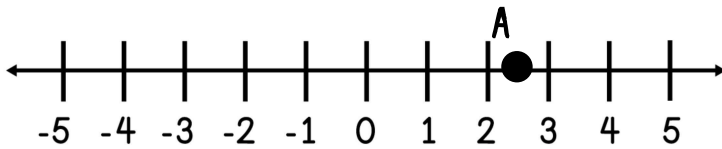


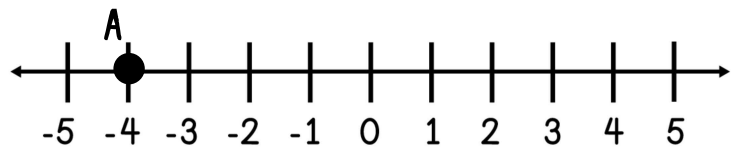
# DISTANCE BETWEEN POINTS

Janice and Philip are asked to plot point B  $4\frac{1}{2}$  units away from point A on the number lines shown. Where should they each plot point B? Will their points be in the same location?

**JANICE**



**PHILIP**

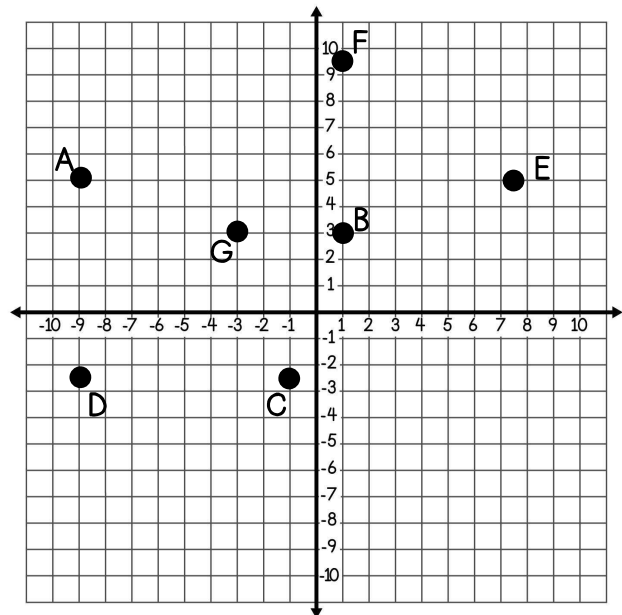


## DISTANCE BETWEEN POINTS

- If two points have the same \_\_\_\_\_ or \_\_\_\_\_ coordinate, then they lie on the same \_\_\_\_\_ of the coordinate plane.
- The distance between the two points can be \_\_\_\_\_ by counting using the scale.

1. Use the coordinate plane to determine the distances and the direction between the points below.

	DISTANCE	DIRECTION
A & D		
B & F		
C & D		
E & A		
G & B		

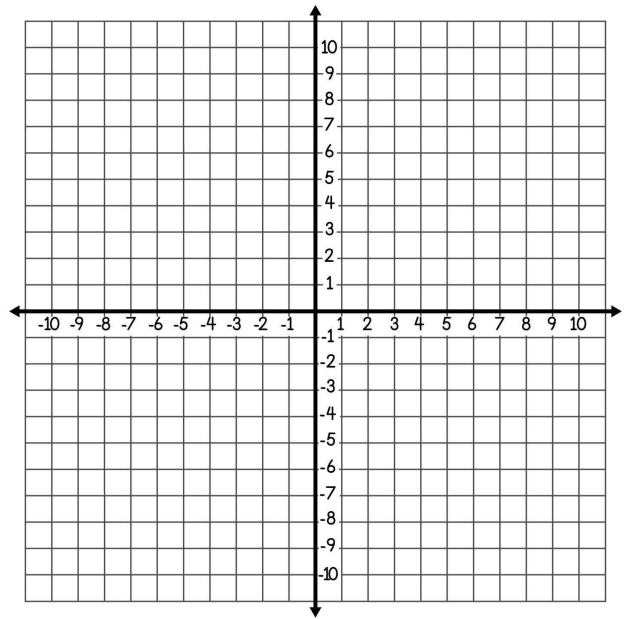


a. Which ordered pair best describes a point that is located 3 units to the left of the origin and 3 units above the x-axis?

b. Point H is located 3 units away from point B. Sam says that (4, 3) could represent point H. Is Sam correct? Justify your thinking.

