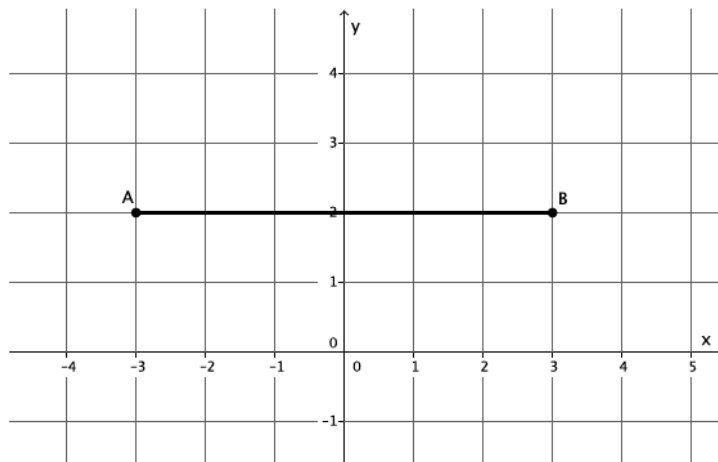


## Lesson 17: Distance on the Coordinate Plane

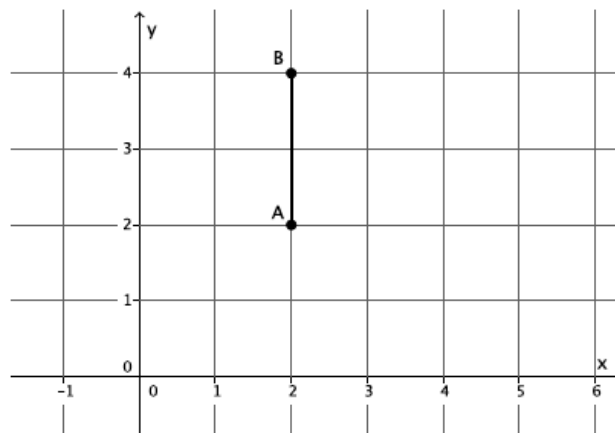
### Classwork

#### Example 1

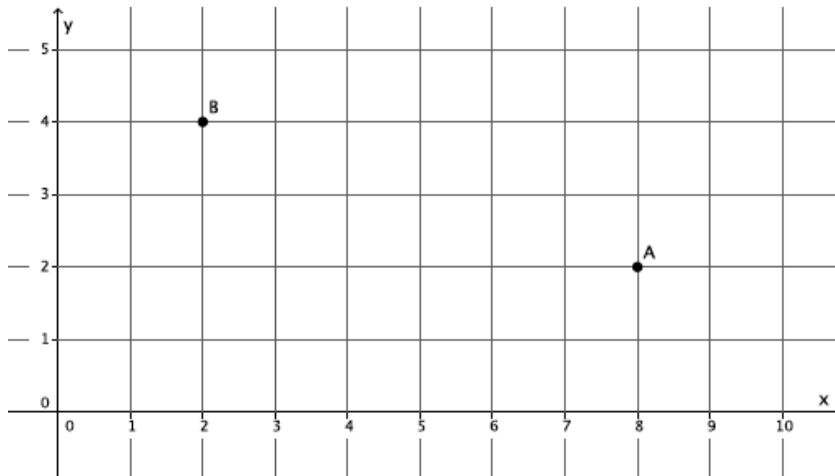
What is the distance between the two points  $A$  and  $B$  on the coordinate plane?



What is the distance between the two points  $A$  and  $B$  on the coordinate plane?

