

DIRECTION

CHITKARA
UNIVERSITY

DIRECTION

What is Direction and Distance?

As the name suggests, Direction and Distance questions are based on the distance and/or direction puzzle. Based on the given distance and direction, candidates need to find out the final direction from the starting point and/or find out the distance, covered between starting point and the final or end point. To solve these types of questions, candidates need to know about the directions; there are 4 main directions and 4 sub directions. The main directions are; **East, West, North, and South**, whereas the sub directions are: **North- East, North-West, South-East, and South-West**. Besides this, the right turn and left turn are generally asked in the direction and distance reasoning section. The direction of the right turn is always clockwise whereas the direction of the left turn is always anticlockwise.

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Types of Direction and Distance

As now we know what consists of the questions related to the Direction and Distance reasoning section, let us see the various types of Direction and Distance one by one below.

1. **Turns and Rotations** : In this type of Direction and Distance, rotations such as clockwise or anticlockwise, and turns such as left or right taken by people will be given and candidates will need to find his/her final position.
2. **Distance and Displacement** : A displacement is a short distance between the initial and final position of a point or a person. It quantifies both distance and direction. For example, if a person starts walking from a point and after walking 100m, reaches the same point from where he started then the displacement of that person is 0, whereas the distance travelled by him is 100m.

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- 3. Shadow Based :** In this type of Direction and Distance, questions are asked based on shadow. Shadows always fall on the opposite side of the Sun. For example, from sunrise to afternoon, such as before 12 PM, the shadow will fall in the west direction, whereas from afternoon to evening, such as after 12 PM, the shadow will fall in the east direction. No shadow will be formed at 12 PM.
- 4. Coded Directions and Distance :** In this type of Direction and Distance, distance and directions are given in coded form and using the coded expression given in the question, candidates need to decode it and find the final answer.

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Tip #1: To resolve these types of questions, candidates need to know about the directions, there are 4 main directions and four sub directions. The main directions are; East, West, North, and South, whereas the sub directions are: North-East, North-West, South- East, and South-West.

Tip #2: Besides this, the right turn and left turn are generally asked in the direction and distance reasoning section. The direction of the right turn is always clockwise whereas the direction of the left turn is always anticlockwise.

Tip #3: To find the shortest distance covered between a starting point and the end point, candidates need to use the Pythagoras formula such as $H^2 = B^2 + P^2$, where H is the hypotenuse, B is the Base, and P is the Perpendicular.

Tip #4: Always use NESW in a clockwise direction. North is opposite to South and East is opposite to West.

DIRECTION

Q 1. Ashok went 8 Km South and turned west and walked 3 Km, again he turned north and walked 5 Km. He took a final turn to the east and walked 3 km. In which direction was Ashok from the starting point?

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

DIRECTION

Q 1. Ashok went 8 Km South and turned west and walked 3 Km, again he turned north and walked 5 Km. He took a final turn to the east and walked 3 km. In which direction was Ashok from the starting point?

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

DIRECTION

Q 2. Starting from a point P, Sachin walked 20m towards South. He turned left and walked 30m. He then turned left and walked 20m. He again turned left and walked 40 m and reached a point Q. How far and in which direction is the point P from the point Q.?

- (a) 20 m West
- (b) 10 m West
- (c) 10 m East
- (d) 10 m North
- (e) None of these

DIRECTION

Q 2. Starting from a point P, Sachin walked 20m towards South. He turned left and walked 30m. He then turned left and walked 20m. He again turned left and walked 40 m and reached a point Q. How far and in which direction is the point P from the point Q.?

- (a) 20 m West
- (b) 10 m West
- (c) 10 m East
- (d) 10 m North
- (e) None of these

DIRECTION

Q 3. Roy walked 2 km to the East, then turned North-west and walked 3 km. Then he turned South and walked 5 km. Then again he turned west and walked 2 km. Finally he turned North and walked 6 km. In which direction, is he from the starting point?

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

DIRECTION

Q 3. Roy walked 2 km to the East, then turned North-west and walked 3 km. Then he turned South and walked 5 km. Then again he turned west and walked 2 km. Finally he turned North and walked 6 km. In which direction, is he from the starting point?

