Asha cycles for 8 m and takes a right turn. Now she cycles for 5 m before turning to right again.
(2) Abhi cycles for 4 m and takes a left turn. Now he cycles for 6m before turning to left again.
If both stop at these points, how much respective distance they have to travel to meet each other on their current paths?

a) 10 m, 15 m
b) 13 m, 17 m
c) 15 m, 20 m
d) 18 m, 24 m
e) Cannot be determined

Q13. From point A, Swati started walking in south direction. She walked for 4 m and took a right turn. Next she walked 5 m and turned to her left. Next she walked for 3 m and turned to her right. Next she walked 4 m and turned to her right again. Next she walked 15 m and turned to her right again and stopped at point B after walking 7 m. Find distance AB.

a) $2\sqrt{22}$ *m*
b) $3\sqrt{21}$ *m*
c) $2\sqrt{19}$ *m*
d) $4\sqrt{17}$ *m*
e) None of these

Q14. Point P is 10 m west of point Q. Point R is 4 m north of point P. Point T is 3 m east of point S and point S is 5 m south of point Q. What is the direction of point R with respect to point T?

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

Q15. Anaya started from a point in some direction. After walking for some time, she turned to her right and continued walking. Now walking for some distance she turned to her left and after this finally to her right. If now she is walking in west direction, in which direction did she started her journey?

a) North
b) West
c) East
d) South
e) East or west

Q16. Sheetal started from point in South direction. After walking for 5 km she took a right turn. Now she walked another 5 km and took a left turn. Then after walking for 2 km she took a right turn. After covering more 2 km she turned 45o in clockwise direction.
She is facing which direction now?

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

Directions (17-18): *Point P is 5 m south of point A. Point T is 8 m east of point Q. Point Z is 4 m west of point V. Point P is 6 m west of point B. Point V is 6 m south of point T. Point Q is 4 m south of point B*

Q17. Find distance EZ

a) $5\sqrt{13}$ *m*
b) $6\sqrt{13}$ *m*
c) $4\sqrt{14}$ *m*
d) $7\sqrt{15}$ *m*
e) $3\sqrt{11}$ *m*

Q18. A person starts from point B in north direction. Walks for 6 m and reaches point C, takes a right turn walks for 5 m reaches point F. Again he takes a right turn, walks for 3 m, reaches point H, now takes a left turn, reaches point K, now takes a final right turn to reach point T. Find the area enclosed by points B, Q, T, K, H, F and C.

a) $58m^2$
b) $65m^2$
c) $71m^2$
d) $76m^2$
e) None of these

Directions (19-20): *Point A is 8 m west of point B. Point E is 2 m east of point F. Point G is 3 m east of point H. Point E is 3 m north of point of point D. Point C is 9 m west of point D. Point G is 9 m north of point F. Point C is 6 m south of point B.*

Q19. Find distance AH

a) $7\sqrt{6}$ *m*
b) $7\sqrt{5}$ *m*
c) $6\sqrt{6}$ *m*
d) $6\sqrt{5}$ *m*
e) None of these

Q20. A person starts from point G in east direction. Walks for 6 m, takes a right turn, now walks for 5 m. Now he takes a left turn, walks for 3 m, then after two consecutive right turns he reaches point E. Find the distance travelled by him to reach point E.

a) 27 m
b) 25 m
c) 23 m
d) 24 m
e) 28 m

Directions (21-22): Point A is 10 km south of point B. Point C is 7 km east of point B. Point A is 4 km west of point D. Point D is 5 km north of point E.

Q21. A person starts from point E, goes to point F in east direction. After that he takes a left turn and reaches point C. Find distance DF.

a) 17 km
b) $\sqrt{34}$ km
c) $5\sqrt{31}$ km
d) $7\sqrt{24}$ km
e) $2\sqrt{34}$ km

Q22. A person starts from point G which is 10 km west of point E. Then he goes towards north and after taking a right turn he reaches point A. Now he turns to his right and reaches a point T on line EG. Find distance GT.

a) 8 km
b) 12 km
c) 5 km
d) 6 km
e) None of these

Q23. A person starts from a point and goes 6 km in north direction. Now he takes a right turn and moves 7 km. Next he takes a left turn and moves 10 km. Next he turns right and moves 5 km. Finally he turns right and moves 12 km to reach his destination. Find the distance from his starting point.

a) 12 km
b) $4\sqrt{10}$ km
c) $5\sqrt{5}$ km
d) $6\sqrt{2}$ km
e) None of these

Directions (24-25): Point B is 9 km east of point A. Point T is 6 km south of point B. Point S is 4 km west of point T. Point T is 8 km west of point G.

Q24. A person starts from point S, walks 3 km towards south and reaches point D. Next he takes two right turns and reaches point A. How much distance has he travelled?

a) 18 km
b) 20 km
c) 17 km
d) 14 km
e) 11 km

Q25. A person is standing on midpoint of line TG. Find his shortest distance from point B?

a) $3\sqrt{15}$ km
b) $5\sqrt{14}$ km
c) $6\sqrt{3}$ km
d) $2\sqrt{13}$ km
e) None of these

Q26. A person starts from a point in east direction. He walks 6 km and turns to his left. Next he walks 4 km and turns to his left again. Next he walks 2 km and turns towards south direction. He stops after walking 8 km. Find his distance from the starting point.

a) 16 km
b) $3\sqrt{2}$ km
c) $4\sqrt{2}$ km
d) $4\sqrt{4}$ km
e) 8 km

Q27. From a point, a person starts walking in south direction. He takes a right turn, then taken 2 lefts turns and then takes two right turns and stops after walking 3 km. In which direction he is standing with respect to the starting point?

a) West
b) East
c) North
d) South
e) Cannot be determined

Directions (28-30): Point B is 7 km north of point A. Point A is 8 km east of point G. Point B is 12 km east of point C. Point E is 9 km north of point D which is 12 km east of point A.

