

DISTANCE & DIRECTION

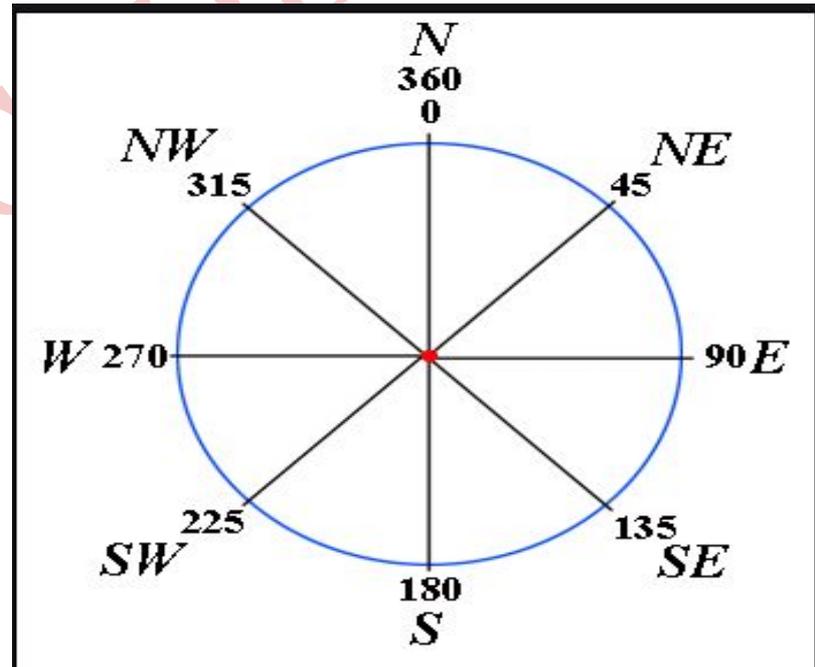
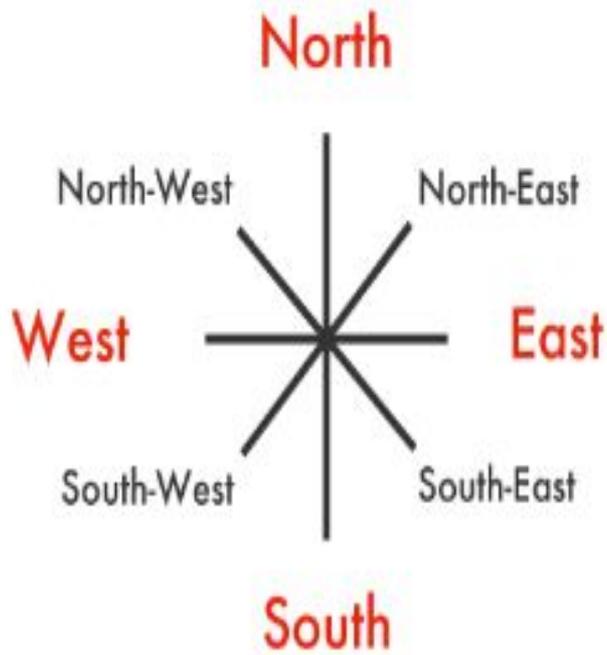
PLUTUS ACADEMY



Questions asked in 4 ways:

- ? **Left Right Concept**
- ? **Angle based**
- ? **Shadow based**
- ? **Coded Direction**





SHADOW CONCEPT

A Shadow Directions In morning(From sunrise - 11:59 A.M)

1. If a person facing towards Sun, the shadow will be towards his back or in west.
2. If a person facing towards South, the shadow will be towards his right.
3. If a person facing towards West, the shadow will be towards his front.
4. If a person facing towards North, the shadow will be towards his left.

B Shadow Directions In evening(From 12:01 A.M - sunset)

1. If a person facing towards Sun, the shadow will be towards his back or in East.
2. If a person facing towards North, the shadow will be towards his right.
3. If a person facing towards East, the shadow will be towards his front.
4. If a person facing towards South, the shadow will be towards his left.

NOTE:Important :At 12:00 noon, the rays of the sun are vertically downward hence there will be no shadow.



Q1) Ajay goes 6 m North and turns right and walk 8 m. Again, he turns to his right and walks 4 m. After this, he takes another turn to his right and walks 8 m. So, what is the distance between his current position and his starting point?

