

Midpoint.

1. $(-6, 7), (7, 4)$

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$\left[\frac{-6+7}{2}, \frac{7+4}{2} \right]$$

$$\left(\frac{1}{2}, \frac{11}{2} \right)$$

$$= 0.5, 5.5$$

2. $(0, 0), (-5, -4)$

$$\left(\frac{0+(-5)}{2}, \frac{0+(-4)}{2} \right)$$

$$\left(-\frac{5}{2}, -\frac{4}{2} \right)$$

$$= (-2.5, -2)$$

3

$$(1, -8), (-8, 5)$$

$$\left[\frac{1+(-8)}{2}, \frac{-8+5}{2} \right]$$

$$\left(-\frac{7}{2}, -\frac{3}{2} \right)$$

$$(-3.5, -1.5)$$

$$4 \quad (-3, 1), (0, 4)$$

$$\left[\frac{-3+0}{2}, \frac{1+4}{2} \right] = \left[-\frac{3}{2}, \frac{5}{2} \right]$$

$$= (-1.5, 2.5)$$

$$5 \quad (4, 0), (0, 3)$$

$$\left(\frac{4+0}{2}, \frac{0+3}{2} \right)$$

$$\left(\frac{4}{2}, \frac{3}{2} \right)$$

$$(2, 1.5)$$

$$6 \quad (5, -8), (-3, 1)$$

$$d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

$$d = \sqrt{(5 - (-3))^2 + (-8 - 1)^2}$$

$$d = \sqrt{8^2 + (-9)^2}$$

$$d = \sqrt{81 + 81}$$

$$d = 12$$

$$d = \sqrt{162}$$

$$7 \quad (1, 7), (-8, 8)$$

$$d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

$$d = \sqrt{(1 - -8)^2 + (7 - 8)^2}$$

$$d = \sqrt{9^2 + 1^2}$$

$$d = \sqrt{81 + 1}$$

$$d = 9.1$$

$$8 \quad (1, -5), (5, -2)$$

$$d = \sqrt{(1 - 5)^2 + (-5 - -2)^2}$$

$$d = \sqrt{(-4)^2 + (-3)^2}$$

$$d = \sqrt{16 + 9}$$

$$d = \sqrt{25}$$

$$d = 5$$

$$9 \quad (-2, 5), (4, -1)$$

$$d = \sqrt{(-2 - 4)^2 + (5 - -1)^2}$$

$$d = \sqrt{(-6)^2 + 6^2}$$

$$d = \sqrt{36 + 36}$$

$$d = 8.49$$

$$10 \quad (0, -1), (-1, -3)$$

$$d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

$$d = \sqrt{(0 - (-1))^2 + (-1 - (-3))^2}$$

$$d = \sqrt{1^2 + 2^2}$$

$$d = \sqrt{1 + 4}$$

$$d = \sqrt{5}$$

$$d = 2.24$$