Q28. A person starts from point S, walks 9 km and reaches point T mid-way between points A and D. Then he goes 2 km towards south, takes 2 left turns and reaches point D. How much distance has he travelled?
a) 15 km
b) 18 km
c) 20 km
d) 19 km
e) 21 km

Q29. A person starts from point D in south direction. He walks 5 km and reaches point L and then turns towards west and reaches point K which is south of point C. Find distance LK – BC.
a) 13 km
b) 12 km
c) 24 km
d) 16 km
e) Cannot be determined

Q30. If point M is 4 km north of point G and point O is south if point G such that point G is mid way between points M and N. Find distance MN + AE.
a) 23 km
b) 25 km
c) 19 km
d) Cannot be determined
e) None of these

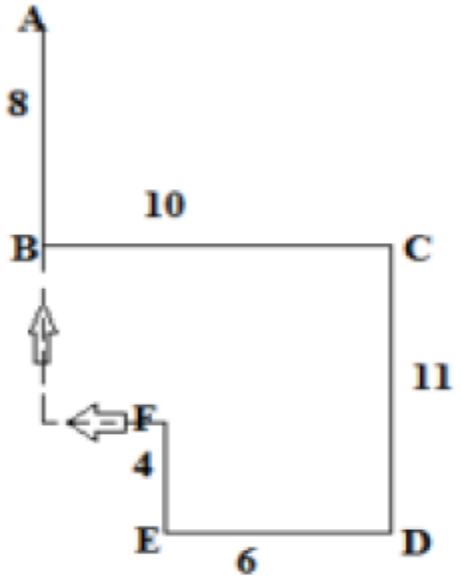
Solutions

Q1. Option (C)

Distance = $\sqrt{[(6+3)^2+(4+8)^2]} = 15m$

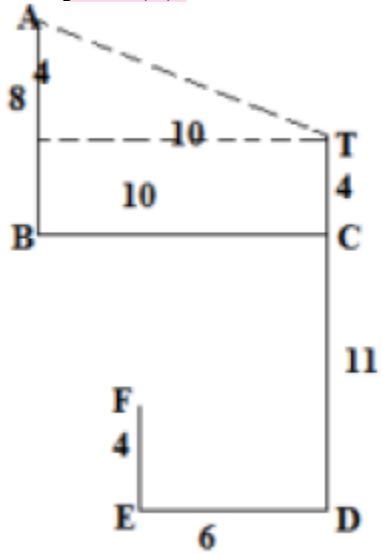
Q2. Option (D)

Since he takes a left and a right turn to reach B, so the figure is like:



So FG = 10 – 6 = 4m and then FG + BC = 4 + 10

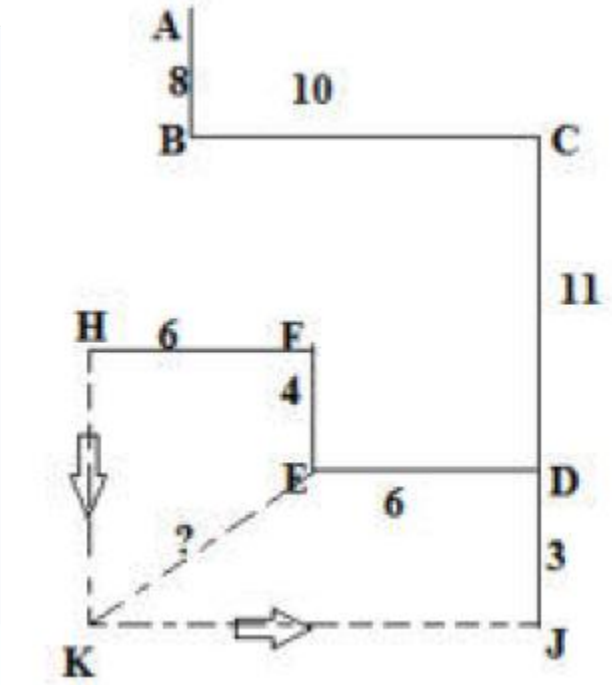
Q3. Option (B)



AT = $\sqrt{(10^2+4^2)} = 2\sqrt{29}\ m$

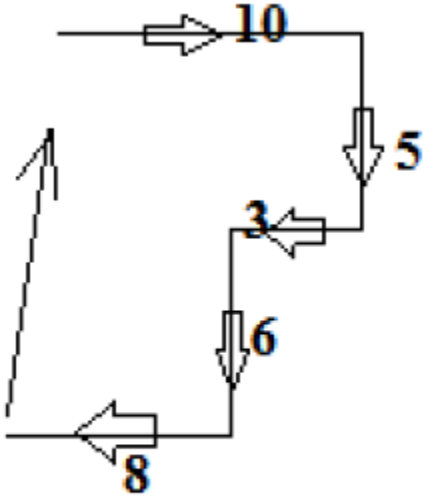
Q4. Option (E)

We get figure as:



