

1. 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 here 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 ? **(SSC CGL 1st Sit. 2010)**
 - (a) 80m (b) 100m
 - (c) 260m (d) 140m
2. K is a place which is located 2 km away in the north-west direction from the capital P, R is another place that is located 2 km away in the south-west direction from K. M is another place and that is located 2 km away in north-west direction from R. T is yet another place that is located 2 km away in the south-west direction from M. In which direction is T located in relation to P? **(SSC CGL 1st Sit. 2010)**
 - (a) South-west (b) North-west
 - (c) West (d) North
3. Babu is Rahim's neighbour and his house is 200 metres away in the north west direction. Joseph is Rahim's neighbour and his house is located 200 metres away in the south west direction. Gopal is Joseph's neighbour and he stays 200 metres away in the south east direction. Roy is Gopal's neighbour and his house is located 200 metres away in the north east direction. Then what is the position of Roy's house with respect to Babu's? **(SSC CGL 2nd Sit. 2010)**
 - (a) South east (b) South west
 - (c) North (d) North east
4. If a man on a moped starts from a point and rides 4 km South, then turns left and rides 2 km to turn again to the right to ride 4 km more, towards which direction is he moving? **(SSC CGL 1st Sit. 2011)**
 - (a) North (b) West
 - (c) East (d) South
5. Ganesh cycles towards South-West a distance of 8 m, then he moves towards East a distance of 20 m. From there he moves towards North-East a distance of 8 m, then he moves towards West a distance of 6 m. From there he moves towards North-East a distance of 2 m. Then he moves towards West a distance of 4 m and then towards South-West 2 m and stops at that point. How far is he from the starting point? **(SSC CGL 1st Sit. 2011)**
 - (a) 12m (b) 10m
 - (c) 8m (d) 6m
6. One evening, Raja started to walk toward the Sun. After walking a while, he turned to his right and again to his right. After walking a while, he again turned right. In which direction is he facing? **(SSC CGL 2nd Sit. 2011)**
 - (a) South (b) East
 - (c) West (d) North
7. Vivek and Ashok start from a fixed point. Vivek moves 3 km north and turns right and then covers 4 km. Ashok moves 5 km west and turns right and walks 3 km. Now how far are they apart? **(SSC CGL 2nd Sit. 2011)**
 - (a) 10 km (b) 9 km
 - (c) 8 km (d) 6 km
8. A person walks 9 km to the South. From there he walks 5 km to the North. After this he walks 3 km to the West. In which direction and how far is he now from the starting point? **(SSC Sub. Ins. 2012)**
 - (a) 4 km South (b) 4 km North
 - (c) 5 km North West (d) 5 km South West
9. Shankar and Ganesh walked 150 meters towards East. Shankar turned left and walked 100 meters. Ganesh went straight for another 100 meters. Afterwards Ganesh turned to right and Shankar turned left. In which direction are they facing now? **(SSC Sub. Ins. 2012)**
 - (a) East and North (b) West and South
 - (c) North and South (d) South and North
10. Raghu starts from his house in his car and travels 8 km towards the North, then 6 km towards East then 10 m towards his right, 4 km towards his left, 10 km towards North and finally 4 km towards his right. In which Directions is he now with respect to the starting point? **(SSC CHSL 2012)**
 - (a) South (b) North East
 - (c) South East (d) North
11. Four aeroplanes of Airforce viz, A, B, C, D, started for a demonstration flight towards east. After flying 50 km planes A and D flew towards right, planes B and C flew towards left. After 50 km, planes B and C flew towards their left, planes A and D also towards their left. In which directions are the aeroplanes A, B, D, C respectively flying now? **(SSC CGL 1st Sit. 2012)**
 - (a) North, South, West, East
 - (b) South, North, West, East
 - (c) East, West, West, East
 - (d) West, East, West, East
12. Satish start from A and walks 2 km east upto B and turns southwards and walks 1 km upto C. At C he turns to east and walks 2 km upto D. He then turns northwards and walks 4 km to E. How far is he from his starting point ? **(SSC CGL 1st Sit. 2012)**
 - (a) 5km (b) 6km
 - (c) 3km (d) 4km