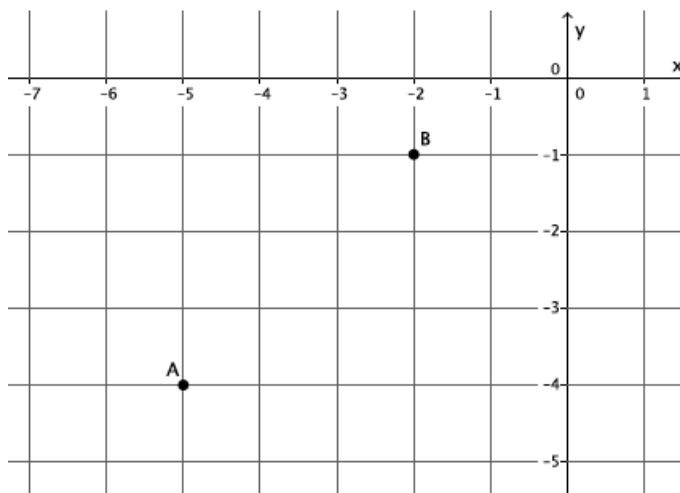


What is the distance between the two points  $A$  and  $B$  on the coordinate plane? Round your answer to the tenths place.



**Example 2**

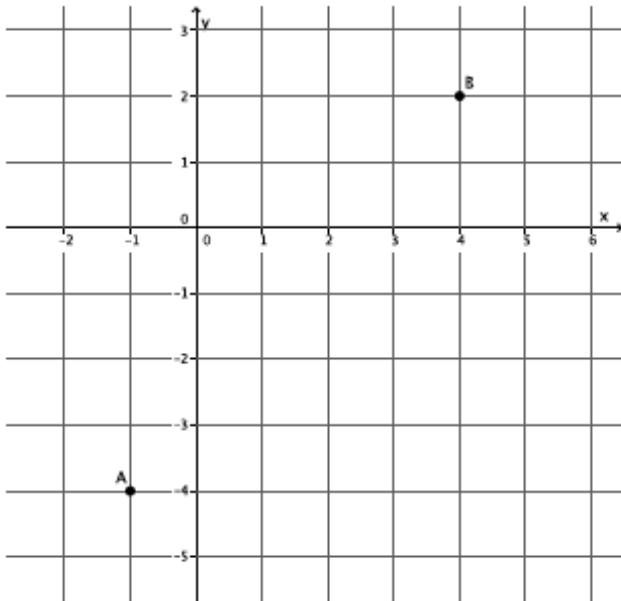
Given two points  $A$  and  $B$  on the coordinate plane, determine the distance between them. First, make an estimate; then, try to find a more precise answer. Round your answer to the tenths place.



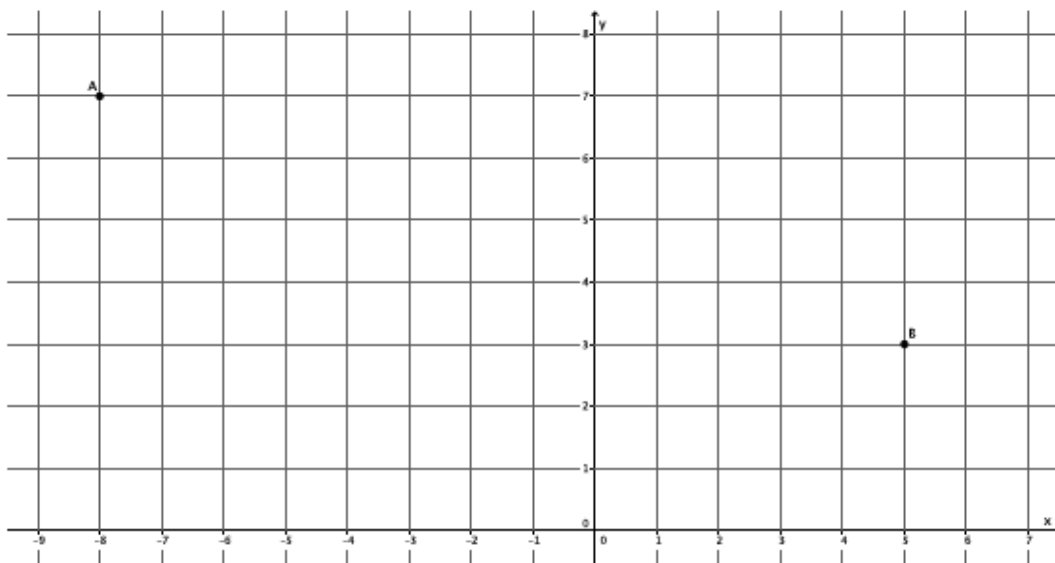
**Exercises 1–4**

For each of the Exercises 1–4, determine the distance between points  $A$  and  $B$  on the coordinate plane. Round your answer to the tenths place.

