https://www.youtube.com/watch?v=ilNn9iGZuFc

Steps to Finding the Distance Between Coordinate Points

Determine if the points are in the same quadrant, or in different quadrants.

If they are in different quadrants:

1)Determine which coordinate is the same (x or y) and cross it out.
2)Circle the number that is different in both coordinate pairs
3)Find the absolute value of each number (write an expression)
4)Find the sum.

If they are in the same quadrant:

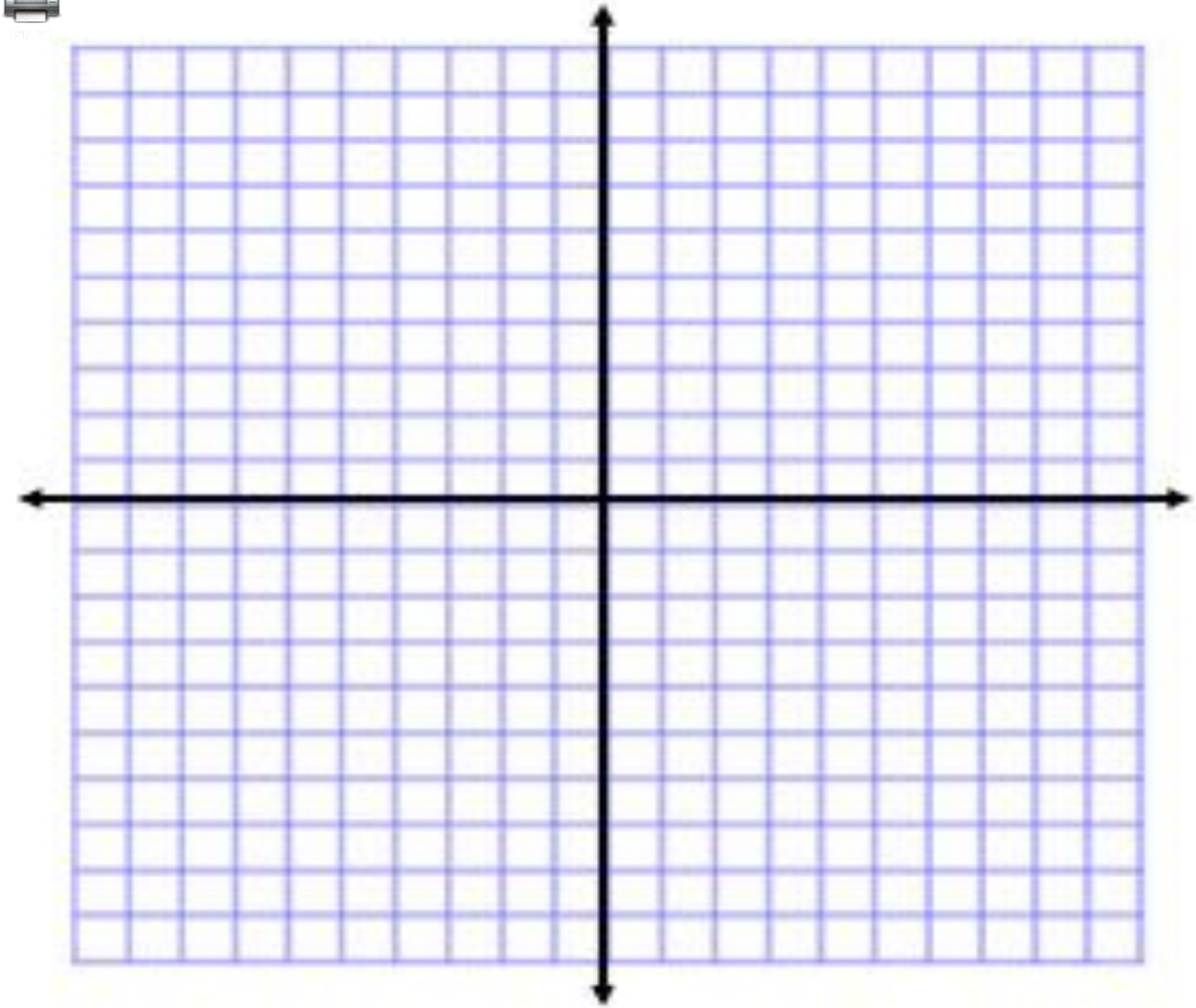
1)Determine which coordinate is the same (x or y) and cross it out.
2)Circle the number that is different in both coordinate pairs.
3)Write a subtraction expression.
4)Find the difference

Name :_____Class:_____ City Name:_____

Your task is to build your own city. Your city must have 5 landmarks and 2 that you would like to add for fun. Follow the directions below to build your own city. You may use the provided landmarks or insert your own. Once you have platted your points, make sure to complete the table to the right.

- € Plot your **city hall** at the **origin**
- € Plot a **store** in **Quadrant I** (grocery, clothing, appliance, etc)
- € Plot a **field** in **Quadrant IV** (football, baseball, soccer, etc)
- € Plot **your house** in **Quadrant III** (apartment, townhouse, house, etc)
- € Plot a **restaurant** in **Quadrant II** (Mexican, Italian, café, etc)
- € Choose any of your points, make a reflection of this point over the **Y-axis** choose a **tourist attraction** to place in your town
- € Choose another point, make a reflection of this point over the **X-axis** and choose a **friend or family members home** to plot.