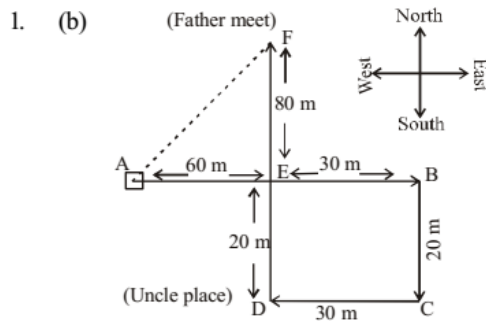
13. Ram and Sham start walking in opposite directions. Ram covers 6 kms and Sham 8 kms. Then Ram turns right and walks 8 kms and Sham turns left and walks 6 kms. How far each is from the starting point? **(SSC CGL 1st Sit. 2012)**
 (a) 11 kms (b) 8 kms
 (c) 9 kms (d) 10 kms
14. Sherly starting from a fixed point goes 15 m toward North and then after turning to his right he goes 15 m. Then he goes 10, 15 and 15 metres after turning to his left each time. How far is he from his starting point?
(SSC CGL 1st Sit. 2012)
 (a) 15 metres (d) 5 metres
 (c) 10 metres (d) 20 metres
15. A man started from a place walked towards North for 5 km then turned 90° to his right and walked another 5 km. then he turned 45° to his right and walked 2 km and turned 45° to his left. What is his direction now?
(SSC CGL 2nd Sit. 2012)
 (a) South (b) South East
 (c) East (d) South East
16. A boy running towards South, turns to his right and runs. Then he turns to his right and finally turns to his left. Towards which direction is he running now?
(SSC CGL 2nd Sit. 2012)
 (a) East (b) West
 (c) South (d) North
17. If South East becomes North, then what will South West become?
(SSC CGL 2nd Sit. 2012)
 (a) North (b) West
 (c) East (d) North West
18. A man coming out of the backdoor of his house which is facing East, walked for one kilometre, turned to his right and walked for another kilometre. Then he turned to his right and walked a kilometre again. Where was he from his house at the end?
(SSC CGL 2nd Sit. 2012)
 (a) 1 km away in north (b) 1 km away in south
 (c) 1 km away in east (d) 1 km away in west
19. Seema walks 30 m North. Then she turns right and walks 30 m then she turns right and walks 55 m. Then she turns left and walks 20 m. Then she again turns left and walks 25m. How many metres away is she from her Original position?
(SSC Sub. Ins. 2013)
 (a) 45 m (b) 50 m
 (c) 66 m (d) 55 m
20. After walking 10 m, Shankar turned left and covered a distance of 6 m, then turned right and covered a distance of 20 m. In the end, he was moving towards the south. From 20 m. In the end, he was moving towards the south. From which direction did Shankar start his journey?
(SSC Sub. Ins. 2013)
 (a) West (b) North
 (c) South (d) East
21. A cyclist goes 30 km to North and then turning East he goes 40 km. Again he turns to his right and goes 20 km. After this, he turns to his right and goes 40 km. How far is he from his starting point ?
(SSC CHSL 2013)
 (a) 25km (b) 40km
 (c) 6km (d) 10km
22. One morning at 7 o'clock, Naresh started walking with his back towards the Sun. Then he turned towards left, walked straight and then turned towards right and walked straight. Then he again turned towards left. Now in which direction is he facing ?
(SSC CHSL 2013)
 (a) West (b) South
 (c) North (d) East
23. Shiela and Belah start from their office and walk in opposite direction each travelling 10 kms. Shiela then turns left and walks 10 kms. Belah turns right and walks 10 km. How far are they now from each other ?
(SSC CGL 1st Sit. 2013)
 (a) 20km (b) 10km
 (c) 5km (d) 8km
24. A man walks 15 metres south. Then turning to his right he walks 15 metres. Then turning to his left, he walks 10 meters. Again turns to his left and walks 15 metres. How far is he from his initial position?
(SSC CGL 1st Sit. 2013)
 (a) 10m (b) 25m
 (c) 15m (d) 60 m
25. One day, Nita left home and cycled 10 km southwards, turned right and cycled 5 km and turned right and cycled 10 km and turned left and cycled 10 km. How many kilometers km and turned left and cycled 10 km. How many kilometers will she have to cycle to reach her home straight?
(SSC CGL 1st Sit. 2013)
 (a) 10km (b) 15km
 (c) 20km (d) 25km
26. Rajat moves from his office to the canteen straight at a distance of 12 meters. Then he turned left and walked for 2 metres. Then he turns left again and walks straight for 12 metres. How far is he from his office?
(SSC CGL 1st Sit. 2013)
 (a) 10 metres (b) 12 metres
 (c) 8 metres (d) 2 metres
27. Raj is standing in the middle of a square field. He starts walking diagonally to North-East. Then he turns right and reaches the far end of the field. Then he turns right and starts walking. In the midway he agains turns right and starts walking. In halfway, he turns to his left and reaches a new far end. In what direction is Raj now?
(SSC CGL 2nd Sit. 2013)
 (a) South (b) North-West
 (c) South-West (d) North
28. A boy starts from home in early morning and walks straight for 8 km facing the Sun. Then he takes a right turn and for 8 km facing the Sun. Then he takes a right turn and walks for 3 km. Then he turns right again and walks for 2 km and then turns left and walks for 1 km. Then he turns right, travels 1 km and then turns right and travels for 4 km straight. How far is he from the starting point?
(SSC CGL 2nd Sit. 2013)
 (a) 6km (b) 2km
 (c) 4km (d) 5km