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

DIRECTION

Q 4. Vimal faces towards the north turning to his right, he walks 25 meters. He then turns to his left and walks 30 meters. Next, he moves 25 meters after turning to his right. He then turns to his right again and walks 55 meters. Finally, he turns to the right and moves 40 meters. In which direction is he now from his starting point?

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

DIRECTION

Q 4. Vimal faces towards the north turning to his right, he walks 25 meters. He then turns to his left and walks 30 meters. Next, he moves 25 meters after turning to his right. He then turns to his right again and walks 55 meters. Finally, he turns to the right and moves 40 meters. In which direction is he now from his starting point?

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

DIRECTION

Q 5. Tom walked 10 miles from point P towards the east. He then took right turn and walked 5 miles and taking another right turn walked again for another 5 miles. In which direction is point P from where Tom is standing Now?

- (a) South-East
- (b) North-West
- (c) North-East
- (d) Can't be determined

DIRECTION

Q 5. Tom walked 10 miles from point P towards the east. He then took right turn and walked 5 miles and taking another right turn walked again for another 5 miles. In which direction is point P from where Tom is standing Now?

- (a) South-East
- (b) North-West
- (c) North-East
- (d) Can't be determined

DIRECTION

Q 6. Amit walked 10 Km towards North. From there he turned back and walked 6 Km towards South. Then he walked 3 km towards the East. How far was he from the starting point?

- (a) 8 km
- (b) 5 km
- (c) 7 km
- (d) 6 km
- (e) None of these

DIRECTION

Q 6. Amit walked 10 Km towards North. From there he turned back and walked 6 Km towards South. Then he walked 3 km towards the East. How far was he from the starting point?

- (a) 8 km
- (b) 5 km**
- (c) 7 km
- (d) 6 km
- (e) None of these

DIRECTION

Q 7. Seema walks 1 km to the east turns right and walks another 1 km and then turns left and walks 2 km and again turning to her left and travels 5 km. How far is Seema from her starting point?

- (a) 8 km
- (b) 5 km
- (c) 7 km
- (d) 6 km
- (e) None of these

DIRECTION

Q 7. Seema walks 1 km to the east turns right and walks another 1 km and then turns left and walks 2 km and again turning to her left and travels 5 km. How far is Seema from her starting point?

- (a) 8 km
- (b) 5 km**
- (c) 7 km
- (d) 6 km
- (e) None of these

DIRECTION

Q 8. Shyam walked 6 meters towards East, then took a right turn and walked a distance of 9 meters. He then took a left turn and walked a distance of 6 meters. How far is he from the starting point?

- (a) 15 meters
- (b) 21 meters
- (c) 18 meters
- (d) Can't be determine

DIRECTION

Q 8. Shyam walked 6 meters towards East, then took a right turn and walked a distance of 9 meters. He then took a left turn and walked a distance of 6 meters. How far is he from the starting point?

- (a) 15 meters
- (b) 21 meters
- (c) 18 meters
- (d) Can't be determine

DIRECTION

Q 9. Vimal starts from point P and walks toward South and stops at point Q. He now takes a right turn followed by a left turn and stops at point R. He finally takes a left turn and stops at point S. If he walks 5 km before taking each turn, towards which direction will Vimal have to walk from point S to reach point Q?

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

DIRECTION

Q 9. Vimal starts from point P and walks toward South and stops at point Q. He now takes a right turn followed by a left turn and stops at point R. He finally takes a left turn and stops at point S. If he walks 5 km before taking each turn, towards which direction will Vimal have to walk from point S to reach point Q?

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

DIRECTION

Q 10. Imagine that you are walking towards the South. After some time you turn left. Then again you turn left. After that, you turn right and once again turn to the right. In which direction you are walking now?

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

DIRECTION

Q 10. Imagine that you are walking towards the South. After some time you turn left. Then again you turn left. After that, you turn right and once again turn to the right. In which direction you are walking now?

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

DIRECTION

Q 11. If northeast becomes West and South-east becomes North then what will West become?

- (a) South-east**
- (b) North-east**
- (c) South**
- (d) North-west**

DIRECTION

Q 11. If northeast becomes West and South-east becomes North then what will West become?

- (a) **South-east**
- (b) North-east
- (c) South
- (d) North-west

DIRECTION

Q 12. If M is in the south of B and B is in the west of N, then in which direction is N from M?

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

DIRECTION

Q 12. If M is in the south of B and B is in the west of N, then in which direction is N from M?