- (a) 1m**
- (b) 3m**
- (c) 5m**
- (d) 2m**
- (e) None of these**



Q2) Vijay walks 10 m towards South. From there he takes a U-Turn and walks 6 m. Then, he takes a left walks 3 m. What is the distance and direction of his current location with respect to his starting point?

- (a) 4 km, South-West**
- (b) 5 km, South-West**
- (c) 5 km, South-East**
- (d) 5 km, North-West**
- (e) None of these**



Q3) Amir is 40 km away from Akbar in the South-West Direction.

Anthony is 40 km away from Akbar in the South-East direction, then what is the direction of Anthony with respect to Amir?

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

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Q4) A ran 15m towards South, took a turn towards east and ran 20m and again he took a turn towards the north and ran 15m. What is the distance between his current position and his starting position?

- (a) 10**
- (b) 15**
- (c) 30**
- (d) 20**
- (e) None of the above**



Q5) Laxman left his home for a run and ran 15 km in the Northern direction. Then he turned left and ran 10 km. Then he turned another left and ran 5 km. Finally, he took a turn to the East and ran 10 km. In which direction is his current location with respect to his home?

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



Directions (6-10): Study the information carefully and answer the questions given below.

Preeti starts walking towards her school from her house. She walks 17m from her house towards North direction to reach at a park, then she takes a right turn and walks for 9m to reach her uncle shop. From her uncle shop she takes a right turn and walks for 14m to reach bus stop. From bus stop, she walks 12m in east to reach pizza hut, From pizza hut she takes a right turn and walks 3m to reach petrol pump. From petrol pump, She walks 8m in west direction and reached her school.

Q6. What is the shortest distance between School and her house?

- (a) 13m
- (b) 8m
- (c) 12m
- (d) 15m
- (e) None of these



Directions (6-10): Study the information carefully and answer the questions given below.

Preeti starts walking towards her school from her house. She walks 17m from her house towards North direction to reach at a park, then she takes a right turn and walks for 9m to reach her uncle shop. From her uncle shop she takes a right turn and walks for 14m to reach bus stop. From bus stop, she walks 12m in east to reach pizza hut, From pizza hut she takes a right turn and walks 3m to reach petrol pump. From petrol pump, She walks in west direction and reached her school.

Q7. If point A is 3m west of her school then in which direction point A with respect to her Uncle shop?

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



Directions (6-10): Study the information carefully and answer the questions given below.

Preeti starts walking towards her school from her house. She walks 17m from her house towards North direction to reach at a park, then she takes a right turn and walks for 9m to reach her uncle shop. From her uncle shop she takes a right turn and walks for 14m to reach bus stop. From bus stop, she walks 12m in east to reach pizza hut, From pizza hut she takes a right turn and walks 3m to reach petrol pump. From petrol pump, She walks in west direction and reached her school.

Q8. In which direction of her uncle shop with respect to pizza hut?

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



Directions (6-10): Study the information carefully and answer the questions given below.

Preeti starts walking towards her school from her house. She walks 17m from her house towards North direction to reach at a park, then she takes a right turn and walks for 9m to reach her uncle shop. From her uncle shop she takes a right turn and walks for 14m to reach bus stop. From bus stop, she walks 12m in east to reach pizza hut, From pizza hut she takes a right turn and walks 3m to reach petrol pump. From petrol pump, She walks in west direction and reached her school.

Q9. In which direction Park is with respect of Petrol pump?

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



Directions (6-10): Study the information carefully and answer the questions given below.

Preeti starts walking towards her school from her house. She walks 17m from her house towards North direction to reach at a park, then she takes a right turn and walks for 9m to reach her uncle shop. From her uncle shop she takes a right turn and walks for 14m to reach bus stop. From bus stop, she walks 12m in east to reach pizza hut, From pizza hut she takes a right turn and walks 3m to reach petrol pump. From petrol pump, She walks in west direction and reached her school.

Q10. What is the direction of her house with respect to her school?

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



Direction (11-15): Study the given information and answer the following question.

Point P is 18m north of point Q. Point S is 5m east of point Q. Point Z is west of 15m of point J. Point J is 5m west of point Q. Point N is 7m south of point Z. Point S is 7m north of point W. Point P is 3m east of point T

Q11. What is the shortest distance between N and W?

- (a) 20m
- (b) 15m
- (c) 10m
- (d) 5m
- (e) 25m



Direction (11-15): Study the given information and answer the following question.