29. Asha drives 6 km towards West and turns to the right and drives 3 km. Then, she turns again and drives towards right hand and drives 6 km. How far is she from her starting point? In which direction would she be driving?
(SSC CGL 2nd Sit. 2013)
- (a) 6 km East (b) 3 km West
(c) 3 km East (d) 6 km North
30. Priya starts walking in the afternoon facing the Sun. After some time, she turned to the right. Later again, she turned to her left and again also left. At what direction is Priya moving now?
(SSC CGL 2nd Sit. 2013)
- (a) East (b) West
(c) North (d) South
31. A direction pole was situated on the crossing. Due to an accident, the pole turned in such a manner that the pointer which was showing East started showing South. One traveller went to the wrong direction thinking it to be West. In what direction actually was he travelling?
(SSC CGL 2nd Sit. 2013)
- (a) South (b) East
(c) West (d) North
32. Rachel starts walking towards North. After walking 15 metres, she turns towards South and walks 20 metres. She then turns towards East and walks 10 metres. Then, again, she walks 5 metres towards North. How far is she from her starting point and in which direction?
(SSC CGL 2nd Sit. 2013)
- (a) 10 metres, West (b) 5 metres, East
(c) 5 metres, North (d) 10 metres, East
33. Rohan walks a distance of 3 km towards North, then turns to his left and walks for 2 km. He again turns left and walks for 3 km. At this point he turns to his left and walks for 3 km. How many kilometres is he from the starting point?
(SSC CGL 2nd Sit. 2013)
- (a) 1 km (b) 2 km
(c) 3 km (d) 4 km
34. Rani and Sarita started from a place X. Rani went West and Sarita went North, both travelling with the same speed. After sometimes, both turned their left and walked a few steps. If they again turned to their left, in which directions' the faces of Rani and Sarita will be with respect to X?
(SSC CGL 2nd Sit. 2013)
- (a) North and East (b) North and West
(c) West and North (d) East and South
35. Prem, Rakesh, Roshan, Sanjay, Tanuj, Udit are sitting at equal distance in a circle and are facing the centre. Roshan is third from Prem in the right. Rakesh is third from Tanuj from the left. Udit is between Prem and Tanuj and Sanjay is third from Udit in the left and right. Who is opposite Tanuj?
(SSC Stenographer 2013)
- (a) Roshan (b) Prem
(c) Rakesh (d) Sanjay
36. Brinda goes 30 km. towards North from a fixed point. Then after turning to her right she goes 30 km. After this she goes 30 km after turning to her right. How far and in what direction is she from the starting point? (SSC Stenographer 2013)
- (a) 60 km East (b) 30 km East
(c) 60 km West (d) 30 km South
37. A person walks towards his house at 8.00 am and observes his shadow to his right. In which direction he is walking?
(SSC Sub. Ins. 2014)
- (a) North (b) South
(c) East (d) West
38. A boat moves from a jetty towards East. After sailing for 9 nautical miles, she turns towards right and covers another 12 nautical miles. If she wants to go back to the jetty, what is the shortest distance now from her present position?
(SSC Sub. Ins. 2014)
- (a) 21 nautical miles (b) 20 nautical miles
(c) 18 nautical miles (d) 15 nautical miles
39. Raju was to go to the planetarium. So, he walked 1.5 kms towards east from the place and then turned to right and walked 2.5 kms and then turned towards east walked 1 km. and turned to south and walked 4 kms and reached the place by walking 2.5 kms towards west. What distance is he from the starting point?
(SSC CHSL 2014)
- (a) 6.5 kms (b) 9.5 kms
(c) 10 kms (d) 9 kms
40. A cyclist rides 40 kms to the east, turns north and rides 20 kms. again turns left and rides 20 kms. How far is he from the starting point?
(SSC CHSL 2014)
- (a) 0 km (b) 10 kms
(c) 20 kms (d) 30 kms
41. Dinesh and Ramesh start together from a certain point in the opposite direction on motorcycles. The speed of Dinesh is 60 km per hour and Ramesh 44 km per hour. What will be the distance between them after 15 minutes?
(SSC CGL 1st Sit. 2014)
- (a) 20 km. (b) 24 km
(c) 26 km (d) 30 km
42. Four players P, Q, R and S are standing a play field in such a way that Q is to East of P, R is to the South of P and S is to the North of P. In which direction w.r.t. Q w.r.t. S Standing?
(SSC CGL 1st Sit. 2014)
- (a) North (b) South
(c) North-West (d) South-East
43. Pinky walks a distance of 600 mtr. towards east, turns left and moves 500 mtr, then turns left and walks 600 mtr. and then turns left again and moves 500 mtr and halts. At what distance in metres is she from the starting point?
(SSC CGL 1st Sit. 2014)
- (a) 2200 (b) 500
(c) 0 (d) 600
44. Sunita rode her scooter northwards, then turned left and then again rode to her left 4 km. She found herself exactly 2 kms west of her starting point. How far did she ride northwards initially?
(SSC CGL 2nd Sit. 2014)
- (a) 2 km (b) 4 km
(c) 5 km (d) 6 km

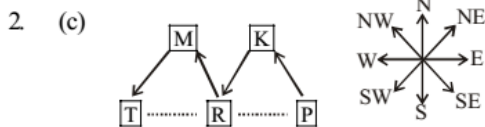
45. Veena and Veeru both start from a point towards North, Veena turns to left after walking 10 Km. Veeru turns to right after walking the same distance. Veena waits for some time and then walks another 5 Km. Whereas Veeru walks only 3 Km. They both then return towards south and walk 15 Km. forward. How far is Veena from Veeru?
(SSC CGL 2nd Sit. 2014)
- (a) 12km (b) 10km
(c) 8km (d) 15km
46. Ravi is walking in the East direction. After covering a distance of one kilometer, he turns 45° left and then 90° right. In which direction is he now ? (SSC CGL 2nd Sit. 2014)
- (a) North (b) West
(c) North West (d) North East
47. One morning after sunrise Manajit and Sangita were walking to each other face to face at the park. If Manajit's shadow was exactly to the right of Sangita, which direction Manajit was facing? (SSC Steno. 2014)
- (a) South (b) East
(c) West (d) North
48. Jaffar starting from a fixed point goes 15 km towards North and then after turning to his right he goes 15 km. Then, he goes 10, 15 and 15 km after turning to his left each time. How far is he from his starting point? (SSC Steno. 2014)
- (a) 10km (b) 20km
(c) 15km (d) 5km
49. One morning Savita set out from home to fetch water in the direction of the Sun. After some time she turned to her left and then to her right. After some time she turned to her right again. Now which direction is she facing?
(SSC Steno. 2014)
- (a) South (b) West
(c) East (d) North
50. Keeping his back towards the rising sun, Reshma starts walking. After a few minutes, she turns left and keeps on walking. Then a little later she turns right and then left. In which direction is she going at the moment?
(SSC Sub. Ins. 2015)
- (a) East or South (b) South or West
(c) North or South (d) West or North
51. From her home facing south west, Kavita walks 15m and turns northward and walks 12 m. How far was she from her home. Which was her starting point ?
(SSC Sub. Ins. 2015)
- (a) 12m (b) 9m
(c) 15m (d) 10m
52. Of the 5 towns A, B, C, D and E situated close to each other. A is to the west of B, C is to the south of A, E is to the north of B and D is to the east of E. Then C is in which direction with respect to D?
(SSC CHSL 2015)
- (a) South-West (b) North-West
(c) North-East (d) South-East
53. Karthik travelled 3 km east, then took a right and travelled 4 kms. How far is he from starting point ? (SSC CHSL 2015)
- (a) 12 kms (b) 3 kms
(c) 7 kms (d) 5 kms
54. After going 80 m, from his house towards east, a person turns left and goes 20 m then turns right and moves 100 m, then turns left and goes 60m, then turns right and goes 120 m to reach the park. What is the distance between his house and the park? (SSC CHSL 2015)
- (a) 120m (b) 20m
(c) 100m (d) None of these
55. The mall is 250 meters north-west of the market. The school is 250 meters south-west of the market. In which direction is the school from the mall? (SSC CHSL 2015)
- (a) West (b) South
(c) North (d) East
56. Deepak starts walking straight towards east. After walking 75 metres, he turns to the left and walks 25 metres straight. Again he turns to the left, walks a distance of 40 metres straight, again he turns to the left and walks a distance of 25 metres. How far is he from the starting point?
(SSC CGL 1st Sit. 2016)
- (a) 35m (b) 50m
(c) 115m (d) 140m
57. A man starts from a point, walks 5 km towards East, turns right and walks 3 km, turns right again and walks. What is the direction he is facing now? (SSC CGL 2nd Sit. 2016)
- (a) North (b) South
(c) West (d) South-west
58. Johnson left for his office in his car. He drove 15km towards North and then 10km towards West. He then turned to the South and covered 5km. Further he turned to East & moved 8km. Finally he turned right and moved 10km. How far & in which direction is he from his starting point?
(SSC CGL 2nd Sit. 2016)
- (a) 2 km, West (b) 5 km, East
(c) 3 km, North (d) 3 km, South
59. Sanmitra walked 8 m towards the north. He turned to his right and walked 16 m, then he turned to his left and walked 5 m and again he turned to his left and walked 16 m. In which direction is he from his starting point?
(SSC CGL 2nd Sit. 2016)
- (a) South (b) East
(c) North (d) West
60. Rajan started from his house and went 2 km east, then the turned right and went 3 km, again turned right and went 3 kg, again he turned right and covered 1 km and finally after turning right and going 1 km he reached point 'K'. In which direction was Rajan walking when he reached ?
(SSC Steno. 2014)
- (a) South (b) North
(c) West (d) East

