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DIRECTION SENSE LOGICAL REASONING



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1. Study the information given below carefully, and answer the question that follow:

On a stage, D, N, A and P are standing as described below facing North.

- 1) N is 2.5 m to the west of A.**
- 2) K is 4 m to the right of A.**
- 3) D is 6 m to the south of K.**
- 4) P is 9 m to the north of D.**

If a boy walks from N, meets A followed by K, D and then P, how many metres has he walked if he has travelled the straight distance all through?

- a. 15 m**
- b. 18 m**
- c. 21.5 m**
- d. 22.5 m**

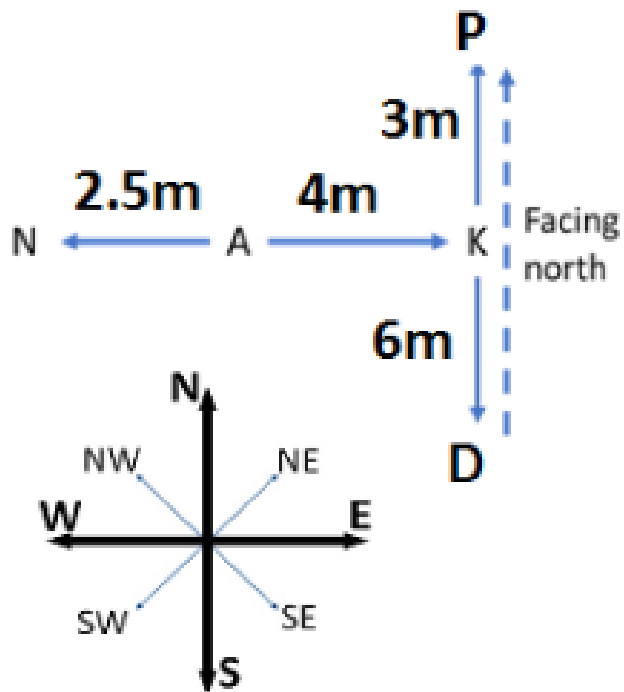


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ANSWER: 21.5 m

Required distance = $NA + AK + KD + DP = 2.5 + 4 + 6 + (6 + 3) = 21.5 \text{ m}$



2. Study the information given below carefully, and answer the question that follow: On a stage, D, N, A and P are standing as described below facing North.

- 1) N is 2.5 m to the west of A.
- 2) K is 4 m to the right of A.
- 3) D is 6 m to the south of K.
- 4) P is 9 m to the north of D.

Who is to the south-west of P?

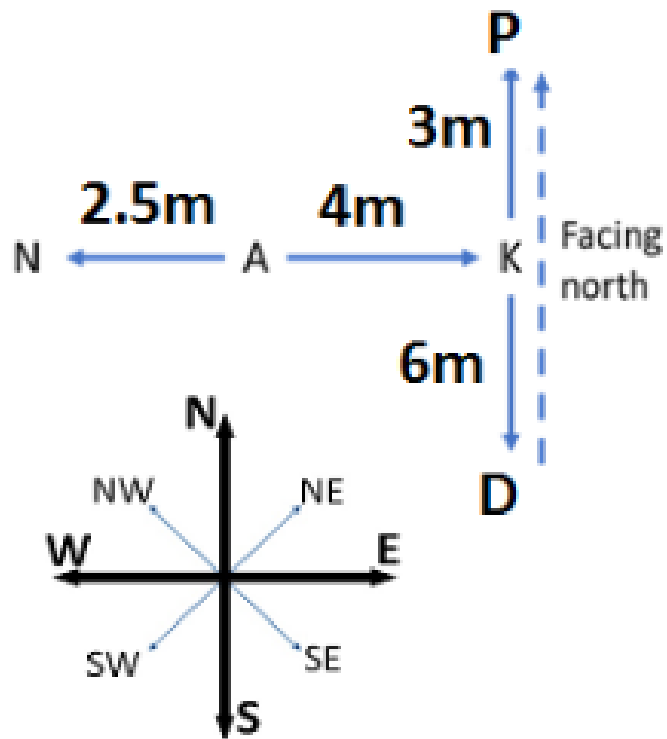
- a. A
- b. D
- c. K
- d. Neither N nor A



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ANSWER: A



A is to the south-west of P.



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3. Read the following information to answer the given question
A billionaire drove his Ferrari towards North, then turned left and drove 10 km and again turned left and covered 20 km. He found himself 10 km West of his starting point. How far did he drive northward initially?