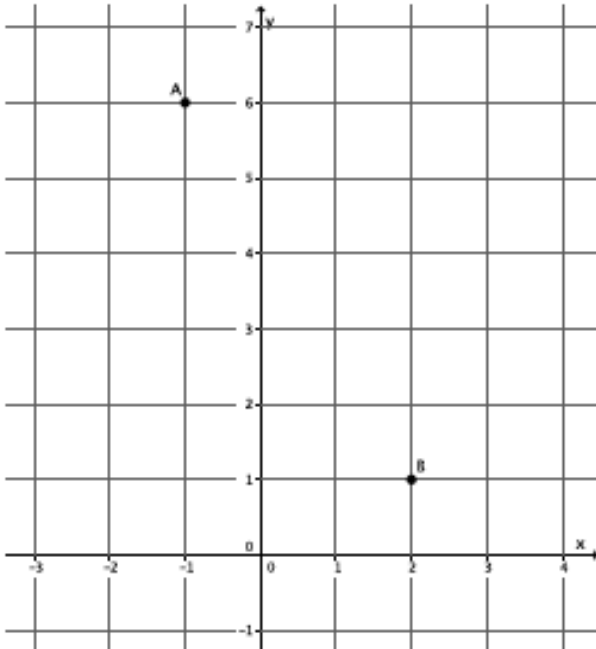
1.



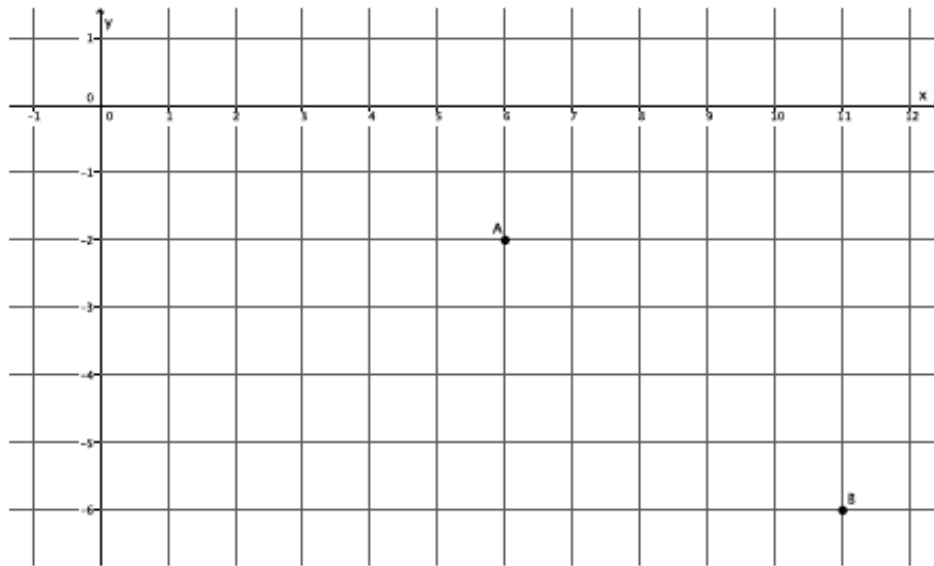
2.



3.