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

DIRECTION

Q 13. Manish starts walking towards East and walks 30 meters, then he turns right and walks 50 meters and he again turns left and walks 40 meters. Again he turns left and walks 50 meters. Now, how far is he from his starting point?

- (a) 170 m
- (b) 70 m
- (c) 120 m
- (d) 110 m
- (e) None of these

DIRECTION

Q 13. Manish starts walking towards East and walks 30 meters, then he turns right and walks 50 meters and he again turns left and walks 40 meters. Again he turns left and walks 50 meters. Now, how far is he from his starting point?

- (a) 170 m
- (b) 70 m
- (c) 120 m
- (d) 110 m
- (e) None of these

DIRECTION

Q 14. A walks 10 m North, then he turns right and walks 10 m. And then turning left each time, he walks 5 m, 15 m, and 15 m respectively. Now, how far is he from his starting point?

- (a) 5 m
- (b) 10 m
- (c) 15 m
- (d) 20 m

DIRECTION

Q 14. A walks 10 m North, then he turns right and walks 10 m. And then turning left each time, he walks 5 m, 15 m, and 15 m respectively. Now, how far is he from his starting point?

- (a) 5 m
- (b) 10 m
- (c) 15 m
- (d) 20 m

DIRECTION

Q 15. Shailesh walks 20 meters towards the south. He then turns left and walks 30 meters. After that, he turns right and walks 10 meters. Then again he turns right and walks 40 meters. After this, he turns right and walks 30 meters. Now he stops. Now, in which direction is he from his starting point?

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

DIRECTION

Q 15. Shailesh walks 20 meters towards the south. He then turns left and walks 30 meters. After that, he turns right and walks 10 meters. Then again he turns right and walks 40 meters. After this, he turns right and walks 30 meters. Now he stops. Now, in which direction is he from his starting point?

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

DIRECTION

Q 16. Seema says to Suresh that she is going in the North direction to hide, but she went 2 Km east and from there 3 Km towards the south and from there 2 km towards the west and then 2km towards the west and then 2km towards the starting place. Now, in which direction is Seema from her hiding place?

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

DIRECTION

Q 16. Seema says to Suresh that she is going in the North direction to hide, but she went 2 Km east and from there 3 Km towards the south and from there 2 km towards the west and then 2km towards the west and then 2km towards the starting place. Now, in which direction is Seema from her hiding place?

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

DIRECTION

Q 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

DIRECTION

Q 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

DIRECTION

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

- (a) 80 meters
- (b) 100 meters
- (c) 140 meters
- (d) 260 meters
- (e) None of these

DIRECTION

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

- (a) 80 meters
- (b) 100 meters
- (c) 140 meters
- (d) 260 meters
- (e) None of these

DIRECTION

Q 19. Gudiya moved a distance of 75 meters towards the north. She then turned to the left and walked for about 25 meters, turned left again, and walked 80 meters. Finally, she turned to the right at an angle of 45 degrees. In which direction was she facing now?

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

DIRECTION

Q 19. Gudiya moved a distance of 75 meters towards the north. She then turned to the left and walked for about 25 meters, turned left again, and walked 80 meters. Finally, she turned to the right at an angle of 45 degrees. In which direction was she facing now?

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

DIRECTION

Q 20. Nitu starts from point T and walks straight to point U which is 4 Ft away. She turns left at 90° and walks to W which is 4 Ft away, turns 90° right and goes 3 Ft to P, turns 90° right, and walks 1 Ft to Q. Again turns 90° left and walks 1 Ft to V. Finally turns 90° right walk 3 Ft to reach R. Then what is the distance between T and R?

- (a) 4 Ft
- (b) 5 Ft
- (c) 7 Ft
- (d) 8 Ft

DIRECTION

Q 20. Nitu starts from point T and walks straight to point U which is 4 Ft away. She turns left at 90° and walks to W which is 4 Ft away, turns 90° right and goes 3 Ft to P, turns 90° right, and walks 1 Ft to Q. Again turns 90° left and walks 1 Ft to V. Finally turns 90° right walk 3 Ft to reach R. Then what is the distance between T and R?

