Name_____ Date _____

4.6 Writing Equations in Slope-Intercept Form

For use with Activity 4.6

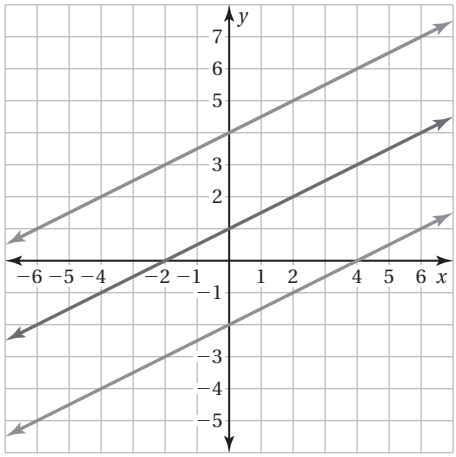
Essential Question How can you write an equation of a line when you are given the slope and *y*-intercept of the line?

1 ACTIVITY: Writing Equations of Lines

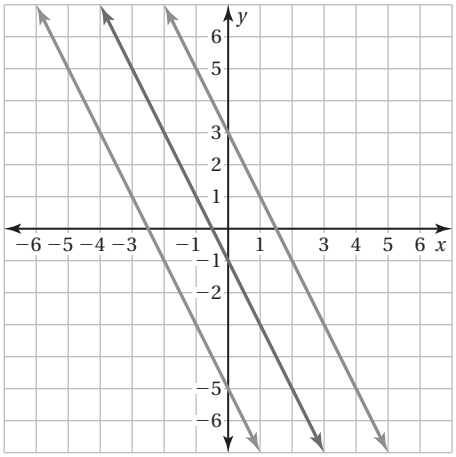
Work with a partner.

- **Find the slope of each line.**
- **Find the *y*-intercept of each line.**
- **Write an equation for each line.**
- **What do the three lines have in common?**

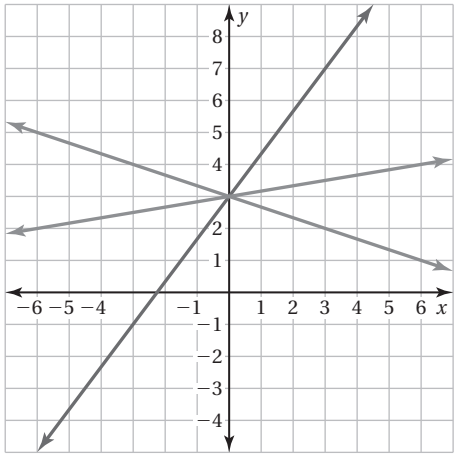
a.



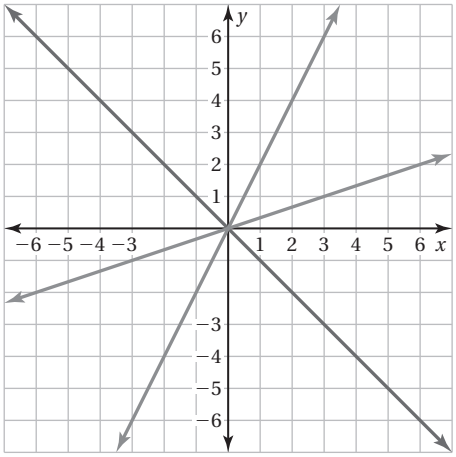
b.



c.



d.



Name _____ Date _____

4.6 Writing Equations in Slope-Intercept Form (continued)

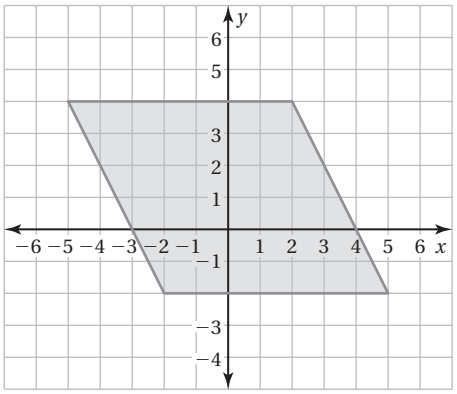
2 ACTIVITY: Describing a Parallelogram

Work with a partner.

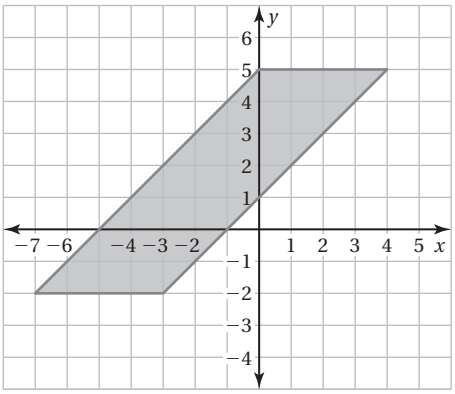
- **Find the area of each parallelogram.**

- **Write an equation that represents each side of each parallelogram.**

a.



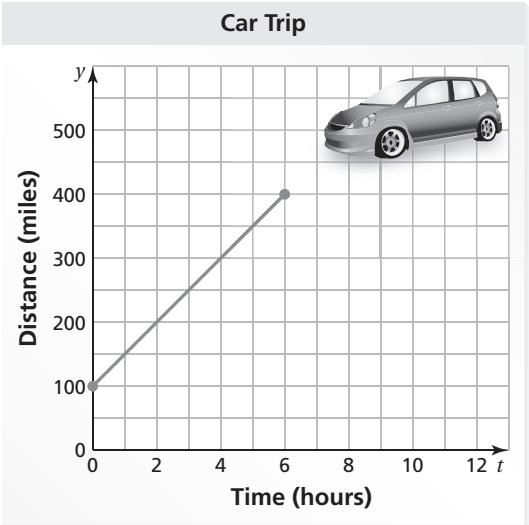
b.



3 ACTIVITY: Interpreting the Slope and the *y*-Intercept

Work with a partner. The graph shows a trip taken by a car, where *t* is the time (in hours) and *y* is the distance (in miles) from Phoenix.

a. Find the *y*-intercept of the graph. What does it represent?



4.6 Writing Equations in Slope-Intercept Form (continued)

b. Find the slope of the graph. What does it represent?

c. How long did the trip last?

d. How far from Phoenix was the car at the end of the trip?

e. Write an equation that represents the graph.

What Is Your Answer?

4. IN YOUR OWN WORDS How can you write an equation of a line when you are given the slope and the y-intercept of the line? Give an example that is different from those in Activities 1, 2, and 3.

5. Two sides of a parallelogram are represented by the equations $y = 2x + 1$ and $y = -x + 3$. Give two equations that can represent the other two sides.