Name: _____ Date: _____ Class: _____

# Rational Numbers HW #3

**Unit**: Rational Numbers **Date Assigned**: January 30, 2020 **Date Due**: **February 6, 2020 (Thur)**

| Assignments | Self-Assessment | Points Earned |
|---|---|---|
| **Reflection & Distance on the Coordinate Plane**<br>• Complete the problems thoroughly.<br>• **Show all of your work.**<br>• Use appropriate labels and units. | ☐ I did excellent!<br>☐ I did good.<br>☐ I did okay.<br>☐ I am having trouble understanding. | / 4 |
| **Coordinate Plane HW Multiple Choice**<br>• Complete the problems thoroughly.<br>• **Show all of your work.**<br>• Use appropriate labels and units. | ☐ I did excellent!<br>☐ I did good.<br>☐ I did okay.<br>☐ I am having trouble understanding. | / 4 |
| **ONLINE HW: Link in Google Classroom**<br>**Khan Academy**<br>✓ **Points on the coordinate plane**<br>✓ **Quadrants on the coordinate plane**<br>✓ **Distance between points: vertical or horizontal**<br>✓ **Coordinate plane problems in all four quadrants** | ☐ I did excellent!<br>☐ I did good.<br>☐ I did okay.<br>☐ I am having trouble understanding. | / 4 |
| **Lunchtime Extra Math Help**<br>every **Tuesday, Thursday** @ Room 405<br>12:25 – 12:55 | ☐ I attended extra help this week.<br>☐ I did not attend extra help this week but I want to sign up for next week.<br>☐ I do not need extra help at the moment. | |

**Total points earned: _____**

Flocabulary

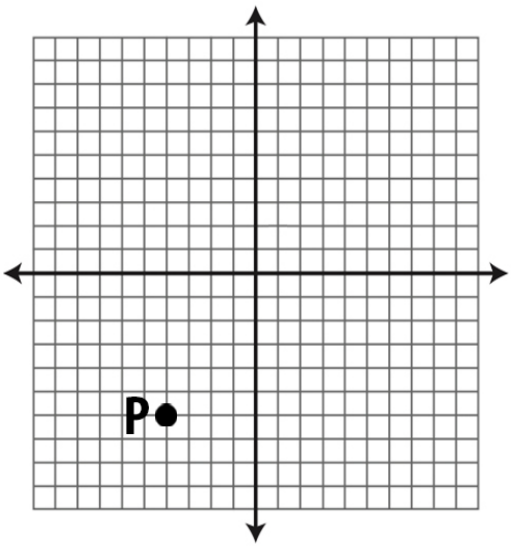
Name _____

Date _____

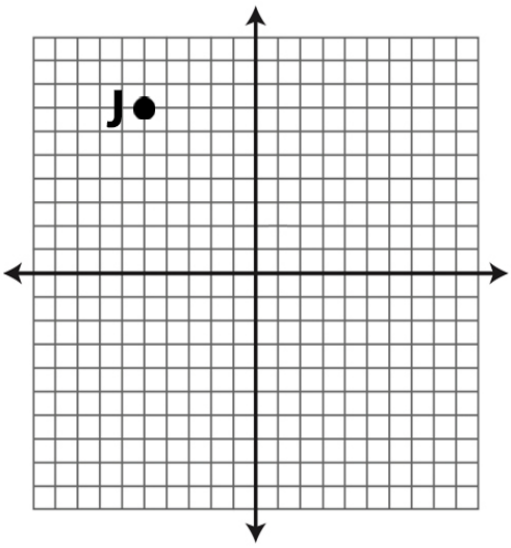
# REFLECTION & DISTANCE
## ON THE COORDINATE PLANE

