IIITB COMET
F O U N D A T I O N

Name : **K.KARTHIK**
Batch : **cometfwc026**
Date : **15 may 2025**

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 been drawn with chalk powder at a distance of 1 m each. 100 flower pots have been placed at a distance of 1 m from each other along AD, as shown in Fig. 7.12. Niharika runs $\dfrac{1}{4}$ the distance AD on the 2nd line and posts a green flag. Preet runs $\dfrac{1}{5}$ 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?

Fig. 7.12

4. Find the ratio in which the line segment joining the points $(-3, 10)$ and $(6, -8)$ is divided by $(-1, 6)$.

5. If $(1, 2)$, $(4, y)$, $(x, 6)$ and $(3, 5)$ are the vertices of a parallelog ram taken in order, find x and y.

6. Find the coordinates of a point A, where AB is the diameter of a circle w hose centre is $(2, -3)$ and B is $(1, 4)$.

7. If A and B are $(-2, -2)$ and $(2, -4)$, respectively, find the coordinat es of P such that $AP = \dfrac{3}{7}AB$ and P lies on the line segment AB.

8. Find the coordinates of the points which divide the line segment joining $A(-2, 2)$ and $B(2, 8)$ into four equal parts.

9. 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 a rhombus is $\dfrac{1}{2}$ (product of its diagonals)]

2019-20