Name _____ Date _____

Skills Maintenance

Substitution

Activity 1

Substitute the value of the variable and solve.

1. Solve $y = 3x$ if $x = 5$. _____
2. Solve $y = 2x$ if $x = 1$. _____
3. Solve $y = 5x$ if $x = 5$. _____
4. Solve $y = x + 4$ if $x = 1$. _____
5. Solve $y = 7x + 23$ if $x = 7$. _____
6. Solve $y = -3x + 5$ if $x = 4$. _____
7. Solve $y = 4x - 10$ if $x = -2$. _____
8. Solve $y = -9x - 10$ if $x = -3$. _____

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Unit Review

Introduction to Functions

Activity 1

Write a function based on each table of data.

1.

x	*y*
9	27
2	6
5	15
4	12

Function _____

2.

x	*y*
−3	3
4	10
−10	−4
2	8

Function _____

Activity 2

Write a function for each word problem.

1. The water bill for your house depends on how much water you use. You probably use a lot more in the summer. The water company has a basic charge of $20 per month plus $3 for every hundred gallons that you use. _____

2. Campino's Go-Cart Track is a place for serious go-cart drivers. If you want to drive a lot, Campino has a special rate. It's $10 a week plus $3 a race. You can race as many times as you want during the week. Leo loves go-carts and spent $43 last week at Campino's. How many races was she in? _____

Name _____ Date _____

Unit Review

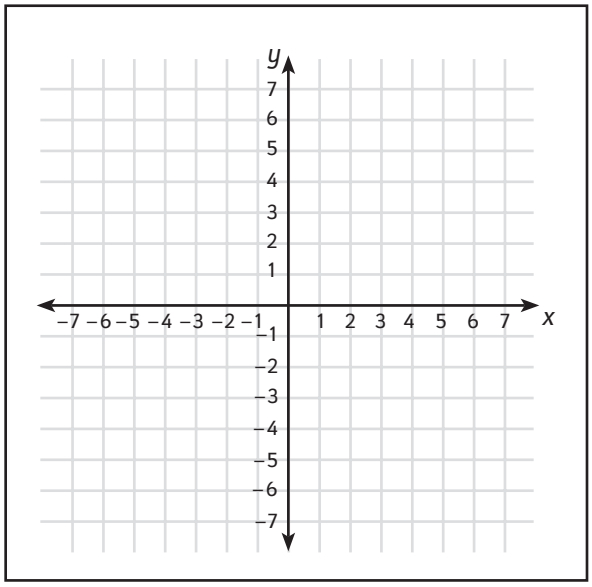
Working With Coordinate Graphs

Activity 1

Create an *x*/*y* table based on the function. Then plot the function on the coordinate graph.

$y = 2x - 3$

x	*y*



Draw the lines for this function on the coordinate graph: $y = \frac{1}{2}x + 4$.

Where do the two lines meet? _____

Activity 2

Answer the questions about each function.

1. Which line is steeper?
   - **(a)** $y = 2x + 3$
   - **(b)** $y = \frac{1}{2}x + 3$
   - **(c)** $y = 3x + 2$
   - **(d)** $y = x + 5$

2. Which line is steeper?
   - **(a)** $y = 4x$
   - **(b)** $y = \frac{3}{4}x$
   - **(c)** $y = x + 6$
   - **(d)** $y = \frac{1}{2}x + 10$

Name _____ Date _____

Activity 3

Use algebra to answer the questions. Decide which scenario will give you the best deal. Then graph the functions for each problem on a coordinate graph and label the point where they intersect.

1. Your family decides it needs new carpet in the entire house. You can pay for the carpet and the work to install it in two ways:

a: Pay $50 per month.

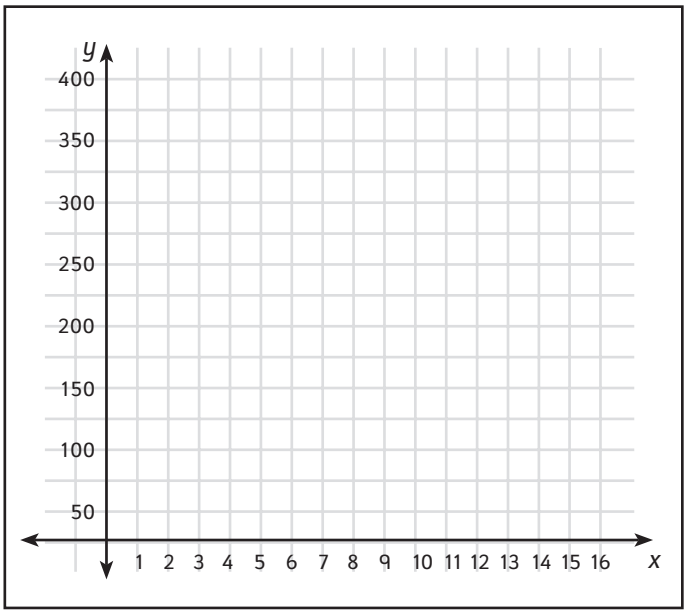
b: Pay $100 down and $25 per month.

When will you pay the same amount?

_____

What plan is the better deal?

_____



2. You want to make as much money as you can in your summer job. You have two jobs to choose from. Each job will pay you by the week.

a: You can work on the factory floor for $10 an hour.

b: You can work on the night shift cleaning floors. You make $30 per week as a base pay and $8 per hour.

When will you make the same amount of money?

_____

Which job should you take?

_____