- a. 10 km
- b. 15 km
- c. 20 km
- d. 25 km

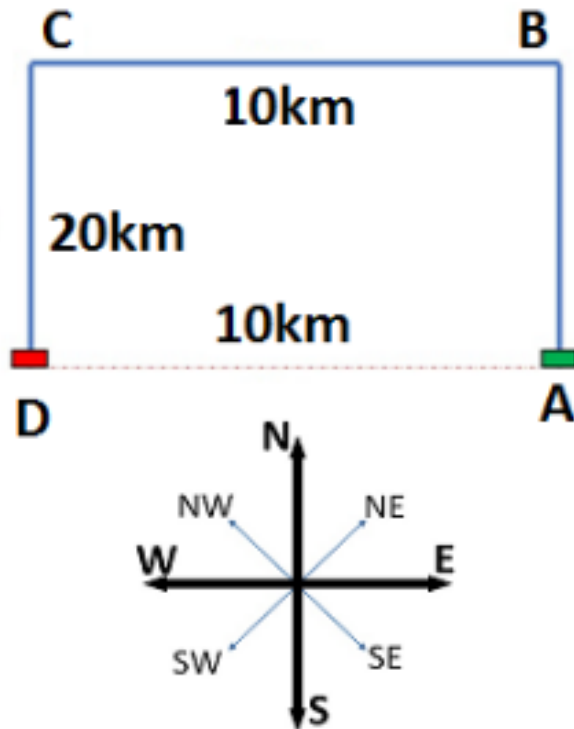


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ANSWER: 20 km

The billionaire drove 20 km in North direction initially.



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4. Ravindra Jadeja left home and ran 20 km towards South, then turned right and ran 10 km. He took rest for ten minutes at the same spot and then again turned right and ran 20 km. After this he turned left and ran 20 km to the cricket ground.

How many kilometers will he have to run back to reach his home?

- a. 15 km
- b. 20 km
- c. 25 km
- d. 30 km

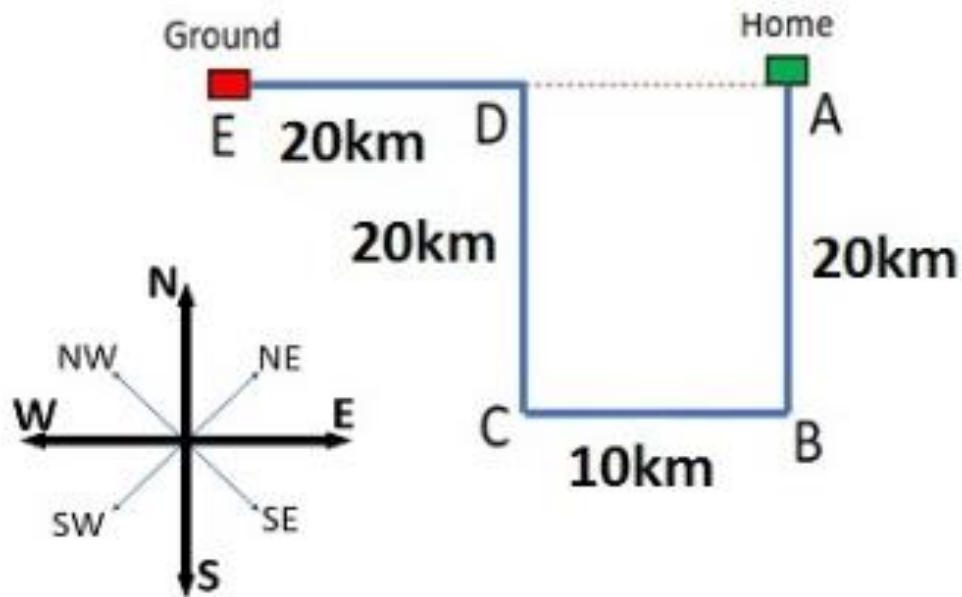


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ANSWER: 30 km

Required distance $AE = 10 + 20 = 30 \text{ km}$



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5. Read the following information to answer the given question: Superman began towards the Sun at 9 AM in the morning.

After flying some distance, he turned to right and again to the right.

After flying some distance, he again turned to the right. In which direction is he flying now?

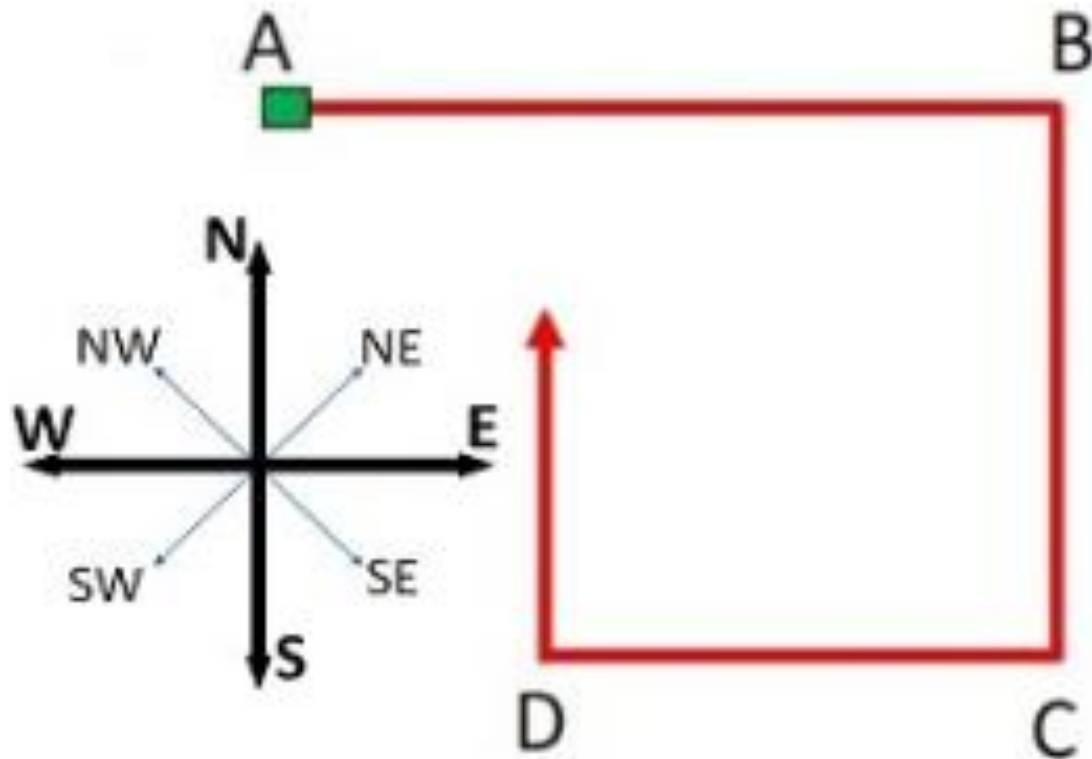
- a. East
- b. West
- c. North
- d. South