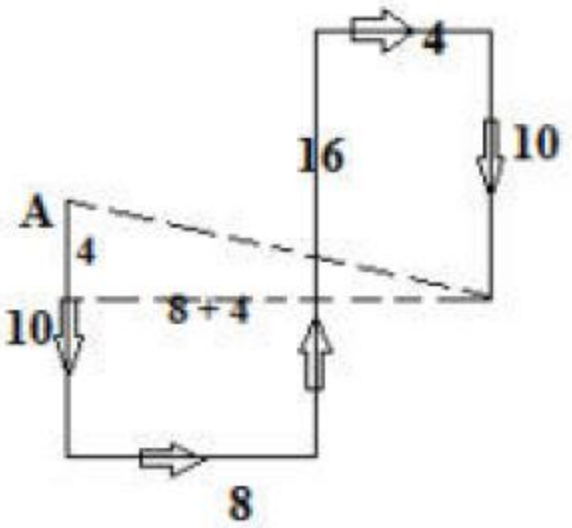
So, KE = $\sqrt{(6^2+3^2} = 3\sqrt{5}\ m$

Q5. Option (D)



~~8+3 = 11~~

Q6. Option (C)

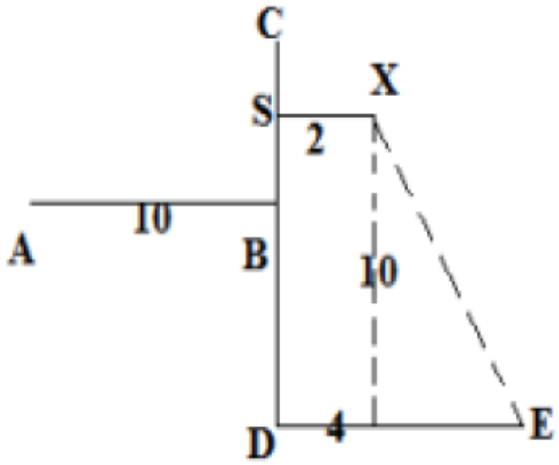


Required distance = $\sqrt{((8+4)^2+4^2)} = 4\sqrt{10}$ *km*

Q7. Option (B)
TK = 10 – 6 = 4 m
So TK + BD – DE = 4 + 7 – 4

Q8. Option (A)
AE = $\sqrt{((10+4)^2+7^2)} = 4\sqrt{10}$ *km*

Q9.Option (E)

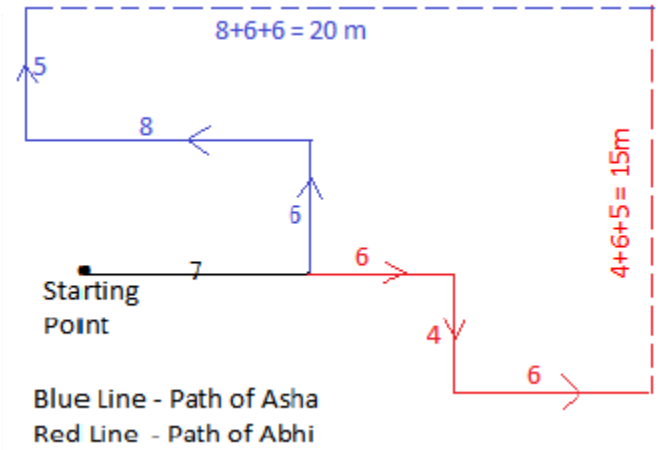


XE = $\sqrt{(10^2+2^2)} = 2\sqrt{26}$ *m*

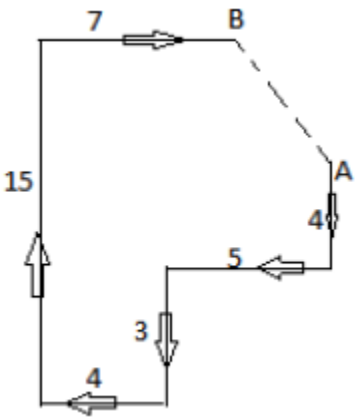
Q10. Option (D)

Q11. Option (D)
Required distance = $\sqrt{(10^2+8^2)} = 2\sqrt{41}$ *m*

Q12. Option (C)



Q13. Option (E)



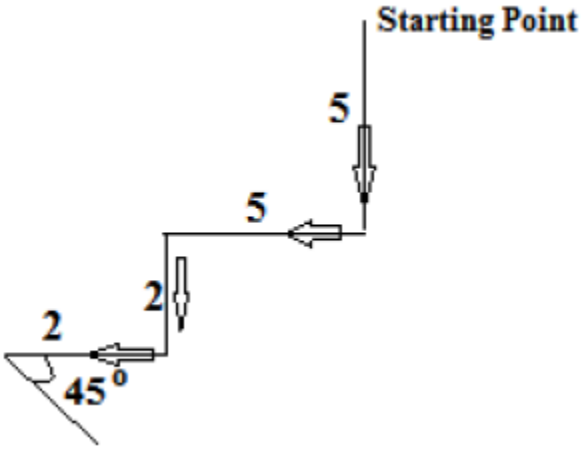
AB = $\sqrt{(8^2+2^2)} = 2\sqrt{17}$ *m*

Q14. Option (D)

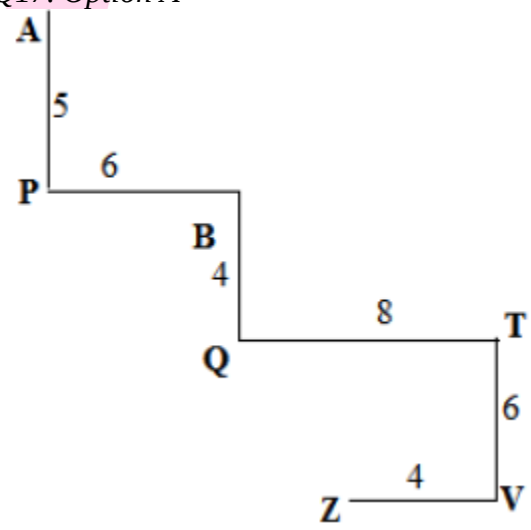
Q15. Option (D)
Start from back and direct towards starting direction
She is walking in west and before that she turned to her right, so she must be travelling in south before turning right.
Now she was walking in south and before that she turned to her left, so she must be travelling in west before turning left.
Now she was walking in west and before that she turned to her right, so she must be travelling in south before turning right.

