Lesson 14-1

Monday, April 27, 2020 9:03 AM

MB 777

Name

Lesson 14-1
The Coordinate System

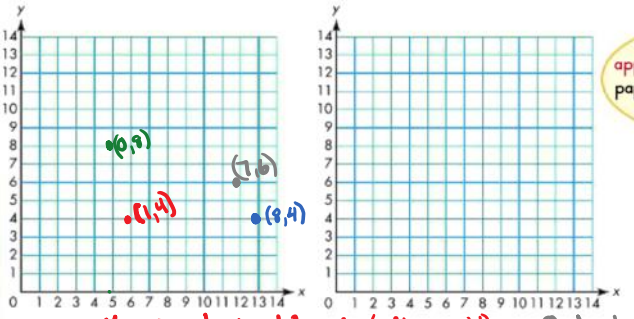
Solve & Share

On the first grid, plot a point where two lines intersect. Name the location of the point. Plot and name another point. Work with a partner. Take turns describing the locations of the points on your first grid. Then plot the points your partner describes on your second grid. Compare your first grid with your partner's second grid to see if they match. *Use the grids below to solve this problem.*

I can ...
locate points on a coordinate grid.

Content Standard 5.G.A.1
Mathematical Practices MP.2, MP.3, MP.4, MP.5, MP.6

On the first grid, plot and label the following points: (8,4), (1,4), (0,8), and (7,6)



X-axis - horizontal axis (left to right)
y-axis - vertical axis (up and down)
The origin is where the two axis meet at (0,0)

Ordered Pairs are written as (x,y).

You can use appropriate tools such as grid paper to graph ordered pairs. *Show your work!*

Look Back! MP.3 Construct Arguments Why does the order of the two numbers that name a point matter? Explain your thinking.

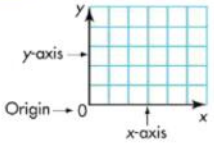
The order matters because the first number moves from O on the x-axis and the second number moves from O on the y-axis.

Essential Question: How Do You Name a Point on a Coordinate Grid?

A

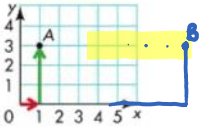
A map shows the locations of landmarks and has guides for finding them. In a similar way, a coordinate grid is used to graph and name the locations of points in a plane.

B A coordinate grid has a horizontal *x*-axis and a vertical *y*-axis. The point at which the *x*-axis and *y*-axis intersect is called the origin.



C A point on the grid is named using an ordered pair of numbers. The first number, the *x*-coordinate, names the distance from the origin along the *x*-axis. The second number, the *y*-coordinate, names the distance from the origin along the *y*-axis.

A (1, 3)



Convince Me! MP.2 Reasoning In the example above, name the ordered pair for Point *B* if it is 3 units to the right of Point *A*. Tell how you decided.

(4, 3); The 4 is where the dot is above the x-axis and across from the 3 on the y-axis.

Name _____

Guided Practice*

Do You Understand?

1. You are graphing Point *E* at (0, 5). Do you move to the right zero units, or up zero units? Explain.

Right 0 units because the x-coordinate is 0.

2. **Vocabulary** What ordered pair names the origin of any coordinate grid?

(0,0)

3. **MP.6 Be Precise** Describe how to graph Point *K* at (5, 4).

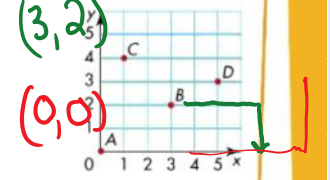
Move 5 units Right from the origin and 4 units up.

Do You Know How?

In **4** and **5**, write the ordered pair for each point. Use the grid.

4. *B* (3,2)

5. *A* (0,0)



In **6** and **7**, name the point for each ordered pair on the grid above.

6. (5, 3) D

7. (1, 4) C

Independent Practice*

In **8–13**, write the ordered pair for each point. Use the grid.

8. *T* (0,5)

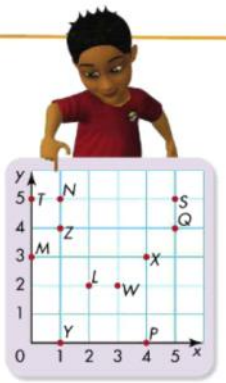
9. *X* (4,3)

10. *Y*

11. *W*

12. *Z*

13. *S*



In **14–18**, name the point for each ordered pair on the grid above.

14. (2, 2) L

15. (5, 4) Q

16. (1, 5)

17. (0, 3)

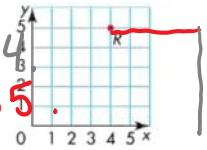
18. (4, 0)

*For another example, see Set A on page 803.

Answer
8, 9, 14, 15
19 & 27 by 1:10.

Math Practices and Problem Solving

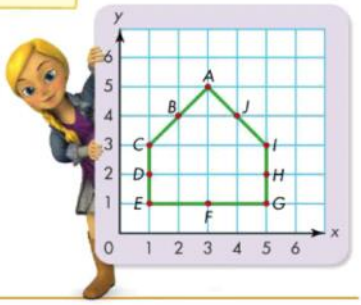
19. **Higher Order Thinking** Describe to a friend how to find and name the ordered pair for Point *R* on the grid.



From R go down to the X-axis to 4
Then go across to the y-axis to 5.
The ordered pair is (4, 5)

In **20–24**, complete the table. List the point and ordered pair for each vertex of the pentagon at the right.

	Point	Ordered Pair
20.		
21.		
22.		
23.		
24.		



25. **MP.2 Reasoning** Why is the order important when naming or graphing the coordinates of a point?

26. How are the *x*-axis and the *y*-axis related on a coordinate grid?

Common Core Assessment

27. Dina's family will visit the place located at (4, 2) on the city map. Which of the following places is located at (4, 2)?

Ⓐ Arena
Ⓑ Museum
Ⓒ Bridge
Ⓓ Park