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ANSWER: North



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6. Solve the following question and choose the correct alternative from the following. Mohan is facing North and walks 20 km.

He turns 270° anti-clockwise and walks 20 km.

He again turns 45° clockwise and walks for 20 km.

Which direction is he facing now?

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



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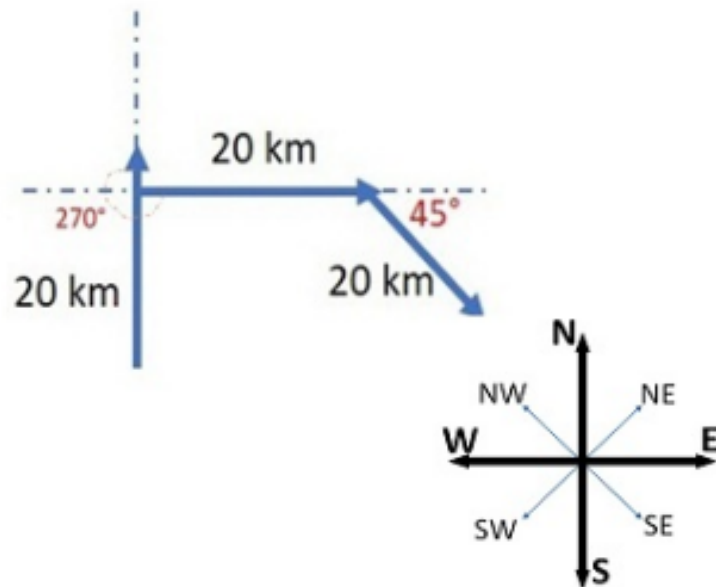
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ANSWER: South-East

Mohan walks 20 km north and turns 270° anti-clockwise which on calculation comes to right of his current position and walks another 20 km.

He is currently facing East, then he turns 45° clockwise i.e. south-east direction and walks 20 km.

Thus, he is facing south-east.



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7. Niranjana moved a distance of 150 m towards north. He then turned to the left and walked for about 50 m, turned left again and walked another 160 m. Finally, he turned to the right at an angle of 45° ?

In which direction was he moving finally?

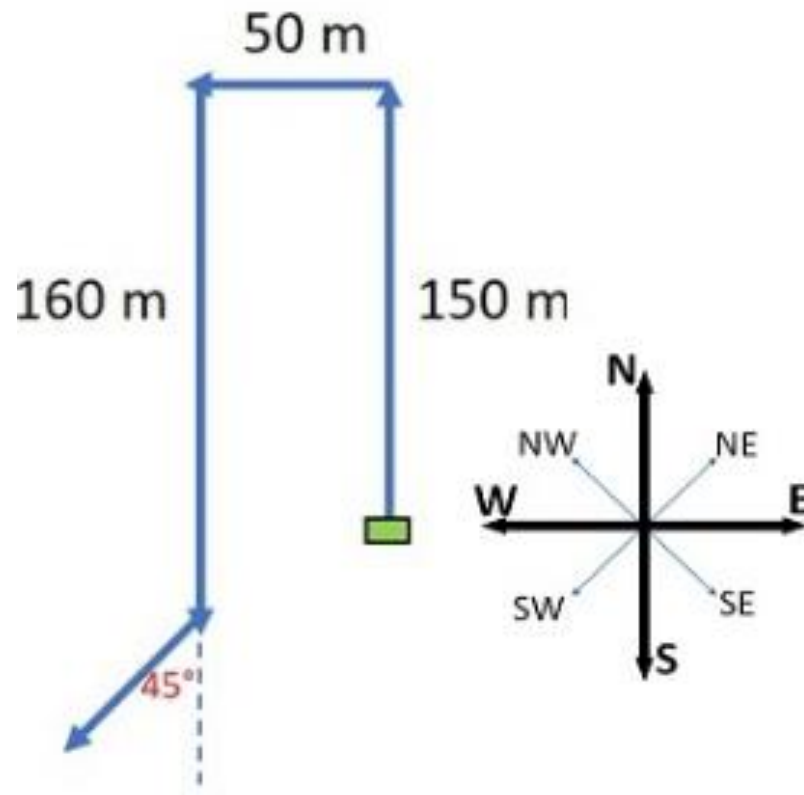
- a. South-west
- b. South-east
- c. North-west
- d. North-east



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ANSWER: South-west



8. Read the following information to answer the given question. Lalu Yadav began the rally from his house and went 150 km to the North. He turned west and covered 100 km. Then he turned south and covered 50 km. Finally turning to the east, he covered 100 km. In which direction is he from his house?