**PART I** Reflect each point across the given axis, and write the coordinates of the point that results.

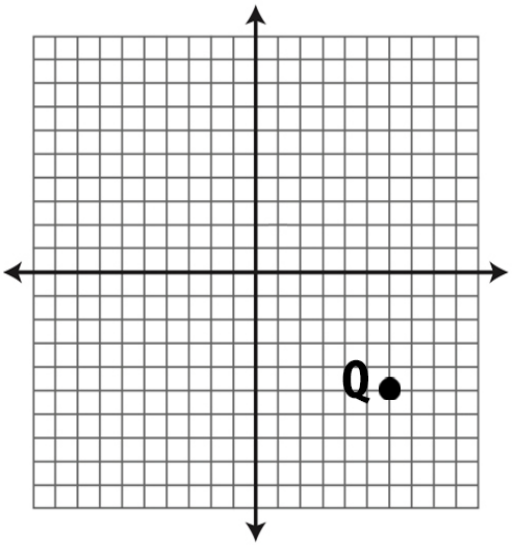
**1.** Reflect point P across the y-axis.




**2.** Reflect point J across the x-axis.




**3.** Reflect point Q across the y-axis.

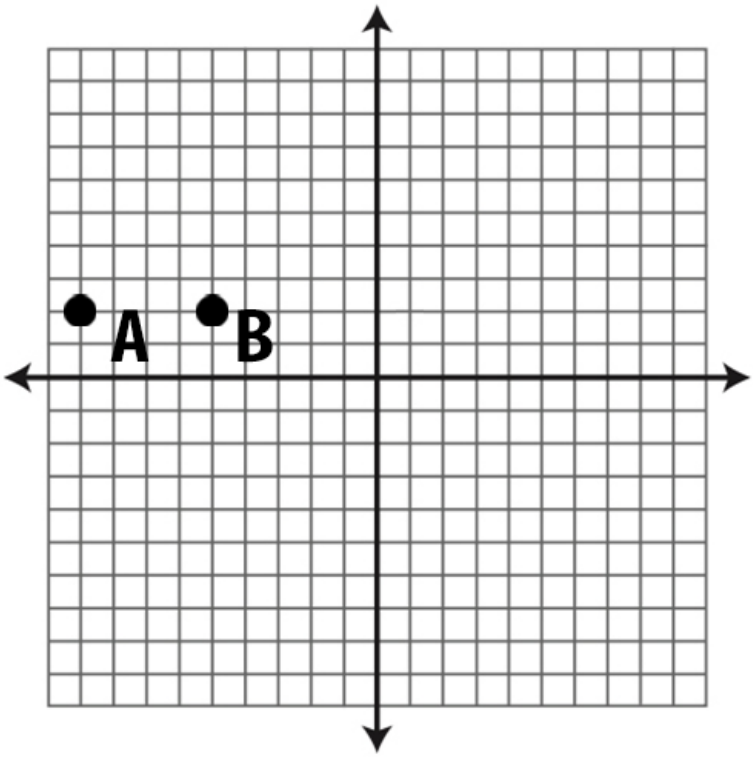


Name _____

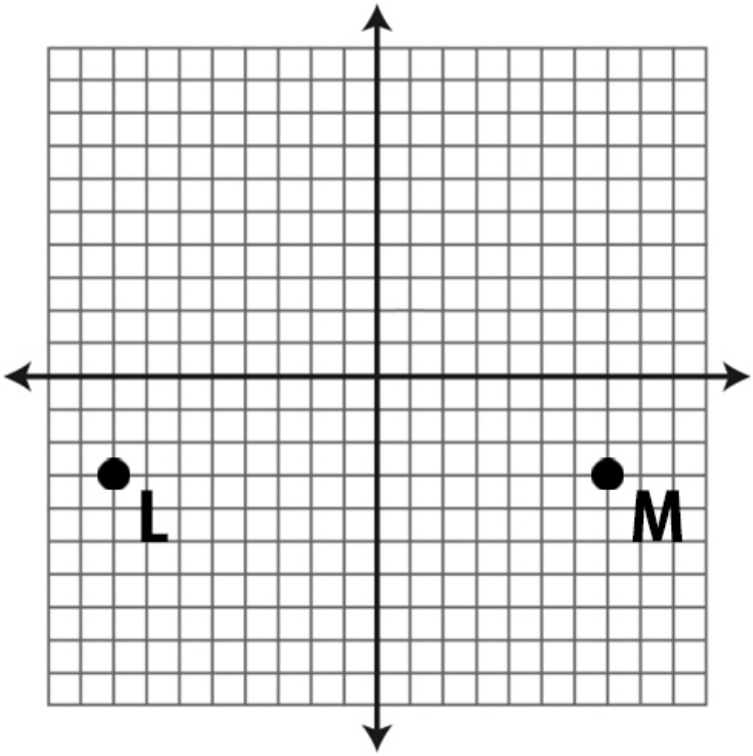
Date _____

**PART II** Find the distance between each of the sets of points below. Explain how you can find the answer using absolute values.