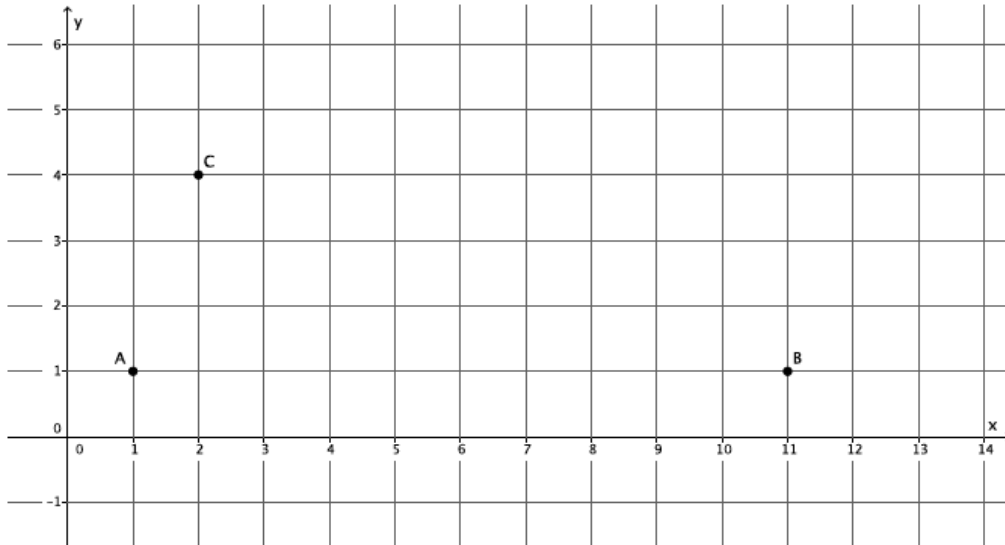


4.



**Example 3**

Is the triangle formed by the points  $A$ ,  $B$ ,  $C$  a right triangle?



**Lesson Summary**

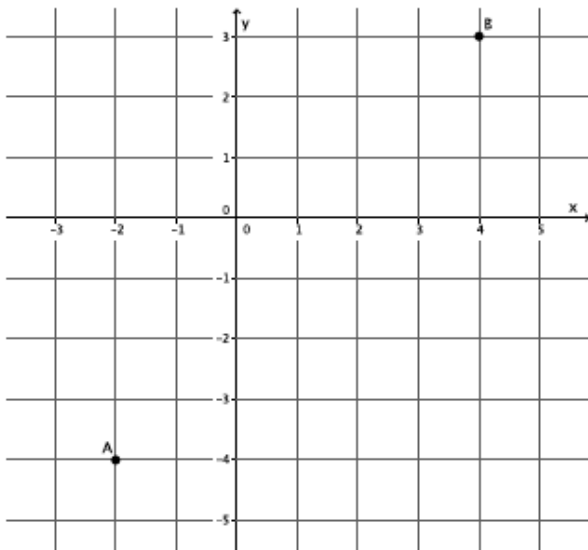
To determine the distance between two points on the coordinate plane, begin by connecting the two points. Then, draw a vertical line through one of the points and a horizontal line through the other point. The intersection of the vertical and horizontal lines forms a right triangle to which the Pythagorean theorem can be applied.

To verify if a triangle is a right triangle, use the converse of the Pythagorean theorem.

