

- Q1. Find the coordinates of the point which divides the line segment joining the points  $(4, -3)$  and  $(8, 5)$  in the ratio  $3 : 1$ .  
Ans.  $(7, 3)$
- Q2. Find the coordinates of the point which divides the line segment joining the points  $(-1, 7)$  and  $(4, -3)$  in the ratio  $2 : 3$ .  
Ans.  $(1, 3)$
- Q3. Find the coordinates of the point which divides the line segment joining the points  $(1, 3)$  and  $(2, 7)$  in the ratio  $3 : 4$ .  
Ans.  $(\frac{10}{7}, \frac{33}{7})$
- Q4. 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.  
Ans.  $(-\frac{2}{7}, -\frac{20}{7})$
- Q5. If A and B are  $(1, 2)$  and  $(2, 3)$ , respectively, find the coordinates of G such that  $AG = \frac{4}{7} AB$  and G lies on the line segment AB.  
Ans.  $(\frac{11}{7}, \frac{18}{7})$
- Q6. In which quadrant does the point P that divides the line segment joining the points A  $(2, -5)$  and B  $(5, 2)$  in the ratio  $2 : 3$  lies?  
Ans.  $P(\frac{16}{5}, -\frac{11}{5})$  IV Quadrant
- Q7. Find the coordinates of the points of trisection of the line segment joining  $(4, -1)$  and  $(-2, -3)$ .  
Ans.  $(2, -\frac{5}{3})$  and  $(0, -\frac{7}{3})$
- Q8. Find the coordinates of the points of trisection of the line segment joining  $(2, -2)$  and  $(-7, 4)$ .  
Ans.  $(-1, 0)$  and  $(-4, 2)$
- Q9. Find the ratio in which the line segment joining the points A  $(-3, 10)$  and B  $(6, -8)$  is divided by  $(-1, 6)$ . Ans.  $2 : 7$
- Q10. Find the ratio in which the line segment joining the points A  $(-6, 10)$  and B  $(3, -8)$  is divided by  $(-4, 6)$ . Ans.  $2 : 7$
- Q11. Find the ratio in which the line segment joining the points A  $(\frac{1}{2}, \frac{3}{2})$  and B  $(2, -5)$  is divided by  $(\frac{3}{4}, \frac{5}{12})$ . Ans.  $1 : 5$
- Q12. Find the ratio in which the line segment joining the points A  $(1, -5)$  and B  $(-4, 5)$  is divided by  $x$  - axis. Ans.  $1 : 1$
- Q13. Find the ratio in which the line segment joining the points A  $(1, -3)$  and B  $(4, 5)$  is divided by  $x$  - axis. Ans.  $3 : 5$
- Q14. Find the ratio in which the line segment joining the points A  $(5, -6)$  and B  $(-1, -4)$  is divided by  $y$  - axis. Ans.  $5 : 1$
- Q15. Find the ratio in which the line segment joining the points A  $(-2, -3)$  and B  $(3, 7)$  is divided by  $y$  - axis. Ans.  $2 : 3$
- Q16. Determine the ratio in which the line  $3x + y - 9 = 0$  divides the line segment joining the points  $(1, 3)$  &  $(2, 7)$ .  
Ans.  $3 : 4$
- Q17. Determine the ratio in which the line  $2x + y - 4 = 0$  divides the line segment joining the points  $(2, -2)$  &  $(3, 7)$ .  
Ans.  $2 : 9$
- Q18. Find the area of the rhombus if its vertices are  $(3, 0)$ ,  $(4, 5)$ ,  $(-1, 4)$  &  $(-2, -1)$  taken in order. Ans.  $24$  sq.units
- Q19. Find the area of the rhombus if its vertices are  $(2, -1)$ ,  $(3, 4)$ ,  $(-2, 3)$  &  $(-3, -2)$  taken in order. Ans.  $24$  sq.units
- Q20. The coordinates of the mid-point of the line segment joining the points  $(3p, 4)$  and  $(-2, 2q)$  are  $(5, p)$ . Find the values of p and q.  
Ans.  $p = 4, q = 2$
- Q21. Find the coordinates of the points which divides the line segment joining A  $(-2, 2)$  & B  $(2, 8)$  into four equal parts.  
Ans.  $(-1, \frac{7}{2}), (0, 5), (1, \frac{13}{2})$
- Q22. Find the coordinates of the points which divides the line segment joining A  $(-4, 0)$  & B  $(0, 6)$  into four equal parts.  
Ans.  $(-3, \frac{3}{2}), (-2, 3), (-1, \frac{9}{2})$
- Q23. If the points  $(6, 1)$ ,  $(8, 2)$ ,  $(9, 4)$  &  $(p, 3)$  are the vertices of a parallelogram, taken in order, find the value of p.  
Ans.  $p = 7$
- Q24. If  $(1, 2)$ ,  $(4, y)$ ,  $(x, 6)$  &  $(3, 5)$  are the vertices of a parallelogram taken in order, find x and y. Ans.  $x = 6, y = 3$
- Q25. If  $(3, 3)$ ,  $(6, y)$ ,  $(x, 7)$  &  $(5, 6)$  are the vertices of a parallelogram taken in order, find x and y. Ans.  $x = 8, y = 4$