At last south direction.

Q16. Option B

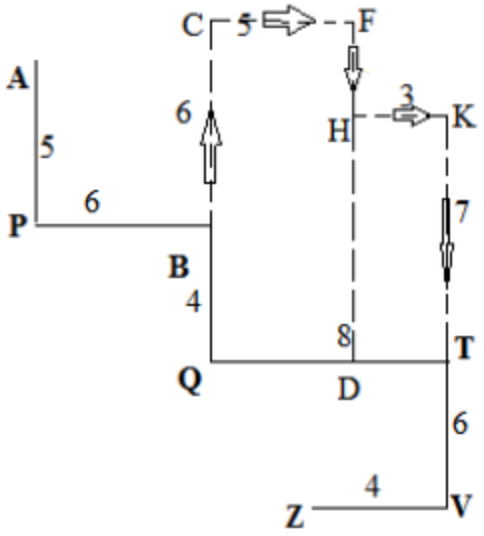


Q17. Option A



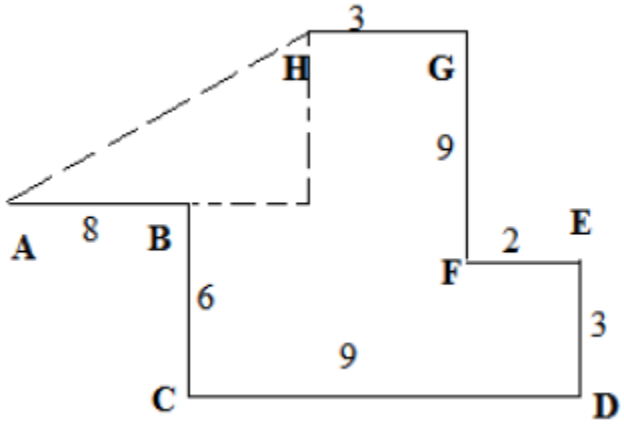
Vertical distance = 5+4+6 = 15 m
Horizontal distance = (PB) + (QT – CV) = 6 + (8-4) = 10 m
So AZ $= \sqrt{(15^2 + 10^2)} = 5\sqrt{13}$ *m*

Q18. Option (C)



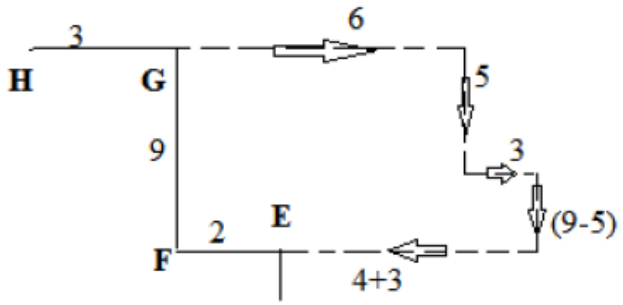
*The area will be = Ar. of rectangle QCFD + Ar. of DHKT = 10*5 + 3*7 = 71m*^{2}

Q19. Option (D)



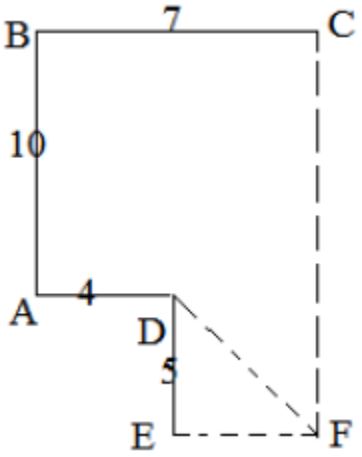
Vertical distance = GF – (CB – ED) = 9 – (6-3) = 6
Horizontal distance = AB + (CD – (HG + FE)) = 8 + (9 – (3+2) = 12
Required distance AH $= \sqrt{(6^2 + 12^2} = 6\sqrt{5}$ *m*

Q20. Option (B)



6 + 5+ 3 + (9-5) + (3+4) = 25 m

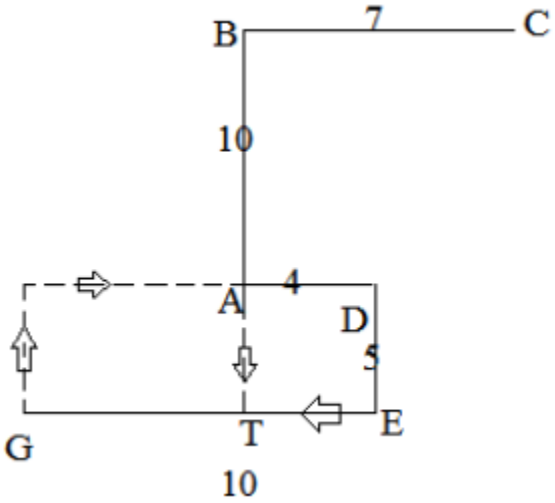
Q21. Option (B)



After left turn he reaches point C, this means point F is in south of point C. So EF= 3km

So DF = $\sqrt{DE^2 + EF^2} = \sqrt{(5^2 + 3^2} = \sqrt{34}$ *km*

Q22. Option (D)



GT = 10-4 = 6 km

Q23. Option (B)