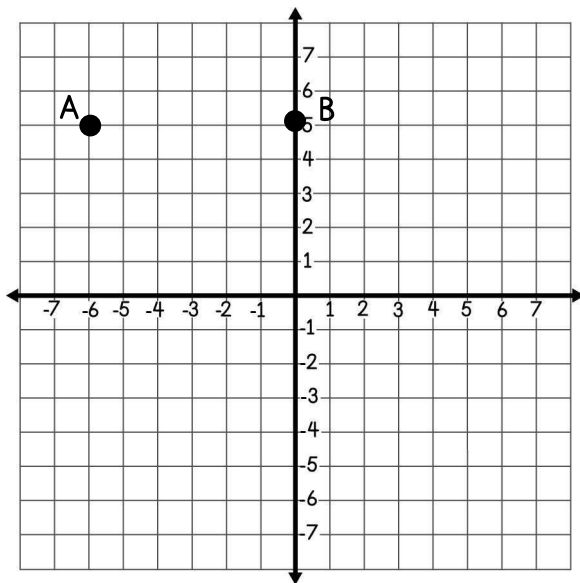
2. Use the coordinate plane to complete the table below. Determine which coordinate is the same and the distance between the two points.

POINT 1	POINT 2	COORDINATE IN COMMON	DISTANCE
(0, -6)	(0, 9)		
(8, -2)	(-4, -2)		
(3, 6)		y-coordinate	9 units
	(-8, -1)	x-coordinate	6 units
		y-coordinate	15 units

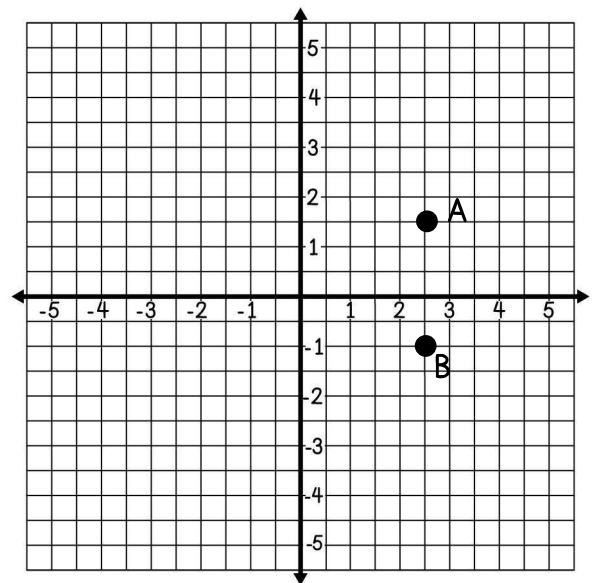


a. Giselle says that when the x-coordinates of two points are the same, you can find the distance between the two points by adding the absolute values of the y-coordinates. Use your findings above to determine if Giselle is correct or not. Explain your thinking.

