

# Latex Assignment9

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25 August,2023

## Exercise 10.7.2

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 1m each. 100 flower pots have been placed at a distance of 1m from each other along AD, as shown in Fig. 1. Niharika runs  $\frac{1}{4}th$  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  $(1, 2)$ ,  $(4, y)$ ,  $(x, 6)$  and  $(3, 5)$  are the vertices of 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  $AP = \frac{3}{7} AB$  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.
10. Find the area of a rhombus if its vertices are  $(3, 0)$ ,  $(4, 5)$ ,  $(1, -4)$  and  $(-2, -1)$  taken in order.

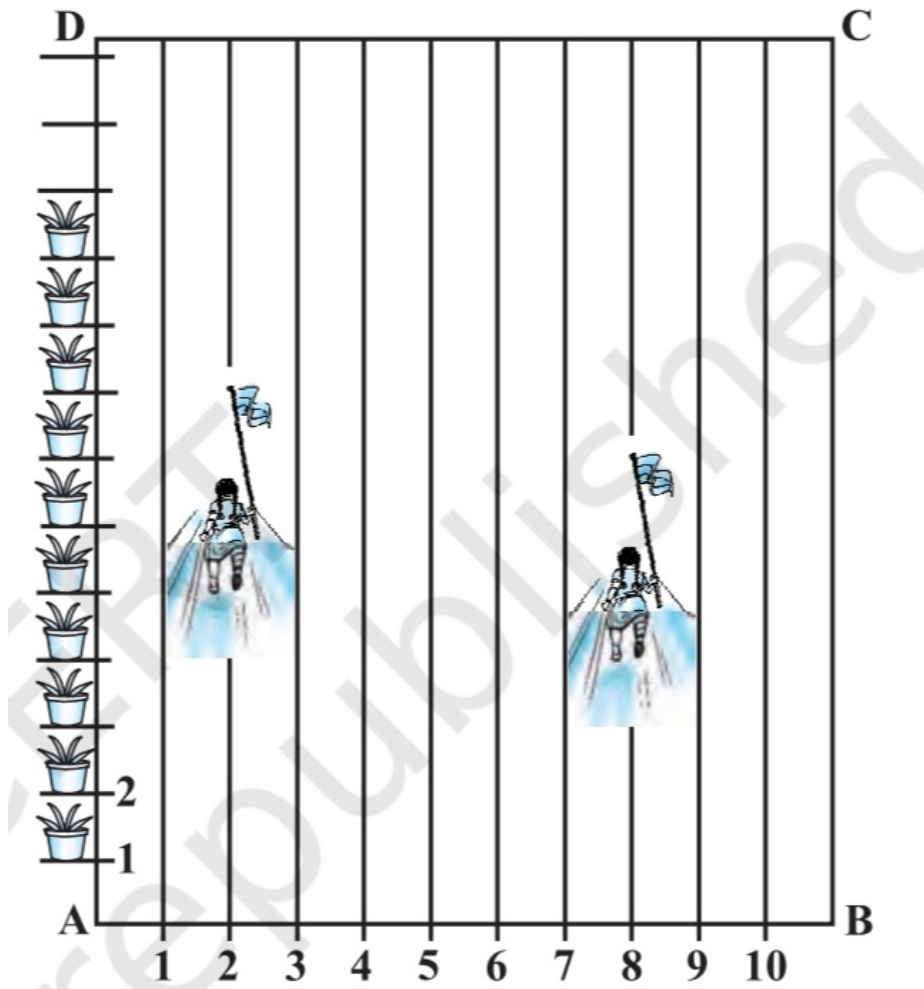


Figure 1: 7.12