

Distance Formula

L152

Example: Find the distance between the points $(-2, -1)$ and $(3, -1)$.

$$\begin{aligned} \text{Distance} &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(3 + 2)^2 + (-1 + 1)^2} \\ &= \sqrt{(5)^2 + (0)^2} = \sqrt{25 + 0} = \sqrt{25} = \mathbf{5 \text{ units}} \end{aligned}$$

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

1) $(0, 8), (-10, -7)$

3) $(-9, 2), (-8, -1)$

5) $(-7, -5), (-3, 6)$

7) $(1, 2), (-5, -5)$

9) $(4, -9), (-1, -7)$

10) $(-2, 6), (-3, 7)$

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

1) $(0, 8), (-10, -7)$

$\sqrt{325} \approx 18.0$

21 units

3) $(-9, 2), (-8, -1)$

$\sqrt{10} \approx 3.16$

units

5) $(-7, -5), (-3, 6)$

$\sqrt{137} \approx 11.7$

28 units

7) $(1, 2), (-5, -5)$

$\sqrt{85} \approx 9.22 \text{ units}$

$\sqrt{106} \approx 10.3 \text{ units}$

9) $(4, -9), (-1, -7)$

10) $(-2, 6), (-3, 7)$

$\sqrt{29} \approx 5.39 \text{ units}$

$\sqrt{2} \approx 1.41 \text{ units}$

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