EXAMPLE: A(3, 2) and B(9, 10)

1 = p \cdot
0 \cdot 1 = p \cdot
\sqrt{100} = p \cdot
\sqrt{64 + 36} = p \cdot
\sqrt{8^2 + 6^2} = p \cdot
\sqrt{(3 - 6) + (2 - 10)} = p \cdot
\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = p \cdot

DISTANCE FORMULA

Otherwise, you will have to do Pythagorean Theory to figure it out. If you are given two plotted points, you can figure the DISTANCE of the line segment (hypotenuse) as:

\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = p
The Distance Formula

Find the distance between each pair of points.

1) 

2) 

3) 

4) 

5) \((-1, 2), (2, -4)\)

6) \((4, 3), (-3, 4)\)

7) \((0, 4), (2, 3)\)

8) \((4, 0), (-4, 1)\)

9) \((12, 12), (-3, 1)\)

10) \((1, -9), (6, -6)\)

11) \((5, -10), (-5, 4)\)

12) \((5, 5), (-6, -4)\)
1. What is the length of $TV$?

2. What is the length of $PQ$?

3. A vertical line segment has endpoints at $(8, 2)$ and $(8, 7)$. What is its length?

4. What is the length of $AB$?

5. To the nearest tenth, what is the length of $MN$?

Find the distance between each pair of points.

$(-1, 2), (2, -4)$

$(0, 4), (2, 3)$
6. To the nearest tenth, what is the length of $CD$?

A. 5.7 units  
B. 5.6 units  
C. 3.2 units  
D. 1.6 units

7. To the nearest tenth, what is the distance between (7, 4) and (12, 5)?

A. 4.8 units  
B. 4.9 units  
C. 5.0 units  
D. 5.1 units

8. To the nearest tenth of a unit, what is the distance between (−6, −2) and (8, 5)?

A. 3.6 units  
B. 8.5 units  
C. 15.7 units  
D. 15.8 units


A. Find the distance between points $G$ and $H$. Show your work.