Name _____ Date _____

LESSON 5.5

Practice B

For use with pages 318–324

Write an equation of the line that passes through the given point and is parallel to the given line.

1. $(4, 7), y = 5x - 3$

2. $(3, -2), y = \frac{2}{3}x + 1$

3. $(-6, 1), 4x + y = 7$

4. $(-5, -5), 6x - y = 1$

5. $(0, -8), 8x + 4y = 5$

6. $(-9, 11), 5x - 10y = 3$

Write an equation of the line that passes through the given point and is perpendicular to the given line.

7. $(1, -1), y = 3x + 2$

8. $(5, 0), y = \frac{2}{3}x - 4$

9. $(3, -7), y = -\frac{1}{5}x + 1$

10. $(-9, 2), 10x - 5y = 6$

11. $(10, -11), -2x + 5y = 1$

12. $(-4, -8), 8x + 3y = 7$

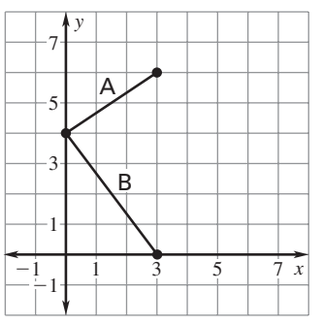
Determine which of the following lines, if any, are parallel or perpendicular.

13. Line a: $y = 8x - 5$, Line b: $y = \frac{1}{8}x + 1$, Line c: $8x + y = 2$

14. Line a: $y = -2x + 5$, Line b: $2y - x = 3$, Line c: $2x + y = 1$

15. Line a: $6x + 2y = 5$, Line b: $y = \frac{1}{3}x - 4$, Line c: $y = -3x + 5$

16. **Kite Design** You are beginning to model a kite design on the coordinate plane, as shown.



a. Write an equation that models part A of the kite.

b. Write an equation that models part B of the kite.

c. Do the kite parts form a right angle? *Justify* your answer.

17. **Lunch Duty** Everyone at camp takes turns being on lunch duty. You and your friend are in charge of making sandwiches. You both can make 1 sandwich in 2 minutes. Your friend arrives 10 minutes earlier than you and starts making sandwiches.

a. Write equations that model the number of sandwiches made as a function of the number of minutes it takes you and your friend to each make sandwiches.

b. How many sandwiches will each of you make in 20 minutes?

c. How are the graphs of the equations from part (a) related? *Justify* your answer.