- (a) 4 Ft
- (b) 5 Ft
- (c) 7 Ft
- (d) 8 Ft

DIRECTION

Q 21. A person starts from point A and travels 3 Km eastwards to B and then turns left and travels thrice that distance to reach C. He again turns left and travels five times the distance he covered between A and B and reaches his destination D. The shortest between the starting point and the destination is

- (a) 12Km
- (b) 15Km
- (c) 16Km
- (d) 18Km

DIRECTION

Q 21. A person starts from point A and travels 3 Km eastwards to B and then turns left and travels thrice that distance to reach C. He again turns left and travels five times the distance he covered between A and B and reaches his destination D. The shortest between the starting point and the destination is

- (a) 12Km
- (b) 15Km
- (c) 16Km
- (d) 18Km

DIRECTION

Q 22. Pran and Khan start from their office and walk in opposite directions, After both traveled 10 km, Pran turns left and walks 10 km while Khan turns right and walks 10 km How far are they now from each other?

- (a) 0Km
- (b) 5Km
- (c) 10Km
- (d) 20Km

DIRECTION

Q 22. Pran and Khan start from their office and walk in opposite directions, After both traveled 10 km, Pran turns left and walks 10 km while Khan turns right and walks 10 km How far are they now from each other?

- (a) 0Km
- (b) 5Km
- (c) 10Km
- (d) 20Km

DIRECTION

Q 23.Ram is facing North-West. He turns in the clockwise direction by 90° , then 180° in the anti-clockwise direction, and turns another 90° in the same direction. Which direction is he facing now?

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

DIRECTION

Q 23.Ram is facing North-West. He turns in the clockwise direction by 90° , then 180° in the anti-clockwise direction, and turns another 90° in the same direction. Which direction is he facing now?

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

DIRECTION

Q 24. If A is 50 meters North-West of B and C is 50 meters North-East of B and D is 50 meters South of B then who is in the East direction of A?

- (a) A
- (b) B
- (c) C
- (d) D

DIRECTION

Q 24. If A is 50 meters North-West of B and C is 50 meters North-East of B and D is 50 meters South of B then who is in the East direction of A?

- (a) A
- (b) B
- (c) C
- (d) D

DIRECTION

Q 25. K is P's neighbor and he stays 400 meters away toward the east. N is K's neighbor and resides 400 meters away towards North. S is N's neighbor and stays 400 m to the west If the distance between S and P is also 400 meters, Then who stays in the South East direction of S?

- (a) S
- (b) P
- (c) N
- (d) K

DIRECTION

Q 25. K is P's neighbor and he stays 400 meters away toward the east. N is K's neighbor and resides 400 meters away towards North. S is N's neighbor and stays 400 m to the west If the distance between S and P is also 400 meters, Then who stays in the South East direction of S?

- (a) S
- (b) P
- (c) N
- (d) K

DIRECTION

Q 26. After sunrise, Sudhir faces the Sun and walks for one Kilometer. Then he turns right and walks for 2 km, Then he turns right again and walks for one km In which direction is Sudhir from his starting point?

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

DIRECTION

Q 26. After sunrise, Sudhir faces the Sun and walks for one Kilometer. Then he turns right and walks for 2 km, Then he turns right again and walks for one km In which direction is Sudhir from his starting point?

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

DIRECTION

Q 27. If A stands on his head with his face towards the north, in which direction will his left-hand point?

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

DIRECTION

Q 27. If A stands on his head with his face towards the north, in which direction will his left-hand point?

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

DIRECTION

Q 28. Arun walks to the north 30 meters. moves left and walk 40 meters. He again turns left and walks 30 meters. He finally turns left and walks 50 meters. Now how far Arun is from the starting point?

- (a) 50 meter.
- (b) 40 meter.
- (c) 90 meter.
- (d) 10 meter.

DIRECTION

Q 28. Arun walks to the north 30 meters. moves left and walk 40 meters. He again turns left and walks 30 meters. He finally turns left and walks 50 meters. Now how far Arun is from the starting point?

- (a) 50 meter.
- (b) 40 meter.
- (c) 90 meter.
- (d) 10 meter.

DIRECTION

Q 29. Balu's house is 300 meters away from that Sam. Balu stays 300 meters South West of Sam's house. Raju resides 600 meters North East of Balu. Then there is the position of Sam's house about Raju's.

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

DIRECTION

Q 29. Balu's house is 300 meters away from that Sam. Balu stays 300 meters South West of Sam's house. Raju resides 600 meters North East of Balu. Then there is the position of Sam's house about Raju's.