Name of Location	Ordered Pair	Quadrant Location



City Hall

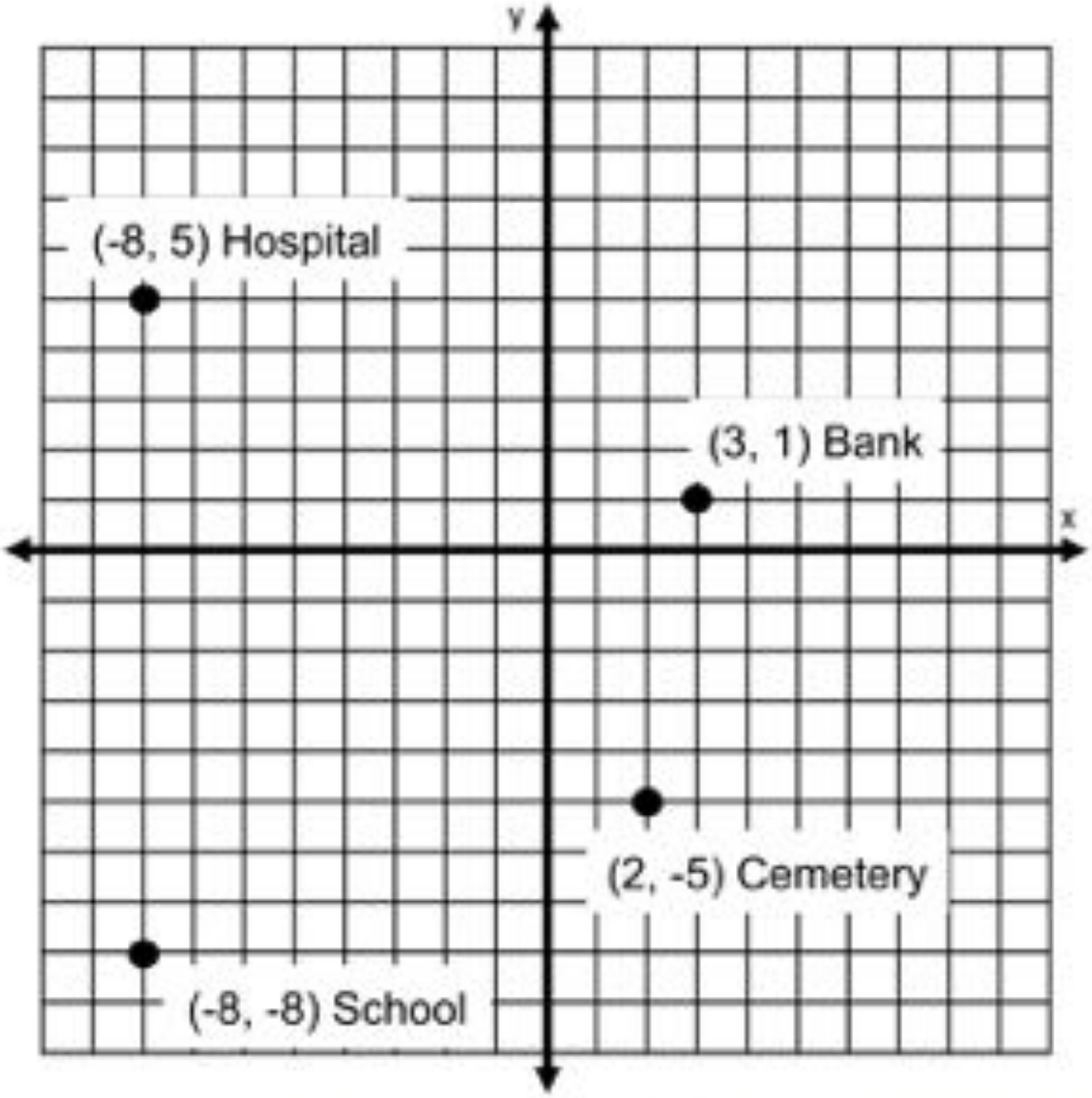
Name: 6.NS.8

Real-World Graphing

Directions: Solve each problem.

1. A map of Squaresville is shown below. Each unit represents one mile. How many miles is the hospital from the school? _____

2. A map of Squaresville is shown below. Each unit represents one mile. The bank is ___ miles North and ___ miles East of the school.



