

## Distance and Midpoint Formulas

1. Find the distance  $d(P_1, P_2)$  between the points  $P_1$  and  $P_2$ .

$$P_1 = (1, 5); P_2 = (5, 8)$$

2. Find the distance  $d(P_1, P_2)$  between the points  $P_1$  and  $P_2$ .

$$P_1 = (-2, -3); P_2 = (7, -5)$$

3. Find the distance  $d(P_1, P_2)$  between the points  $P_1$  and  $P_2$ .

$$P_1 = (3\sqrt{2}, \sqrt{7}); P_2 = (5\sqrt{2}, 4\sqrt{7})$$

4. Find the midpoint of the line segment formed by joining the points  $P_1$  and  $P_2$ .

$$P_1 = (2, 7); P_2 = (4, 3)$$

5. Find the midpoint of the line segment formed by joining the points  $P_1$  and  $P_2$ .

$$P_1 = (1, 5); P_2 = (3, 2)$$

6. Find the midpoint of the line segment formed by joining the points  $P_1$  and  $P_2$ .

$$P_1 = (4\sqrt{3}, 2\sqrt{5}), P_2 = (8\sqrt{3}, 3\sqrt{5})$$