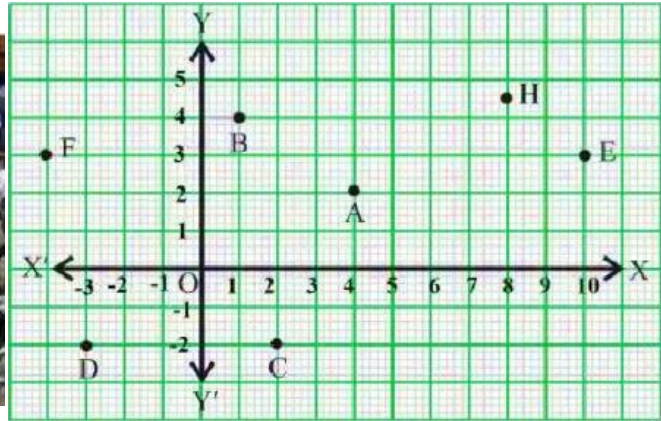


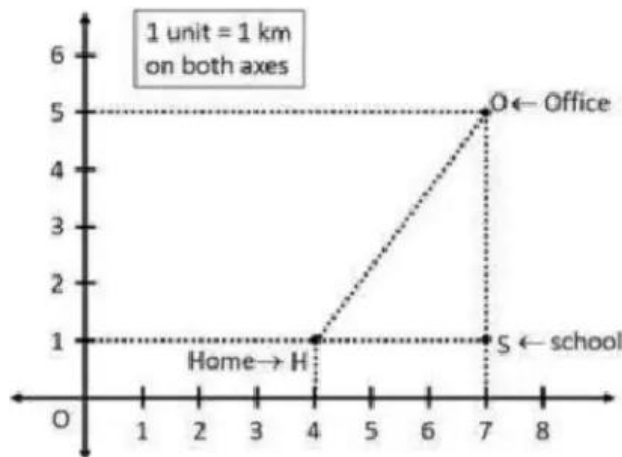
Case Study: Co-ordinate Geometry

1. Student of class IX are on visit of Sansad Bhawan. Teacher assigned them the activit to observe and take some pictures to analyse the seating arrangement between various MPs and speakers based on coordinate geometry. The staff tour guide explained various facts related to Mathematics of Sansad Bhawan to the students, they were surprised when teacher asked them that they now need to apply coordinate geometry on the seating arrangement of MP's and speakers. Refer to the below image and graph. Answer the following questions:



- Find the perpendicular distance of the point E from the y-axis.
- In which quadrant, the point 'C' lies?
- write the coordinates and Quadrant of the mirror image of point A across Origin?

2. Aryaman has to reach his Office every day at 7:00 am. On the way to his Office, he drops his son at school. Now, the location of Aryaman's house, his son's school and his office are represented by the map below. Using the details given, answer the following questions.



- Find the coordinates of Aryaman's office?
- Find the Area enclosed by Triangle HOS?
- Find the distance between Aryaman's home and his son's school?

Assertion & Reason

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
- (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
- (c) Assertion (A) is true but reason (R) is false.
- (d) Assertion (A) is false but reason (R) is true.

1. Assertion: Point A(-2,-4) lies on III quadrant

Reason: A point both of whose coordinates are negative lies in III quadrant

2. Assertion: The abscissa of a point (5, 2) is 5.

Reason: The perpendicular distance of a point from y-axis is called its abscissa.

3. Assertion: The point (0,4) lies on y-axis.

Reason: The x co-ordinate of the point on y-axis is zero.

4. Assertion: Point (4,-2) lies in IV quadrant.

Reason: The perpendicular distance of a point from y-axis is called its abscissa.

5. Assertion: The points (-1, 2) and (2,-1) are at different positions in the coordinate plane.

Reason: Point (-1,2) lies in II-quadrant and (2,- 1) lies in IV quadrant

6. Assertion: If the ordinate of a point is equal to its abscissa, then the point lies either in the first quadrant or in the second quadrant.

Reason: A point both of whose coordinates are negative will lie in third quadrants

7. Assertion: A point whose abscissa is -3 and ordinate is 2 lies in second quadrant

Reason: Points of the type (-; +) lie in the second quadrant

8. Assertion: The perpendicular distance of the point A(3, 4) from the y-axis is 4

Reason: The perpendicular distance of a point from y-axis is called its x-coordinate.