

EXERCISE 7.1

- Find the distance between the following pairs of points:
 - $(2, 3), (4, 1)$
 - $(-5, 7), (-1, 3)$
 - $(a, b), (-a, -b)$
- Find the distance between the points $(0, 0)$ and $(36, 15)$. Can you now find the distance between the two towns A and B discussed in Section 7.2?
- Determine if the points $(1, 5), (2, 3)$ and $(-2, -11)$ are collinear.
- Check whether $(5, -2), (6, 4)$ and $(7, -2)$ are the vertices of an isosceles triangle.
- In a classroom, 4 friends are seated at the points A, B, C and D as shown in Fig. 7.8. Champa and Chameli walk into the class and after observing for a few minutes Champa asks Chameli, "Don't you think ABCD is a square?" Chameli disagrees. Using distance formula, find which of them is correct.

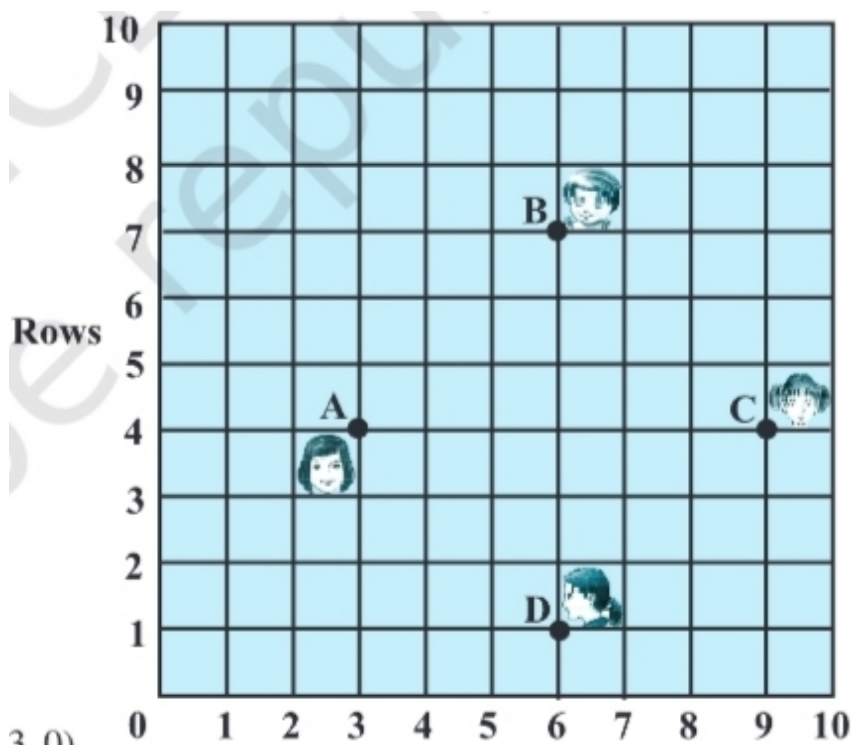


Figure 1: Fig. 7.8

6. Name the type of quadrilateral formed, if any, by the following points, and give reasons for your answer:
- (i) $(-1, 2), (1, 0), (-1, -2), (-3, 0)$
 - (ii) $(-3, 5), (3, 1), (0, 3), (-1, -4)$
 - (iii) $(4, 5), (7, 6), (4, 3), (1, 2)$
7. Find the point on the x -axis which is equidistant from $(2, -5)$ and $(-2, 9)$.
8. Find the values of y for which the distance between the points $P(2, -3)$ and $Q(10, y)$ is 10 units.
9. If $Q(0, 1)$ is equidistant from $P(5, -3)$ and $R(x, 6)$, find the values of x . Also find the distances QR and PR .
10. Find a relation between x and y such that the point (x, y) is equidistant from the point $(3, 6)$ and $(-3, 4)$.