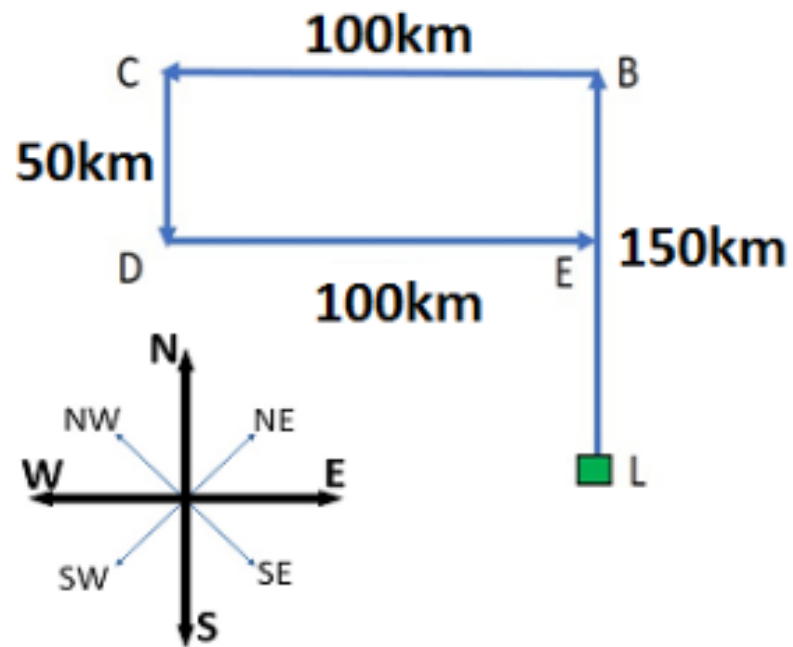
- a. East
- b. West
- c. North
- d. South



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ANSWER: North



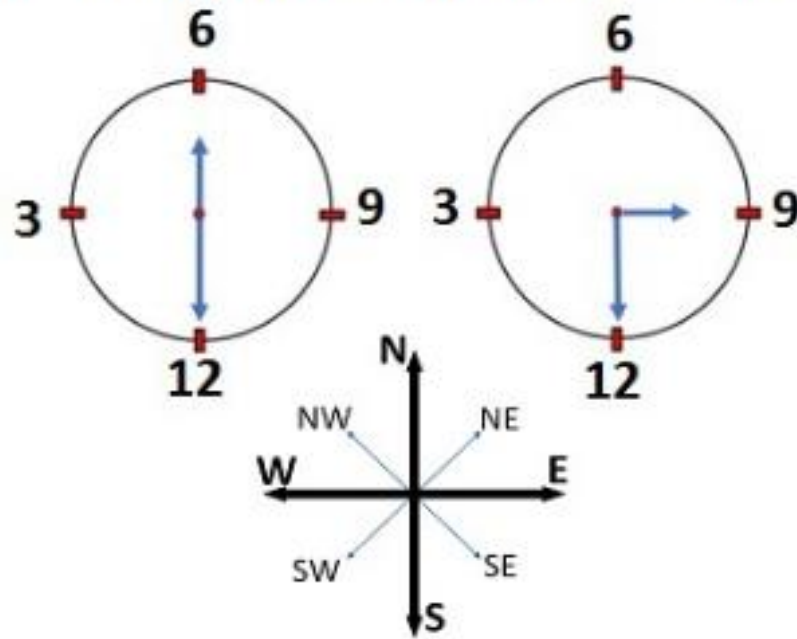
9. Read the following information to answer the given question. David put a timepiece on the table. He put it in such a way that at 6 P.M. hour hand pointed to North. In which direction, the hour hand will point at 9 P.M.?

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



ANSWER: East

At 9 P.M., the minute hand will point towards east.



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10. If you are facing north-east and move 12 m forward, turn left and move 5 m, then you are –

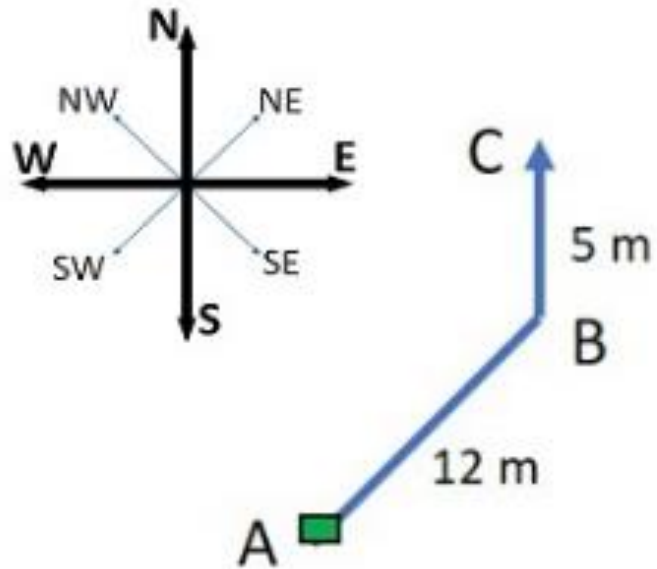
- a. East of your initial position
- b. West of your initial position
- c. South of your initial position
- d. North of your initial position



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ANSWER: North of your initial position



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11. If South–East becomes North, North–East becomes West and so on. What will West become?

