CLASS-10
CHAPTER-7
COORDINATE GEOMETRY

EXERCISE - 7.4

1. lf $(-4, 3)$ and $(4, 3)$ are two vertices of an equilateral triangle. find the coordinates of the third vertex, given that the origin lies in the interior of the triangle

2. $\mathbf{A}(6, 1), \mathbf{B}(8, 2)$ and $\mathbf{C}(9, 4)$ are three vertices of a parallelogram ABCD .lf $\mathbf{C}$ is the midpaint of DC find the area of $\triangle ADE$

3. the points $\mathbf{A}(x_1, y_1), \mathbf{B}(x_2, y_2)$ and $\mathbf{C}(x_3, y_3)$ are the vertices of $\triangle ABC$

   (a) The median from $\mathbf{A}$ meets BC at $\mathbf{D}$ find the coordinates of the point $\mathbf{D}$

   (b) Find the coordinates of the point p on AD such that AP.PD=2

   (c) Find the coordinates of points $\mathbf{Q}$ and $\mathbf{R}$ an medians BE and CF respectively such that BQ:QE=2:1 and CR:RF=2:1

   (d) What are the coordinates of the centroid of the triangle ABC

4. If the points $\mathbf{A}(1, -2)\mathbf{B}(2, 3)\mathbf{C}(a, 2)$ and $\mathbf{D}(-4-3)$ form pamrallelogram, find the vale of a and height of the parallelogram taking AB as base.

5. Students of a school are standing in rows and colums in their playgreound for a drill practice $\mathbf{A}, \mathbf{B}, \mathbf{C}$ and $\mathbf{D}$ are the positions of four students as showh in figure 7,4. is it passible to place jaspal in the drill in such a woy tnat he is equidisthant from each of the four students $\mathbf{A}, \mathbf{B}, \mathbf{C}$ and $\mathbf{D}$. If so, what should be his position

6. Ayush starts walking from his house to office. Instead of going to the office directly, he goes to a bank first, from there to his daughter school and then reaches the office what is the extra distance travelled by Ayush in reaching his office. Assume that all distanes covered are in straight lines. If the house is situated at $(2, 4)$, bank at $(5, 8)$, school at $(13, 14)$ and office at $(13, 26)$ and coordinates are in km.

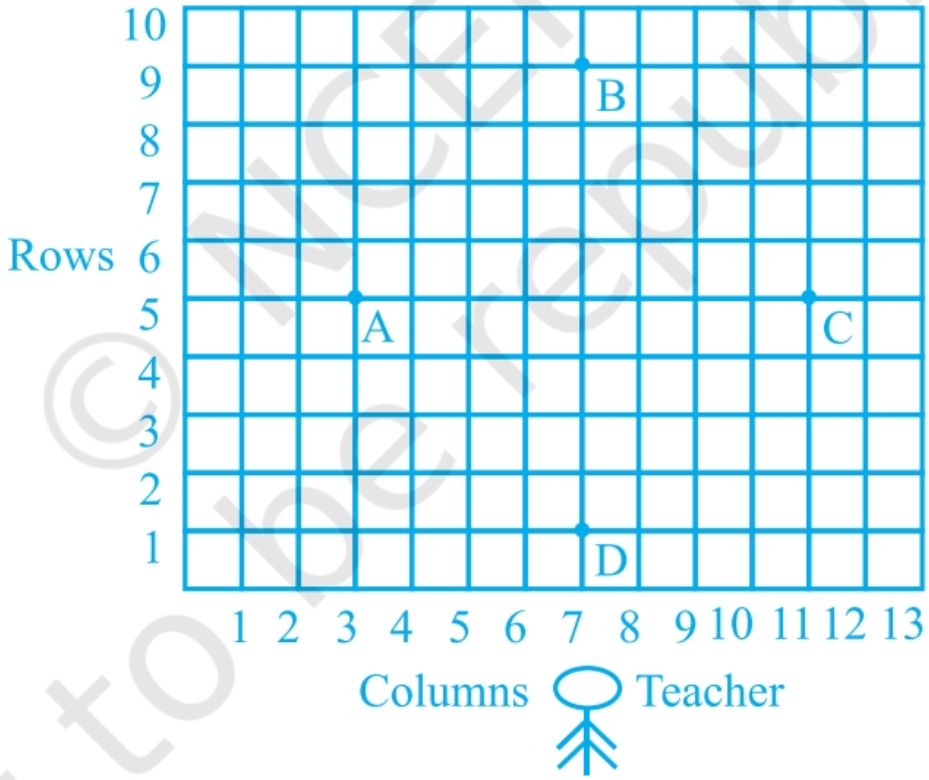

Fig. 7.4

Figure 1