

Function Review/Extension from Day 1

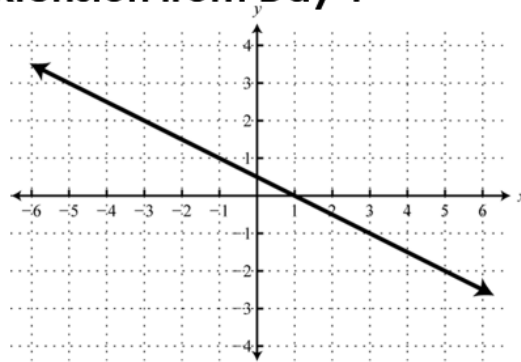
Evaluate the function using the following graph.

a. $f(-1) =$ _____

b. $f(3) =$ _____

c. $f(\text{_____}) = 0$

d. $f(\text{_____}) = 3$



$$f(x) = 4x - 2$$

Evaluate the following expressions given: $g(x) = 3x - 3$

$$h(x) = 8x + 10$$

a. Find $f(3)$

b. Find $h(-2)$

c. Find x if $f(x) = 2$

d. Find x if $g(x) = 12$

e. Find x if $h(x) = 10$

f. Find x if $f(x) = 1$

Foundations of Algebra

Unit 5: Linear Functions

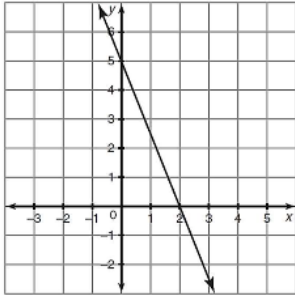
Extra Practice

Writing Equations of Lines Given a Graph

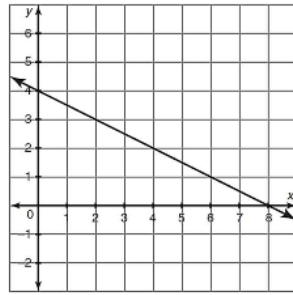
Name: _____

Date: _____ Block: _____

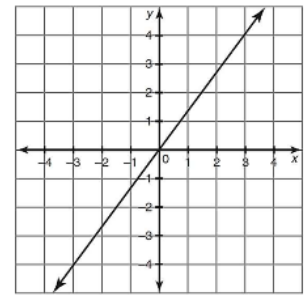
1. m: _____ b: _____ eqtn: _____



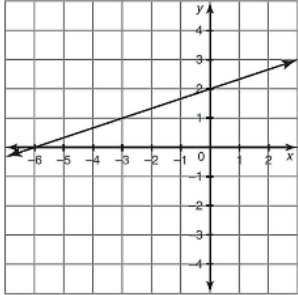
2. m: _____ b: _____ eqtn: _____



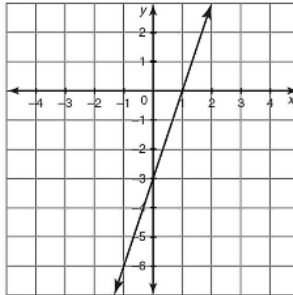
3. m: _____ b: _____ eqtn: _____



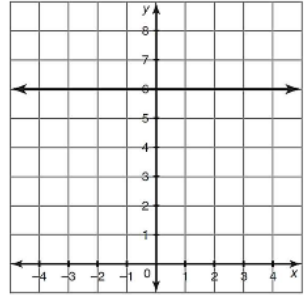
4. m: _____ b: _____ eqtn: _____