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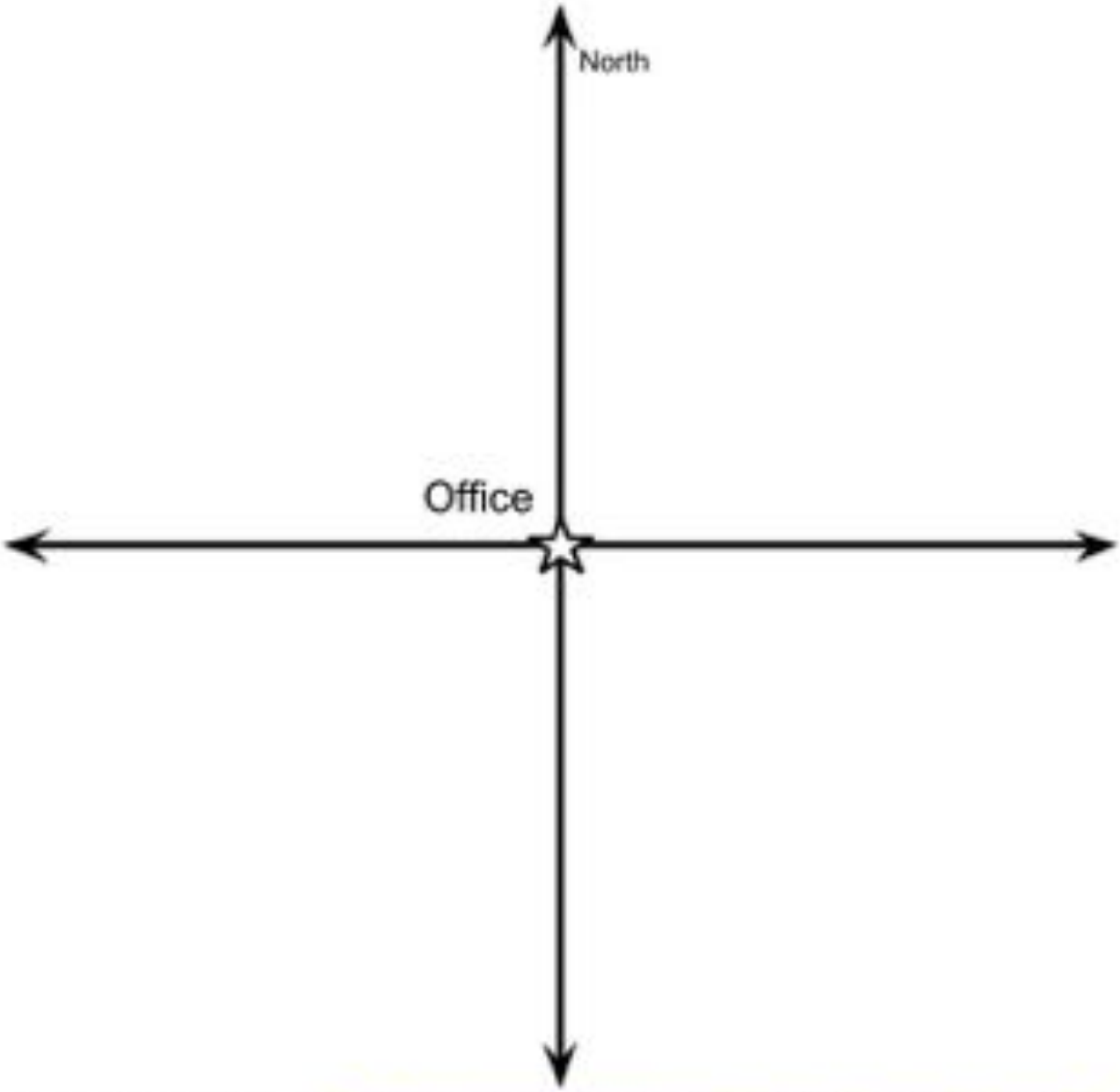
Name: 6.NS.8

Real-World Graphing

Directions: Solve each problem.

1. An oil company drilled well "A" 300 miles West and 300 miles North of its office. They drilled well "B" 300 miles West and 100 miles South of their office. Graph and label these two points.

2. How far apart are the two wells? _____



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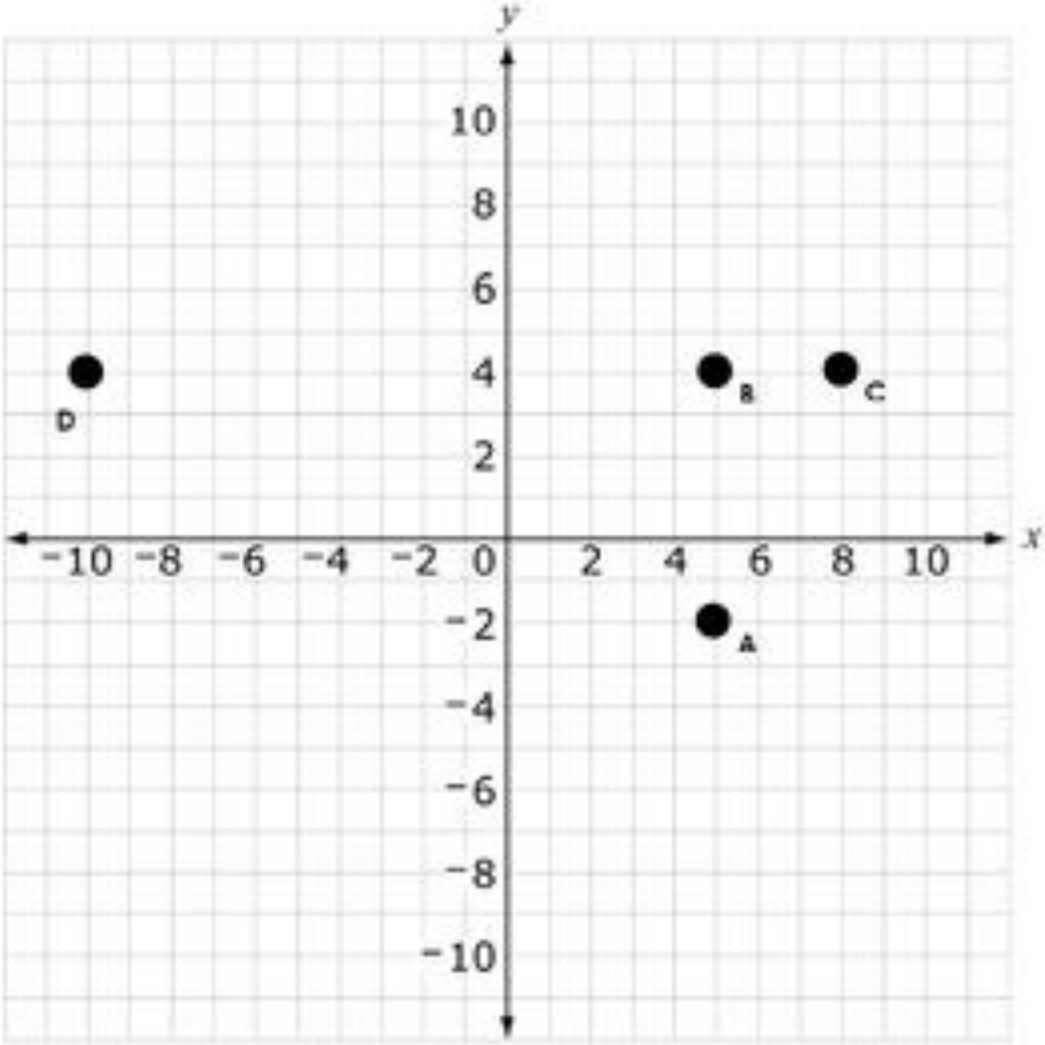
Name:_____ Class:_____

