

CHAPTER-7
COORDINATE GEOMETRY

EXERCISE - 7.2

1. Find the coordinates of the point which divides the join of $(-1, 7)$ and $(4, -3)$ in the ratio 2:3.
2. Find the coordinates of the points of trisection of the line segment joining $(4, -1)$ and $(-2, 3)$.
3. To conduct Sports Day activities, in your rectangular shaped school ground **ABCD**, lines have drawn with chalk powder at a distance of 1m each. 100 flower pots have been placed at a distance of 1m from each other along **AD**, as shown in Fig. 7.12. Niharika runs $\frac{1}{4}$ th the distance **AD** on the 2nd line and posts a green flag. Preet runs $\frac{1}{5}$ th the distance **AD** on the eighth line and posts a red flag. What is the distance between both the flags? If Rashmi has to post a blue flag exactly halfway between the line segment joining the two flags, where should she post her flag?
4. Find the ratio in which the line segment joining the points $(-3, 10)$ and $(6, -8)$ is divided by $(-1, 6)$.
5. Find the ratio in which the line segment joining **A**(1, -5) and **B**(-4, 5) is divided by the x-axis. Also find the coordinates of the point of division.
6. If $(1, 2), (4, y), (x, 6), (3, 5)$ are the vertices of a parallelogram taken in order, find x and y.
7. Find the coordinates of a point **A**, where **AB** is the diameter of a circle whose centre is $(2, -3)$ and **B** is $(1, 4)$.
8. If **A** and **B** are $(-2, -2)$ and $(2, -4)$, respectively, find the coordinates of **P** such that $\mathbf{AP} = \frac{3}{7}\mathbf{AB}$ and **P** lies on the line segment **AB**.
9. Find the coordinates of the points which divide the line segment joining $A(-2, 2)$ and $B(2, 8)$ into four equal parts.

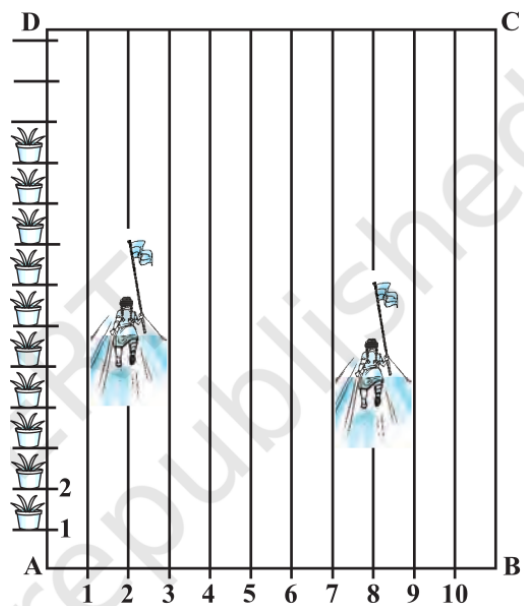


Fig. 7.12

10. Find the area of a rhombus if its vertices are $(3, 0)$, $(4, 5)$, $(-1, 4)$ and $(-2, -1)$ taken in order. [**Hint** : Area of rhombus $= \frac{1}{2}$ (product of its diagonals)]