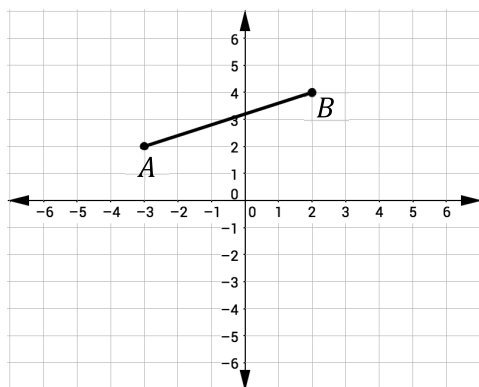


**Section 1 – Topic 4**  
**Midpoint and Distance in the Coordinate Plane – Part 2**

Consider  $\overline{AB}$  below.



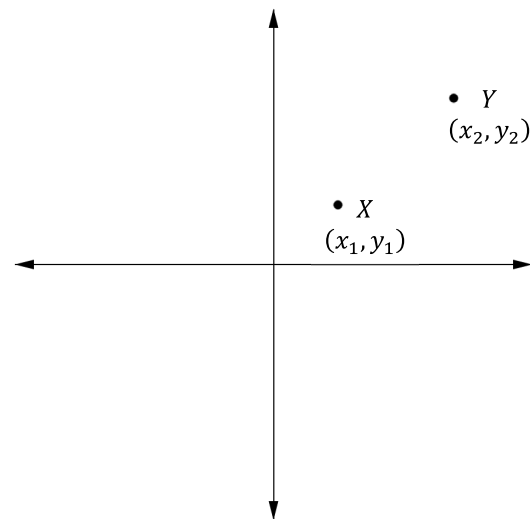
Draw point  $C$  on the above graph at  $(2, 2)$ .

What is the length of  $\overline{AC}$ ?

What is the length of  $\overline{BC}$ ?

Triangle  $ABC$  is a right triangle. Use the Pythagorean theorem to find the length of  $\overline{AB}$ .

Let's consider the figure below.

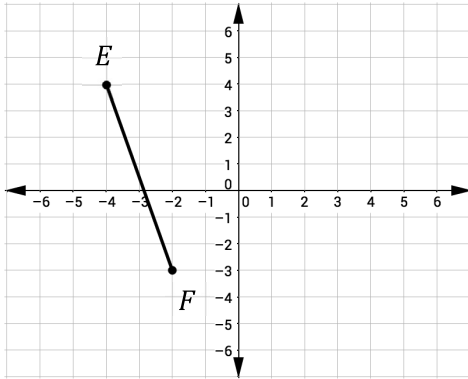


Write a formula to determine the distance of any line segment.



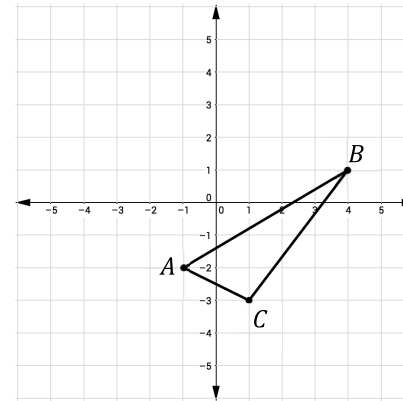
**Let's Practice!**

1. Find the distance of  $\overline{EF}$ .



**Try It!**

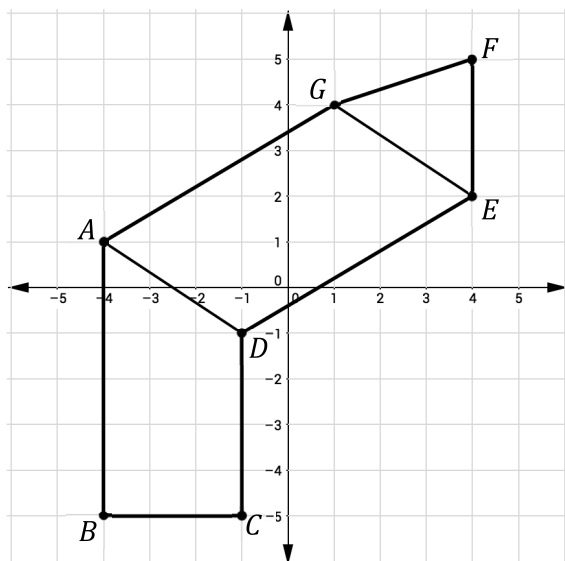
2. Consider triangle  $ABC$  graphed on the coordinate plane.



Find the perimeter of triangle  $ABC$ .

## BEAT THE TEST!

1. Consider the following figure.



Which of the following statements are true? Select all that apply.

- The midpoint of  $\overline{AG}$  has coordinates  $(-\frac{3}{2}, \frac{5}{2})$ .
- $\overline{DE}$  is exactly 5 units.
- $\overline{AD}$  is exactly 3 units.
- $\overline{FG}$  is longer than  $\overline{EF}$ .
- The perimeter of quadrilateral  $ABCD$  is about 16.6 units.
- The perimeter of quadrilateral  $ADEG$  is about 18.8 units.
- The perimeter of triangle  $EFG$  is 9 units.