Distances Between Coordinate Pairs

Use the graph below to answer the questions 1 - 4.



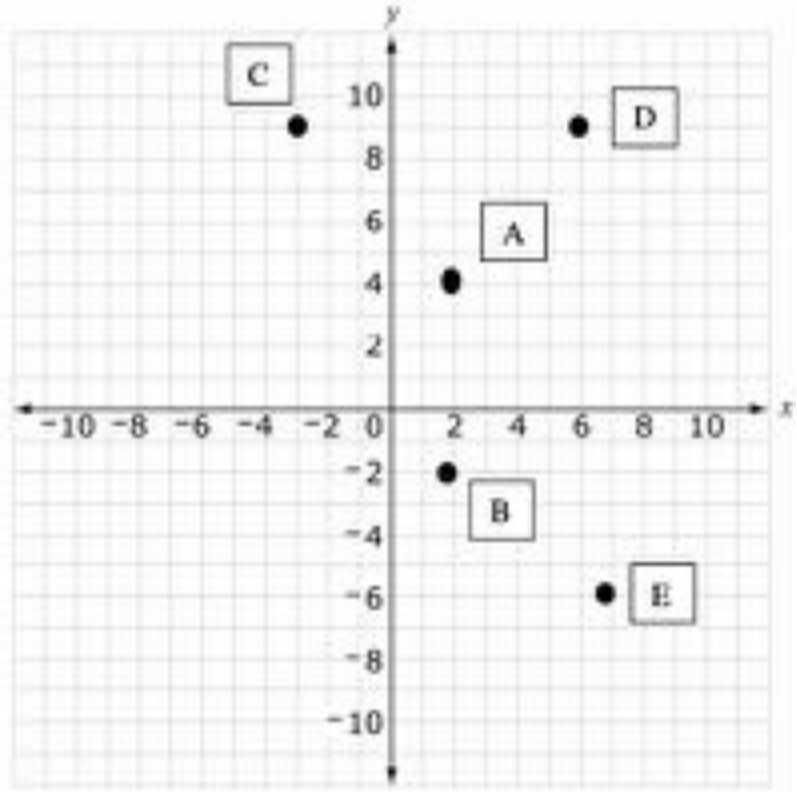
1. What is the distance, in units, between points A and B?

2. How can you represent the distance between points A and B using an expression?

3. What is the distance between points C and D?

4. How can you represent the distance between points C and D using an expression?

Use the graph below to answer question 5.