Required distance is $\sqrt{(12^2 + 4^2)} = 4\sqrt{10}$*km*

Q24. Option (A)

Let after first right turn he is at point K. Since after turn from K he reaches at point A so point K is in south of point A. So he has travelled SD + DK + KA = 3 + (9-4) + (3+6) = 17 km

Q25. Option (D)

Let that point be Y. So Midpoint of TG means TY = $\frac{8}{2}$ = *4 km*

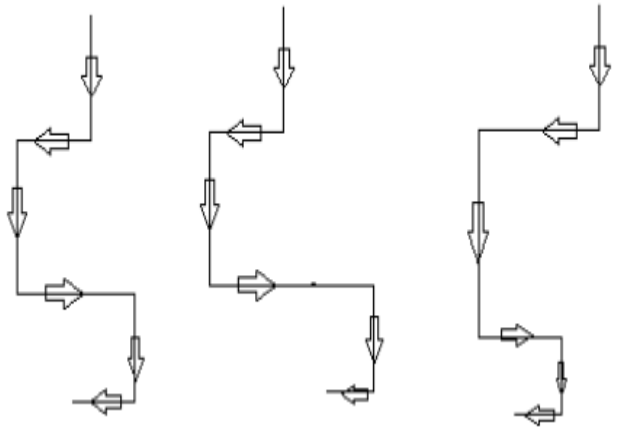
So BY = $\sqrt{BT^2 + TY^2} = \sqrt{6^2 + 4^2} = 2\sqrt{13}$ *km*

Q26. Option (C)

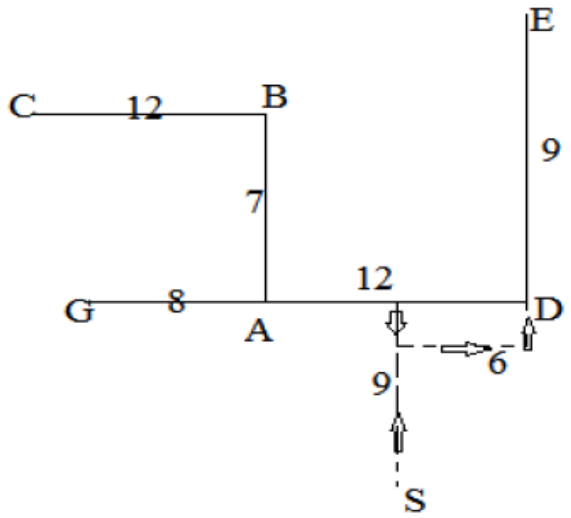
Required distance = $\sqrt{(4^2 + 4^2} = 4\sqrt{2}$ *km*

Q27. Option (E)

Since we do not know that how much distances has he travelled after each turn, his position with respect to starting point cannot be determined. There can be many cases as:



Q28. Option (D)



He has travelled = 9 + 2 + 6 + 2 = 19 km

Q29. Option (B)
LK = 12+12 = 24 km. BC = 12 km, so required answer = 24-12 = 12 km

Q30. Option (A)
MN = 4+4 = 8km
AE $= \sqrt{(AD^2 + DE^2)} = \sqrt{(12^2 + 9^2)} =$ $15km$
So required answer = 8+15 = 23 km

Q1. A man is facing west. He turns 45 degree in the clockwise direction and then another 180 degree in the same direction and then 270 degree in the anticlockwise direction. Find which direction he is facing now?

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

Q2. A man is facing north. He turns 45 degree in the clockwise direction and then another 180 degree in the same direction and then 45 degree in the anticlockwise direction. Find which direction he is facing now ?

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

Q3. One day, Raviraj left home and cycled 20 Km southwards, turned right and cycled 10 km and turned right and cycled 20 Km and turned left and cycled 20 Km. How many kilometres will he have to cycle to reach his home straight ?

a) *50 Km*
b) *30 Km*
c) *40 Km*
d) *60 Km*

Q4. 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 is right again to look for his father at his uncle's place 30 meters from this point. His father was not there. From there, he went 100 meters to his north before meeting his

father in a street. How far did the son meet his father from starting point ?

a) *80 metre*
b) *90 metre*
c) *100 metre*
d) *110 metre*

Q5. Kunal walks 10 km towards North. From there he walks 6 Km towards South. Then, he walks 3 Km towards east. How far and in which direction is he with reference to his starting point ?

a) *5 Km North*
b) *5 Km South*
c) *5 Km East*
d) *5 Km North-East*

Q6. 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 ?

a) *40 metres*
b) *50 metres*
c) *60 metres*
d) *70 metres*

Q7. A dog runs 20 metre towards East and turns Right, runs 10 metre and turns to right, runs 9 metre and again turns to left, runs 5 metre and then turns to left, runs 12 metre and finally turns to left and runs 6 metre. Now which direction dog is facing ?

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

Q8. I am facing South. I turn right and walk 20 metre. Then I turn right again and walk 10 metre. Then I turn left and walk 10 metre and then turning right walk 20 metre. Then I turn right again and walk 60 metre. In which direction am I from the starting point ?

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

Q9. Rohit walked 25 metres towards South. Then he turned to his left and walked 20 metres. He then turned to his left and walked 25 metres. He again turned to his right and walked 15 metres. At what distance is he from the starting point and in which direction ?

a) *35 metre, North*
b) *30 metre, South*
c) *35 metre, East*
d) *30 metre, North*

Q10. Starting from a point P, Sachin walked 20 metres towards South. He turned left and walked 30 metres. He then turned left and walked 20 metres. He again turned left and walked 40 metres and reached a point Q. How far and in which direction is the point Q from the point P ?

a) *30 metres, West*
b) *10 metres, West*
c) *30 metres, North*
d) *10 metres, North*

Q11. From his house, Lokesh went 15 kms to the North. Then he turned West and covered 10 kms. Then he turned South and covered 5 kms. Finally, turning to East, he covered 10

kms. In which direction is he from his house ?

