

Distance Formula

L153

Example: Find the distance between the points (6, 10) and (4, 5).

$$\begin{aligned} \text{Distance} &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(4 - 6)^2 + (5 - 10)^2} \\ &= \sqrt{(-2)^2 + (-5)^2} = \sqrt{4 + 25} = \sqrt{29} \approx \mathbf{5.39 \text{ units}} \end{aligned}$$

Find the distance between the points. Round the answer to two decimal places.

1) (5, 0), (2, -10)

3) (-3, 9), (-6, -7)

5) (-4, 1), (-8, -5)

7) (-9, -1), (3, -1)

9) (8, -2), (7, 4)

10) (-3, 10), (1, -4)

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1) (5, 0), (2, -10)

$$\sqrt{109} \approx 10.4$$

_____ units

3) (-3, 9), (-6, -7)

$$\sqrt{265} \approx 16.2$$

_____ 47 units

5) (-4, 1), (-8, -5)

$$\sqrt{52} \approx 7.21$$

_____ 54 units

7) (-9, -1), (3, -1)

_____ 12 units

$$\sqrt{40} \approx 6.32 \text{ units}$$

9) (8, -2), (7, 4)

$$\sqrt{37} \approx 6.08 \text{ units}$$

10) (-3, 10), (1, -4)

$$\sqrt{212} \approx 14.56 \text{ units}$$

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