**1.** _____




**2.** _____



Flocabulary

Name _____

Date _____

**PART III** Solve each problem below.

**1.** Determine whether the points (-5,8) and (-5,-4) lie on the same horizontal or vertical line. Explain how you know. Then, find the length of the line segment that connects them.

**2.** Skye's city is on a grid like the coordinate plane. He unicycles from point (11,15) to point (11, -12). How many units does he travel? Explain how you found your answer using absolute value.

Name _____

Date _____

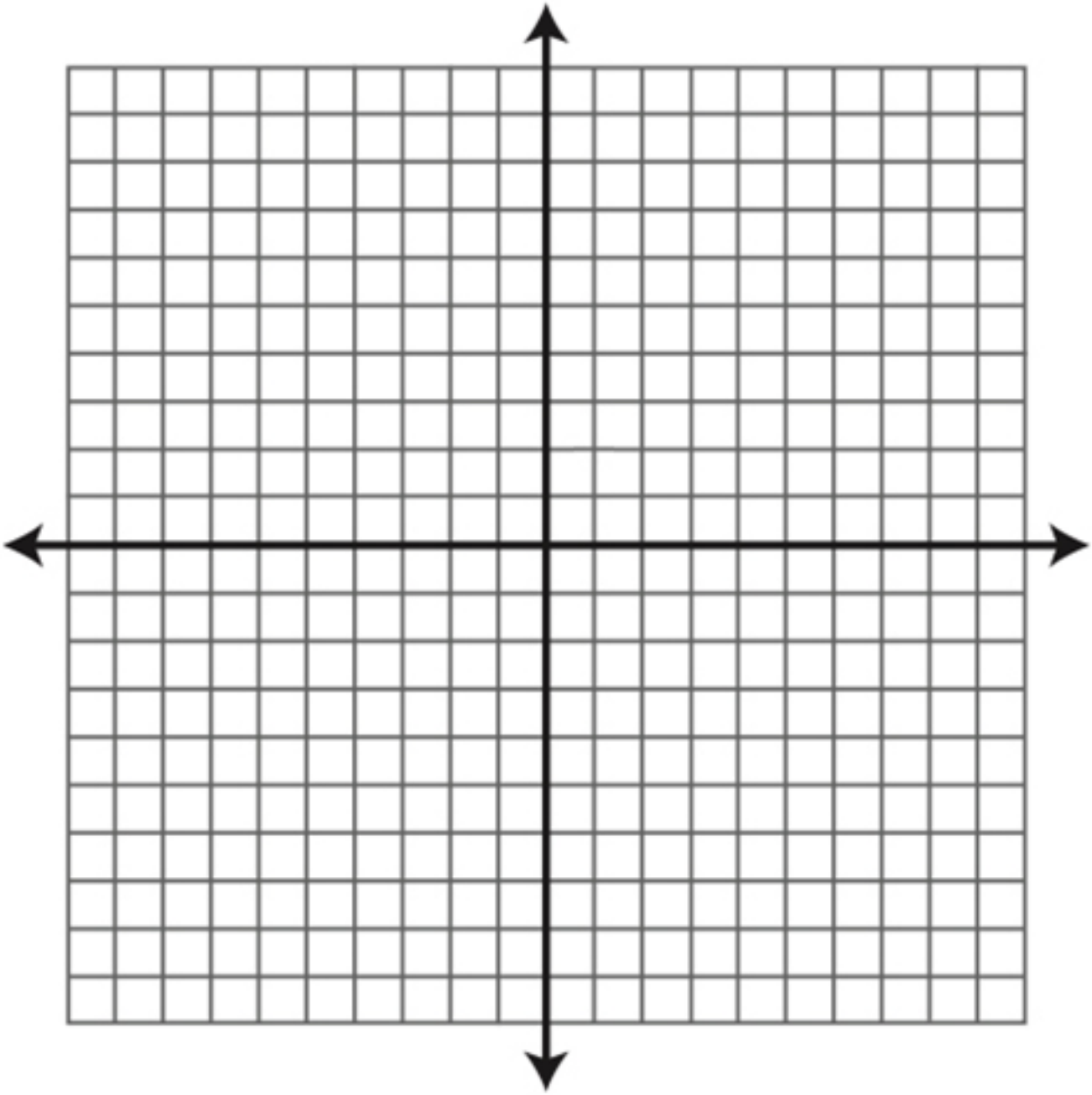
**BONUS** Plot the following points on the coordinate plane. Connect them, and find the area of the shape that results.