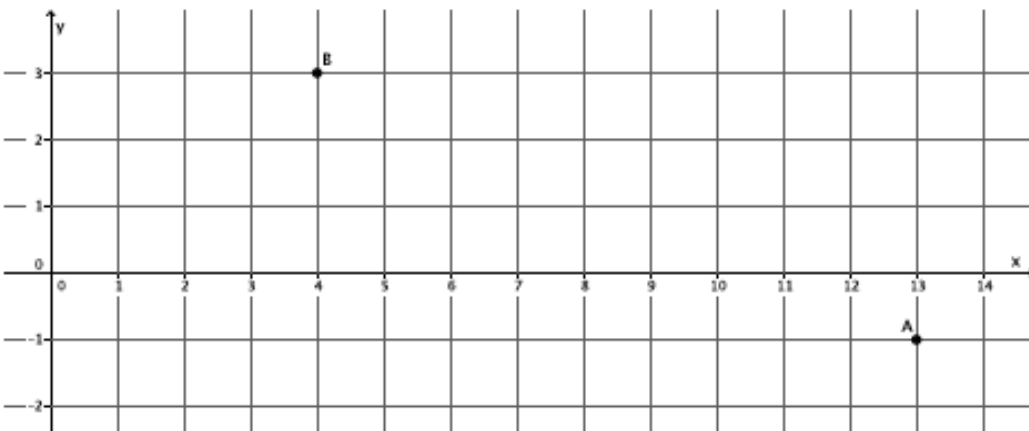
**Problem Set**

For each of the Problems 1–4, determine the distance between points *A* and *B* on the coordinate plane. Round your answer to the tenths place.

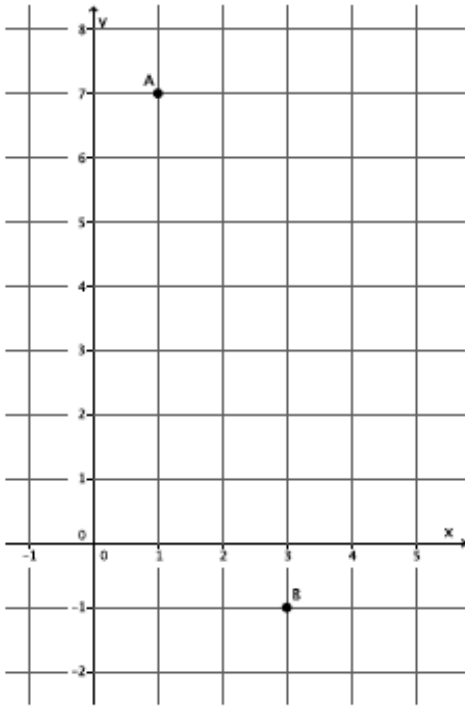
1.



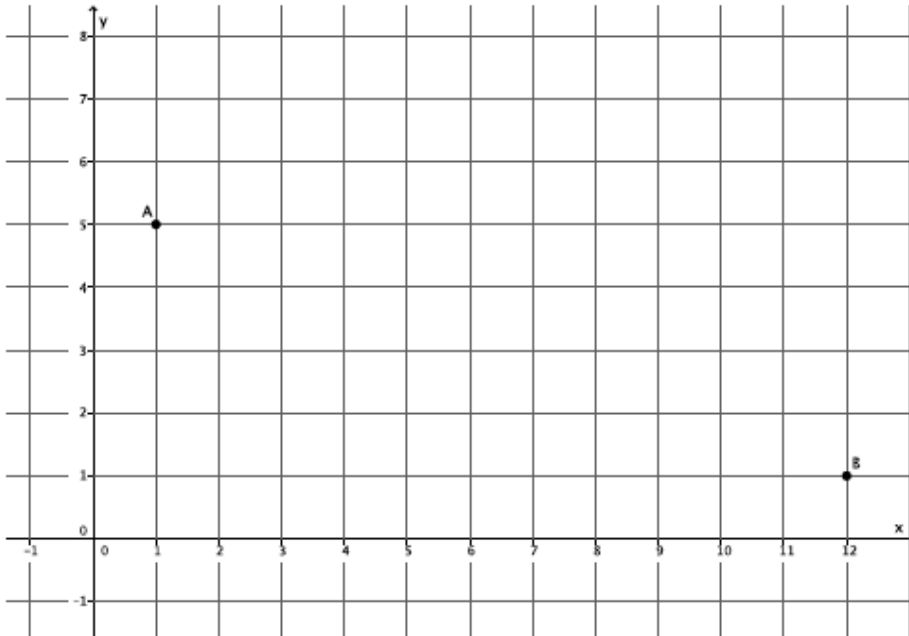
2.



3.



4.



5. Is the triangle formed by points  $A$ ,  $B$ ,  $C$  a right triangle?