Point P is 18m north of point Q. Point S is 5m east of point Q. Point Z is west of 15m of point J. Point J is 5m west of point Q. Point N is 7m south of point Z. Point S is 7m north of point W. Point P is 3m east of point T

Q12. Point Z is in which direction with respect to S?

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



Direction (11-15): Study the given information and answer the following question.

Point P is 18m north of point Q. Point S is 5m east of point Q. Point Z is west of 15m of point J. Point J is 5m west of point Q. Point N is 7m south of point Z. Point S is 7m north of point W. Point P is 3m east of point T

Q13. What is the direction of Point T with respect of point S?

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



Direction (11-15): Study the given information and answer the following question.

Point P is 18m north of point Q.

Point S is 5m east of point Q.

Point Z is west of 15m of point J.

Point J is 5m west of point Q.

Point N is 7m south of point Z.

Point S is 7m north of point W.

Point P is 3m east of point T

Q14. In which direction of Point J with respect to Point T?

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



Direction(11-15)Point P is 18m north of point Q. Point S is 5m east of point Q. Point Z is west of 15m of point J. Point J is 5m west of point Q. Point N is 7m south of point Z. Point S is 7m north of point W. Point P is 3m east of point T

Q15. If Point K is 6m west of point P and Point L is 8m south of point P then what is the shortest distance between Point K and Point L

- (a) 10m
- (b) 9m
- (c) 11m
- (d) 6m
- (e) None of these



Direction(16-19)Point A is 13m west of point B. Point D is 4m south of point B. Point C is east of 9m of point M. Point T is 12m west of point D. Point Y is 16m north of point C. Point Y is 2m west of point A.

- Q16. What is the shortest distance between Y and T?**
- (a) $\sqrt{18}$ m**
 - (b) 5m**
 - (c) 7m**
 - (d) 2m**
 - (e) 2m**



**Point A is 13m west of point B.
Point D is 4m south of point B.
Point C is east of 9m of point
M. Point T is 12m west of point
D. Point Y is 16m north of point
C. Point Y is 2m west of point
A.**

**Q17. Point Y is in which direction
with respect to D?**

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



**Point A is 13m west of point B.
Point D is 4m south of point B. Point C is east of 9m of point M. Point T is 12m west of point D. Point Y is 16m north of point C. Point Y is 2m west of point A.**

Q18. If Point K is 3m east of point C then what is the shortest distance between Point T and Point K?

- (a) 18m
- (b) 12m
- (c) 9m
- (d) 7m
- (e) None of these



Point A is 13m west of point B. Point D is 4m south of point B. Point C is east of 9m of point M. Point T is 12m west of point D. Point Y is 16m north of point C. Point Y is 2m west of point A.

Q19. What is the direction of C with respect of T?

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



Direction(20-21)D is 20m in south of A. C is 5m east of D. E is 10m north of C. F is 10m east of E. G is 15m south of F. X is 15m west of G. B is 10m to the east of A. Z is 10m to the south of B. L is 10m to east of C.

Q20. In which direction is point A with respect to point G?

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



D is 20m in south of A. C is 5m east of D. E is 10m north of C. F is 10m east of E. G is 15m south of F. X is 15m west of G. B is 10m to the east of A. Z is 10m to the south of B. L is 10m to east of C.

Q21. What is distance between point F and L?

- (a) 10m
- (b) 5m
- (c) 15m
- (d) 20m
- (e) 25m



QUESTION 22

Vishal started walking positioning his back towards the sun. After some time, he turned left, then turned right and then towards the left again. In which direction is he going now?

1.North 2.West 3.South 4.East

A.1 or 2

B.1 or 3

C.2 or 3

D.3 or 4



QUESTION 23

One morning after sunrise , Amit was standing facing a pole .The shadow of the pole fell exactly to his right.To which direction is he facing?

A.Data inadequate.

B.South

C.West

D.East



QUESTION 24

A man is facing north-west. He turns 90° in the clockwise direction, then 180° in the anticlockwise direction and then another 90° in the same direction. Which direction is he facing now?

- A) South**
- B) South-west**
- C) South-east**
- D) East**



CODED DIRECTION



Direction (1-4): Read the following information carefully and answer the given questions.

X * Y means X is to the left of Y at a distance of 7m.

X # Y means X is to the south direction of Y at a distance of 5m.