(3,2)

(-6,2)

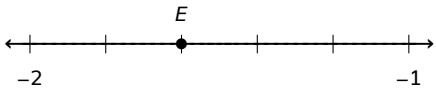
(-6,-8)

(3,-8)



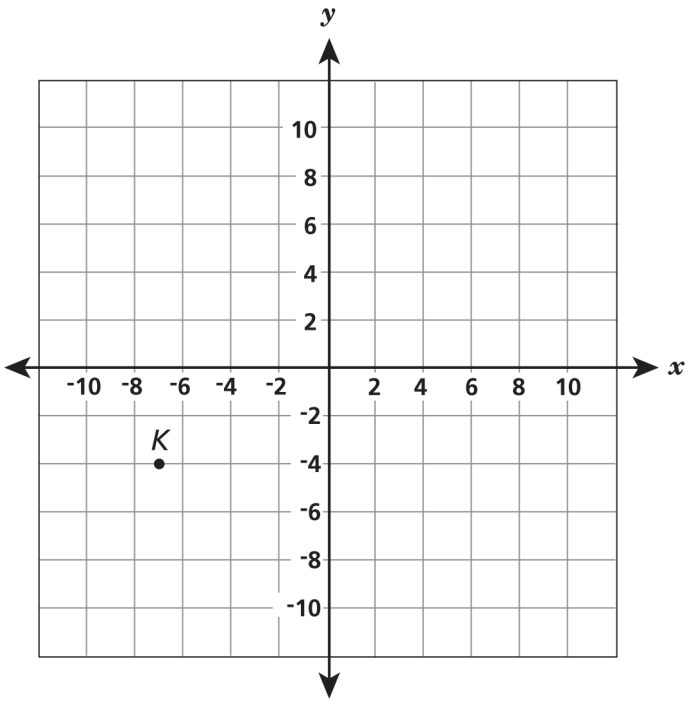
**Coordinate Plane HW**

1. Which number best represents the location of point *E* on the number line below?



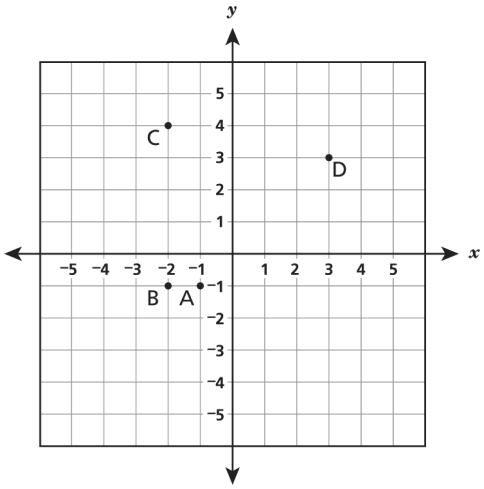

A. −1.8 B. −1.6 C. −1.5 D. −1.3

2. What coordinates best represent the location of point *K* on the coordinate plane below?




A. (−7, −4) B. (−7, 4) C. (−4, −7) D. (−4, 7)

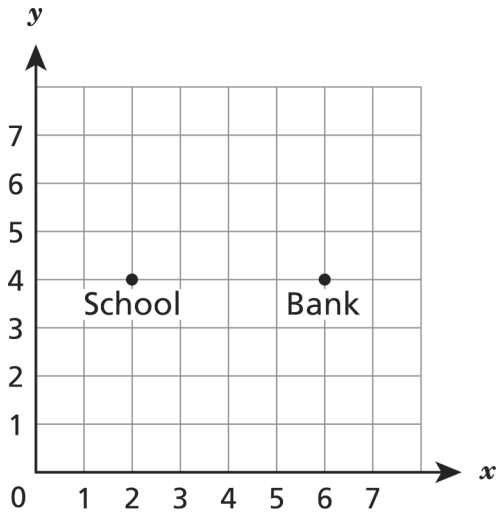
3. Point G is the point (3, –1).




Which point is 5 units from point G?

A. point A B. point B C. point C D. point D

4. Mark graphed points on the coordinate plane below to represent the locations of his school and a bank.




