

① If A and B are the points (5, 3) and (15, -7) respectively. Find the co-ordinates of the point which divides AB externally in the ratio 3:1

Solution

$$P(x, y) \quad (5, 3)$$

$$A(x_1, y_1) \quad (15, -7)$$

$$B(x_2, y_2)$$

$$x = \frac{5(15) + 3(5)}{5 + 3} = \frac{75 + 15}{8} = \frac{90}{8} = 11.25$$

$$y = \frac{5(-7) + 3(3)}{5 + 3} = \frac{-26}{8} = -3.25$$

$$\therefore (11.25, -3.25)$$