5. What is the distance between point C and point D? How do you know?

6. Write an expression that correctly shows the distance between (-7, 5) and (2, 5)?

7. Write an expression that correctly shows the distance between (-6, -5) and (-3, -5)?

9. How far apart are the points (-4, 5) and (3, 5)?

_____

10. How far apart are the points (-3, 5) and (-3, -9)? Explain how you know.

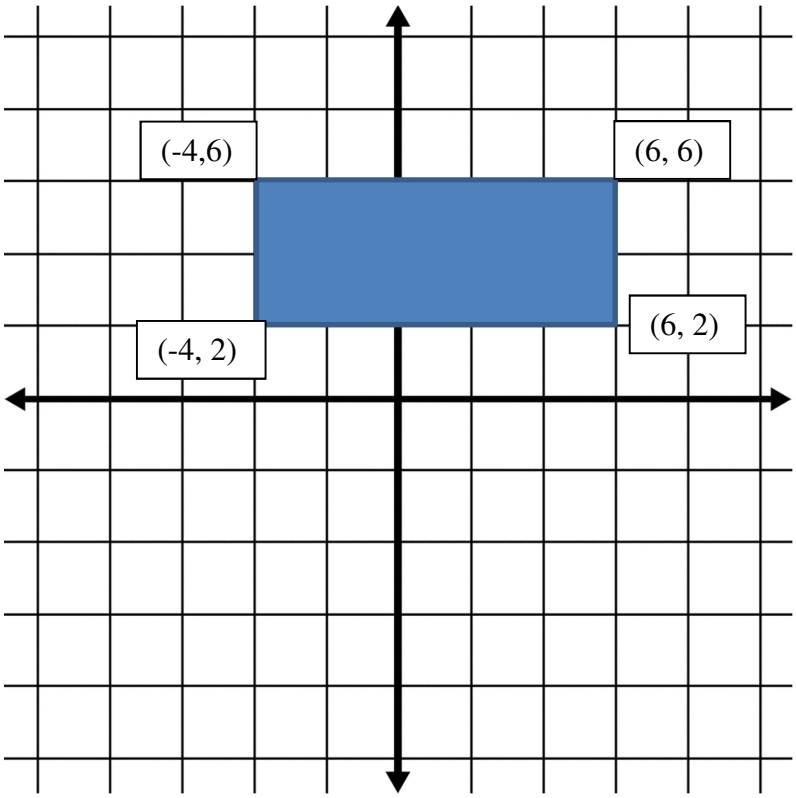
_____

_____

_____

_____

Use the graph below for questions 11-13



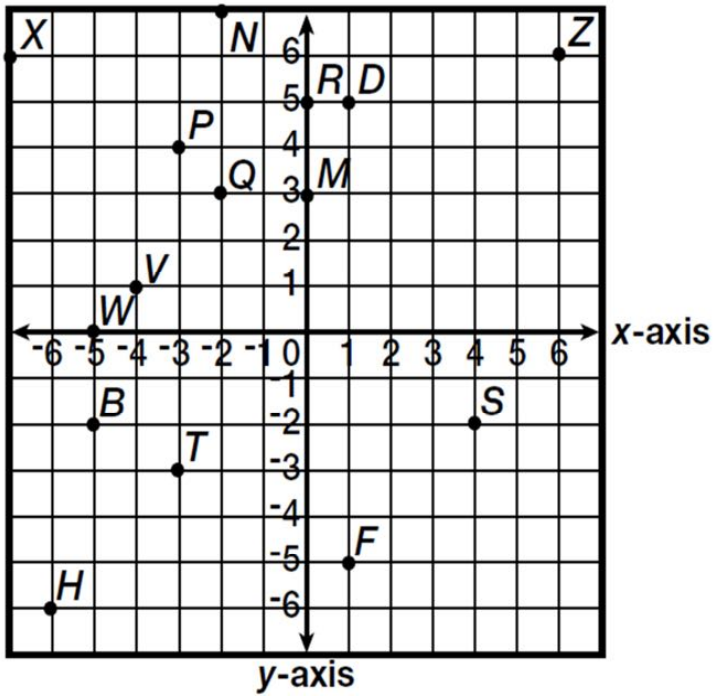
11. What is the width of the figure above? _____

12. What is the length of the figure above? _____

13. What is the perimeter of the figure above? _____

Independent Practice

Use the graph above for examples 5-10. Write an expression to prove your answer.



1. What is the vertical distance, in units, between point P and point T? _____

2. What is the horizontal distance, in units, between point B and point S? _____

3. Plot a point at (4,0). Label is point A.

4. Use a straight line to connect points W, A, S and B.

5. What is the height of the figure you just created? _____

6. What is the length of the figure you just created? _____

7. Maria thinks that the vertical distance between points R and M is 0. Is Maria correct? Explain.

_____

_____

_____

8. Ajani believes that point T is -3 units away from the y-axis. Do you agree with Ajani? Why or why not?

_____

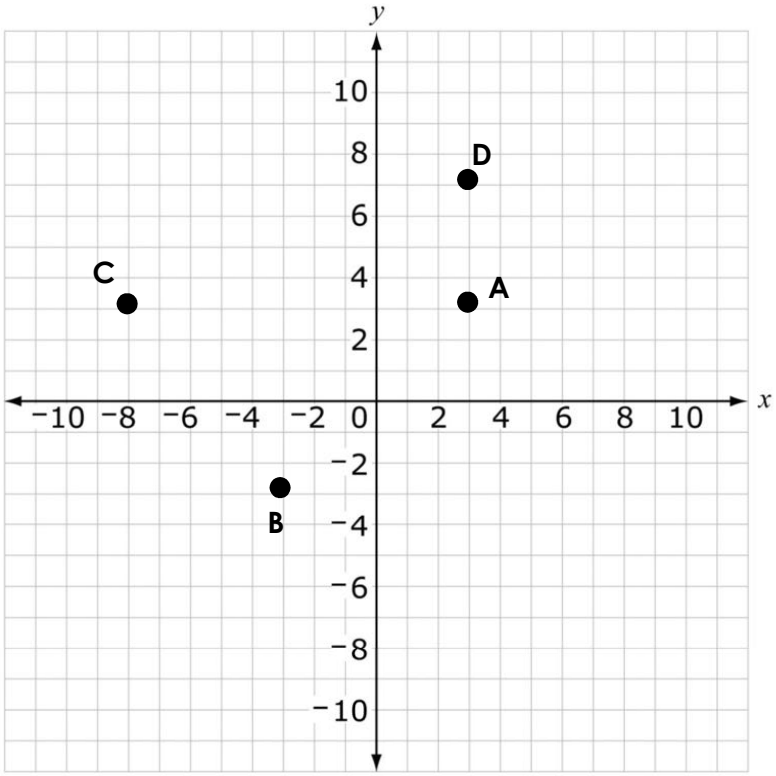
_____

_____

Name:_____ Date:_____

Distances Between Coordinate Pairs: Exit Ticket

Use the coordinate plane below to answer questions 1 - 4. Let each unit represent 1 mile.



