Direction Sense Test

QUESTIONS

1. A man walks 200 m towards East. He turns to right and walks 100 m. He again turns to right and walks 200 m. He then turns to right and again walks 200 m. How far is he from the starting point of the trip?
(a) 50 m   (b) 100m   (c) 200 m   (d) 700 m

2. A cyclist started his journey towards some direction. After covering 5 km, he turned to the left of him and covered 3 km. He again turned to the left and covered 2 km. He then turned to the right and covered 2 km. He again turned to the right and cycled 5 km. At last he turned to the right and cycled a distance of 5 km. How far was he at the end point from the starting point of the journey?
(a) 8 km   (b) 10km   (c) 12 km   (d) 14 km

3. Someone is facing South-West and moves 5 m forward. She turns left and moves 12 m. She now is ____.
(a) 11 m away from her initial point
(b) 17m away from her initial point
(c) 13m away from her initial point
(d) 12 m away from her initial point

4. Ganesh goes 5 km South, then he turns left two times and walks 8 km and 5 km respectively. How far and in which direction is he from the starting point?
(a) 8 km, North   (b) 8 km. East   (c) 5 km, West   (d) 5 km. South

5. Geeta is standing at the centre of a circular field. She goes up to the North and reach at a point on the boundary of circle. She turns to the right and walks a distance of one-fourth of the boundary along the circular field. Finally she walks along the diameter from one end to another end. How far is she from the starting point if radius of the field is R?
(a) 2R   (b) $\dfrac{3}{4}\pi R$ (c) πR (d) R

6. A tourist travelled 40 km towards East and turning to his left he travelled 60 km. "He then turned to his right and travelled 40 km. What was the distance between his initial and final positions?
(a) 100km   (b) 120km
(c) 140 km   (d) Not possible to determine

7. A farmer everyday walks in his farm. He starts his walking from a point and walks 400 m towards South-East. He then turns to the right and moves 400 m again. He again turns to the right and walks 400 m. Finally he turns to the right and walks 400 m. What is the distance (in metres) between his initial and final position?
(a) 0   (b) 400   (c) $400\sqrt{2}$ (d) 800

8. Two students Ram and Shyam 10 m apart are standing on a horizontal line. Both of them run the same distance towards North-East. They again travelled equal distance towards South. How far is Ram now from Shyam?
(a) $10\sqrt{2}$ m   (b) $5\sqrt{2}$ m   (c) 10 m   (d) $20\sqrt{2}$ m

9. A postman holds a bicycle and leaves the post office to deliver the posts. He travels 2 km to East and then 1 km to his right. He then travels $\dfrac{1}{2}$ km to East and then $\dfrac{1}{2}$ km to his right. He again travels 1/2 km to west and then 1 km to his left. He finally travels 2 km to West. How far is he from the post office and in which direction?
(a) 2 km - East   (b) 2 km - West   (c) $2\dfrac{1}{2}$ km - North   (d) $2\dfrac{1}{2}$ km - South

10. Kamya drove her car for 4 km in East. She then turned in South-West and drove for 5 km. She then turned in East and drove for 4 km. She again turned in North-West and drove for 5 km. The shortest distance between Kamya's initial and final position was __.
(a) 9 km   (b) 6.5 km   (c) 3 km   (d) None of these

11. A villager visited in many villages to invite his relatives on his son's marriage from his village Rampur. He went to Kohinoor, the village of his son-in-law, 4 km away in South-East direction of Rampur. From there he went to Kishangarh, the village of his brother-in-law, 3 km away in South of Kohinoor. He then went to Ujalapur, the village of his friend, $2\sqrt{2}$ km away in west of Kishangarh. How far was Rampur from Ujalapur?

(a) $(3+2\sqrt{2})$ km   (b) $(3-2\sqrt{2})$ km   (c) $(4+2\sqrt{2})$ km   (d) $(4-2\sqrt{2})$ km

12. Two cyclists are standing at a point. One goes 6 km towards West and other one goes the same distance towards North. How far is one from the other one?

(a) 3 km   (b) 12 km   (c) $4\sqrt{2}$ km   (d) $6\sqrt{2}$ km

13. There are four police posts namely P, Q, R and S. P is 6 km to the North of Q. Q is 4 km to the West of R and S is 2 km to the West of P. In which direction is S of R?

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

14. If North is replaced by South, then East is replaced by which of the following directions?

(a) South   (b) West   (c) North-West   (d) Data inadequate

15. If North-West is replaced with South, then North is replaced with which of the following directions?

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

16. An athlete starts running towards North. After running 5 km, she turns to her left and runs another 10 km. She then turns to left and runs another 20 km. Finally she turns to left and runs 10 km. How far is she now from the starting point and in which direction?

