

Represent Problems in the Coordinate Plane



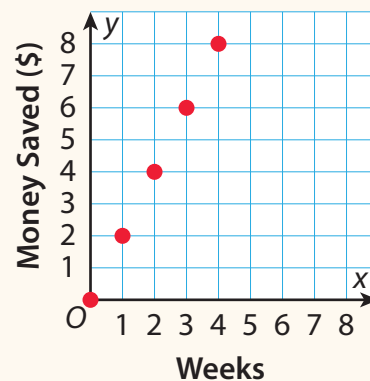
Dear Family,

This week your child is learning to solve problems by graphing points in the coordinate plane.

Your child has already learned to use ordered pairs to locate and identify points in the coordinate plane. Now your child is learning how to solve problems involving points and figures in the coordinate plane.

Carla is saving money to buy a gift for her brother. The points in the coordinate plane below show Carla's savings. How many weeks does it take Carla to save \$6?

You can solve the problem by using the axis titles to interpret the points. The x-axis represents the number of weeks that Carla has been saving money. The y-axis represents the amount of money that Carla has saved. To find the number of weeks it takes Carla to save \$6, find the point with a y-coordinate of 6. The point is (3, 6), so it takes Carla 3 weeks to save \$6.

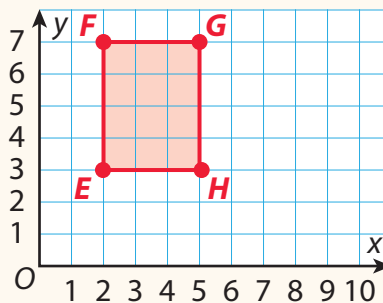


Your child is also learning to solve problems with plane figures graphed in the coordinate plane. For example, you can find the perimeter of the rectangle $EFGH$ in the coordinate plane at the right by counting the number of units on each side to find the side lengths of the rectangle. Then add the lengths to find the perimeter.

$$4 + 3 + 4 + 3 = 14$$

The perimeter of the rectangle is 14 units.

Invite your child to share what he or she knows about graphing points in the coordinate plane by doing the following activity together.



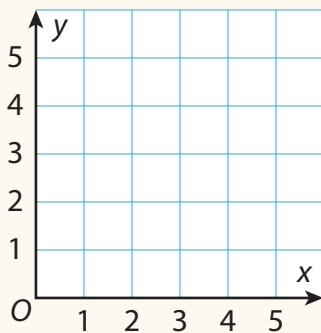
ACTIVITY GRAPHING A GEOMETRIC FIGURE

Do this activity with your child to graph a geometric figure in the coordinate plane.

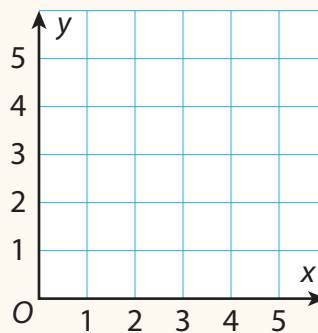
Play a game to graph points and draw matching figures in coordinate planes with your child.

- Cut out the coordinate planes below or use separate paper, so each player can draw without the other player seeing.
- Player 1 chooses 4 points, marks them, and labels them *A*, *B*, *C*, and *D*. He or she should make sure that the other player does not see the marked points.
- Player 1 connects the points with lines to draw a figure with 4 sides, making sure that the other player does not see the 4-sided figure.
- Player 1 lists the *x*- and *y*-coordinates for each point in the table.
- Player 2 uses the table to graph the points in his or her own coordinate plane. He or she connects the points to form a 4-sided figure.
- Now players compare the figures in their coordinate planes. Are they the same?

Point	<i>x</i>	<i>y</i>
<i>A</i>		
<i>B</i>		
<i>C</i>		
<i>D</i>		



Player 1



Player 2