

Name: _____

Date: _____

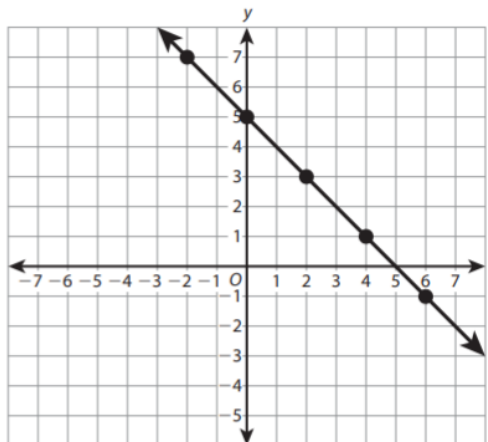
Ms. Streffacio

Class: _____

I can:

Do Now (3 minutes to complete):

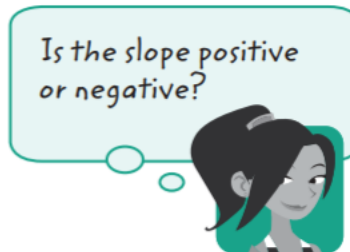
Write an equation for the function shown in the graph. Identify the slope and the y -intercept. Then graph a different linear function that has the same slope as the function shown. Write an equation for your function.



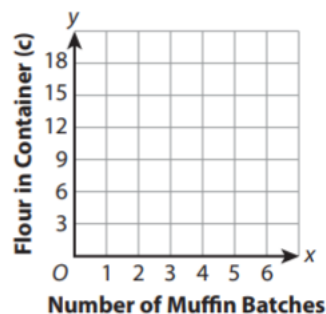
Teacher Model (10 minutes) You Watch, Listen, Copy:

Martin has an 18-cup container of flour that he uses for muffins only. He uses 3 cups of the flour for every batch of muffins he makes. Write an equation to show how much flour is left in the container after x batches of muffins. Then graph the function.

Show your work.



Flour Use



Solution: _____

Check for Understanding- Did you understand the Model? (2 minutes) Teacher will check!

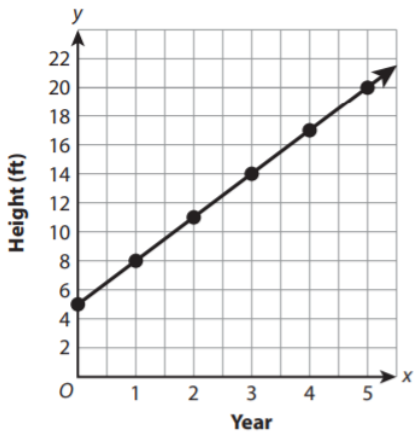
A restaurant has a container that holds 25 gallons of lemonade. They sell lemonade at a rate of about 2.5 gallons per hour. Suppose that the container is full. Write an equation that shows how much lemonade y (in gallons) is in the container after x hours. Identify the slope and the y -intercept.

Show your work.

Solution: _____

We Do Together (10 minutes):

Lila planted a tree in her backyard. She made this graph to show the tree growth over 5 years.



Part A

Complete the equation to correctly show how to find the slope for the function shown in the graph.

$$\text{slope} = \frac{\square - 8}{5 - \square} = \frac{\square}{4} = \square$$

Part B

What is the y-intercept for the function shown in the graph?

Answer: The y-intercept is _____.

Part C

Explain what the slope and y-intercept mean in the context of the problem.

Final Check for Understanding before I send you to Independent Practice! Teacher will Check (4 minutes):

Filipe is paid \$1,000 every month plus an additional \$150 bonus for every tractor he sells, x . Write an equation to represent the total amount of money, y , Filipe makes each month.

Answer: _____

Independent Practice (on your own):

Beginning in 2000, a sports team increased its ticket price by a constant amount each year until 2010.

- A ticket cost \$48 in 2005.
- A ticket cost \$55.50 in 2008.

How much did a ticket cost in 2000? Express the answer as dollars and cents.

Answer \$ _____

Line n passes through the points $(-3, -7.5)$ and $(2, -5)$. Tahlia determined that the equation of line n is $y = 0.5x$. Explain the error Tahlia made while determining her equation. Be sure to include the correct equation in your explanation.

Answer

The values given in the table below lie on the graph of a linear function.

x	y
0.25	1.00
0.50	1.75
0.75	2.50

What equation represents this linear function?

Show your work.