X @ Y means X is to the right of Y at a distance of 3m.

X % Y means X is to the north direction of Y at a distance of 9m.

In each of the following questions initially, all persons are facing north.

1). B @ D % V # H @ K, then in which direction is K with respect to D?

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



Direction (1-4): Read the following information carefully and answer the given questions.

X * Y means X is to the left of Y at a distance of 7m.

X # Y means X is to the south direction of Y at a distance of 5m.

X @ Y means X is to the right of Y at a distance of 3m.

X % Y means X is to the north direction of Y at a distance of 9m.

In each of the following questions initially, all persons are facing north.

2). M % N, Q * M, N % G, L * Q then find the minimum distance between Q and N (approx)?

- a) $\sqrt{12}$ m
- b) $\sqrt{130}$ m
- c) $\sqrt{81}$ m
- d) $\sqrt{49}$ m
- e) $\sqrt{100}$ m



Direction (1-4): Read the following information carefully and answer the given questions.

X * Y means X is to the left of Y at a distance of 7m.

X # Y means X is to the south direction of Y at a distance of 5m.

X @ Y means X is to the right of Y at a distance of 3m.

X % Y means X is to the north direction of Y at a distance of 9m.

In each of the following questions initially, all persons are facing north.

3). S @ T * R % M * U, then T is in which direction with respect to U?

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



Direction (1-4): Read the following information carefully and answer the given questions.

X * Y means X is to the left of Y at a distance of 7m.

X # Y means X is to the south direction of Y at a distance of 5m.

X @ Y means X is to the right of Y at a distance of 3m.

X % Y means X is to the north direction of Y at a distance of 9m.

In each of the following questions initially, all persons are facing north.

4). E # F * H %G * I then find the distance between E and H?

a) $\sqrt{72}$ m

b) 9 m

c) $3\sqrt{2}$ m

d) $\sqrt{74}$ m

? e) None of these



Direction (5-8): Read the following information carefully and answer the given questions.

X\$Y - Y is in the south direction of X at distance of 9m.

X!Y - Y is in the north direction of X at distance of 6m

X&Y - Y is in the east direction of X at distance of 13m

X^Y - Y is in the west direction of X at distance of 11m.

X!^Y- Y is in the northwest direction of X.

X\$&Y- Y is in the southeast direction of X.

A\$^C, C!B, B&D!E, A^B

Q5.A is in which direction with respect to D and what is distance between point A and point D?

- a) West and 2m
- b) East and 9m
- c) North and 11m
- d) South and 13m
- e) None of these



Direction (5-6): Read the following information carefully and answer the given questions.

X\$Y - Y is in the south direction of X at distance of 9m.

X!Y - Y is in the north direction of X at distance of 6m

X&Y - Y is in the east direction of X at distance of 13m

X^Y - Y is in the west direction of X at distance of 11m.

X!^Y- Y is in the northwest direction of X.

X\$&Y- Y is in the southeast direction of X.

Q6.What is the distance between E and B?

a) $\sqrt{215}$ m

b) $\sqrt{85}$ m

c) $\sqrt{205}$ m

d) $\sqrt{145}$ m

e) None of these



Direction (5-8): Read the following information carefully and answer the given questions.

X\$Y - Y is in the south direction of X at distance of 9m.

X!Y - Y is in the north direction of X at distance of 6m

X&Y - Y is in the east direction of X at distance of 13m

X^Y - Y is in the west direction of X at distance of 11m.

X!^Y- Y is in the northwest direction of X.

X\$&Y- Y is in the southeast direction of X.

Q7.E is in which direction with respect to A and what is distance between point A and point E?

- a) North, $\sqrt{40}$ m
- b) North-west, $\sqrt{40}$ m
- c) West, $\sqrt{40}$ m
- d) North-east, $\sqrt{40}$ m
- e) None of these



Direction (5-8): Read the following information carefully and answer the given questions.

X\$Y - Y is in the south direction of X at distance of 9m.

X!Y - Y is in the north direction of X at distance of 6m

X&Y - Y is in the east direction of X at distance of 13m

X^Y - Y is in the west direction of X at distance of 11m.

X!^Y- Y is in the northwest direction of X.

X\$&Y- Y is in the southeast direction of X.

Q8.C is in which direction with respect to E?

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



Direction (9-11): Read the following information carefully and answer the questions given below it:

Study the following information carefully and answer the questions given below.