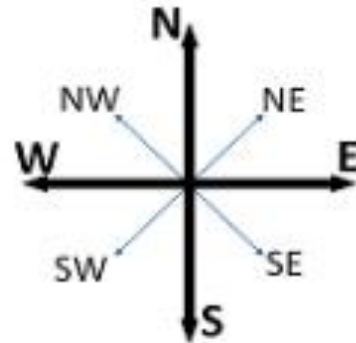
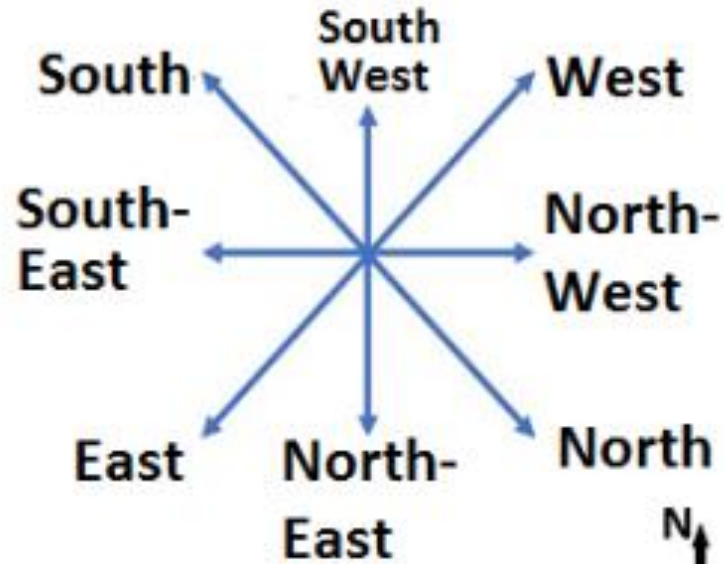
- a. South–East**
- b. South–West**
- c. North–East**
- d. North–West**



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ANSWER: South-East



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12. Read the following information carefully and answer the question below. Rambo walked 40 m towards north and killed a terrorist.

Then he silently turned right and walked 60 m.

Then he turned right, walks 70 m and again he turned left, walks 30 m.

Finally, he turned left and walks 30 m.

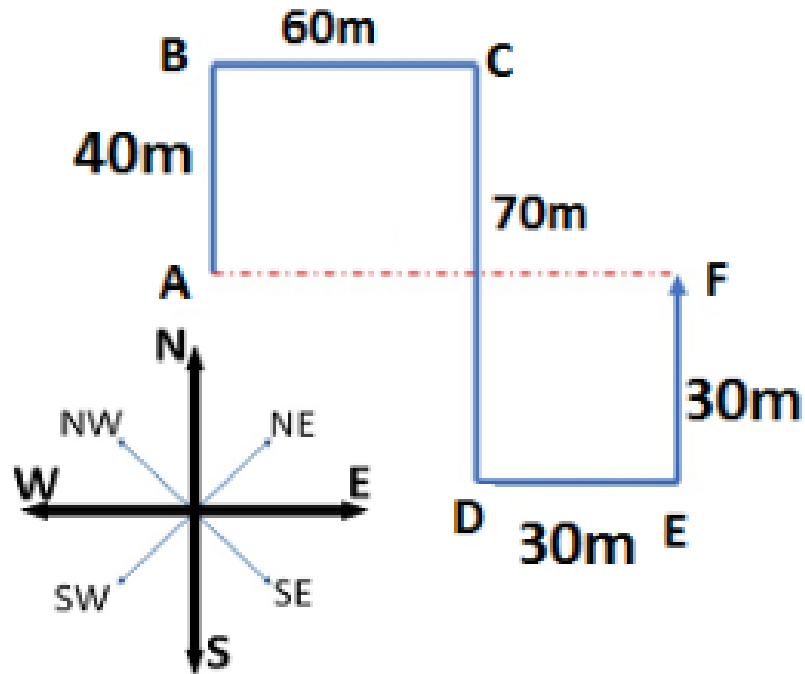
In which direction and how far is he from the starting

- a. 90 m East**
- b. 90 m West**
- c. 90 m South**
- d. 90 m North**



ANSWER: 90 m East

Required distance = $AF = 60 + 30 = 90$



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13. Salman started walking from point A. He walked 6 m towards East to reach point B. From point B he took a right turn and walked 3 m to reach point C. From point C he took a right turn and walked 10 m to reach point D. From point D he took a left turn and walked 4 m to reach E. From point E, he walked 4 m East to reach point F. Point G is exactly mid-way between C and point D.

