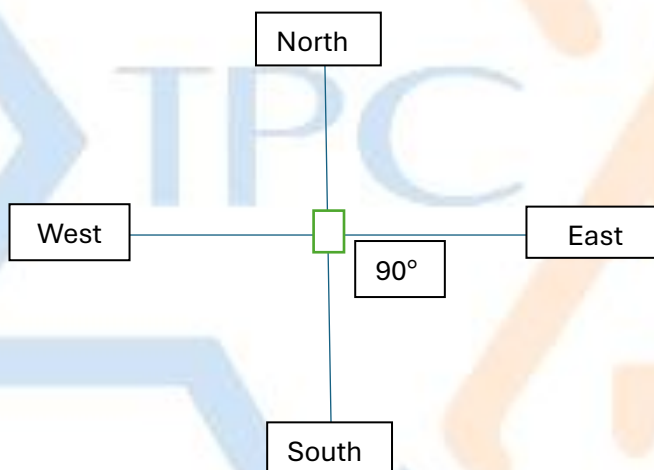# Directions and ranking Concept

Directions are part of logical reasoning. It is one of the most commonly found topics in almost all the entrance exams. The topic requires analytical and logical skills to solve the questions. Mastering the 'Directions' topic will help in gaining expertise in seating arrangement. Strengthens ability to visualize and calculate directions and positions. Commonly asked in TCS, Infosys, Wipro, Cognizant, Amazon, Accenture, Tech Mahindra, HCL Technologies, IBM, Microsoft, etc.

Cardinal directions

The four cardinal directions or cardinal points are:
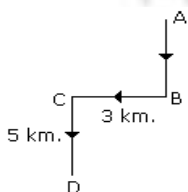
1. North

2. East

3. South

4. West

Types of problems in Directions

1. **Directional movement**

Question: A man walks 5 km toward south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. Now in which direction is he from the starting place?
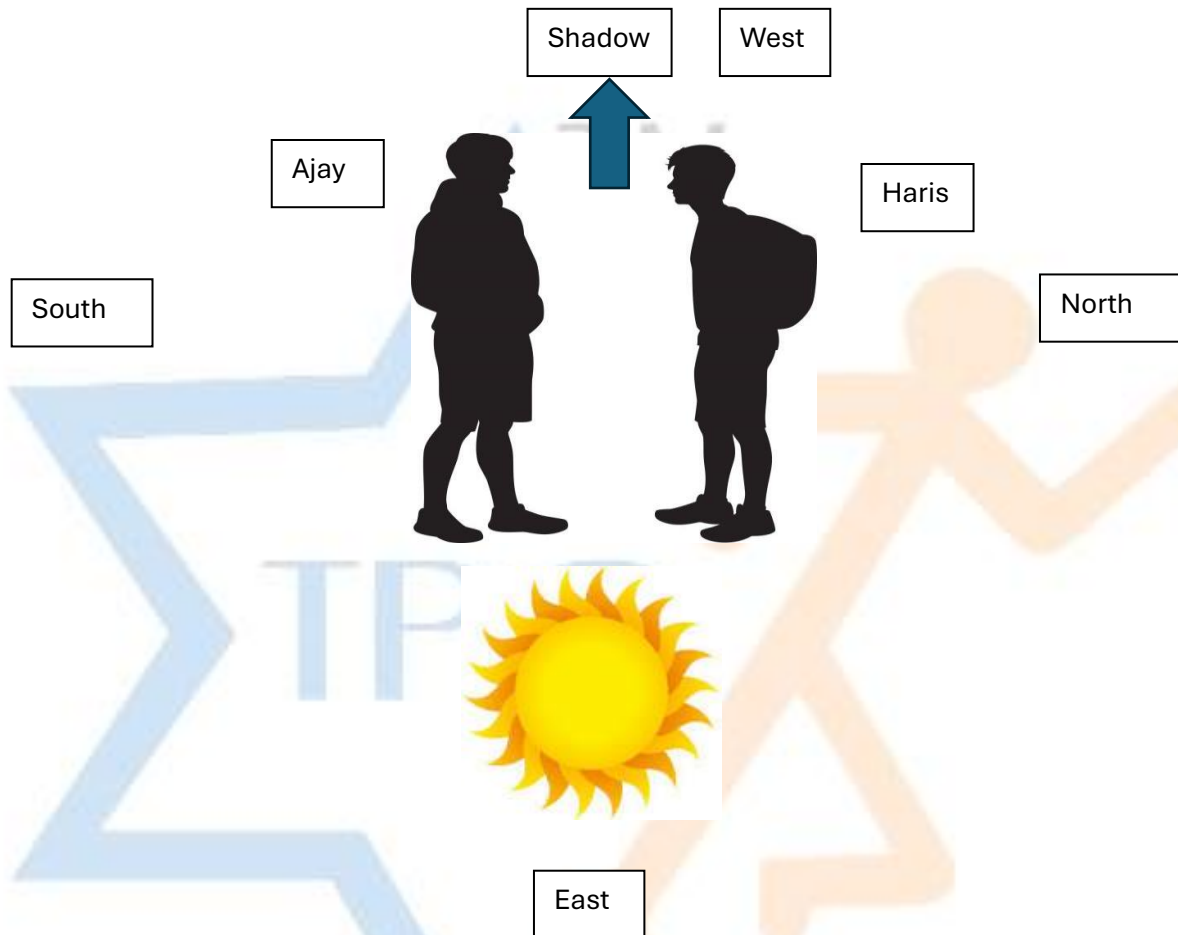
Solution