(a) 15 km, North   (b) 15 km. South   (c) 20 km, North   (d) 20 km, South

17. Two students X and Y come out from the school and starts walking 1.5 km each in opposite directions. Each turns to his right and go 2 km to reach their homes. What is the distance between the homes of X and Y?

(a) 8 km   (b) 7 km   (c) 6 km   (d) 5 km

18. Poonam first drives her car towards East, then she turns to her left and drives some distance. After that she turns to her right and drives a certain distance. At last, she turns to her right and drives uncertainly. In which direction is Poonam now driving?

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

19. X and Y are at the same distance from Z but X is towards North-East of Z and Y is towards South-East of Z. In which direction of Y does X lie?

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

20. A boy is facing towards West. He turns 135° anticlockwise and then 90° clockwise. Which direction is he facing now?

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

21. There is a crossing of four perpendicular roads in a city. The roads end to a museum, a theatre, a school and a temple respectively. The temple ends in the North. One observes that if he comes on the crossing from the temple, the road to the right ends is the museum, the road to the left ends is the theatre and straight forward is the school. In which direction is the theatre?

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

22. Gunjan is facing West. She turns 200° in the clockwise direction and then 85° in the anticlockwise direction. At last she turns 20° in the clockwise direction. Which direction is she facing now?

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

Direction (23 - 25): Study the information given below carefully and answer the questions that follow.

Five students facing East, are sitting in a class room as described below:

(i) Naresh is 3 metres to the East of Mukesh

(ii) Suresh is 5 metres to the West of Naresh

(iii) Harsh is 4 metres to the North of Munesh

(iv) Mukesh is 1 metre to the South of Harsh

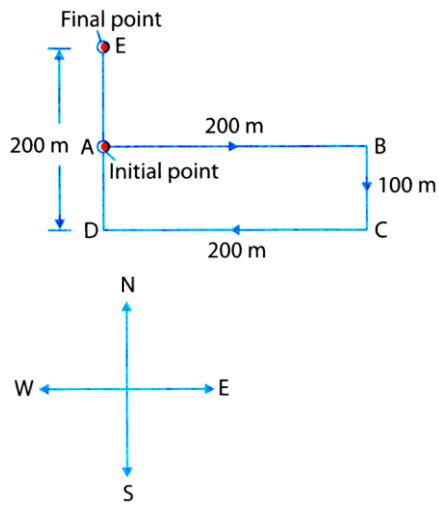**23.** Who is the South-West of Naresh?

(a) Mukesh   (b) Harsh   (c) Suresh   (d) Munesh

24. If another boy walked from Harsh, met Mukesh followed by Suresh and then by Naresh, then atleast how many metres has he walked if he could travel only horizontally and vertically?

(a) 6m   (b) 8 m   (c) 7 m   (d) 9 m

25. If Suresh and Harsh interchanged their places, then who is to the West of Mukesh?

(a) Naresh   (b) Suresh   (c) Harsh   (d) Munesh

26. Komal faces towards north.Turning to her right, she walks 25 metres. She then turns to her left and walks 30 metres. Next, she moves 25 metres to her right. She then turns to her right again and walks 55 metres. Finally, she turns to the right and moves 40 metres. In which direction is she now from her starting point?

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

27. Inspector Jatin travelled from his police station for 400 metres. He then turned left and travelled 500 metres straight after which he turned left again and travelled for 400 metres straight. He then turned right and walked for another 600 metres straight. How far is he from the Police station?

(a) 1.0km   (b) 1.1 km   (c) 1.4km   (d) 1.8km

28. 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 starting point?

(a) 80 m   (b) 100 m   (c) 140 m   (d) 260 m

29. Y is to the East of X, which is to the North of Z. If P is to the South of Z, then P is in which direction with respect to Y? **(SOF NCO 2016)**

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

30. Trishu starts from point P and walks towards West and stops at point Q. She now takes a right turn and then a left turn and stops at point R. She finally takes a left turn and stops at point S. If she walks 5 km before taking each turn, towards which direction will Trishu have to walk from point 5 to reach point Q. **(SOF NSO 2016)**

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

31. Trishika and Sidak started walking from two different points 'A and 'B' respectively. Trishika walks 5 km North and turns to the East and walks 6 km. She again turns to North and walks 4 km and finally she turns to East and walks 3 km to reach point 'C'. Similarly, Sidak walks 5 km North and turns to West and walks 6 km and finally turns to North, walks 4 km and meets Trishika at point 'C. In which direction is point "B" from point 'A'?