A storm moves at a rate of 8 miles per hour. It is 200 miles away from Freeport and headed directly for this town. The equation $y = 200 - 8x$ can be used to represent this function. Identify the slope and y -intercept and explain what they represent.

Tim is selling tickets to a school sporting event to raise money for his club. He put some extra money in his box before he began. As he sells tickets, he records the number of tickets he has sold and the total amount of money in the box. Some of his data are shown below.

**TOTAL AMOUNT OF MONEY
FROM TICKET SALES**

Number of Tickets Sold	Total Money in Box (dollars)
7	108.75
13	146.25
18	177.50

Assuming all the tickets are the same price, write an equation that represents the situation in the table. Explain how to use your equation to determine the amount of money originally in the box before any tickets were sold and the price of each ticket.

Show your work.

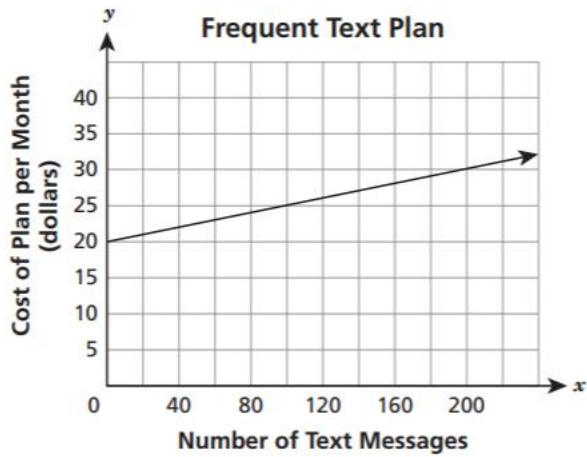
Answer

A customer is comparing two different text message plans at Cellular Bargains. He wants to find out which plan allows the most text messages for the same cost.

The Pay Per Text Plan charges \$10 per month and \$0.10 for each text message. Write a function that models this plan, stating what your variables represent.

Answer _____

The Frequent Text Plan is modeled by the graph shown below.

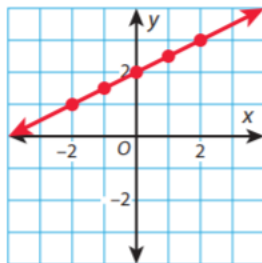


How many text messages would result in the same cost per month for the two plans?

Show your work.

Write an equation for the graph. Identify the slope and y-intercept.

Show your work.



Solution _____

A 50-gallon rain barrel is filled to capacity. It drains at a rate of 10 gallons per minute. Write an equation to show how much water is in the barrel after x minutes of draining.

Show your work.

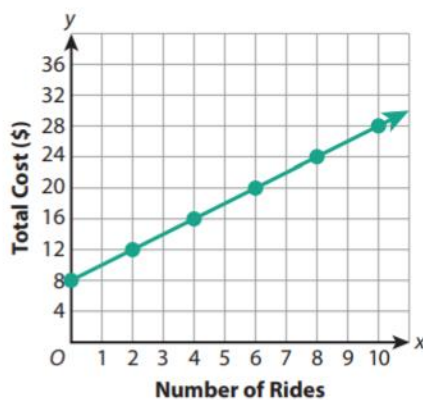
Answer _____

Write an equation for the table of values. Explain how you got your answer.

x	0	1	2	3	4
y	1	5	9	13	17

An amusement park charges \$8 for admission and \$2 for each ride. Use the graph to find the slope and the y -intercept. Then write an equation for the function that relates the total cost to the number of rides.

Show your work.



Solution: _____

A taxi service charges a pick-up fee plus a charge for each mile driven. The equation $y = 1.8x + 5$ gives the total cost y to travel x miles in the taxi. Complete the table. Explain how to use the table to find the slope and the y -intercept for this function.

x	0	10	20	30	40
y					

A different taxi service charges a pick-up fee of \$4 plus a charge of \$1.75 per mile driven. Write an equation for this function, and identify the slope and the y -intercept.

Enrico is filling his pool. The pool has 3,000 gallons of water in it now. The water hose that Enrico uses puts 500 gallons per hour into the pool. Write an equation for the number of gallons y of water in the pool after x hours. Identify the slope and the y -intercept.

The Peach Festival charges \$12 for admission and \$2.25 for each pound of peaches picked. Write an equation for the total cost y if you pick x pounds of peaches. Use your equation to find the total cost of attending the festival and picking 5 pounds of peaches.

Show your work.