In this case the required direction is South west.
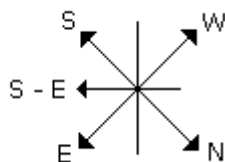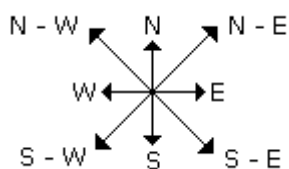
2. Shadow based problems

Question: One fine morning Harish and Ajay were talking to each other face to face. It was noticed that the shadow of Ajay falls on the right of Harish. In which direction Ajay is facing?

Solution: In morning shadow falls on West, it means West is in right Harish, So Ajay would be facing in North direction.

3. The correct map v/s wrong map

Question: If South-East becomes North, North-East becomes West and so on. What will West become?

Solution: It is clear from the diagrams that new name of West will become South-East.

4. Directions in Clocks

Question: A clock is so placed that at 2:00 p.m. the minute hand points towards North-west. In which direction does the hour hand point at 6:00 p.m.?

Solution: If the Minute hand is at 12 which is North-West, then at 6.00 p.m. the hour hand will be pointing at the number 6. Since the numbers 12 and 6 are exactly the opposite. The opposite of North-West should be South-East.
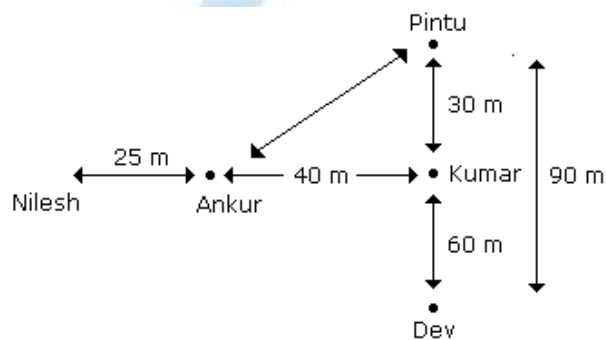
Hence, South-east is the correct answer.

5. Directions in Seating arrangement

Question: Dev, Kumar, Nilesh, Ankur and Pintu are standing facing to the North in a playground such as given below:

1. Kumar is at 40 m to the right of Ankur.

2. Dev is are 60 m in the south of Kumar.

3. Nilesh is at a distance of 25 m in the west of Ankur.

4. Pintu is at a distance of 90 m in the North of Dev.

Which one is in the North-East of the person who is to the left of Kumar?

Solution:

Ankur is in the left of Kumar. Hence Pintu is in North-East of Ankur.

Movement based on degrees

Question: A horse is facing north. It turns 90 degrees in the clockwise direction, then 180 degrees in the anti-clockwise and then another 90 degrees in the same direction. Which direction is the horse facing now?

Solution: Starting from the initial point facing north, the horse turns 90 degrees clockwise, which means it turns towards East. Similarly, the other directions can be considered and written as : East West South Thus, the direction it is facing now is South.

Ranking test

Order and Ranking means relative position or standing. Ranking is the process of determining the position or place of a person or a thing on the basis of comparison or positions of other persons or things. In order and ranking logical reasoning questions relative position or ranking of different groups of people or objects are given, and one has to determine position or rank of a person from left to right or from top to bottom of a row or class or total number of persons.

Question: In a row of 60 cars, car A is 32nd from the right end. What is its position from the left end?

Solution: Position from left end = (Total number of cars + 1) – Position from right end

Position from left end = (60 + 1) – 32 = 61 – 32 = 29.

Hence, the position of car A from left end is 29.

Question: Shalu ranks 16th from the top and 13th from the bottom in a certain examination. How many students are there in the class?

Solution: Number of students in the class = 16 + 13 – 1 = 29 – 1 = 28.

Hence, 28 is the correct answer.

Question: Sahil and Gaurav are standing in a row of persons. Sahil is 12th from left side and Gaurav is 18th from the right side of the row. If they interchanged their positions Sahil becomes 25th from left. What is the total number of persons standing in the row?

Solution: Total person = Position from Left + Position from right – 1

Position of Sahil from Left = 25 (after interchanging)

Position of Sahil from Right = 18 (position of Sahil from right end is same as Gaurav after interchanging) – 1

Total person = 25 + 18 – 1 = 42

Hence, there are 42 persons in the row.