(SOF NSO 2016)

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

32. Puneet left his home for office in car. He drove 15 km straight towards North and then turned Eastwards and covered 8 km. He then turned to left and covered 1 km. He again turned left and drove for 20 km and reached office. How far and in which direction is his office from the home? **(SOF NCO 2017)**

(a) 21 km, West   (b) 15 km, North-East

(c) 20 km, North-West   (d) 26 km, North-West

33. Ajay is in the East of Sumit who is in the North of Jatin. If Arnav is in South of Jatin, then Arnav is in which direction with respect to Ajay? **(SOF NSO 2017)**

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

34. Going 90 m to the South, Gaurav turns left and goes another 35 m. Then turning to the North, goes 60 m and then turning to his right and goes 25 m. How far is he now from his starting point and in which direction?

(SOF IMO 2017)

(a) $30\sqrt{5}$ m, North-East   (b) $30\sqrt{5}$ m, South-East

(c) 38 m. South   (d) $40\sqrt{3}$ m, North-West

35. Sneha walks 2 km North from A to B. She turns right at 90° and goes 3 km upto C. She, then again turns right at 90° and goes 8 km upto D. Again she takes right turn at 90° and goes 3 km upto K. From K she takes right turn at 90° again and reaches at F after covering 4 km. Find the distance between A and F.

(SOF IMO 2017)

(a) 2 km   (b) 4 km   (c) 6 km   (d) 8 km
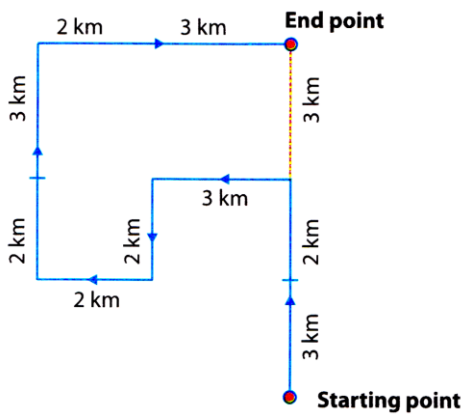
ANSWER - KEY									
1.	B	**2.**	A	**3.**	C	**4.**	B	**5.**	D
6.	A	**7.**	A	**8.**	C	**9.**	D	**10.**	D
11.	A	**12.**	D	**13.**	B	**14.**	D	**15.**	D
16.	B	**17.**	D	**18.**	D	**19.**	A	**20.**	C
21.	A	**22.**	A	**23.**	D	**24.**	B	**25.**	C
26.	D	**27.**	B	**28.**	B	**29.**	D	**30.**	D
31.	A	**32.**	C	**33.**	B	**34.**	B	**35.**	A

EXPLANATIONS

1. (b):

2. (a) : Let the cyclist started his journey towards North.

3. (c):

(Using Pyathagoras theorem in triangle OAB).

4. (b):

5. (d):

O ≡ Initial point
C ≡ Final point
Required distance = OC = R
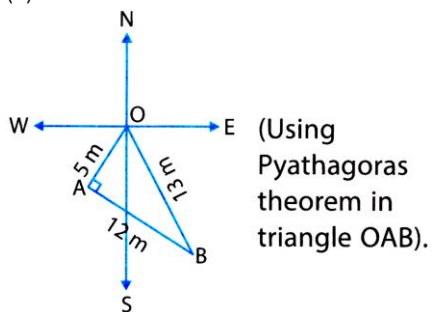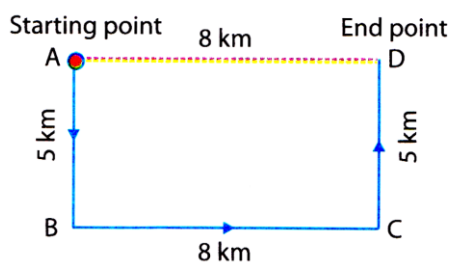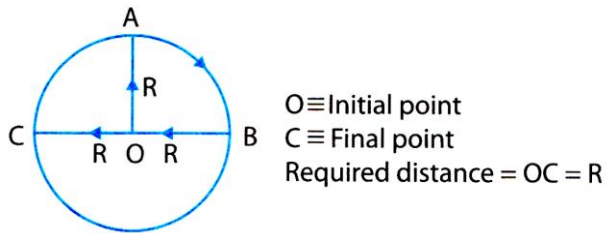
6. (a);
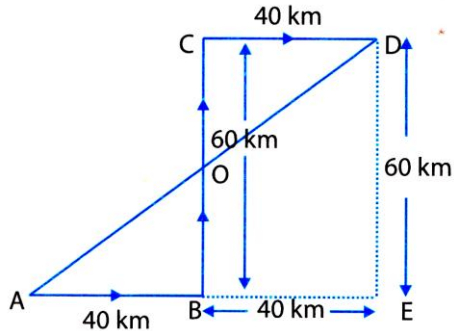
A ≡ Initial position
D ≡ Final postion