1. How many miles from the x-axis is point B? _____

2. Which expression can be used to determine the distance from point A to point C?
   a) -8 + 3
   b) |-8| + |3|
   c) 3 + -8
   d) |-8| - |3|

3. Lauren says that the distance between points C and A is 5 miles. Joshua says that the distance between points C and A is 11. Who is correct? Explain in the space below.

_____

_____

4. How far apart are the points (-4, -5) and (6, -5)? Explain how you found your answer.

_____

_____

_____

_____

Name:
Period:
Coordinate Plane and Integers Assessment

1. Complete the following inequalities using one of the following symbols: >,<, or =

a. |35| _____ 35

b. -10 _____ -3

c. 8 _____ -5

d. |-20| _____ 20

e. |15| _____ |-16|

2. List the following integers in order from least to greatest:

-20 5 0 7 -2 -10 10

_____ _____ _____ _____ _____ _____ _____

3. Point A and point B are placed on a number line. Point A is located at -20 and point B is 5 points LESS than point A. Which statement about point B is true. (Draw and show your work)

A. It is located at -25 and is to the right of point A on the number line.
B. It is located at -15 and is to the right of point A on the number line.
C. It is located at -25 and is to the left of point A on the number line.
D. It is located at -15 and is to the left of point A on the number line.

4. The table below shows the elevations at which different artifacts were found during an archeological dig.

Artifact	Elevation	Integer
Arrow head	15 feet above sea level	
bone	721 feet above sea level	
Clay bowl	Sea level	
necklace	462 feet above sea level	
Woven basket	1,200 feet below sea level	

Write an integer to represent the elevation at which each artifact was found. Write your answer in the table above.

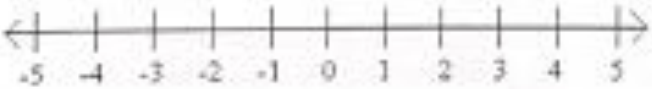
5. Ethan is hiking in a canyon.

* He is at an elevation that is BELOW sea level.
* His elevation is WITHIN 200 feet of sea level.

Which of the following:

A. -300
B. -150
C. 150
D. 300

6. Use the number line below to answer the questions that follow.



a. Locate the opposite of the opposite of -2 on the number line and label it P.
b. Is the opposite of 2 located at the same place as point P on the number line? Explain why or why not.

7. The average low temperatures in December of several U.S. cities are shown in the chart below.

City	Temperature (C°)
Atlanta, Georgia	3
Boston, Massachusetts	-2
Chicago, Illinois	-6
Columbus, Ohio	-8
Hartford, Connecticut	-5
Miami, Florida	17.6

a. Ray compares the average December temperatures in Boston and Columbus. He says, "Boston is colder than Columbus because -2 < -8"
Do you agree with Ray? Explain your reasoning.

b. Write an inequality to compare the average December temperatures in Hartford to Chicago. Where is it warmer?

8. What coordinates best represent the location of point K on coordinate plane A?

a. (-7, -4)
b. (-7, 4)
c. (-4, -7)
d. (-4, 7)

9. Point L is represented by the ordered pair (4, -3) on coordinate plane B.

A. Point M is 5 units away from point L. Plot TWO different locations that could represent where point M is on the coordinate plane. List the coordinates below.

