Name _____ Date _____ Class _____

SECTION 5A

Ready To Go On? Skills Intervention

5-2 Using Intercepts

Find these vocabulary words in Lesson 5-2 and the Multi-Language Visual Glossary.

Vocabulary	
y-intercept	*x*-intercept

Graphing Linear Equations by Using Intercepts

Use intercepts to graph the line described by the equation $5x - 2y = 10$.

STEP 1: The *x*-intercept is the point where the line _____ the ____-axis.

The *y*-coordinate for the *x*-intercept is always ____.

Find the *x*-intercept of $5x - 2y = 10$.

$5x - 2(\_\_\_\_) = 10$ Substitute $y = 0$.

$5x - (\_\_\_\_) = 10$ Multiply.

$5x = 10$

$x = \_\_\_\_$

The point where $5x - 2y = 10$ crosses the *x*-axis is (____, 0).

STEP 2: The *y*-intercept is the point where the line _____ the ____-axis.

The *x*-coordinate for the *y*-intercept is always ____.

Find the *y*-intercept of $5x - 2y = 10$.

$5(\_\_\_\_) - 2y = 10$ Substitute $x = 0$.

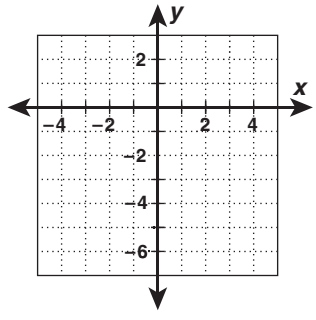
$(\_\_\_\_) - 2y = 10$ Multiply.

$-2y = 10$

$y = \_\_\_\_$

The point where $5x - 2y = 10$ crosses the *y*-axis is (0, ____).

STEP 3: The *x*-intercept is (____, 0). Plot this point on the coordinate system. The *y*-intercept is (0, ____). Plot this point on the coordinate system. Connect these two intercepts with a straight line.



Name _____ Date _____ Class _____

SECTION 5A

Ready to Go On? Problem Solving Intervention

5-2 Using Intercepts

The intercepts of the graph of a linear function are specific points on the line. They are the points where the line intersects each axis.

Jaime earns a monthly allowance of $50. He currently owes his mom $250 for money she let him borrow. The function $f(x) = 50x - 250$ represents Jaime's current allowance status, where x = months. Graph the function and find its intercepts. What does each intercept represent?

Understand the Problem

1. What does x represent? _____

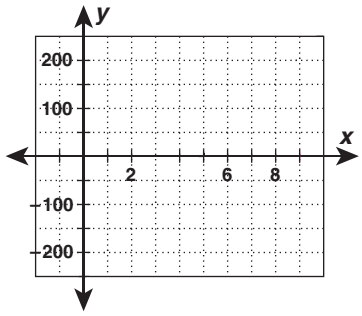
2. What does $f(x)$ represent? _____

Make a Plan

3. Use the function $f(x) = 50x - 250$ to complete the table.

x	0	1	2	3	4	5
y	−250					0

Solve



4. Graph the ordered pairs from the table.

5. Name the ordered pair of the y-intercept. _____

6. The y-intercept represents the amount of _____ Jaime owes his _____.

7. Name the ordered pair of the x-intercept. _____

8. The x-intercept represents the number of _____ that will pass before Jaime has paid off his mom.

Look Back

9. To check your answer, substitute the intercepts into the function.

x-intercept: _____

$f(\_\_\_) = 50(\_\_\_) - 250$

$f(\_\_\_) = \_\_\_\_\_ - 250$

$f(\_\_\_) = \_\_\_$

y-intercept: _____

$f(\_\_\_) = 50(\_\_\_) - 250$

$f(\_\_\_) = \_\_\_ - 250$

$f(\_\_\_) = \_\_\_\_\_$

10. Do the intercepts make the function true? _____