CHAPTER-7
COORDINATE GEOMETRY

EXERCISE - 7.1

1. Find the distances between the following pairs of points:

   (a) $(2, 3), (4, 1)$

   (b) $(-5, 7), (-1, 3)$

   (c) $(a, b), (-a, -b)$

2. Find the distance between the points $(0, 0)$ and $(36, 15)$. Can you now find the distances between the two towns A and B discussed in Section 7.2 ?

3. Determine if the points$(1, 5), (2, 3)$ and $(-2, -11)$ are collinear.

4. Check whether$(5, -2), (6, 4)$ and $(7, -2)$ are the vertices of an isosceles triangle.

5. In a classroom, 4 friends are seated at the points A,B,C and D as shown in Fig. 1, Champa and Chameli walk in to the class and after observing for a few minutes Champa asks Chameli,"Dont't you think ABCD is a square?" Chameli disagrees,Using distance formula, find which of them is correct.

6. Name the type of quadrilateral formed,if any,by the following points,and give reasons for your answer:

   (a) $(-1, -2), (1, 0), (-1, 2), (-3, 0)$

   (b) $(-3, 5), (-3, 1), (0, 3), (-1, -4)$

   (c) $(4, 5), (7, 6), (4, 3), (1, 2)$

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 $\mathbf{P}(2, -3)$ and $\mathbf{Q}(10, y)$ is 10 units.

9. If $\mathbf{Q}(0, 1)$ is equidistant from $\mathbf{P}(5, –3)$ and $\mathbf{R}(x, 6)$, find the values of x. Also find the distances **QR** and **PR**.

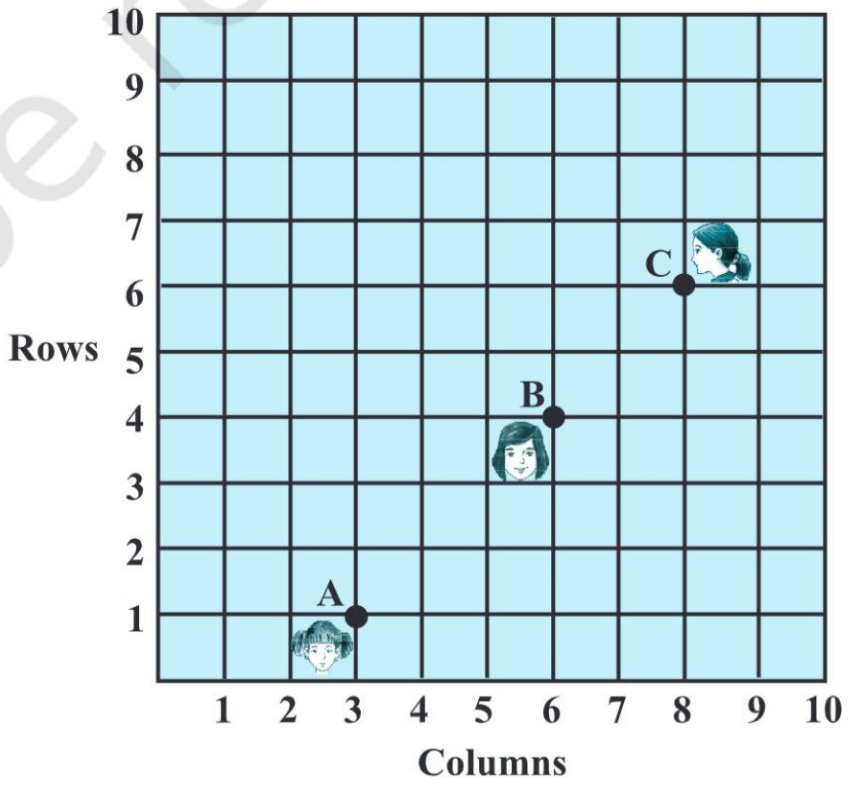

Fig. 7.6

Figure 1

10. Find a relation between x and y such that the point (x, y) is equidistant from the point $(3, 6)$ and $(–3, 4)$.