61. Sanjith faces towards north turning to his right, he walks 10 m. He then turn to left and walks 30 m. He moves 25 m to his right and again to right through 50 m. Finally he turns to right and moves 40 m. In which direction is he now from his starting point? **(SSC SI 2016)**
 (a) North - East (b) South - East
 (c) South - West (d) North - West
62. Indu starts travelling towards east and stops after 35 km and turns right walks 15 km and again turn right walks another 15 km and again turns right and walk right 15 km and then stops. What is the minimum distance Indu has to walk to reach the starting point? **(SSC SI 2016)**
 (a) 35 km (b) 30 km
 (c) 20 km (d) 25 km
63. Neeraj is facing north, then he turns 45 degree right and goes 25 m, then turns in south – east direction to move 25 m and from there 25 m to east. In which direction/place is he from his original place? **(SSC CHSL 2017)**
 (a) North (b) East
 (c) West (d) South
64. 'Z' started walking straight towards South. He walked a distance of 15 metres and then took a left turn and walked a distance of 30 metres. Then he took a right turn and walked a distance of 15 metres again. Z is facing which direction? **(SSC MTS 2017)**
 (a) North (b) West
 (c) South (d) East
65. Sunita walks 45 metres towards south. Then turns right and walk another 45 metres. Then turn right and walks for 20 metres to reach point L. She then again turns to her right and walks for 45 metres. How far (in metres) is she from point L? **(SSC Sub. Ins. 2017)**
 (a) 50 (b) 45
 (c) 25 (d) 60
66. After starting from his house, Naren waked a few meters towards the east. From there, he took a right turn and walked 80 m, and then took a left turn and walked 20 m. Finally, he took a right turn again and walked 40 m to reach the hospital. If the air distance between his house and the hospital is 130 m, how far did Naren walk towards the east initially? **(SSC Sub. Ins. 2018)**
 (a) 40 m (b) 25 m
 (c) 50 m (d) 30 m
67. Rakesh starts walking from his house and then takes two left turns and one right turn to reach the market. If he is facing north on reaching the market, in which direction was Rakesh facing when he started from his house? **(SSC Sub. Ins. 2018)**
 (a) North (b) South
 (c) East (d) West
68. Vilas went from his home to his college. He started his journey facing East. First, he went 2 km straight; then he turned to his right and went 3 km; finally, he turned left and walked 4 km to reach his college.
 To which direction is Vilas's home located in relation to his college? **(SSC Stenographer 2018)**
 (a) South-west (b) North-east
 (c) South-East (d) North-west
69. In morning after sunrise a boy rode his bicycle 4 km towards North then he took right turn and rode 6 km then he took left turn and rode 5 km to reach his school. In which direction the starting point is with respect to location of School? **(SSC Stenographer 2018)**
 (a) South-east (b) South-west
 (c) North-west (d) North-east
70. Mridul cycles 145 m towards the east, and then turns left and cycles 155 m. Again, he turns left and cycles 225 m. He finally turns left and cycles 95 m to reach his home. What is the shortest distance between his home and the starting point? **(SSC Stenographer 2020-21)**
 (a) 100 m (b) 140 m
 (c) 120 m (d) 60 m
71. Meenal walks 45 m towards the north, and then turns left and walks 35 m. From there, she turns right and walks 26 m, and then she again turns right and walks 35 m. She finally takes a left turn and walks 17 m to reach her home. How far is she from the starting point? **(SSC Stenographer 2020-21)**
 (a) 85 m (b) 83 m
 (c) 88 m (d) 80 m
72. Ratan walks 15 m towards the north and then turns right and walks 23 m. Then, he turns left and walks 16 m, After that, he turns left and walks 11 m. Then, he turns right and walks 17 m. Then, he turns left and walks 12 m. He finally turns right and walks 19 m. In which direction and how far is he now with reference to the starting point? **(SSC Sub-Inspector 2020-21)**
 (a) South, 51 m (b) North, 52 m
 (c) North, 48 m (d) North, 67 m

Hints & Solutions

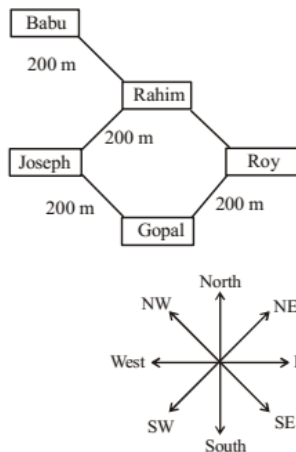


∴ Required distance = AF
 $= \sqrt{(80)^2 + (60)^2}$
 $= \sqrt{6400 + 3600} = \sqrt{10000} = 100\text{m}$



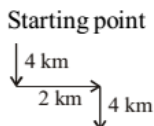
It is clear that T is located to the West of P.

