

(13) $x_1 := 12$ $y_1 := 3$ $x_2 := -8$ $y_2 := 3$

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

$$M_1 := \frac{(x_1 + x_2)}{2}$$

$$M_2 := \frac{(y_1 + y_2)}{2}$$

$d = 20$ $M_1 = 2$ $M_2 = 3$

(14) $x_1 := 0$ $y_1 := 0$ $x_2 := 5$ $y_2 := 12$

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

$$M_1 := \frac{(x_1 + x_2)}{2}$$

$$M_2 := \frac{(y_1 + y_2)}{2}$$

$d = 13$ $M_1 = 2.5$ $M_2 = 6$

(15) $x_1 := 6$ $y_1 := 8$ $x_2 := 3$ $y_2 := 4$

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

$$M_1 := \frac{(x_1 + x_2)}{2}$$

$$M_2 := \frac{(y_1 + y_2)}{2}$$

$d = 5$ $M_1 = 4.5$ $M_2 = 6$

(16) $x_1 := -4$ $y_1 := 2$ $x_2 := 4$ $y_2 := 17$

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

$$M_1 := \frac{(x_1 + x_2)}{2}$$

$$M_2 := \frac{(y_1 + y_2)}{2}$$

$d = 17$ $M_1 = 0$ $M_2 = 9.5$

(17) $x_1 := -3$ $y_1 := 8$ $x_2 := 5$ $y_2 := 4$

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

$$M_1 := \frac{(x_1 + x_2)}{2}$$

$$M_2 := \frac{(y_1 + y_2)}{2}$$

$d = 8.944$ $M_1 = 1$ $M_2 = 6$

(29) $x_1 := 5$ $x_2 := 6$ $y_2 := 1$ $d := \sqrt{10}$ $d = \sqrt{(x_2 - x_1)^2 + (y_2 - a)^2}$ $a = -2 \text{ or } 4$

$$\sqrt{10} = \sqrt{(6-5)^2 + (1-a)^2} = \sqrt{1 + 1^2 - 2a + a^2} \quad \text{Square Both Sides}$$

$$10 = a^2 - 2a + 2$$

$$0 = a^2 - 2a - 8$$

$$0 = (x+2)(x-4)$$

$$x = \{-2, 4\}$$

$$\begin{cases} S \Rightarrow -2 \\ P \Rightarrow -8 \\ +2 = -4 \end{cases}$$

CK $\sqrt{10} = \sqrt{1+3^2} \checkmark$
 $x = -2$

CK $\sqrt{10} = \sqrt{1+(-3)^2} \checkmark$
 $x = 4$