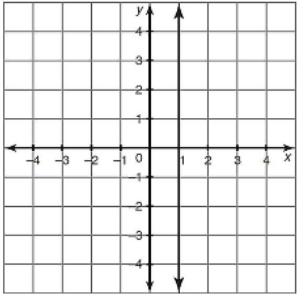
5. m: _____ b: _____ eqtn: _____



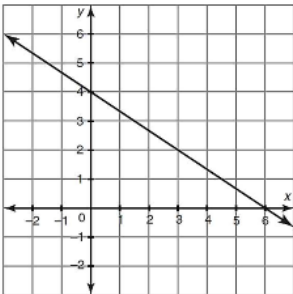
6. m: _____ b: _____ eqtn: _____



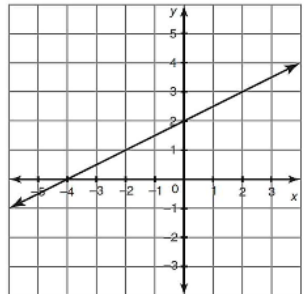
7. m: _____ b: _____ eqtn: _____



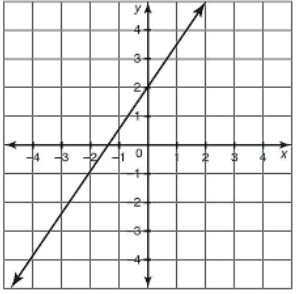
8. m: _____ b: _____ eqtn: _____



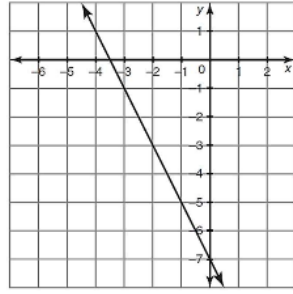
9. m: _____ b: _____ eqtn: _____



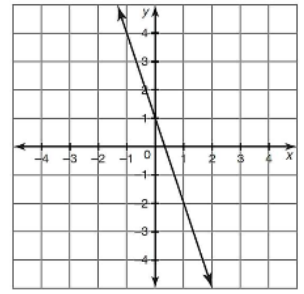
10. m: _____ b: _____ eqtn: _____



11. m: _____ b: _____ eqtn: _____



12. m: _____ b: _____ eqtn: _____



Foundations of Algebra

Unit 5: Linear Functions

Practice

Extra-Graphing Horizontal & Vertical Lines/Inequalities

Name: _____

Practice Assignment

Date: _____ Block: _____

Directions: Show three points that satisfy each equation. Name the slope and y-intercept. Graph.

1. $y = -2$

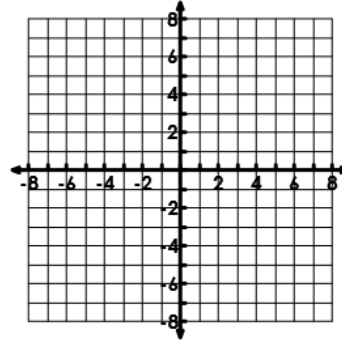
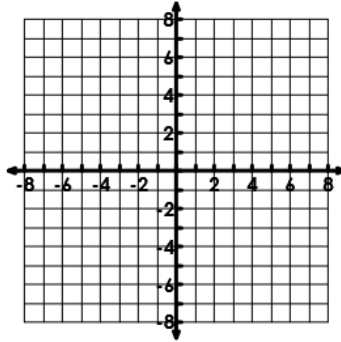
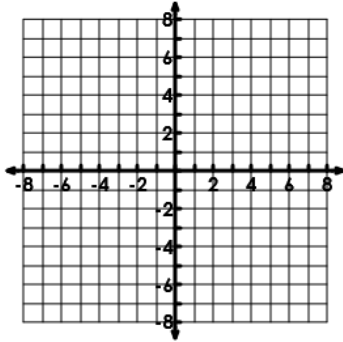
2. $x = 4$

