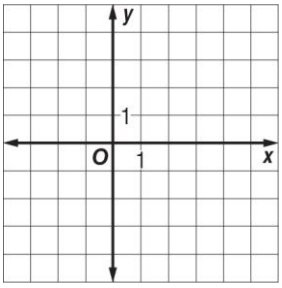
NAME _____ DATE _____ PERIOD _____

Lesson 5 Skills Practice

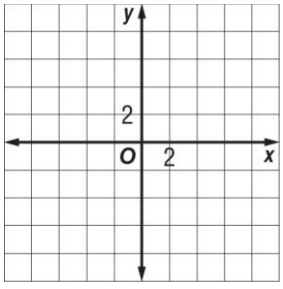
Graph a Line Using Intercepts

State the *x*- and *y*-intercepts of each function. Then graph the function.

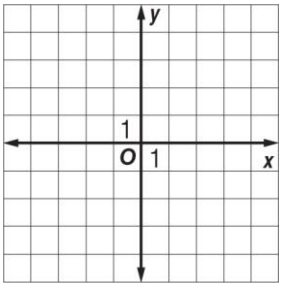
1. $3x - 5y = 15$



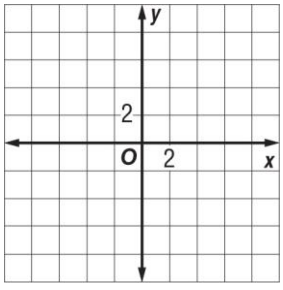
2. $-\frac{1}{2}x + 3y = -3$



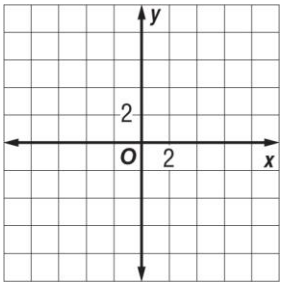
3. $4x - 6y = 12$



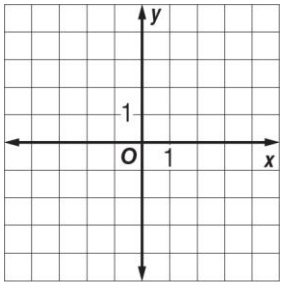
4. $7x + 3y = -21$



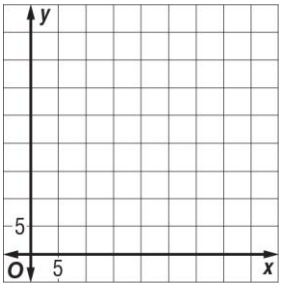
5. $\frac{2}{3}x - \frac{1}{3}y = 2$



6. $-x + y = -2$



7. DRINKS Ms. Purdy bought coffee and orange juice for her coworkers in her office. She bought *x* cups of coffee at $2 per cup and *y* cups of orange juice at $1.50 per cup. Altogether she spent $30. This can be represented by the function $2x + 1.5y = 30$. Graph the function. Then interpret the *x*- and *y*-intercepts.



NAME _____ DATE _____ PERIOD _____

Lesson 5 Problem-Solving Practice

Choose 4!

Graph a Line Using Intercepts

1. FOOTBALL Tyrell plays running back and kicks field goals for his team. He scores 6 points for a touchdown and 3 points for a field goal. In his last game, he scored 24 points. This can be represented by the function $6x + 3y = 24$. Find the x- and y-intercepts. Interpret the x- and y-intercepts.

2. GARDENING Mr. Bigelow's garden is a rectangle with dimensions x feet long by y feet wide. Its perimeter is 70 feet.

a. Write a function to represent the perimeter of his garden.

b. What are the x- and y-intercepts of the function?

c. Does either intercept make sense as a solution for this situation? Explain.

3. SCHOOL DANCE The sign below indicates the cost of attending the big dance. In all, \$320 was made. This can be represented by the function $2x + 5y = 320$. Find the x- and y-intercepts. What do they represent?

Dance Ticket Prices	
Fr./Soph.	\$2
Jr./Sr.	\$5

4. CONSTRUCTION Jack bought x picks costing \$30 each and y shovels costing \$40 each. In all he spent \$240.

a. Write a function to represent this situation.

b. What are the x- and y-intercepts of the function?

c. What do the intercepts represent?

5. BRICKS Jarrod is putting in a sidewalk using two different style bricks. One style brick is 8 inches long and he intends to use x of these bricks. The other style brick is 6 inches long and he intends to use y of these. His sidewalk is to be 288 inches long.

a. Write a function to represent this situation.

b. What are the x- and y-intercepts of the function? What do they represent?