If Salman walks 4 m to the North of point F, how far and in which direction will he be from point G?

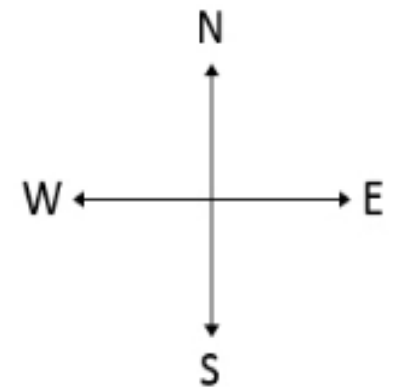
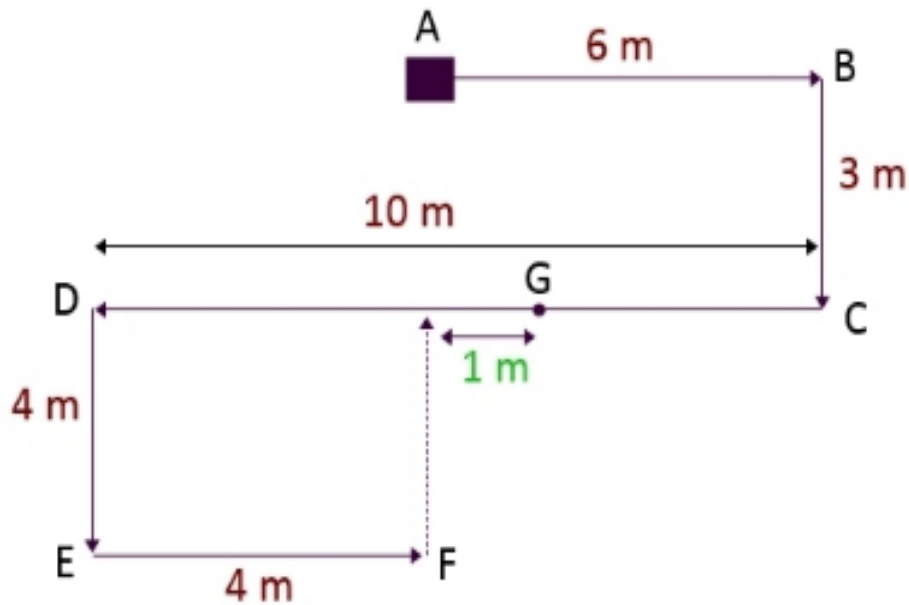
- a. 1 m towards East
- b. 1 m towards West
- c. 2 m toward East
- d. 2 m towards west



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Correct Option: A



It's clear from the diagram that Salman's end point will be 1 m far from and in the west direction with respect to point G.

Hence, option A is correct.



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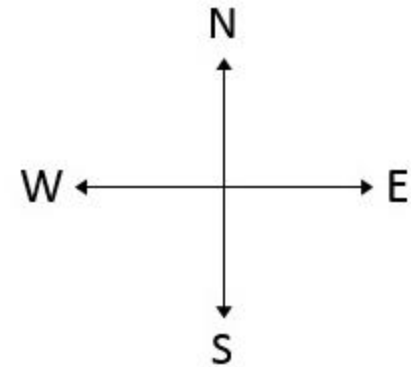
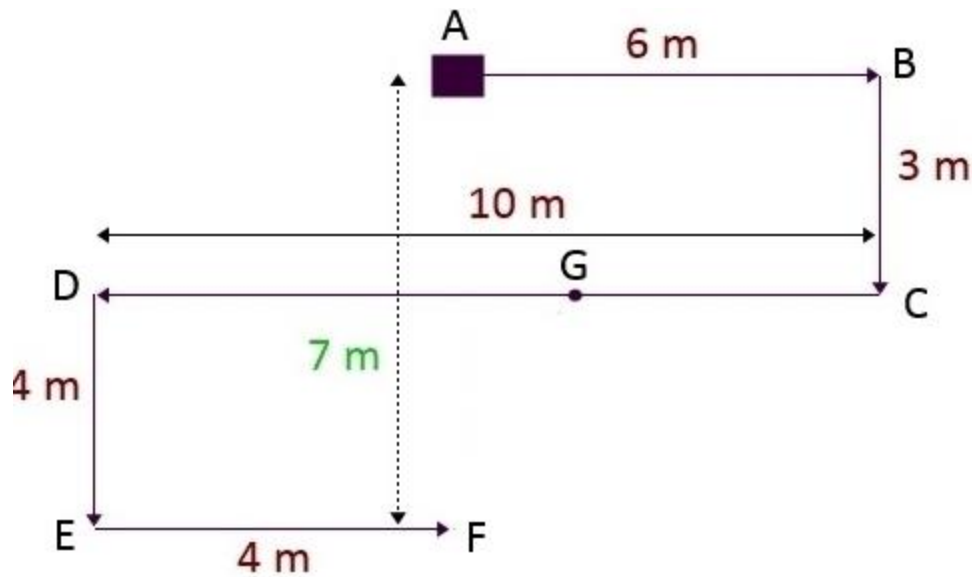
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14. Salman started walking from point A. He walked 6 m towards East to reach point B. From point B he took a right turn and walked 3 m to reach point C. From point C he took a right turn and walked 10 m to reach point D. From point D he took a left turn and walked 4 m to reach E. From point E, he walked 4 m East to reach point F. Point G is exactly mid-way between C and point D.