Mark wants to add the location of the library on the coordinate plane. The distance from the library to the school is the same as the distance from the bank to the school. Which ordered pair could be the coordinates of the library?

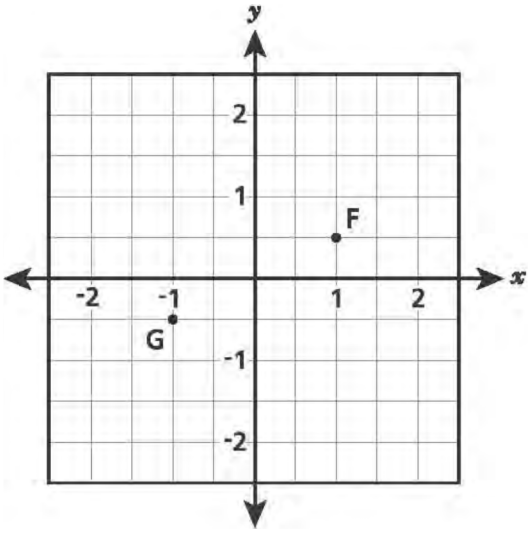
A. (2, 4) B. (2, 8) C. (4, 4) D. (6, 8)

5. The coordinates of point $A$ are $(-6, 4)$. The coordinates of point $B$ are $(3, 4)$. Which expression represents the distance, in units, between points $A$ and $B$?

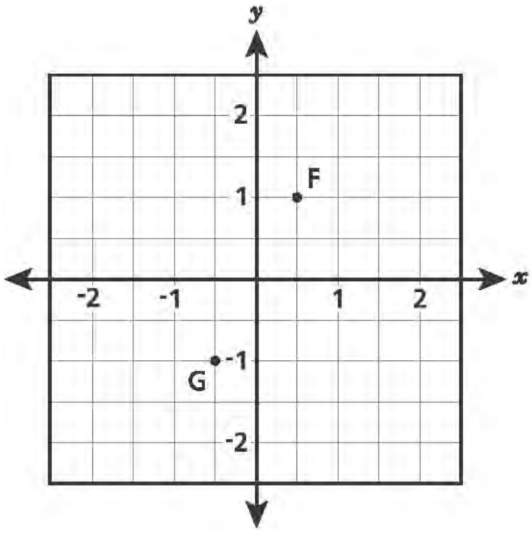
A. $|-6| + |3|$ B. $|3| - |-6|$ C. $|-6| + |-4|$ D. $|4| - |-6|$

6. The coordinates of point $F$ are $(1, 0.5)$ and the coordinates of point $G$ are $(-1, -0.5)$. Which coordinate plane below correctly shows the locations of points $F$ and $G$?

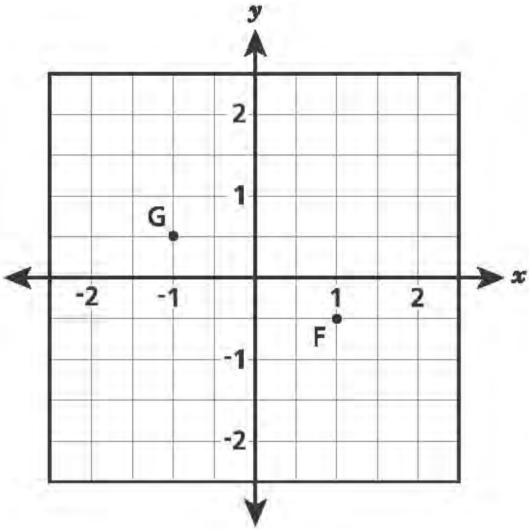
A.



