Example : Find the distance between the points (1, 4) and (6, 9).

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

$x_1 = 1$; $x_2 = 6$; $y_1 = 4$; $y_2 = 9$

$$= \sqrt{(6 - 1)^2 + (9 - 4)^2}$$

$$= \sqrt{25 + 25} = \sqrt{50} \approx \textbf{7.07 units}$$

Find the distance between each pair of points. Round the answer to the nearest hundredth.

1)   (3, 3) and (–2, –5)

2)   (–1, –4) and (–10, –11)

3)   (1, –1) and (–8, –1)

4)   (4, 3) and (0, 0)

5)   (9, 12) and (6, 7)

6)   (–1, 8) and (0, –2)

7)   (–5, –6) and (–2, –1)

8)   (7, 7) and (9, 10)

Distance Formula

Answer key

Example : Find the distance between the points (1, 4) and (6, 9).

Distance = $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ $x_1 = 1$; $x_2 = 6$; $y_1 = 4$; $y_2 = 9$

= $\sqrt{(6 - 1)^2 + (9 - 4)^2}$

= $\sqrt{25 + 25}$ = $\sqrt{50}$ ≈ **7.07 units**

Find the distance between each pair of points. Round the answer to the nearest hundredth.

1)   (3, 3) and (−2, −5)

9.43 units

2)   (−1, −4) and (−10, −11)

11.4 units

3)   (1, −1) and (−8, −1)

9 units

4)   (4, 3) and (0, 0)

5 units

5)   (9, 12) and (6, 7)

5.83 units

6)   (−1, 8) and (0, −2)

10.05 units

7)   (−5, −6) and (−2, −1)

5.83 units

8)   (7, 7) and (9, 10)

3.61 units