How far and in which direction is point F from point A?

- a. 7m towards South
- b. 6 m towards South
- c. 8 m toward South
- d. 2 m towards South





It's clear from the diagram that the point F is 7 m far from and in the south direction with respect to point A.

Hence, option C is correct.



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15. Point F is 10 m to the South of E. Point G is 3 m to the East of F. Point H is 5 m to the South of G. Point I is 6 m to the West of H. Point J is 10 m to the North of I. Point K is 6 m to the East of J. Point L is 5 m to the North of K.

Which of the following represents the direction of point G with respect to point J?

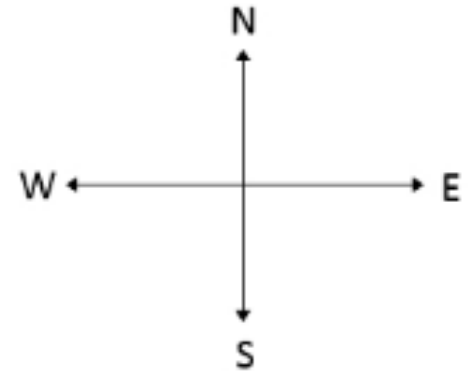
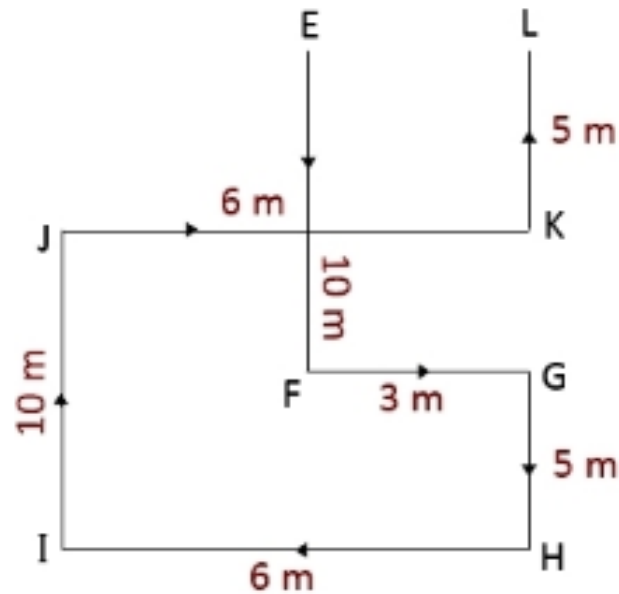
- a. South East
- b. South West
- c. South
- d. North



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Correct Option: A



It's clear from the diagram that direction of point G with respect to point J is South- East.

Hence, option A is correct.



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16. Point F is 10 m to the South of E. Point G is 3 m to the East of F. Point H is 5 m to the South of G. Point I is 6 m to the West of H. Point J is 10 m to the North of I. Point K is 6 m to the East of J. Point L is 5 m to the North of K.

How far and in which direction is point E from point L?

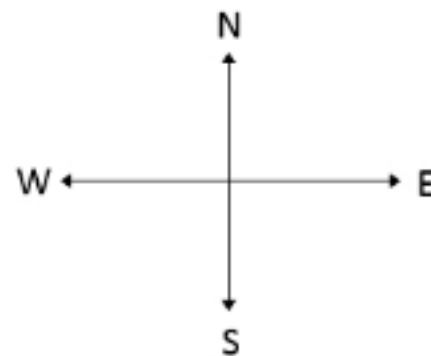
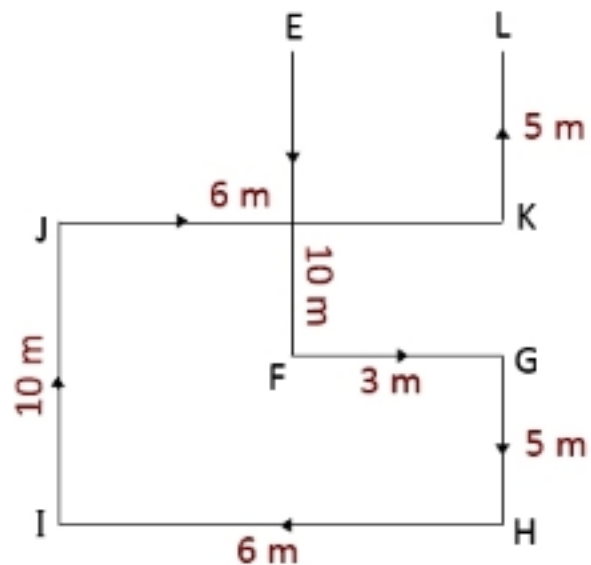
- a. 6m towards South
- b. 3 m towards East
- c. 8 m toward North
- d. 3m towards West



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Correct Option: D



It's clear from the diagram that the point E is 3 m far from and in the west direction with respect to point L.

Hence, option D is correct.



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17. A man is facing west. He turns 45° in the clockwise direction and then another 180° in the same direction and then 270° in the anti-clockwise direction. Which direction is he facing now?

