

Distance Formula

L2S2

Example: Find the distance between the points (4, -6) and (2, 5).

$$\begin{aligned} \text{Distance} &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(2 - 4)^2 + (5 + 6)^2} \\ &= \sqrt{(-2)^2 + (11)^2} = \sqrt{4 + 121} = \sqrt{125} \approx \mathbf{11.18 \text{ units}} \end{aligned}$$

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

1) (1, 2), (3, 4)

3) (0, -9), $(\frac{1}{6}, -10)$

5) (7, 2), (-1, -3)

7) $(\frac{5}{7}, 0)$, (-8, 5)

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

10) $(-6, \frac{1}{5})$, (4, 10)

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

1) (1, 2), (3, 4)

$$\sqrt{8} \approx 2.83$$

$$\underline{\hspace{2cm}} \quad \mathbf{13.68 \text{ units}}$$

3) (0, -9), $(\frac{1}{6}, -10)$

$$\sqrt{1.03} \approx 1.0$$

$$\underline{\hspace{2cm}} \quad \mathbf{5.28 \text{ units}}$$

5) (7, 2), (-1, -3)

$$\sqrt{89} \approx 9.43$$

$$\underline{\hspace{2cm}} \quad \mathbf{7.84 \text{ units}}$$

7) $(\frac{5}{7}, 0)$, (-8, 5)

$$\sqrt{100.93} \approx 10.05 \text{ units}$$

$$\underline{\hspace{2cm}} \quad \mathbf{3 \text{ units}}$$

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

$$\sqrt{148} \approx 12.17 \text{ units}$$

10) $(-6, \frac{1}{5})$, (4, 10)

$$\sqrt{196.04} \approx 14 \text{ units}$$

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