

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Ms. Napolitano

Activity: 5.1

**Topic: Ratios**

I can understand the concept of a ratio as a way of expressing relationships between quantities. I can write a ratio to describe the relationship between two quantities.

## Homework

Solve the problems.

- 1** A recipe uses 5 cups of water, 3 cups of rice, and 1 cup of black beans. What is the ratio of cups of rice to cups of water?
- A 3:9
  - B 5 to 3
  - C 1 to 3
  - D 3:5

- 2** Nora has a flower arrangement with 7 pink flowers, 9 purple flowers, and 5 white flowers. Write a word from the box in each blank to compare the quantities using ratios. Answer choices may be used more than once.

pink	purple	white	total
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The ratio of \_\_\_\_\_ flowers to \_\_\_\_\_ flowers is  $\frac{5}{9}$ .

The ratio of \_\_\_\_\_ flowers to \_\_\_\_\_ flowers is 9 to 21.

The ratio of \_\_\_\_\_ flowers to \_\_\_\_\_ flowers is 21:7.

- 3** Lisa goes to school 7 hours per day, works 3 hours per day, and sleeps for 8 hours per day. What is the ratio of hours Lisa works to hours Lisa sleeps?

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7th grade HW

Ms. Frost

RSCS

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

1) Drew is an artist. He paints portraits. The table below shows the number of portraits painted in hours. Do the numbers in the table represent a proportional relationship?

Number of portraits	Time (In Hours)
1	5
2	10
3	15
4	20

2)

3) Fred wrote notes during an examination. The table below shows number of pages written in relation to the time it took to make the notes (in hours). Does the table represent a proportional relationship?

Notes (pages)	Time (In Hours)
8	16
9	18
10	20
11	23

3)

The students are selling cookies at a school fair. Sara is selling three chocolate chip cookies for \$2.49.

a) If you wanted to buy one cookie from Sara, how much would it cost? \_\_\_\_\_

b) How much would it cost to buy 20 of Sara's cookies? \_\_\_\_\_

Show your work and explain your reasoning in the space provided below:

c) Choose three of the missing values in the table below. In the space provided below the table, show how you found the values.

Number of cookies	1	3	20	100	50	150			525
Cost (in dollars & cents)		\$2.49					\$145.25	\$190.90	

d) John is selling seven chocolate chip cookies for \$5.39. Who offers the better price, Sara or John? \_\_\_\_\_

Explain why:



CT

Ms. Frost

RSCS

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

1)  $y = -\frac{3}{4}x + 4$  slope = \_\_\_\_\_  
y-intercept = \_\_\_\_\_

2)  $y = \frac{1}{3}x - 4$  slope = \_\_\_\_\_  
y-intercept = \_\_\_\_\_

3)  $y = -\frac{1}{3}x + 1$  slope = \_\_\_\_\_  
y-intercept = \_\_\_\_\_

4)  $y = -\frac{2}{5}x - 2$  slope = \_\_\_\_\_  
y-intercept = \_\_\_\_\_

5)  $y = \frac{8}{3}x - 5$  slope = \_\_\_\_\_  
y-intercept = \_\_\_\_\_

6)  $y = 2x - 4$  slope = \_\_\_\_\_  
y-intercept = \_\_\_\_\_

7)  $y = -2x + 2$  slope = \_\_\_\_\_  
y-intercept = \_\_\_\_\_

8)  $y = -\frac{4}{3}x + 1$  slope = \_\_\_\_\_  
y-intercept = \_\_\_\_\_

**Write the equation of the line given the slope and y-intercept**

9)  $m = \frac{1}{4}$   $b = -6$

10)  $m = -5$   $b = \frac{2}{3}$

11)  $m = 8$   $b = -4$



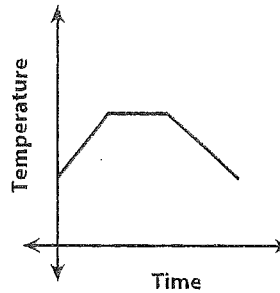
**Describe Qualitative Graphs**

Study the example problem showing how to interpret a qualitative graph. Then solve problems 1–7.

**Example**

The graph shows the temperature for a day in a city. Summarize what the graph shows.

The temperature increases at the beginning of the day. It stays constant during the middle of the day. Then it decreases for the rest of the day.



- 1 Explain how the graph in the example shows that the temperature increases at the beginning of the day. What do you know about the slope of the line?

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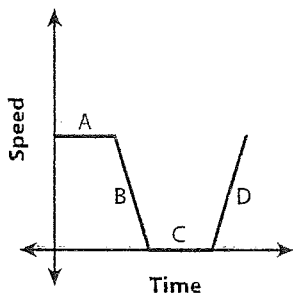


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- 2 Explain how the graph in the example shows that the temperature stays constant for a while.

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- 3 This graph shows the speed of a car on a city street. Describe and interpret section C of the graph.




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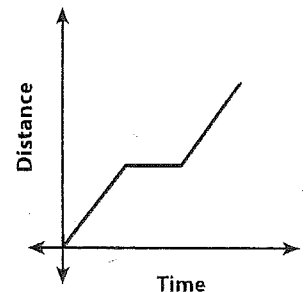


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**Vocabulary**

**qualitative graph** a graph that represents a function visually, not with exact numbers.



**Solve.**

- 4** Summarize the graph showing the speed of a roller coaster.

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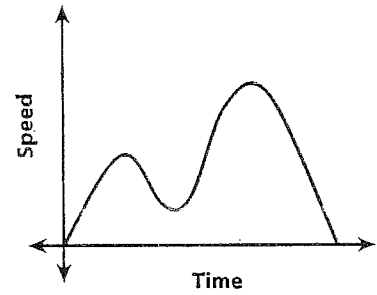
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- 5** Suppose the label *Speed* in the graph for problem 4 is changed to *Height*. Explain how that would change your summary of the graph. Write a revised summary.

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- 6** This graph shows Raj's distance from school as he walks home at the end of the day. Describe what could be happening during each section of the graph.

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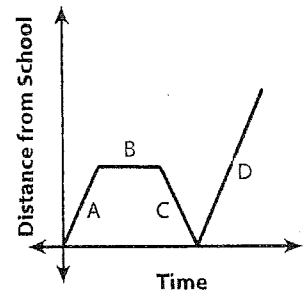
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- 7** This graph shows the weight of a puppy over a 6-month period. Tamara says that the puppy's weight increased at a greater rate at the beginning of the 6-month period than at the end. Do you agree? Explain.

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