- a. South**
- b. North West**
- c. West**
- d. South West**



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Correct Option: D

Total movement in Clockwise direction = $45 + 180 = 225$ degrees

Total movement in Anti-clockwise direction = 270 degrees

The difference = $270 - 225 = 45$ degrees (towards anti-clock wise because the total degrees in anti-clockwise is more than that of clockwise direction)

So, 45 degrees in anti-clockwise direction from the West will be: South-West.

Option D is hence the correct answer.



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18. A child is looking for his father. He went 90 metres in the east before turning to his right. He went 20 metres before turning to his right again to look for his father at his uncle's place 30 metres from this point. His father was not there. From there, he went 100 metres to his north before meeting his father in a street. How far did the son meet his father from the starting point?

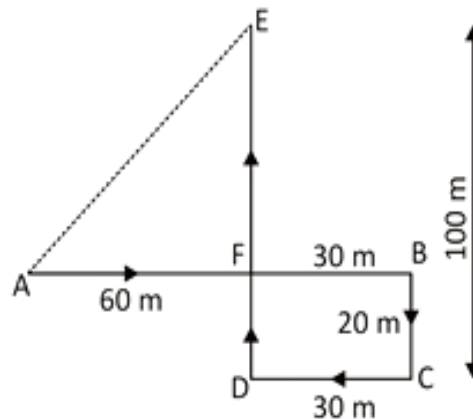
- a. 80m
- b. 100 m
- c. 140 m
- d. 180 m



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Correct Option: B



Clearly, the child moves from A 90 m east-wards up to B, then turns right and moves 20 m up to C, then turns right and moves 30 m up to D. Finally, he turns right and moves 100 m up to E. Clearly, $AB = 90\text{ m}$, $BF = CD = 30\text{ m}$ so, $AF = AB - BF = 60\text{ m}$. Also, $DE = 100\text{ m}$, $DF = BC = 20\text{ m}$ so, $EF = DE - DF = 80\text{ m}$.

So, His distance from starting point A = $AE = \sqrt{(AF^2 + EF^2)}$

$$\Rightarrow \sqrt{(60)^2 + (80)^2} = \sqrt{3600 + 6400}$$

$$\Rightarrow \sqrt{10000} = 100\text{ m}.$$

Hence, option B is correct.



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19. Kailash faces towards north. Turning to his right, he walks 25 metres. He then turns to his left and walks 30 metres. Next, he moves 25 metres to his right. He then turns to his right again and walks 55 metres. Finally, he turns to the right and moves 40 metres. In which direction is he now from his starting point?

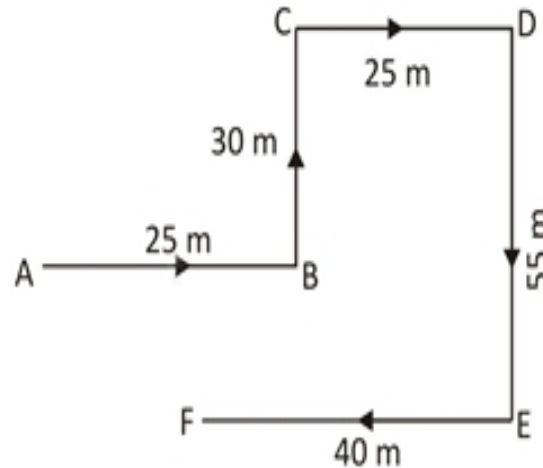
- a. South West**
- b. South**
- c. North West**
- d. South East**



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Correct Option: D



Kailash turns right from north direction. So, he walks 25 m towards east up to B, turns left and moves 30 m up to C, turns right and goes south and walks 55 m up to E. Next, he again turns to right and walks 40 m up to F, which is his final position. F is to the south-east of A. So, he is to the south-east from his starting point.

Hence, option D is correct.



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20. Deepa moved a distance of 75 metres towards the north. She then turned to the left and walking for about 25 metres, turned left again and walked 80 metres. Finally, she turned to the right at an angle of 45° . In which direction was she moving finally?

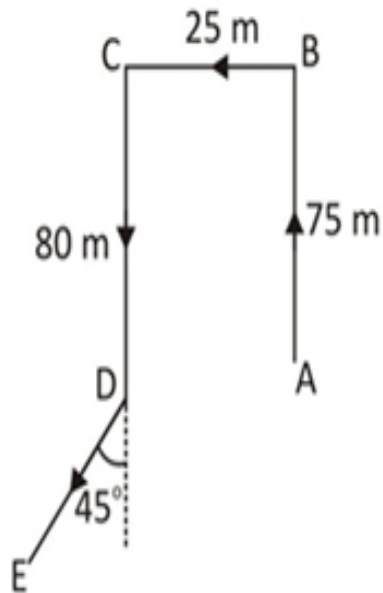
- a. North East
- b. North West
- c. South
- d. South West



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Correct Option: D



Deepa started from A, Moved 75 m up to B, turned left and walked 25 m up to C. She turned left again and moved 80 m C to D. Turning to the right at angle of 45° , she was finally moving in the direction DE i.e, South- west.

Hence, option D is correct.



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