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

Q12. Shweta goes towards East 5 km then she takes a turn to South-West and goes 5 km. She again takes a turn towards North-West and goes 5 km with respect to the point from where she started, where is she now ?

a) In the South-West
b) In the North-West
c) In the East
d) At the starting Point

Q13. One morning Udai and Vishal were talking to each other face to face at a crossing. If Vishal's shadow was exactly to the left of Udai, which direction was Udai facing?

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

Q14. Y is in the East of X which is in the North of Z. If P is in the South of Z, then in which direction of Y, is P?

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

Q15. If South-East becomes North, North-East becomes West and so on. What will West become?

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

Q16. A man walks 5 km toward south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. Now in which direction is he from the starting place?

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

Q17. Rahul put his timepiece on the table in such a way that at 6 P.M. hour hand points to North. In which direction the minute hand will point at 9.15 P.M. ?

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

Q18. Rasik walked 20 m towards north. Then he turned right and walks 30 m. Then he turns right and walks 35 m. Then he turns left and walks 15 m. Finally he turns left and walks 15 m. In which direction and how many metres is he from the starting position?

a) 15m West
b) 30m East
c) 30m West
d) 45m East

Q19. Two cars start from the opposite places of a main road, 150 km apart. First car runs for 25 km and takes a right turn and then runs 15 km. It then turns left and then runs for another 25 km and then takes

the direction back to reach the main road. In the mean time, due to minor break down the other car has run only 35 km along the main road. What would be the distance between two cars at this point?

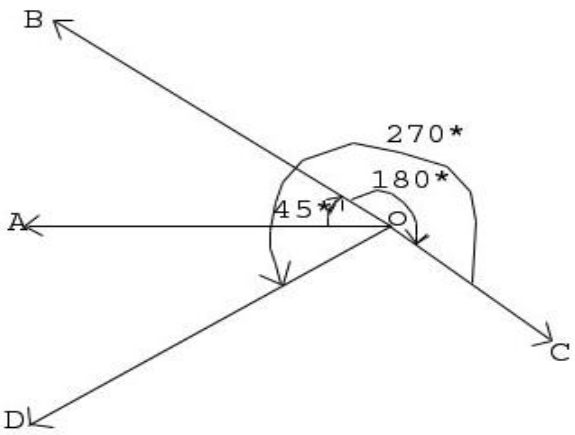
a) *65km*
b) *75km*
c) *80km*
d) *85km*

Q20. Starting from the point X, Jayant walked 15 m towards west. He turned left and walked 20 m. He then turned left and walked 15 m. After this he turned to his right and walked 12 m. How far and in which directions is now Jayant from X?

a) *32m, South*
b) *47m, East*
c) *42m, North*
d) *27m, North*

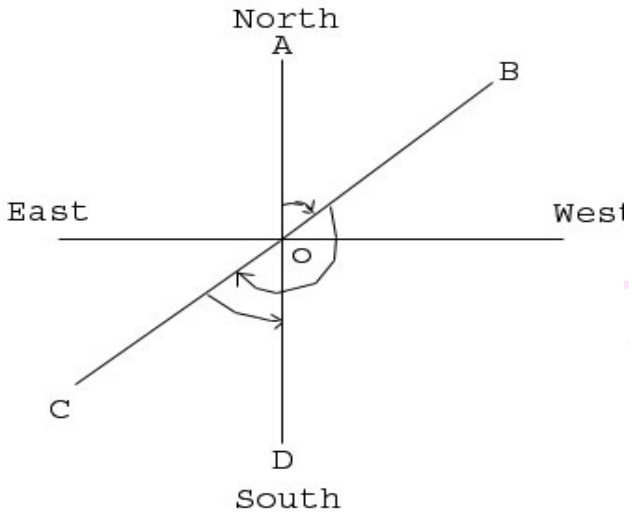
Solutions

Q1. Option A



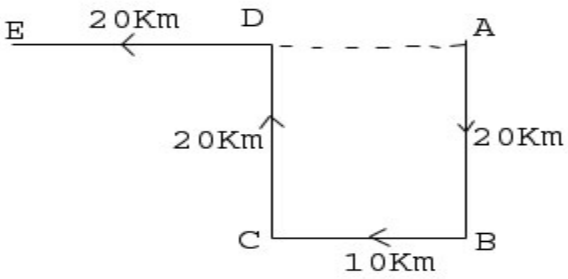
The man firstly faces the direction OA. On moving 45 degree clockwise[Please check carefully always if clockwise or anticlockwise], he faces the direction OB. Now again he moved 180 degree clockwise, now he will be facing OC. From here he moved 270 degree anticlockwise, Finally he is facing OD, which is South west.

Q2. Option D



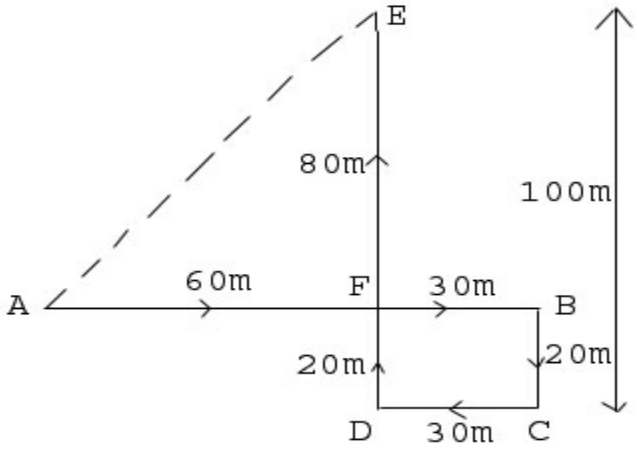
The man firstly faces the direction OA. On moving 45 degree clockwise, he faces the direction OB.
Now again he moved 180 degree clockwise, now he will be facing OC. From here he moved 45 degree anticlockwise, Finally he is facing OD, which is South direction.