3. $x = -3$

Slope: _____ Y-int: _____

Slope: _____ Y-int: _____

Slope: _____ Y-int: _____



4. $y = -5$

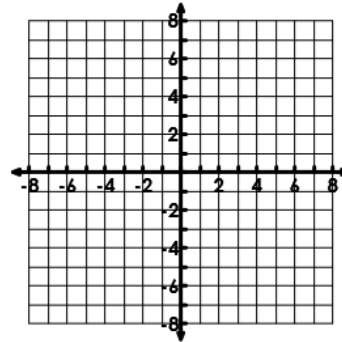
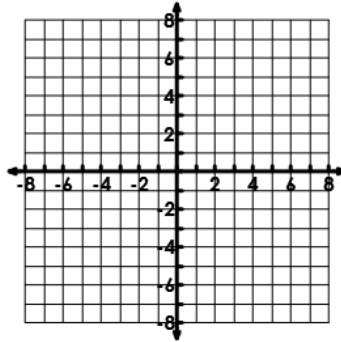
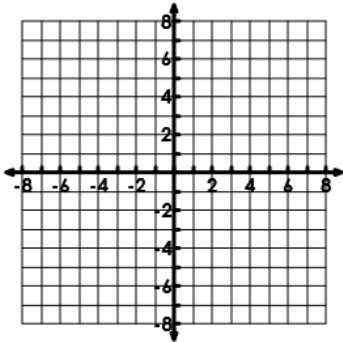
5. $x = 1$

6. $y = 0$

Slope: _____ Y-int: _____

Slope: _____ Y-int: _____

Slope: _____ Y-int: _____



7. $x = -8$

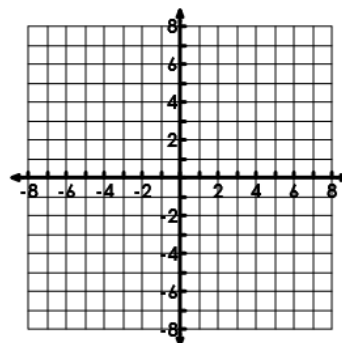
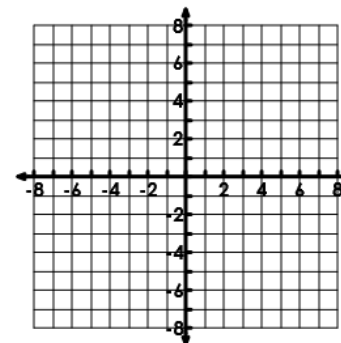
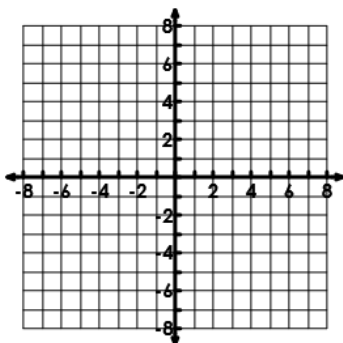
8. $y = 7$

9. $x = 6$

Slope: _____ Y-int: _____

Slope: _____ Y-int: _____

Slope: _____ Y-int: _____



Foundations of Algebra

Unit 5: Linear Functions

Additional Practice

Slope Practice

Find the slope from the give representations. Provide a labeled answer.

a.

| Number of Balloons | Total Cost of Balloons (in Dollars) |
|--------------------|-------------------------------------|
| 2 | 6 |
| 4 | 12 |
| 6 | 18 |
| 8 | 24 |

b.

| Number of Hours | Total Number of Miles Traveled |
|-----------------|--------------------------------|
| 2 | 130 |
| 5 | 325 |
| 8 | 520 |
| 11 | 715 |

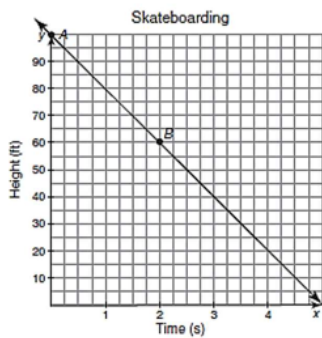
c.

| Number of Photos Printed | Total Cost of Photos (in Dollars) |
|--------------------------|-----------------------------------|
| 10 | 2 |
| 20 | 4 |
| 30 | 6 |
| 40 | 8 |