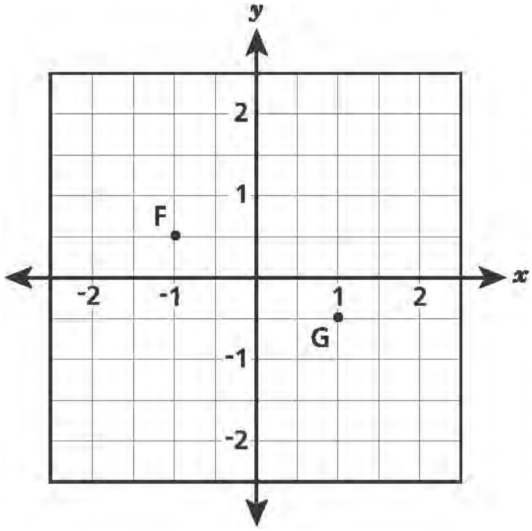

B.



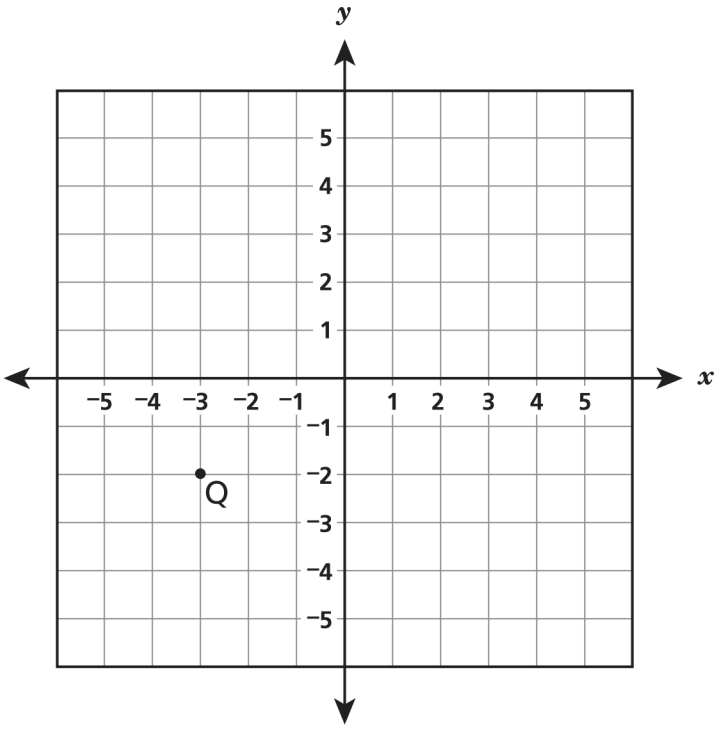

C.




D.



7. Point Q is shown on the coordinate grid below.




Which statement correctly describes the relationship between the point $(-3, 2)$ and point Q?

A. It is a reflection across the *x*-axis.

B. It is a reflection across the *y*-axis.

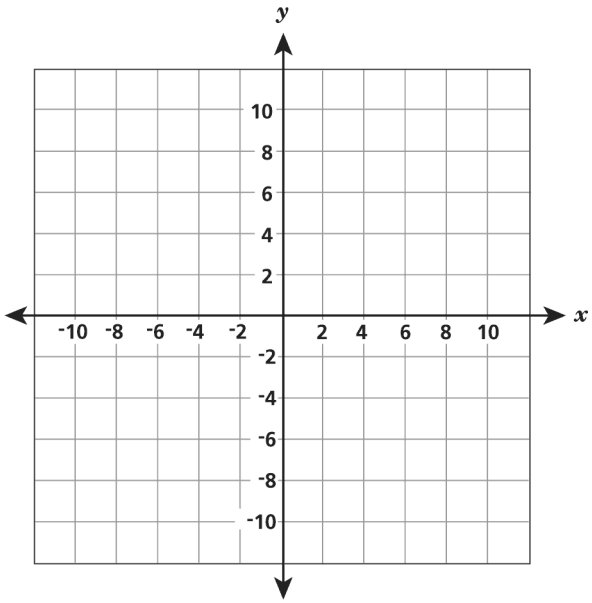
C. They are 6 units apart.

