# Hi friends!

- \*Dates are written on activities/ Pages 50 you know what to do When.
- \* Remember to send me pictures of Your completed work for credit.
- \*Fridays are Lexial Imagine Math.
- \* Keep up all of your great work! I am so proud of you.

Miss you!!

Miss Hall

## Chapter 13 - May 11

What does Mrs. DiAngelo ask Brady to clean out?

How does Brady feel about the news of a baby?

Chapter 14 - May 12

How does Brady get to J.T.'s house?

What type of farm does J.T.'s family own?

What are they having for dinner?

Chapter 15 - May 13

What is the name of Digger's little brother?

What was the "something" Digger wanted to show J.T. and Brady?

Who is Curtis?

Chapter 16-May 14

Where are Brady's parents going?

What flavor of cake did Brady's mom make?

Where is Brady going?

Chapter 17 - May 18

Why is Brady taking a week off from working for Mrs. DiAngelo?

Who does Brady see at the end of the school day?

What ceremony is at school?

Chapter 18-May 19

How does Brady get to Rhode Island?

What did the boys think they would grow up to be?

Chapter 19 - May 20

What toy does Emily play with?

What does Auntie Janet give Brady?

Chapter 20 - May 21

What season is it?



Reteach to Build Understanding

5-8

**Dimensional analysis** is a way to use conversion factors to convert one unit of measure to another unit of measure. A **conversion factor** is a rate that compares equivalent measures.

Here are some examples of conversion factors in the customary system.

- 12 inches 1 foot
- 1 pound 16 ounces
- 4 quarts 1 gallon
- 1. The length of a football field, including the two end zones, is 120 yards. How long is the football field in feet?
  - a. Write the conversion factors that relate yards and feet.

\_\_\_\_\_yd or \_\_\_\_\_ft

**b.** What are the desired units?

What are the original units? \_\_\_\_\_

Circle the conversion factor above that has the desired units in the numerator and the original units in the denominator.

**c.** Multiply the given length by the conversion factor. Write in units where necessary, and cross out units when they divide out.

The length of the football field is \_\_\_\_\_feet.

2. Kelsey put 6 gallons of water in the cooler. How many 1-pint water bottles can be filled from the water in the cooler?

$$6 \text{ gal} \times \frac{\text{qt}}{1 \text{ gal}} \times \frac{\text{pt}}{1 \text{ qt}} = \text{pt}$$

#### On the Back!

**3.** A female robin weighs 4 ounces. How much does the robin weigh in pounds?

Name:







## 5-8 Additional Practice

Scan for Multimedia

In 1-12, complete each conversion.

**9.** 
$$\frac{1}{2}$$
 mi =

- 13. Use an equivalent rate to convert 3 quarts to pints.
- 14. Use dimensional analysis to convert 9 teaspoons to tablespoons.
- 15. William bought a piece of wood that is 3 feet long. He cuts it into two pieces. One piece is 14 inches long. How long is the other piece?
- **16.** Ellie needs  $\frac{1}{2}$  cup of milk to make blueberry muffins. She pours  $\frac{1}{2}$  cup of milk from a quart container of milk. How many cups of milk will be left in the container?

- 17. Tania needs to buy at least 3 pounds of bananas. If she buys a bunch of bananas that weighs 42 ounces, will she have enough? Explain.
- 18. A bridge has a sign that says "Maximum Weight 6 Tons." If a truck weighs 13,000 pounds, is it too heavy to cross the bridge? Explain.

You can multiply by a conversion factor to convert from a metric unit to another metric unit. A **conversion factor** is a rate that compares equivalent measures.

Here are some examples of conversion factors for the metric system.

100 centimeters 1 meter 1 kilogram 1,000 grams

1,000 milliliters 1 liter

1. During a track meet, Susanna ran the 150-meter sprint. How many kilometers did Susanna run?

150 \_\_\_\_ × \_\_\_\_km

= \_\_\_150\_\_\_

= \_\_\_\_km

Multiply the given distance by the conversion factor that relates the measures.