$$(AD)^2 = (AE)^2 + (DE)^2$$
$$= (80)^2 + (60)^2 = 6400 + 3600 = 10000$$

AD = 100km

7. (a): The farmer starts walking from O and ends at O.
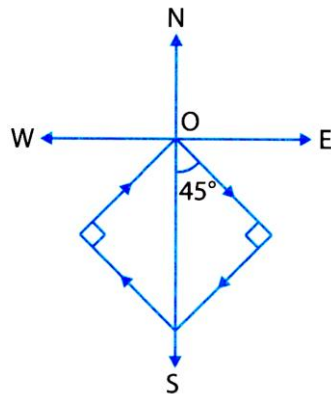
8. (c): A ≡ Ram's initial position
P ≡ Shyam's initial position
C ≡ Ram's final position
R ≡ Shyam's final position
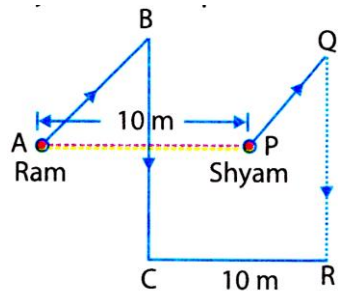
ABQP is a parallelogram, AB is equal & parallel to PQ & AP is equal & parallel to BQ. CR=BQ=10m

9. (d):
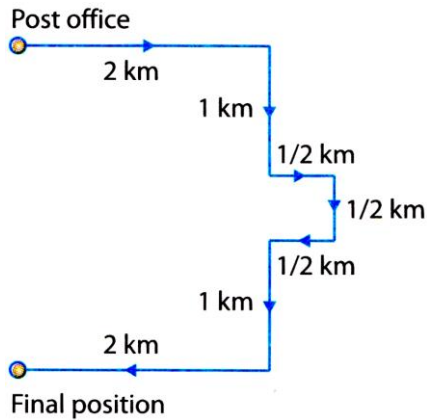
10. (d) : Kamya started her journey from the point A and finished also at the same point A.
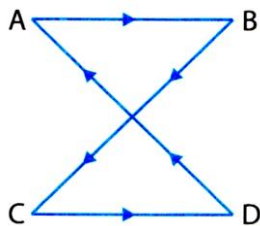
11. (a):
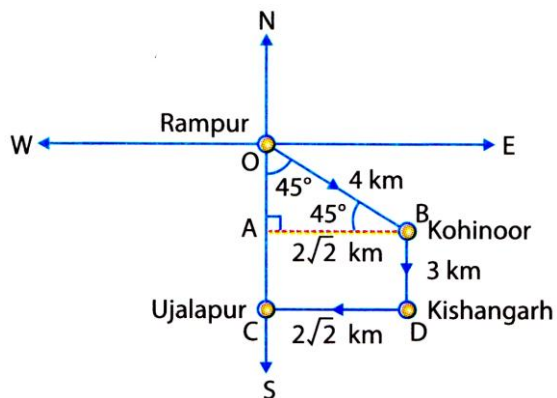
In $\triangle OAB$, $(OA)^2 + (AB)^2 = (OB)^2$

