

## Distance Formula

L255

Example: Find the distance between the points  $(-6, 7)$  and  $(2, -6)$ .

$$\begin{aligned} \text{Distance} &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(2 + 6)^2 + (-6 - 7)^2} \\ &= \sqrt{(8)^2 + (-13)^2} = \sqrt{64 + 169} = \sqrt{233} \approx \mathbf{15.26 \text{ units}} \end{aligned}$$

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

1)  $(10, 4), \left(\frac{1}{8}, 6\right)$

\_\_\_\_\_

3)  $(4, 3), (-5, 5)$

\_\_\_\_\_

5)  $(5, -7), \left(-\frac{3}{8}, 6\right)$

\_\_\_\_\_

7)  $\left(-1, \frac{3}{7}\right), (7, 2)$

\_\_\_\_\_

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

\_\_\_\_\_

10)  $(-3, -1), \left(0, \frac{6}{7}\right)$

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

1)  $(10, 4), \left(\frac{1}{8}, 6\right)$

$\sqrt{101.51} \approx 10$

0.2 units

3)  $(4, 3), (-5, 5)$

$\sqrt{85} \approx 9.22$

16 units

5)  $(5, -7), \left(-\frac{3}{8}, 6\right)$

$\sqrt{197.89} \approx 14$

10.06 units

7)  $\left(-1, \frac{3}{7}\right), (7, 2)$

$\sqrt{66.47} \approx 8.15 \text{ units}$

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

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

5 units

10)  $(-3, -1), \left(0, \frac{6}{7}\right)$

$\sqrt{12.44} \approx 3.53 \text{ units}$

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