Distance and Midpoint Formulas

1. Find the distance $d(P_1,P_2)$ between the points P_1 and P_2.
(similar to p.699 #14)

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

2. Find the distance $d(P_1,P_2)$ between the points P_1 and P_2.
(similar to p.700 #20)

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

3. Find the distance $d(P_1,P_2)$ between the points P_1 and P_2.
(similar to p.700 #22)

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

4. Find the midpoint of the line segment formed by joining the points P_1 and P_2.
(similar to p.700 #26)

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

5. Find the midpoint of the line segment formed by joining the points P_1 and P_2.
(similar to p.700 #30)

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

6. Find the midpoint of the line segment formed by joining the points P_1 and P_2.
(similar to p.700 #34)

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