D. They are 2 units apart.

8. Point W is located at $(-2, 3)$ on a coordinate plane. Point W is reflected over the *x*-axis to create point W'. Point W' is then reflected over the *y*-axis to create point W". What ordered pair describes the location of point W"?

*Explain how you determined your answer.*

9. The endpoints of a line segment can be represented on a coordinate grid by the points $A(-4, 1)$ and $C(-4, -3)$. Graph and label each of the endpoints of the line segment on the coordinate grid below.




What is the distance, in units, between point $A$ and point $C$?

10. A triangle has vertices on a coordinate grid at points $J(-1, 5)$, $K(4, 5)$, and $L(4, -2)$. What is the length, in units, of $\overline{KL}$?

A. 3 B. 7 C. 8 D. 11

11. The coordinates of the vertices of a rectangle are $(-2, 3)$, $(4, 3)$, $(4, -4)$, and $(-2, -4)$. What are the dimensions of the rectangle?

A. 1 unit by 2 units B. 1 unit by 6 units C. 7 units by 2 units D. 7 units by 6 units

12. The coordinates of the points below represent the vertices of a rectangle.

P: $(2, 2)$

Q: $(6, 2)$

R: $(6, 5)$

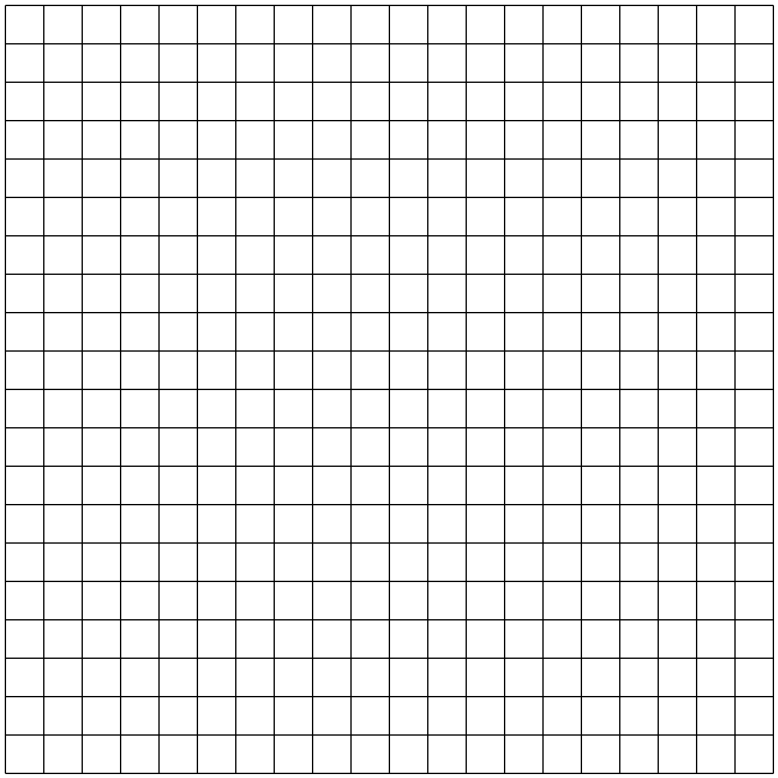
S: $(2, 5)$

What is the perimeter, in units, of rectangle *PQRS*?

A. 8 B. 12 C. 14 D. 16

13. Bronson is using a coordinate plane to design a rectangular swimming pool. He will plot points on the coordinate plane to mark the vertices of the rectangular pool bottom. If Bronson plots the first three points at $(5, 3)$, $(5, 13)$, and $(30, 13)$, what would be the coordinates of the fourth point?

You may use the grid below to help you solve the problem.



A. $(30, 5)$ B. $(20, 13)$ C. $(5, 28)$ D. $(30, 3)$