Q3. Option B



Raviraj starts from home at A, moves 20 Km in south upto B. Then he turns right and moves 10 Km upto C, then he turns right and moves 20 Km upto D, then he turns lefts and moves 20 Km upto E.
So from image it is clear that, if he moves straight then he will have to move AD+DE,
AD = BC = 10 Km
So, he will have to move 10 + 20 = 30 Km

Q4.Option C



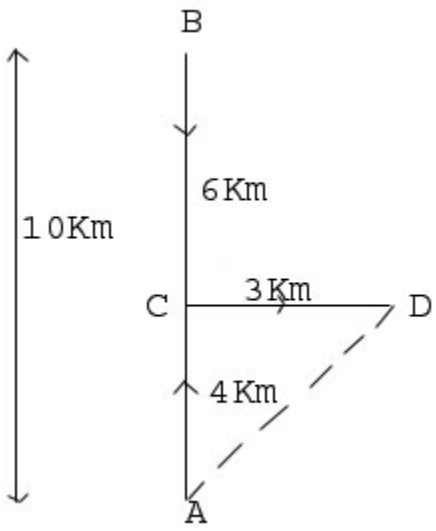
Clearly, the child moves from A to B 90 metres eastwards upto B, then turns right and moves 20 metre upto C, then turns right and moves upto 30 metre upto D. Finally he turns right and moves upto 100 metre upto E.
So AB = 90 metre, BF = CD = 30 metre,
So, AF = AB - BF = 60 metre

Also DE = 100 metre, DF = BC = 20 metre
So, EF = DE - DF = 80 metre
as we can see in image that triangle AFE is a right angled triangle and we are having two sides, need to calculate third one, so we can apply Pythagoras theorem here

$A = AE = \sqrt{AF^2 + EF^2}$
$= \sqrt{60^2 + 80^2}$
$= \sqrt{3600 + 6400}$
$= \sqrt{10000}$
$= 1000$

So from starting point his father was 100 metre away.

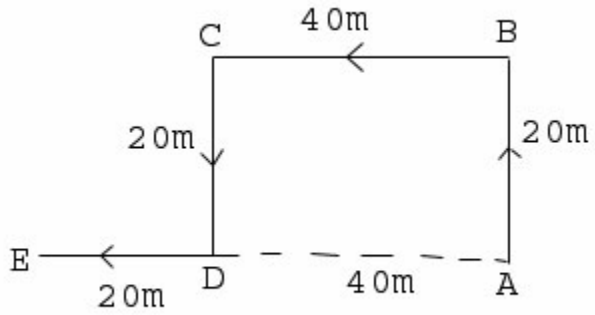
Q5. Option D



Clearly, Kunal moves from A 10 Km northwards upto B, then moves 6 Km southwards upto C, turns towards east and moves 3 km upto D.
Then AC = (AB-BC) = 4 Km

So Kunal distance from starting point A
$AD = \sqrt{AC^2 + CD^2}$
$= \sqrt{4^2 + 3^2}$
$= \sqrt{25} = 5$
So AD is 5 Km also with reference to starting point Kunal's direction is North-East.

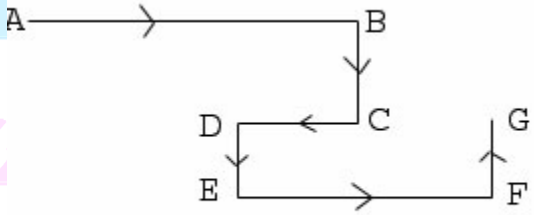
Q6.Option C



Now, Gaurav distance from his initial position A to E

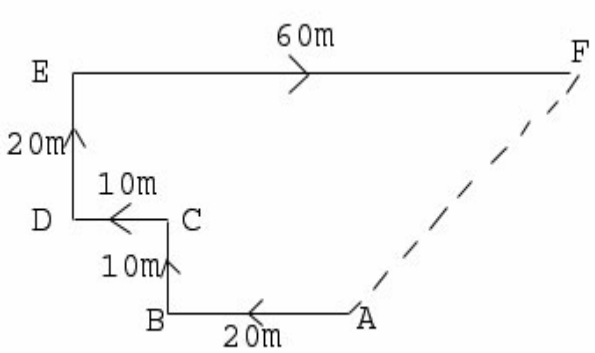
AE = (AD+DE) = 40 + 20 = 60 metres.

Q7. Option B



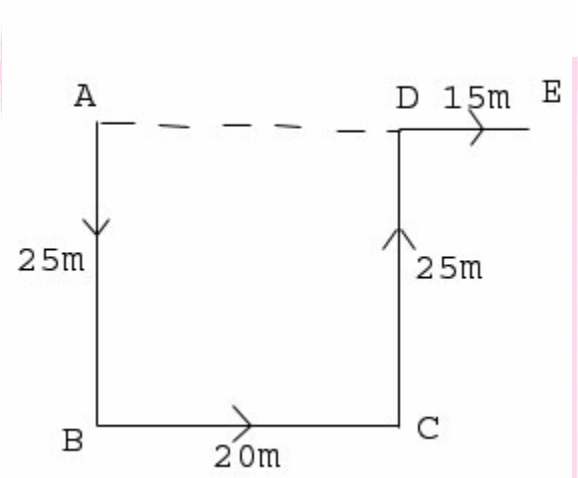
Now dog is facing North

Q8. Option A



Final direction will be north-east with reference to the starting position.