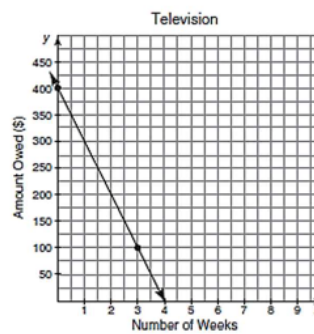
d.

| Number of Greeting Cards | Total Cost of Greeting Cards (in Dollars) |
|--------------------------|-------------------------------------------|
| 2 | 6.50 |
| 3 | 9.75 |
| 6 | 19.50 |
| 8 | 26.00 |

e. Dwayne is riding his skateboard down a hill



f. What Roger owes on his TV



g. $2x + 3y = 21$

h. $8y - 2x = 24$

i. $y = 8$

j. $x = 2$

k. $(7, 1)$ and $(21, 11)$

l. $(2, -7)$ and $(4, -10)$

m. Jamal is shopping with a gift card he received for his birthday. After he purchases two T-shirts, the gift card balanced dropped from \$50 to 20.02. What is the cost per shirt?

n. Rachel loves reading and is participating in a read a thon to raise money for a charity. She plans to read 15 books during the 90 day period. During the first 30 days, she reads 7 books. What is the unit rate of the number of days she has to read each book to reach her goal?

Independent & Dependent Quantities Extra Practice

Directions: Read each scenario. Define what your independent and dependent quantities are, then define a variable for them, and then write a function rule for the scenario.

1. Meredith opened a savings account and put \$1800 in it. From there, she is going to save \$75 per month.

Independent Quantity: _____ Variable: _____

Dependent Quantity: _____ Variable: _____

Function Rule: _____

2. Jaylen is draining her fish tank at a rate of 1.2 gallons per minute. The tank contains 110 gallons of water.

Independent Quantity: _____ Variable: _____

Dependent Quantity: _____ Variable: _____

Function Rule: _____

3. Lauren has already read 55 pages of a novel. Each day, she reads another 30 pages.

Independent Quantity: _____ Variable: _____

Dependent Quantity: _____ Variable: _____

Function Rule: _____

4. A manager is hired at a starting salary of \$60,000 per year. Each year, her salary increases by \$5,000.

Independent Quantity: _____ Variable: _____

Dependent Quantity: _____ Variable: _____

Function Rule: _____

5. A hair stylist earns \$70 each day she works in addition to \$20 for each haircut. Write a function that reflects one day of work.

Independent Quantity: _____ Variable: _____

Dependent Quantity: _____ Variable: _____

Function Rule: _____

Accelerated Algebra I
Section 8.5: Linear Equation Word Problems

Word problems in Slope-intercept form

When a word problem involves a constant rate or speed and a beginning amount, it can be written in slope-intercept form: $y = mx + b$. To do this, recognize which number will represent m , the rate, and which number will represent b , the y-intercept.

1. You are visiting Baltimore, MD and a taxi company charges a flat fee of \$3.00 for using the taxi and \$0.75 per mile.
 - A. Write an equation that you could use to find the cost of the taxi ride in Baltimore, MD. Let x represent the number of miles and y represent the total cost.
 - B. How much would a taxi ride for 8 miles cost?
 - C. If a taxi ride cost \$15, how many miles did the taxi travel?

2. A plumber charges \$50 to make a house call. He also charges \$25.00 per hour for labor.
 - A. Write an equation that you could use to the amount a plumber charges for a house call based on the number of hours of labor.
 - B. How much would it cost for a house call that requires 2.5 hours of labor?
 - C. If the bill from the plumber is \$162.50, how many hours did the plumber work at your house?

3. An airplane 30,000 feet above the ground begins descending at the rate of 2000 feet per minute. Assume the plane continues at the same rate of descent. The plane's height and minutes above the ground are related to each other.
 - A. Write an equation to model the situation.
 - B. Find the altitude of the plane after 5 minutes.