3. (a) The direction diagram is as follows :

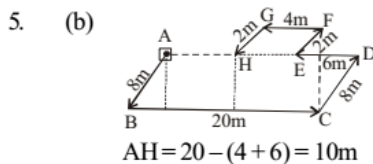


The house of Roy is in South-East direction with respect to the house of Babu.

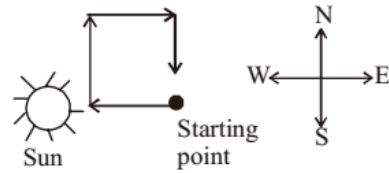
4. (d) The direction diagram is as follows:



It is clearly shown that he is moving south direction.

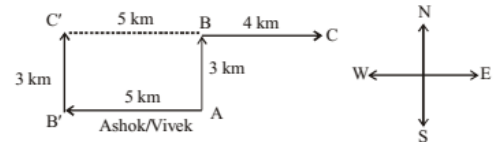


6. (a) The direction diagram is as follows :



So, raja is facing south direction.

7. (b) The direction diagram is as follows :

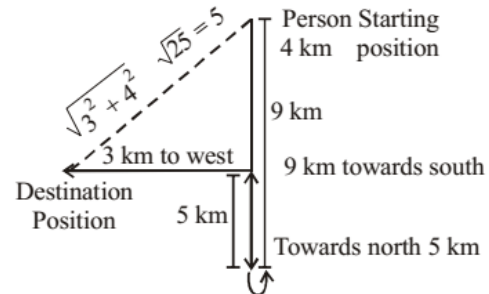


Here, $C'B = B'A = 5\text{ km}$

So, $C'B + BC = 5 + 4 = 9\text{ km}$

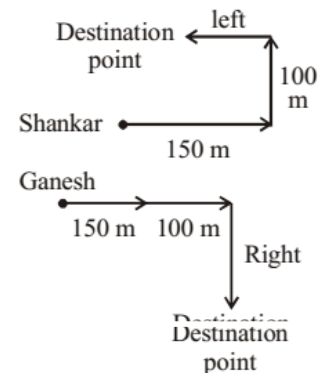
Therefore, they are 9 km far apart each other.

8. (d)



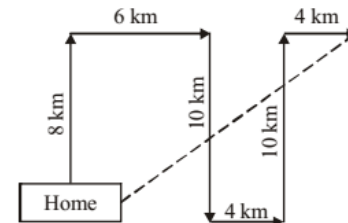
Person is in south west direction & 5 km from the starting point.

9. (b)

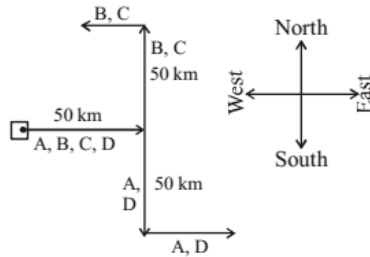


Shankar is facing to west direction & Ganesh is facing to south direction.

10. (b)

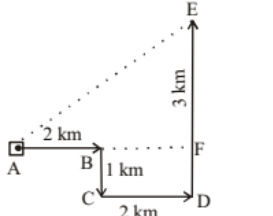


11. (c)



A \Rightarrow East, B \Rightarrow West,
C \Rightarrow West, D \Rightarrow East.

12. (a)

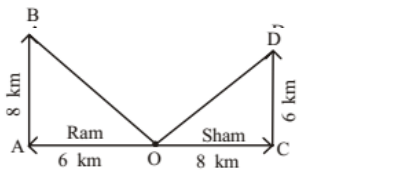


\therefore Required distance AE,

$$= \sqrt{(AF)^2 + (EF)^2}$$

$$= \sqrt{(4)^2 + (3)^2} = \sqrt{16 + 9} = \sqrt{25} = 5 \text{ km}$$

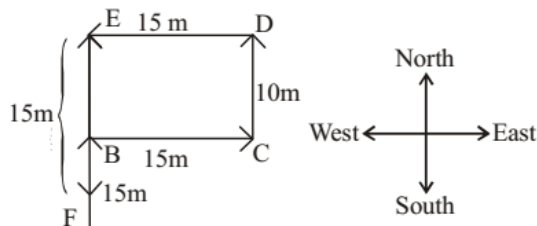
13. (d)



$$OB = \sqrt{(AB)^2 + (AO)^2} = \sqrt{(8)^2 + (6)^2}$$

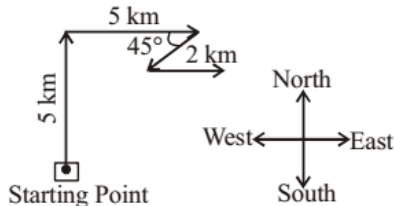
$$= \sqrt{64 + 36} = \sqrt{100} = 10 \text{ km}$$

14. (c)

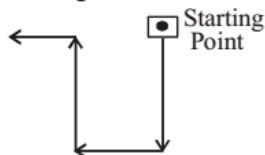


$$\therefore AF = AE - EF = 25 - 15 = 10 \text{ metres}$$

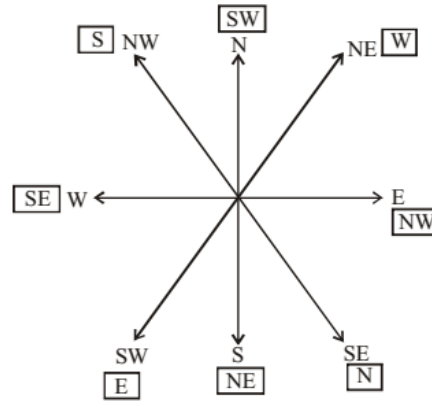
15. (c)



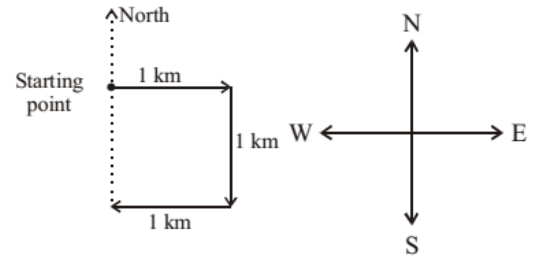
16. (b)



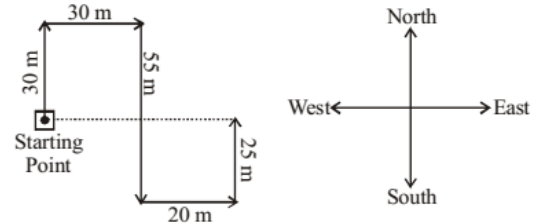
17. (c) If South East becomes North then south west becomes east as shown in direction chart.