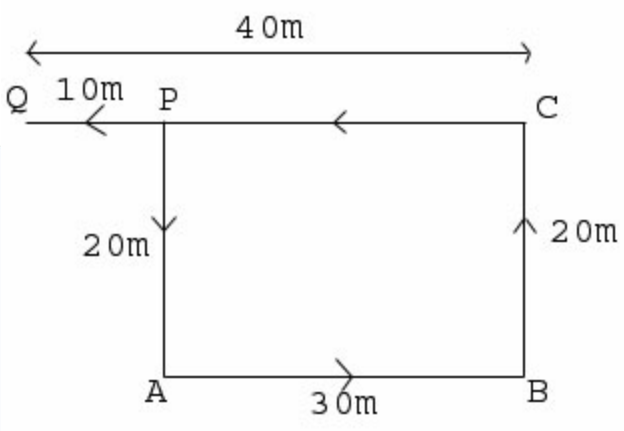
Q9. Option C



The movements of Rohit are shown in figure. Rohit's distance from the starting point A will be
AE = AD+DE = 20 + 15 = 35 metre

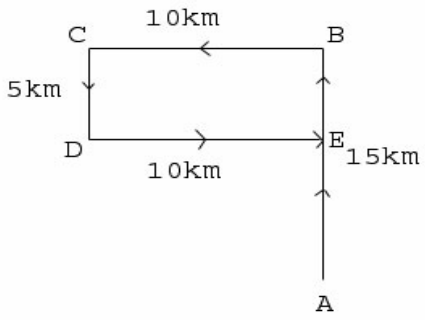
And direction with reference to the starting point is east.

Q10. Option B



Distance from the P to Q is 10 metres and direction of Q with reference to to P is west.

Q11. Option B

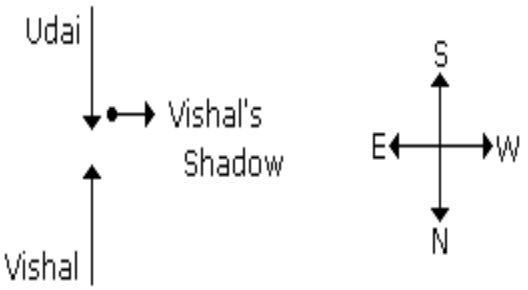


Finally he is to the North to his house

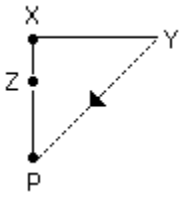
Q12. Option D

She reverts back to her own position

Q13. Option C

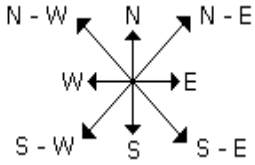


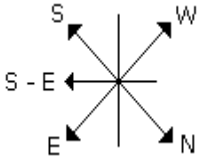
Q14. Option D



P is in South-West of Y

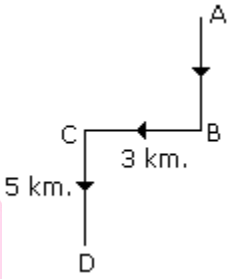
Q15. Option C





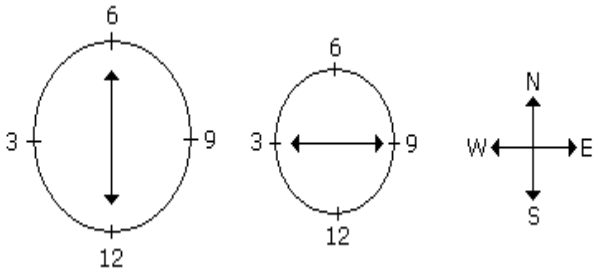
It is clear from the diagrams that new name of West will become South-East.

Q16. Option D



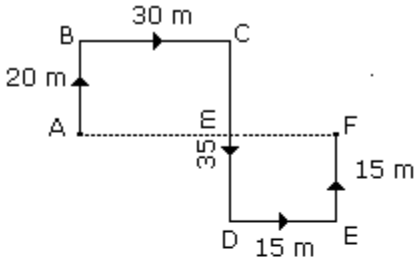
Hence required direction is South-West

Q17. Option D



At 9:15pm, the minute hand will point towards West

Q18. Option D



Required distance = AF

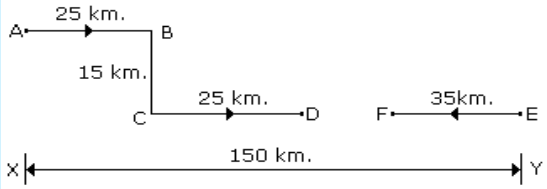
= 30 + 15

= 45 m.

From the above diagram, F is in East direction from A.

Hence the required answer is '45 m East'.

Q19.Option A



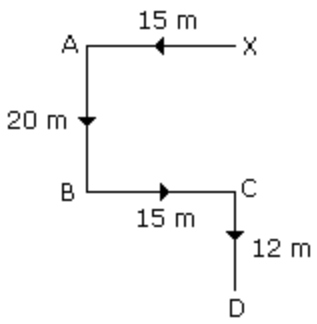
Required distance = DF

= 150 - (25 + 25 + 35)

= 150 - 85

= 65 km.

Q20. Option A



Required distance = 20 + 12

= 32 m in south direction