



Objective

Using Multiple Representations to Solve Problems

Warm-Up



1. How many minutes are in a quarter of an hour?

2. How many minutes are in an hour and a half?

3. How is five and a half minutes written as a decimal?

GETTING STARTED

Matching Game

Four equations are given. Match each equation to a graph or table and explain your reasoning. Then, complete the table and graph for the unmatched equation.

Equations

1. $y = 6$

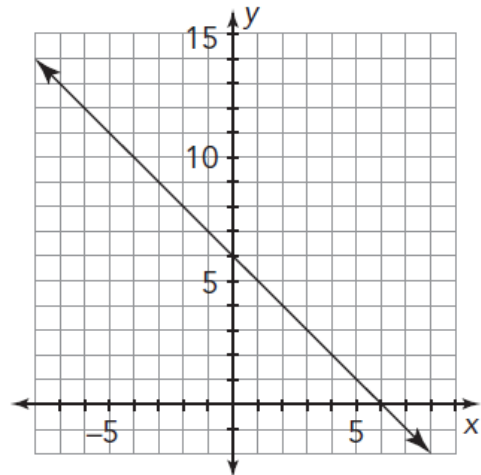
2. $y = \frac{1}{6}x$

3. $y = -x + 6$

4. $2x + y = 6$

Tables and Graphs

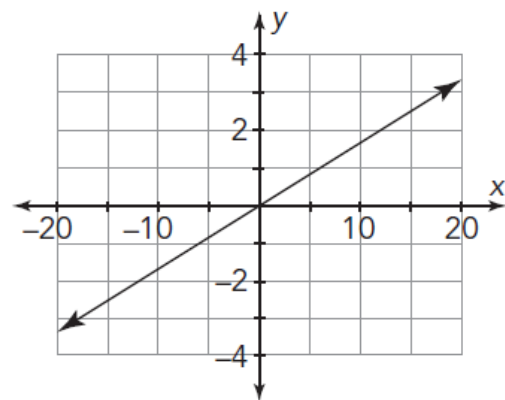
A.



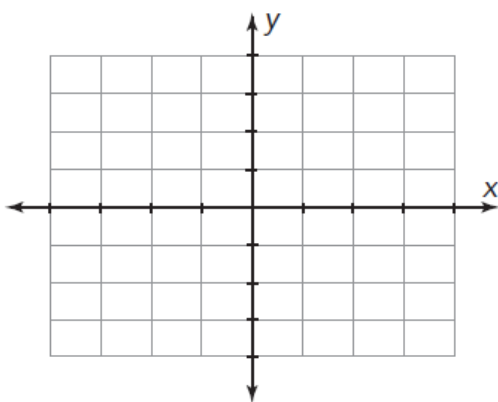
B.

x	y
$\frac{1}{6}$	6
0	6
1	6

C.



x	y



6. How many gallons will be in the tank after:

a. a quarter of an hour?

b. five and a half minutes?

c. an hour and a half?

7. When will the tank be:

a. half full?

b. empty?

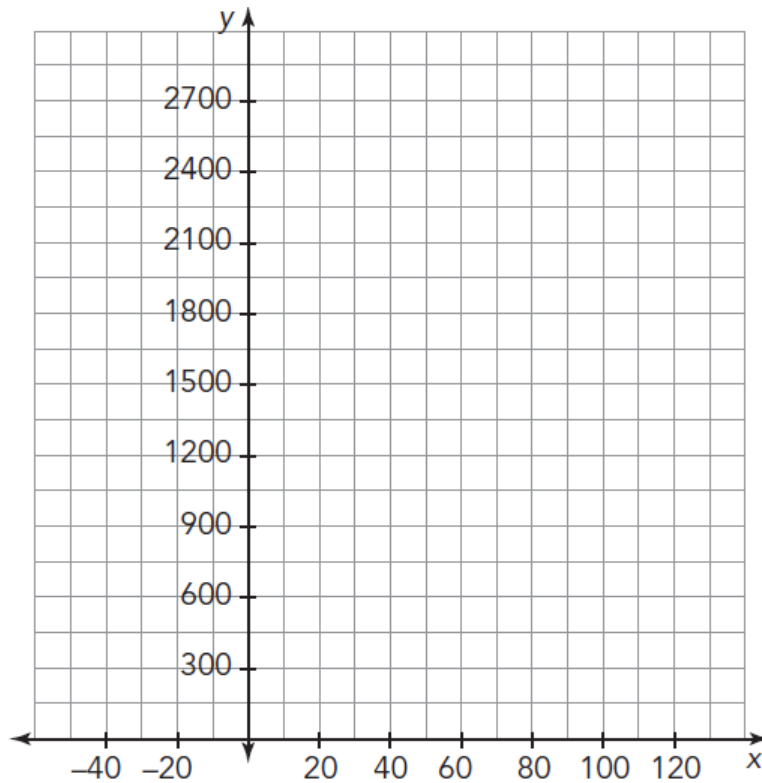
8. How long ago did the tank contain 2600 gallons?

