

Objective:

Do Now: Use the figure at the right to complete the do now.

a. If $AB = 14$ and $BC = 12$, $AC =$ _____

b. If $AC = 35$ and $AB = 19$, $BC =$ _____

c. If $AB = 4x - 15$, $BC = 2x + 9$, and $AC = 9x - 18$:

Find x :

Find AB :

Find BC :

Find AC :



Guided Practice:

Midpoint Formula:

To find the midpoint of the segment connecting two points, (x_1, y_1) and (x_2, y_2) use the formula:

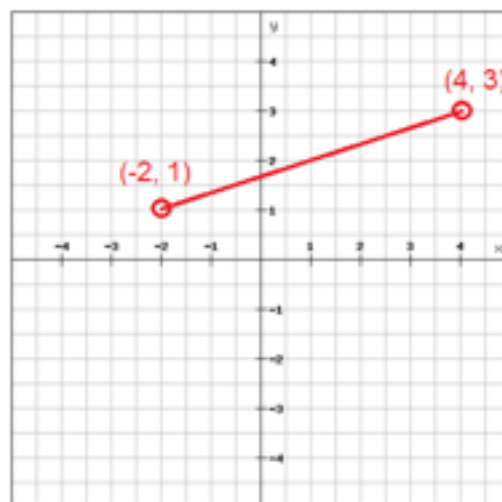
Distance Formula:

To find the length of the segment connecting two points, (x_1, y_1) and (x_2, y_2) use the formula:

Example:

a. Find the midpoint of the segment in the figure to the right.

b. Find the length of the segment in the figure to the right.

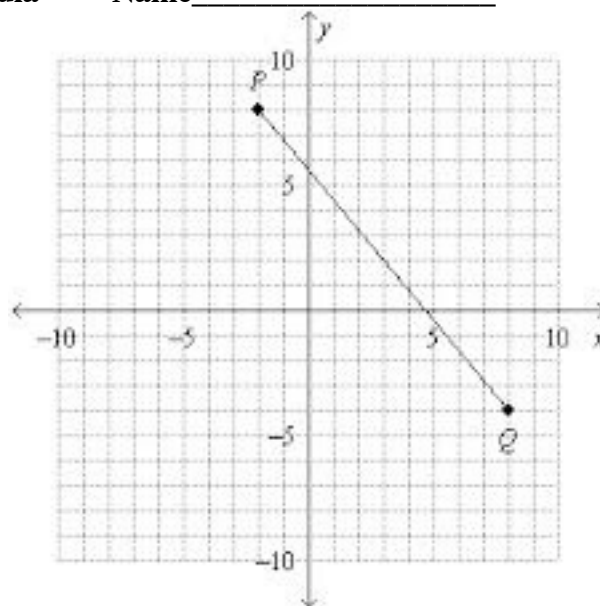


Practice:

1. Find the midpoint and the length of segment PQ:

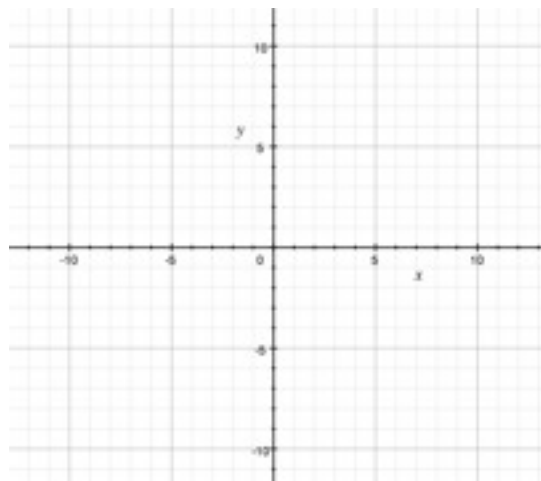
a. Midpoint:

b. Length:



2. Find the midpoint of the segment connecting the points $(-5, 9)$ and $(7, -11)$

3. Find the other endpoint if one endpoint of a segment is $(0, 5)$ and the midpoint is $(-8, -7)$



4. Find the length of the segment connecting the points $(-12, 4)$ and $(-2, 28)$

5. Find the length of the segment connecting the points $(14, 18)$ and $(-16, 5)$