P%R (10)- P is 12m in south of R

P\$R (15)- P is 17m in north of R

P#R (22)- P is 24m in west of R

P&R (14)- P is 16m in east of R

P%Q (22), P#S (5), Q&U(15), U\$W (28), Y&P (15)

Q9). Q is in which direction with respect to Y?

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



Direction (9-11): Read the following information carefully and answer the questions given below it:

Study the following information carefully and answer the questions given below.

P%R (10)- P is 12m in south of R

P\$R (15)- P is 17m in north of R

P#R (22)- P is 24m in west of R

P&R (14)- P is 16m in east of R

P%Q (22), P#S (5), Q&U(15), U\$W (28), Y&P (15)

Q10). What is the distance between Q and S?

- a) 27
- b) 22
- c) 25
- d) 17
- e) 24



Direction (9-11): Read the following information carefully and answer the questions given below it:

Study the following information carefully and answer the questions given below.

P%R (10)- P is 12m in south of R

P\$R (15)- P is 17m in north of R

P#R (22)- P is 24m in west of R

P&R (14)- P is 16m in east of R

P%Q (22), P#S (5), Q&U(15), U\$W (28), Y&P (15)

Q11). What is the direction of W with respect to S?

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



Direction(12-13)

Study the information below and answer the questions.

G & H (99m) – G is 77m south of H.

G % H (65m) – G is 43m east of H.

G @ H (113m) – G is 91m north of H.

G # H (66m) – G is 44m west of H.

G&# H (49m)-G is 27m South-west of H.

A @ B (25m), C # D (38m), B % C (42m), E % D (52m), G # F(64m), G & H (37m), I & E (28m), F @ I (30m) ,W@F(39m)

12). If X @G (23m) then what is distance A and X?

- a) 26m
- b) 42m
- c) 12m
- d) 16m
- e) None of these



Study the information below and answer the questions.

G & H (99m) – G is 77m south of H.

G % H (65m) – G is 43m east of H.

G @ H (113m) – G is 91m north of H.

G # H (66m) – G is 44m west of H.

G&# H (49m)-G is 27m South-west of H.

A @ B (25m), C # D (38m), B % C (42m), E % D (52m), G # F(64m), G & H (37m), I & E (28m), F @ I (30m) ,W@F(39m)

13.What is the direction of A with respect to W?

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



Direction(14-18): In the following questions, the symbols #, &, @ and \$ are used with the following meanings as illustrated below. Study the following information and answer the given questions. (The directions which are given indicates exact directions.)

P#Q - Q is in the south direction of P.

P@Q - Q is in the north direction of P

P&Q - Q is in the east direction of P at distance of either 12m or 6m

P\$Q - Q is in the west direction of P at distance of either 15m or 3m. **P#&Q** - Q or P is in the southeast direction of P or Q.

P@&Q - P or Q is in the northeast direction of Q or P.



Q 14. If A, B, C, D, E, F are related to each other such that F is placed exactly between A and B on line AB. Similarly D and A are vertically inline then what is the possible shortest distance between F and B when DE (length of segment DE) $< DC/2$ and $EC < 10m$?

- (a) 12m**
- (b) 5 m**
- (c) 4 m**
- (d) 6m**
- (e) None of these**



Q 15. If A&B#&C\$D&E@F are related to each other such that D@&B then what is the probable direction of A with respect to F?

- (a) North-west**
- (b) West**
- (c) South-west**
- (d) east**
- (e) Can't be determined**



Q 16. K, T, M, S, K, Z are related to each other such that K is in north of M then what is the probable direction of Z with respect to M?

- (a) North-east**
- (b) West**
- (c) South-west**
- (d) east**
- (e) Can't be determined**



Q 17. K, T, M, S & K, Z are related to each other such that K is in north of M. M and K are inline vertically when $MT > SK$ then what is the distance between S and Z When $KZ = 12$ m?

- (a) 24m**
- (b) 18m**
- (c) 15m**
- (d) Either (a) or (b)**
- (e) None of these**



Q 18. K#&T\$M#&S&K&Z are related to each other such that K is in north of M . M and K are inline vertically when $MT > SK$ then what is the sum of SK and MT?

- (a) 27m**
- (b) 21m**
- (c) 15m**
- (d) Either (a) or (b)**
- (e) Either (b) or (c)**

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