9. How long ago was the tank full?

10. Complete the table for this problem situation.

	Independent Quantity	Dependent Quantity
Quantities		
Units of Measure		
Variables		

11. Label the units of measure on each axis and plot all the points from the table. Then, graph the equation for this situation. Make sure to label the units on the axes.





The equation that converts a temperature in degrees Celsius to a temperature in degrees Fahrenheit is $F = \frac{9}{5}C + 32$, where F is the temperature in degrees Fahrenheit, and C is the temperature in degrees Celsius.

1. What is the temperature in degrees Fahrenheit if the temperature is:

a. 36°C ?

b. 220°C ?

2. What is the temperature in degrees Celsius if the temperature is:

a. 32°F ?

b. 212°F ?

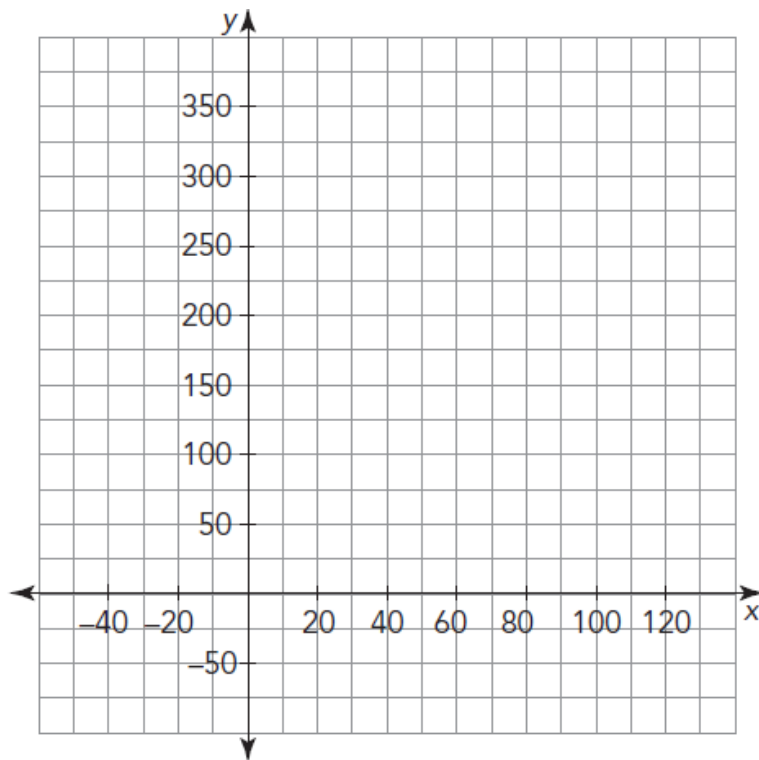
3. What is the unit rate of change? Explain your reasoning.

4. At what temperature are both the Fahrenheit and Celsius temperature values equal? Show your work.

5. Copy and complete the table with the information you calculated in Question 1 through Question 4.

	Independent Quantity	Dependent Quantity
Quantities		
Units of Measure		
Variables		

6. Label the units of measure on each axis and plot all the points from the table. Then, graph the equation for this situation.



**LESSON 9.4a**
Texas Tea and Temperature**Objective****Using Multiple Representations to Solve Problems****Review**

1. Fernando is using a garden hose to fill his backyard pool at a rate of 10 gallons per minute. The pool already contains 9000 gallons of water. The capacity of the pool is 12,000 gallons.

a. Define the independent and dependent variables.

b. Define the unit rate of change.

2. Use double number lines to solve each equation.

a. $2(x + 1) = 10$

b. $-(x - 5) = 0$

3. Solve for each unknown.

a. $\frac{1.6}{2.8} = \frac{x}{7}$

b. $\frac{2}{d4} = \frac{0.4}{5}$