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

DIRECTION

Q 30. Rahul put his Time piece on the table in such a way that at 6 P.M. hour hand pointed in the North direction. In which direction will the minute's hand point at 9:15 P.M.?

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

DIRECTION

Q 30. Rahul put his Time piece on the table in such a way that at 6 P.M. hour hand pointed in the North direction. In which direction will the minute's hand point at 9:15 P.M.?

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

DIRECTION

Q 31. Sunil walks toward the east from point A. He turned toward the right at point B and Covered the same distance that he traveled in the east direction. Now he turns left and covered some distance. Finally, he turns left and covered the same, and stopped at point C. How many times is the distance between A and C to that between A and B?

- (a) Cannot be determined
- (b) Two
- (c) three
- (d) None of these

DIRECTION

Q 31. Sunil walks toward the east from point A. He turned toward the right at point B and Covered the same distance that he traveled in the east direction. Now he turns left and covered some distance. Finally, he turns left and covered the same, and stopped at point C. How many times is the distance between A and C to that between A and B?

- (a) Cannot be determined
- (b) Two
- (c) three
- (d) None of these

DIRECTION

Q 32. On a clock, at 12:30 P.M. hours, the hand of a watch is in the eastward direction and the minute hand of a watch is in the west. In which direction hours hand of watch at 2:45 P.M.?

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

DIRECTION

Q 32. On a clock, at 12:30 P.M. hours, the hand of a watch is in the eastward direction and the minute hand of a watch is in the west. In which direction hours hand of watch at 2:45 P.M.?

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

DIRECTION

Q 33. A clock shows 4:30 P.M. If the minute hand toward the east, in which direction does the hour hand?

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

DIRECTION

Q 33. A clock shows 4:30 P.M. If the minute hand toward the east, in which direction does the hour hand?

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

DIRECTION

Q 34. If South-East becomes North, North-East becomes west and so on. What becomes west?

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

DIRECTION

Q 34. If South-East becomes North, North-East becomes west and so on. What becomes west?

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

DIRECTION

Q 35. Five villages P, Q, R, S, and T are adjacent to each other. P is west of Q, S is East of T. R is South of P. T is North of Q. which direction is R from S?

- (a) North-East
- (b) South-East
- (c) South-west
- (d) cannot be determined.
- (e) None of these

DIRECTION

Q 35. Five villages P, Q, R, S, and T are adjacent to each other. P is west of Q, S is East of T. R is South of P. T is North of Q. which direction is R from S?

- (a) North-East
- (b) South-East
- (c) South-west**
- (d) cannot be determined.
- (e) None of these

DIRECTION

Q 36. Q travelled towards the East, M travelled towards the North, and S and T travelled in the opposite direction. T travelled right to Q. which statement is true in the following sentence?

- (a) M and S are travelling in opposite direction
- (b) T travelled towards West
- (c) T travelled towards North
- (d) M and S travelled in the same direction
- (e) None of these

DIRECTION

Q 36. Q travelled towards the East, M travelled towards the North, and S and T travelled in the opposite direction. T travelled right to Q. which statement is true in the following sentence?

- (a) M and S are travelling in opposite direction
- (b) T travelled towards West
- (c) T travelled towards North
- (d) M and S travelled in the same direction
- (e) None of these

Q.37 One morning after sunrise Juhi while going to school met Lalli at Boring road crossing. Lalli's shadow was exactly to the right of Juhi. If they were face to face, which direction was Juhi facing?

- (a) east
- (b) west
- (c) north
- (d) south

Q.37 One morning after sunrise Juhi while going to school met Lalli at Boring road crossing. Lalli's shadow was exactly to the right of Juhi. If they were face to face, which direction was Juhi facing?

- (a) east
- (b) west
- (c) north
- (d) south

Q.38 At sunrise, Rohit and Mohit are having a conversation standing in front of each other. The shadow of Mohit is formed towards the right hand of Rohit. What direction is Mohit facing?

- (a)east
- (b)west
- (c)north
- (d) south

Q.38 At sunrise, Rohit and Mohit are having a conversation standing in front of each other. The shadow of Mohit is formed towards the right hand of Rohit. What direction is Mohit facing?

- (a)east
- (b)west
- (c)**north**
- (d) south

Thank you