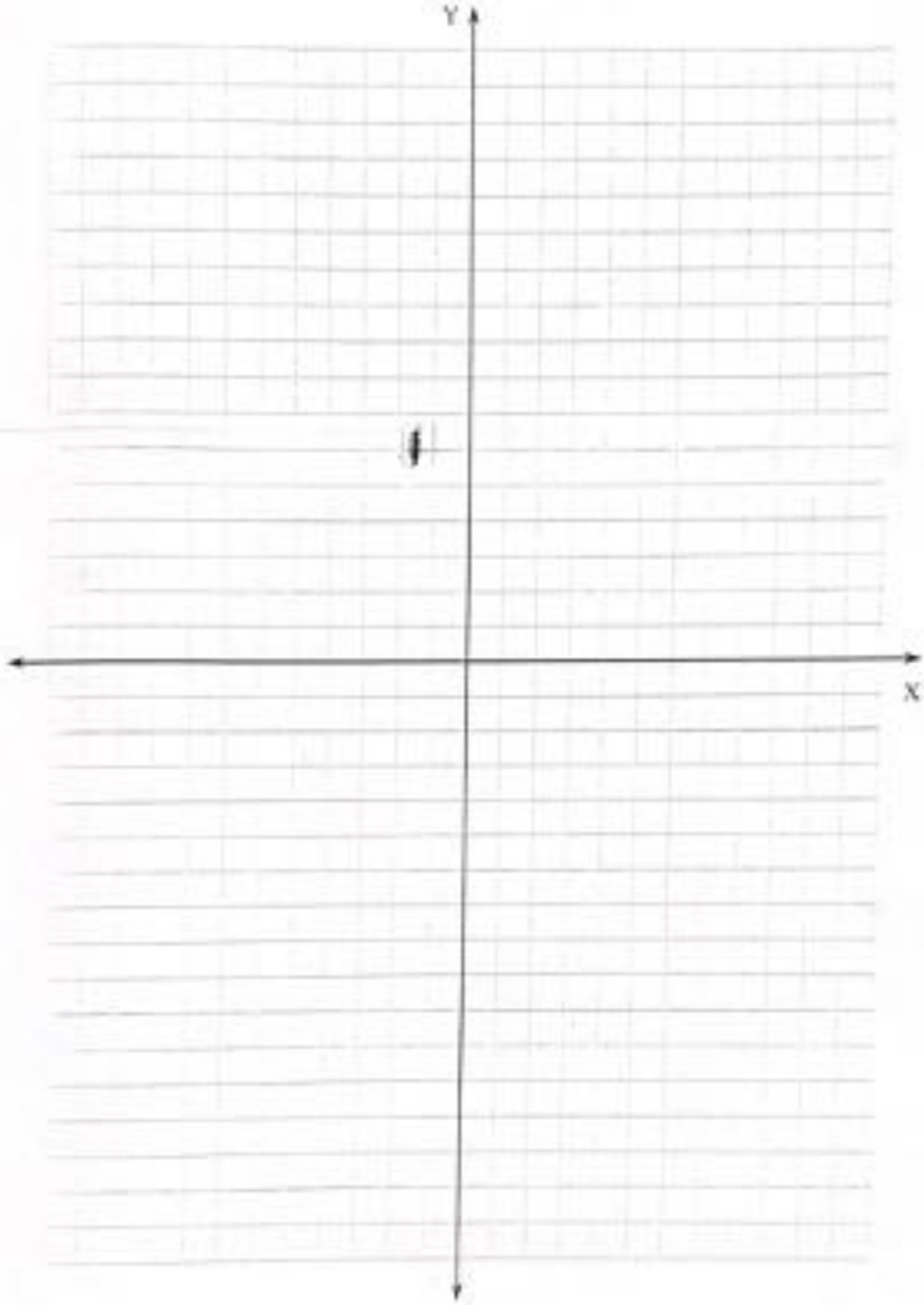
B. Point K is located at (-7, -3). What is the length of the line segment between point L and point K. Show or explain your answer using absolute value.

10. Coordinate Plane C represents a town.

a. Curtis's house is at (-4, -6) and Jean's house is at (-4,3). Plot the points where Curtis's house and Jean's house are located.
b. Each unit on the grid represents 1 mile. What is the distance between the two houses?

BONUS If Curtis can ride his bike at a constant rate of 12 miles per hour, how long would it take Curtis to ride from his house to Jean's house?

Coordinate Plane #



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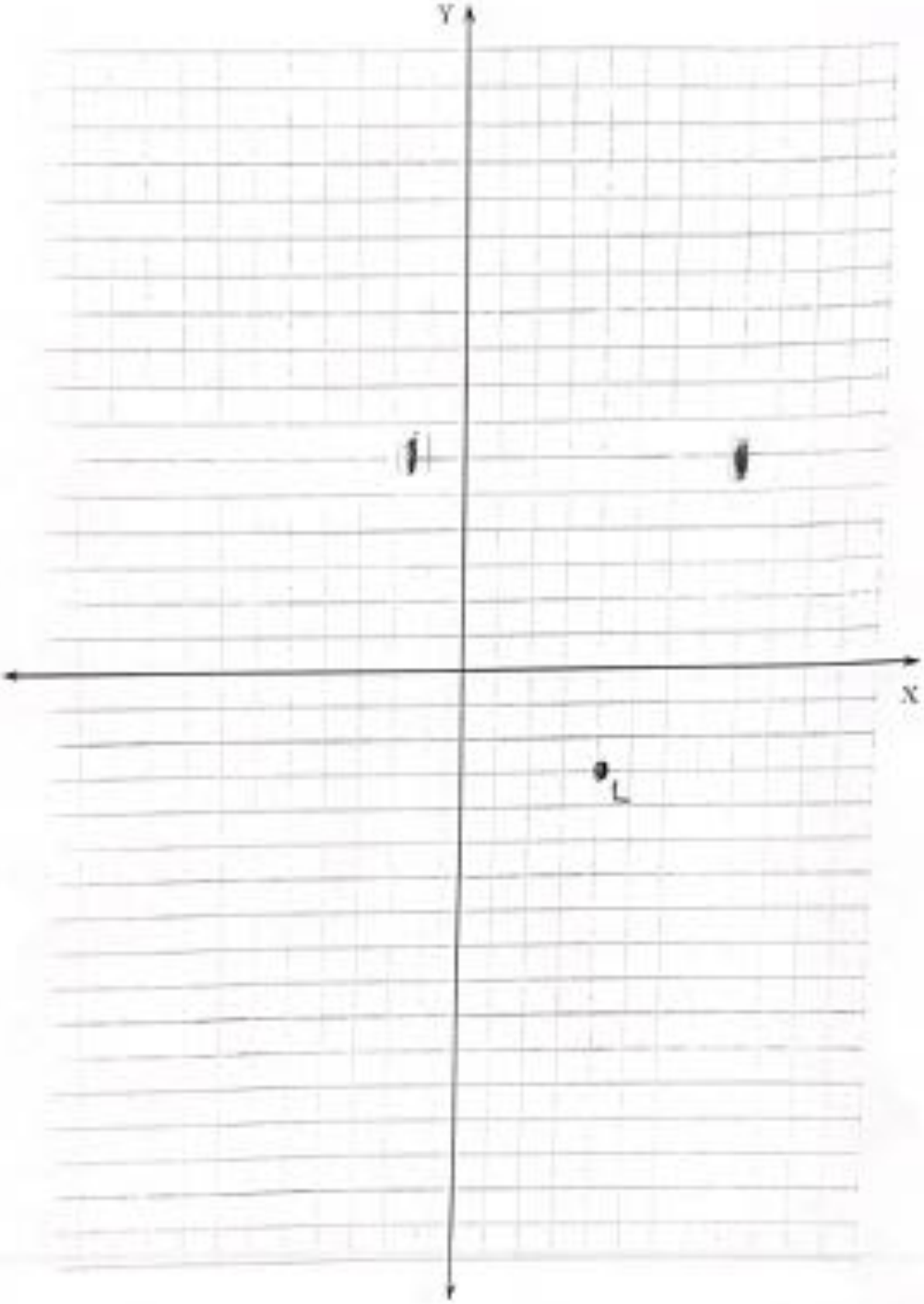
Coordinate Plane 15



