

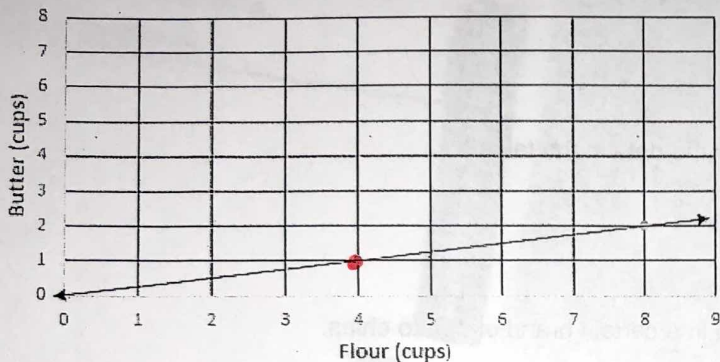
Study Guide

Mod. 1
lessons 1-9

Name _____

Faith bakes cakes using her grandmother's secret recipe. The only part of the recipe that Faith will share is the ratio of flour to butter. The graph shows the numbers of cups of butter that must be mixed with different numbers of cups of flour.

Cake Recipe



of flour to butter
 $\frac{y}{x}$

Based on the graph, write an equation that shows the relationship between the number of cups of butter, y , and the number of cups of flour, x , that is required by Faith's grandmother's secret cake recipe.

$$\frac{y}{x} = \frac{1}{4} \quad y = \frac{1}{4}x$$

Jana needs to bake cookies for her class. The recipe says that she needs $4\frac{2}{3}$ cups of sugar for 7 batches of cookies.

How much sugar is in one batch of cookies?

$$\frac{4\frac{2}{3} \text{ sugar}}{7 \text{ batch}} = \frac{x \text{ sugar}}{1 \text{ batch}}$$

$\frac{2}{3}$ cups sugar

$$\frac{14}{3} \div 7 = \frac{2}{3}$$

On May 6, 2018, a minor earthquake in the Gulf of Mexico sent shockwaves to Grand Isle. It took 2.5 minutes for a wave to travel 120 miles from the epicenter of the earthquake. Write an equation that represents the relationship between m , the number of minute wave traveled.

$$\frac{y}{x} = \frac{120}{2.5} = 48$$

$$y = 48x$$

James uses 4 cups of lemon soda and 16 cups of fruit juices to make a punch. To represent the relationship between s , the number of cups of lemon soda, and the number of cups of fruit juice, j , needed to make the same punch, James wrote the equation $s = \frac{1}{4}j$. What number should be placed in the blank?

cups of soda
number should be placed

$$\frac{4 \text{ soda}}{16 \text{ juice}} = \frac{1}{4}$$

$$s = \frac{1}{4}j$$

Coby drives from Alexandria to Shreveport. While on Interstate 49, he sets the cruise control to travel at a constant rate he takes 1.5 hours to drive 106.5 miles. What is the constant of proportionality for this portion of his trip?

$$\frac{y}{x} = \frac{106.5}{1.5} = 71$$

$$k = 71$$

The table represents a proportional relationship between the values of x and y.

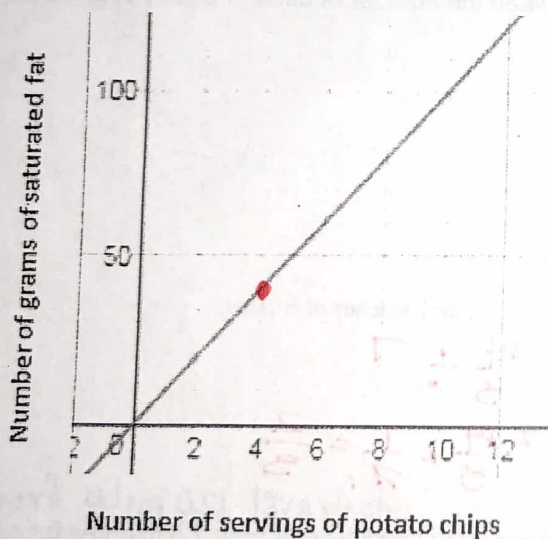
x	y
2	5
4	10
6	15

What is the value of the constant of proportionality for the data in the table?

$$\frac{y}{x} = \frac{5}{2}$$

The graph shows the amount of saturated fat contained in a certain brand of potato chips.

Potato Chips



Select the statement that correctly describes the meaning of (4, 40) on the graph.

- (a) The 40 represents the number of grams of saturated fat for every 4 grams of saturated fat.
- (b) The 40 represents the number of servings of potato chips for every 4 grams of saturated fat.
- (c) The 40 represents the number of grams of saturated fat for every 4 servings of potato chips.
- (d) The 40 represents the number of servings of potato chips for every 4 servings of potato chips.