$(OA)^2 = 16 - 8 = 8$

$OA = 2\sqrt{2}$ km

Required distance $= OC = OA + AC$

$= 2\sqrt{2} + 3$ km

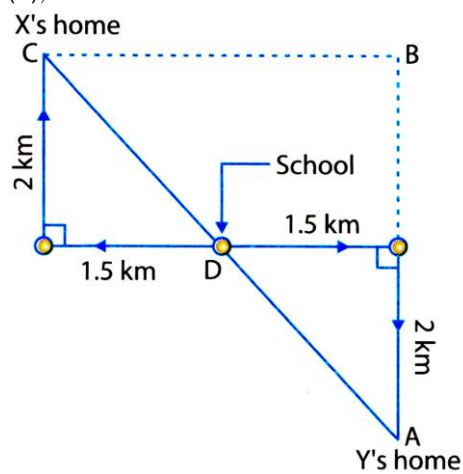**12.** (d) : Let 0 be the initial point. Use Pythagoras theorem.
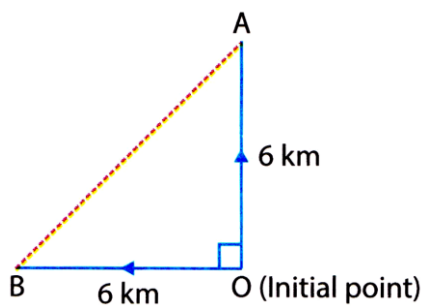
13. (b):
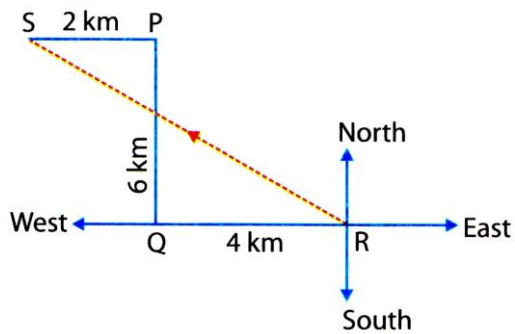
14. (d) : East could be replaced by any direction.
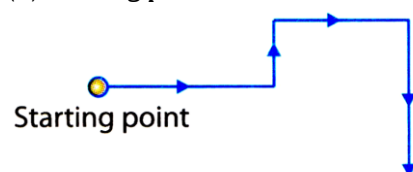
15. (d) : North could be replaced by any direction.

16. (b)
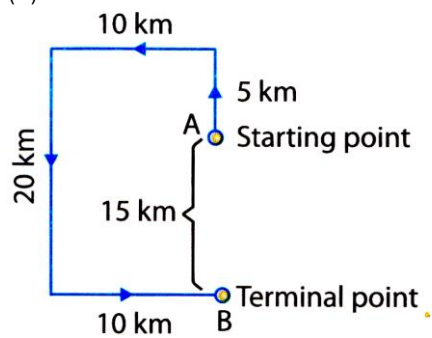
17. (d);

In $\triangle ABC$

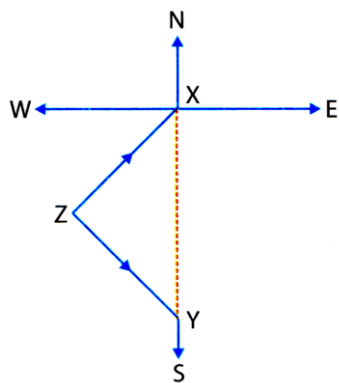$$(AB)^2 + (BC)^2 = (AC)^2 \Rightarrow (4)^2 + (3)^2 = (AC)^2$$

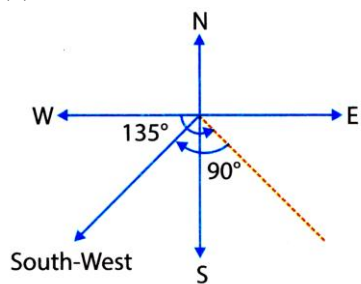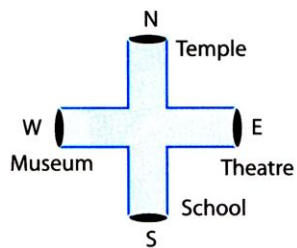$$\Rightarrow 25 = (AC)^2 \Rightarrow AC = 5\ km$$
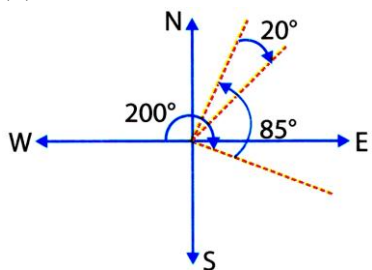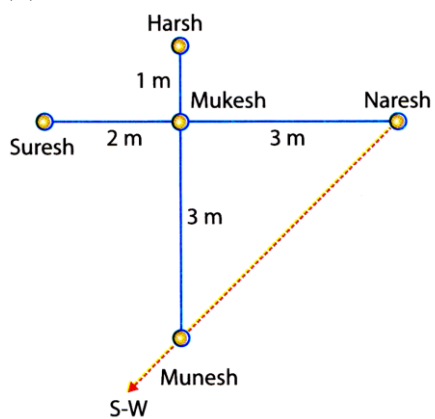
18. (d): Starting point

19. (a)

20. (c):

21. (a):

22. (a)

23. (d)

24.   (b): Required distance $=1+2+2+3=8$m.
25.   (c) Not Available
26.   (d) Not Available
27.   (b) Not Available
28.   (b) Not Available
29.   (d) Not Available
30.   (d) Not Available
31.   (a) Not Available
32.   (c) Not Available
33.   (b) Not Available
34.   (b) Not Available
35.   (a) Not Available