18. (a)

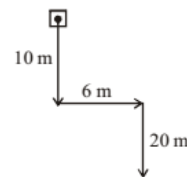


19. (b)



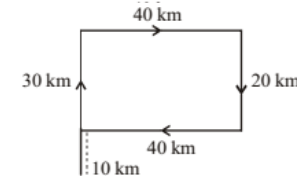
$$\therefore \text{Required distance} = 30\text{m} + 20\text{m} = 50\text{m}$$

20. (b)

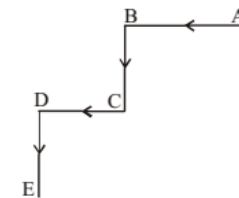


From the diagram it is clear that Shankar started his journey from North to South.

21. (d)



22. (b)



23. (a)
-
- \therefore Required distance
 $= 10 + 10 = 20$ km

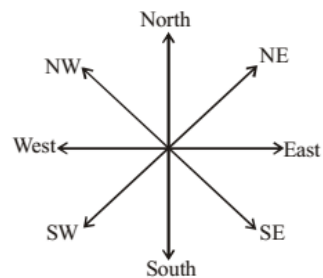
24. (b)
-
- \therefore Required distance $= (15 + 10) \text{ m} = 25 \text{ m}$

25. (b)
-
- \therefore Required distance $= (10 + 5) \text{ km} = 15 \text{ km}$

26. (d)
-
- \therefore Required distance $= 2$ metres

27. (b)
-
- It is clear from the diagram that Raj is in North-West direction.

28. (d)
-



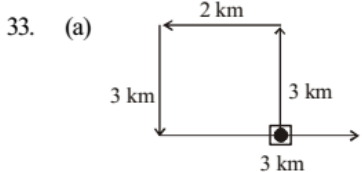
He is 5 km away from the starting point.

29. (c)
-
- Hence, Asha is 3 km from starting point and in the east direction.

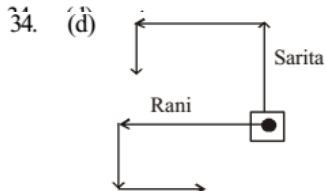
30. (d)
-
- Hence, Priya is moving in the South direction.

31. (d)
-
- As East started showing south then west was actually north.

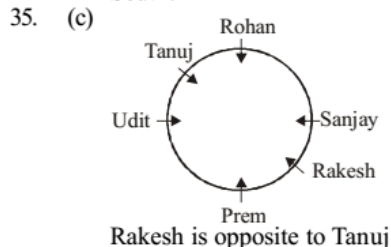
32. (d)
-
- \therefore Required distance $= AE = 10 \text{ m}$
 Rachel is 10 metres towards East from the starting point.



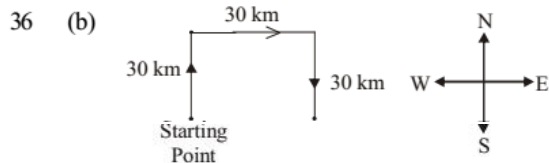
Required distance = 1 km



Rani is facing towards East and Sarita is facing towards South.

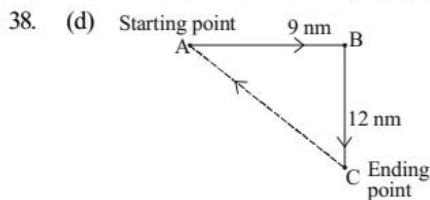


Rakesh is opposite to Tanuj

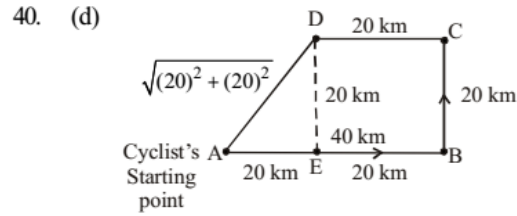
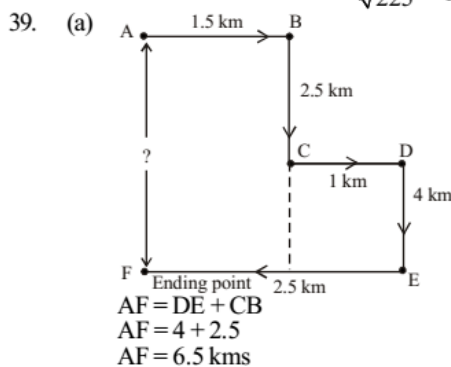


Hence, Brinda is 30 km far in East direction from the starting point.

37. (b) A person observes his shadow to his right. The sun is to his left. He is walking towards the south.



$$\begin{aligned} \text{The shortest distance} &= \sqrt{AB^2 + BC^2} \\ &= \sqrt{9^2 + 12^2} \\ &= \sqrt{225} = 15 \text{ nautical miles} \end{aligned}$$