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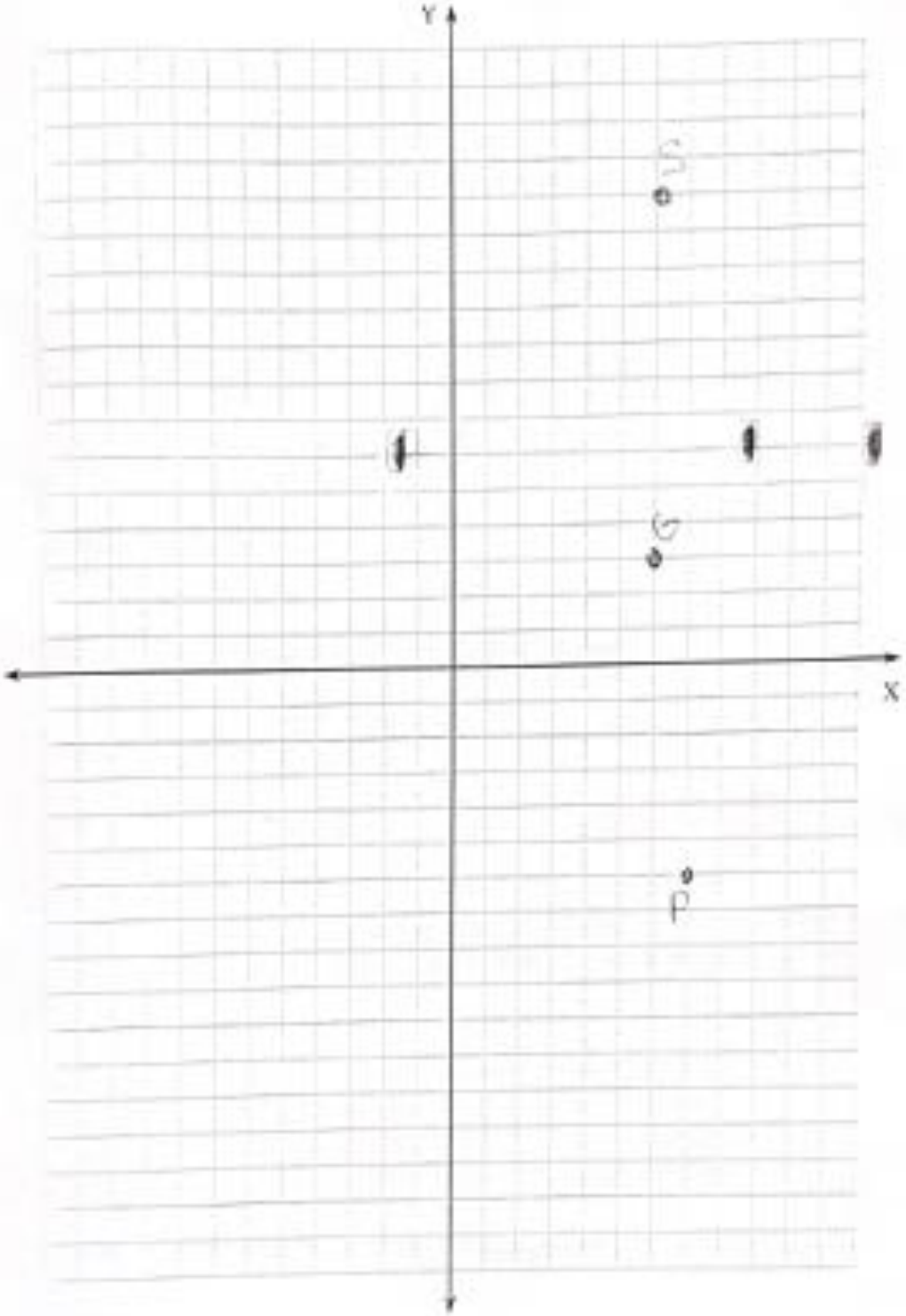
Coordinate plane



S= School
G= Grocery store
P= Post office

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