3. Create a rectangle below with a perimeter of 20 units and an area of 24 units<sup>2</sup>.



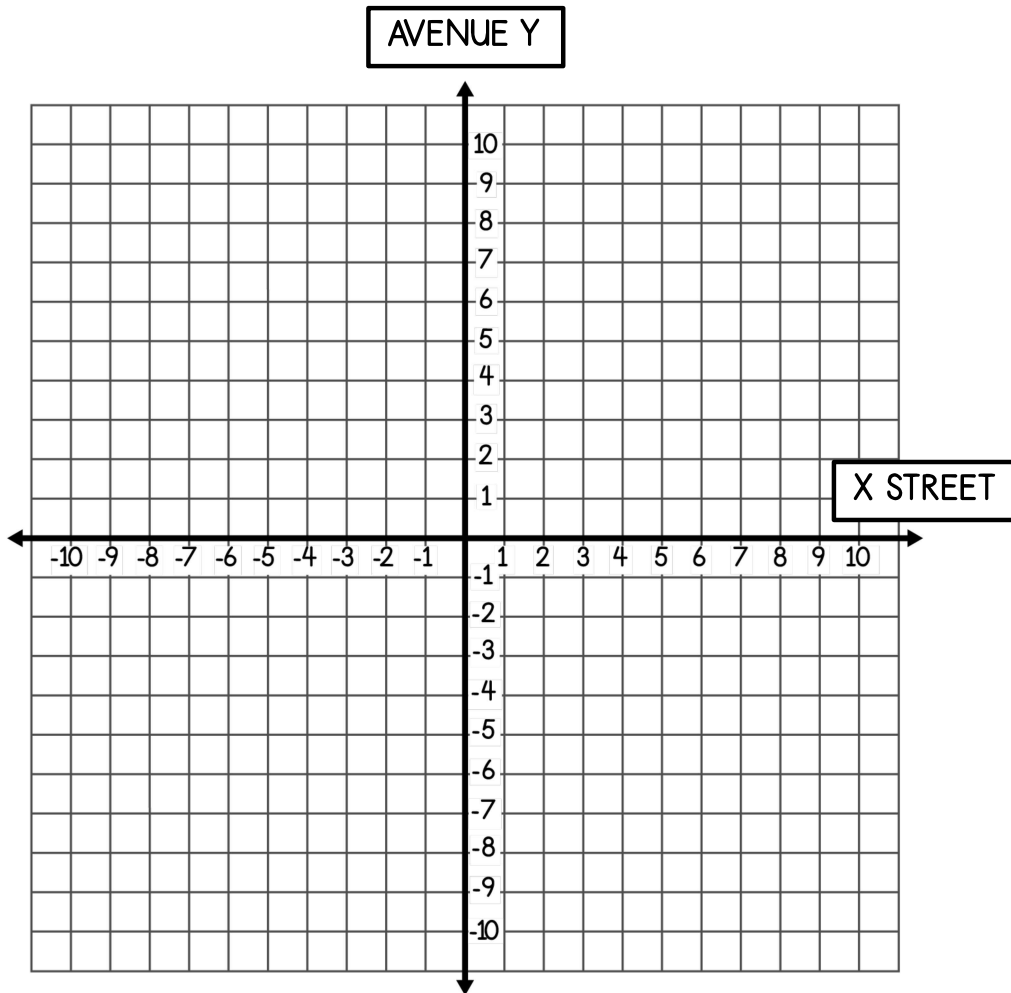
4. Create a rectangle below with a perimeter of 15 units and an area of 12.5 units<sup>2</sup>.



Summarize today's lesson:

# DISTANCE BETWEEN POINTS

Mayor Gomez is trying to create a map for his town, Smallville. Use the clues below to place the different locations on the map and create a key to represent the various locations.



**KEY**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

City hall is located right in the center of town where Avenue Y meets X Street.

\_\_\_\_\_

The hospital is located in the first quadrant, 5 units north and 8 units east of City Hall.

\_\_\_\_\_

The police station is located the same distance away from X Street as the hospital.

\_\_\_\_\_

The middle school is located 8 units west and 7 units south of City Hall.

\_\_\_\_\_

The baseball fields are reflected across Avenue Y from the middle school.

\_\_\_\_\_

The coffee shop is located in the second quadrant, 9 units north of the middle school, then go east 2 units.

\_\_\_\_\_

The library is located 3 units west of the hospital and 3 units north of City Hall.

\_\_\_\_\_

The grocery store is reflected across Avenue Y from the hospital.

\_\_\_\_\_