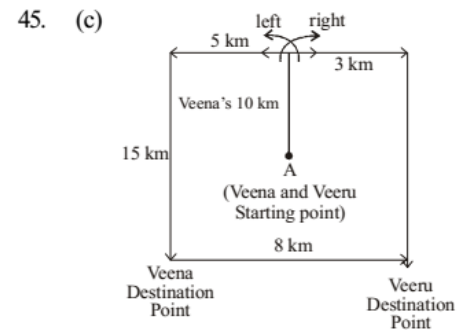
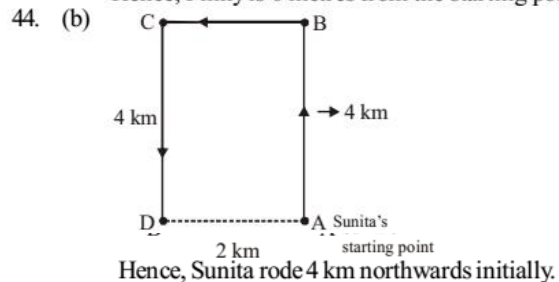
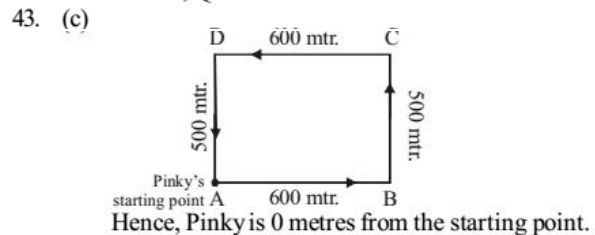
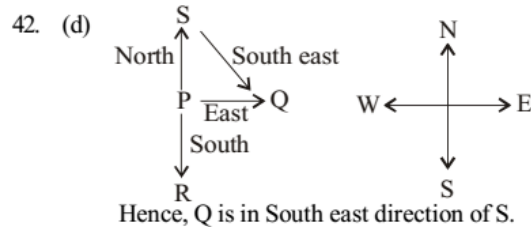
$$AD = \sqrt{(20)^2 + (20)^2} = 28.28 \approx 30 \text{ kms}$$

41. (c)

Relative speed of Dinesh and Ramesh's motorcycles = $(60 + 44) = 104 \text{ km/hr}$

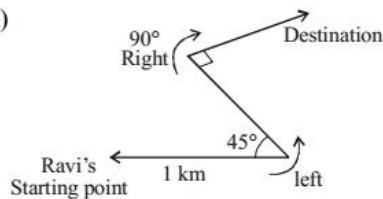
Distance travelled by them = Relative speed \times Time covered,

$$104 \text{ km/hr} \times \left(\frac{15}{60}\right) \text{ hr} = \frac{104 \times 15}{60} = 26 \text{ km}$$



By looking at the above diagram, it is clear that Veena is 8 km far away from Veeru's position.

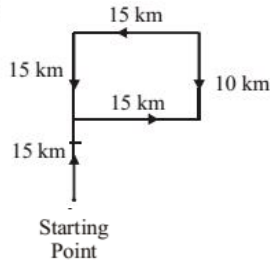
46. (d)



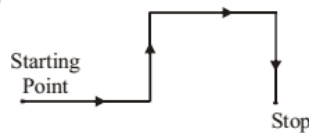
After walking towards 90° right, he is now in north east direction.

47. (d)

48. (a)

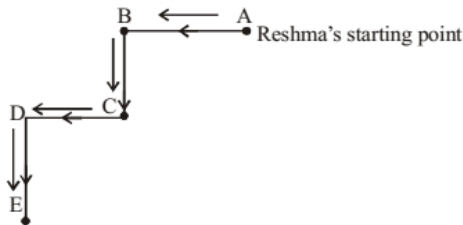


49. (a)



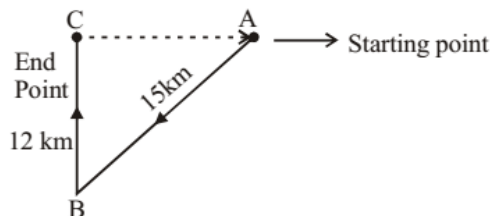
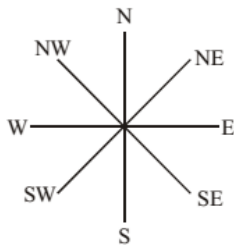
Now, savita is facing south direction.

50. (b)



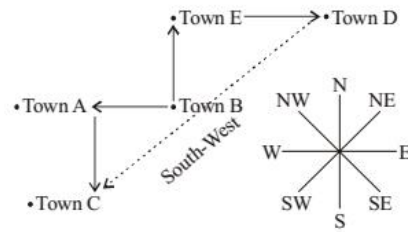
Now, Reshma is going to south direction.

51. (b)



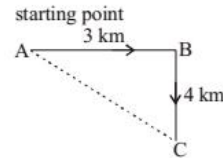
$$\begin{aligned} \text{Distance from starting point} &= (15^2 - 12^2) \\ &= (225 - 144) = (81)^{1/2} = 9 \text{ m} \end{aligned}$$

52. (a)



So, C is in south-west of D.

53. (d)

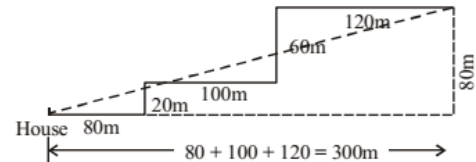


In $\triangle ABC$

$$AC = \sqrt{(AB)^2 + (BC)^2}$$

$$AC = \sqrt{(3)^2 + (4)^2} = \sqrt{9 + 16} = 5 \text{ kms.}$$

54. (d)



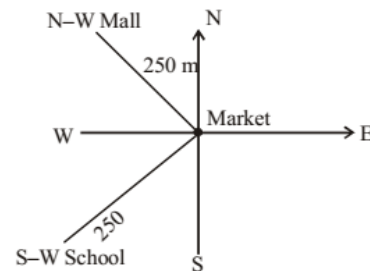
So, distance of house from park

$$\begin{aligned} &= \sqrt{(300)^2 + (80)^2} \\ &= \sqrt{90000 + 6400} = \sqrt{96400} \\ &= 310.5 \text{ m} \end{aligned}$$

Note: None of the answers is correct.

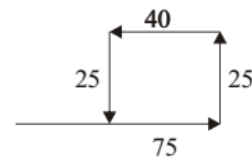
Correct answer is 310.5 m

55. (b)

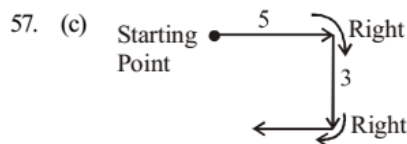


So, School is in south of mall.

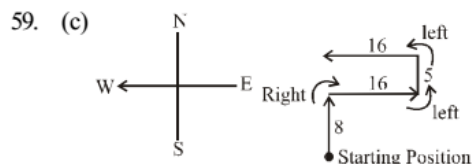
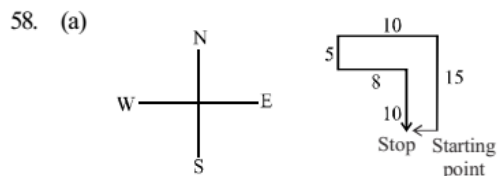
56. (a)



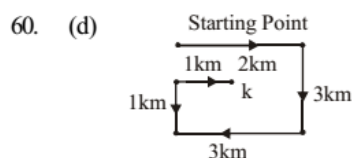
He is $75 - 40 = 35$ m far from starting point



He is facing west direction now.

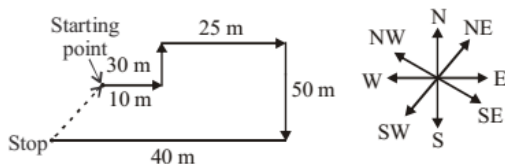


He is in north direction from starting point.

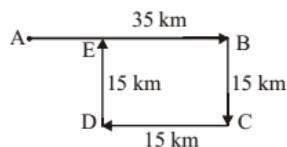


Rajan was walking East direction when he reached 'K' point

61. (c) According to the given information, the direction diagram is as follows:



62. (c) According to the given information, the direction diagram is as follows:

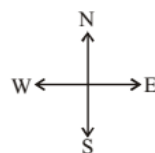
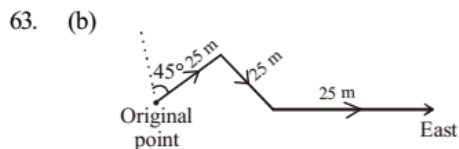


$$AB = 35, EB = DC = 15 \text{ km}$$

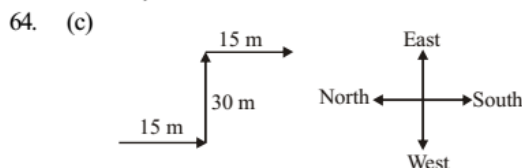
$$AE = AB - EB$$

$$= 35 - 15$$

$$AE = 20 \text{ km.}$$

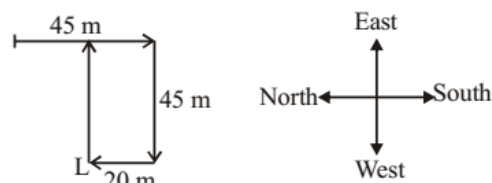


So, answer is East direction.



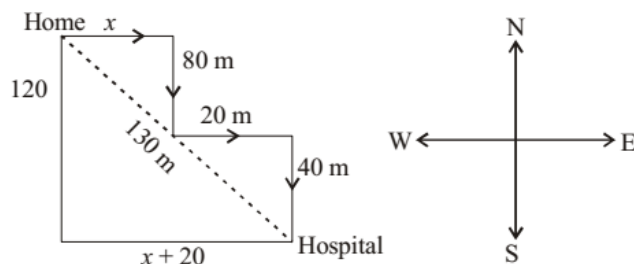
So, After walked; Z is facing south direction.

65. (b) According to the given information the direction diagram is as follows :



She is 45 m far from L - point.

66. (d) According to question.

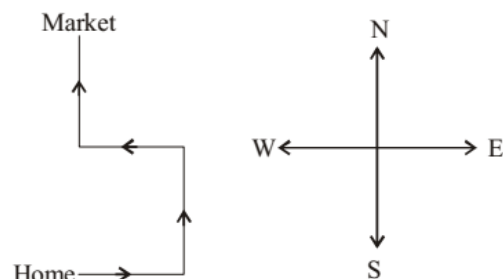


$$(130)^2 = (120)^2 + (x+20)^2$$

$$\therefore (130)^2 - (120)^2 = (x+20)^2$$

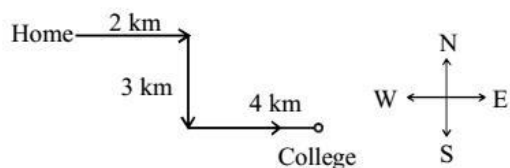
$$\therefore x = 30 \text{ m}$$

67. (c) According to question,



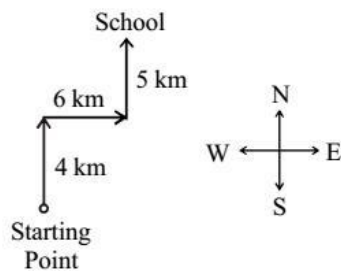
So, Rakesh is facing east when he started from his house.

68. (d) According to question,



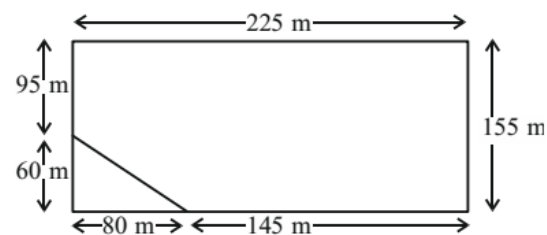
So, Vilas home is located in north-west direction from college.

69. (b)



So, starting point is in south-west direction with respect to school.

70. (a)

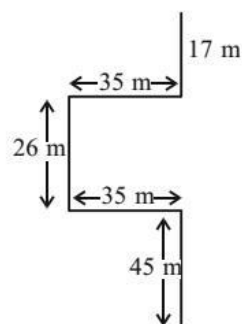


Shortest distance between home and starting point

$$= \sqrt{60^2 + 80^2}$$

$$= \sqrt{100^2} = 100 \text{ m}$$

71. (c)



Distance between starting point and final point
 $= 45 + 26 + 17$
 $= 88 \text{ m}$

72. (d) North, 67 m