Write in units where necessary, and cross out units when they divide out.

Susanna ran \_\_\_\_\_ kilometers.

2. The distance from Jacob's house to school is 6 kilometers. How many meters is Jacob's house from school? Use dimensional analysis.

 $6 \text{ km} \times \frac{1,000}{\text{km}} = 2.000 \text{ m} = 2.000 \text{ m}$ 

The distance from Jacob's house to school is \_\_\_\_\_ meters.

3. A can holds 284 milliliters of soup. How many liters of soup is this?

 $284 \text{ mL} \times \frac{\text{L}}{\text{mL}} = \frac{\text{L}}{\text{L}}$ 

#### On the Back!

**4.** A quarter weighs 5.67 grams. How much does the quarter weigh in centigrams?

Name: \_\_

May 12







#### Scan for Multimedia

#### In 1-12, complete each conversion.

5-9 Additional Practice

- **13.** Use an equivalent rate to convert 24 centiliters to liters.
- **14.** Use dimensional analysis to convert 0.33 kilometer to meters.

## In 15–17, use the table, which shows the amounts of three items that Nobu bought at a farmer's market.

15. What is the mass of the cantaloupe in grams?

Item	Amount
Green Pepper	400 g
Cantaloupe	3 kg
Tomato	630 g

- **16.** What is the total mass in kilograms of all the items that Nobu bought?
- 17. Anya bought some tomatoes with a mass of 1.2 kilograms. How much heavier are Anya's tomatoes than Nobu's tomato?

One way to convert between customary and metric units is to use **equivalent rates**. Equivalent rates have the same value.

- 1. Use an equivalent rate to convert 3 gallons to liters.
  - a. Identify the conversion rate that applies. 1 gal ≈ \_\_\_\_\_ L
  - **b.** Find the equivalent rate.  $\frac{3.79 \text{ L} \times \text{ }}{1 \text{ gal} \times 3} = \frac{\text{L}}{3 \text{ gal}}$
  - c. There are about \_\_\_\_\_\_ liters in 3 gallons.
- 2. A baby giraffe is 1.74 meters tall. How tall is the baby giraffe in feet? Round your answer to the nearest tenth of a foot.
  - a. Write the conversion factors that relate meters and feet.

\_\_\_\_\_m or \_\_\_\_\_ft

**b.** What are the desired units?

What are the original units?

Circle the conversion factor that has the desired units in the numerator and the original units in the denominator.

c. Find the equivalent rate. Multiply both terms by 1.74.

$$\frac{3.28 \text{ ft} \times 1.74}{1 \text{ m} \times 1.74} = \frac{\text{ft}}{1.74 \text{ m}}$$

**d.** Round the height to the nearest tenth of a foot.

The height of the baby giraffe is about \_\_\_\_\_ feet.

#### On the Back!

**3.** The mass of a baby elephant is 91 kilograms. To the nearest pound, how much does the elephant weigh?







## 5-10 Additional Practice

Scan for Multimedia

In 1-9, find the equivalent measure. Round to the nearest tenth.

- 10. Aidan needs 15 liters of cleaning solution. He can buy a 2-gallon jug (\$4.28), a 3-gallon jug (\$5.92), a 4-gallon jug (\$6.56), or a 7-gallon jug (\$12.98). Which jug should he purchase to get at least 15 liters of cleaning solution and spend the least amount of money?
- 11. Elise ran 2 miles in 15 minutes. Teagan ran 3 kilometers in 15 minutes. Who ran at a faster rate? Explain.

- 12. Ryan is running in a 5-kilometer race. How many feet will he run in the race? Use the conversion rates 5,280 ft = 1 mi and 1 mi ≈ 1.61 km. Round to the nearest hundred feet.
- 13. Luisa bought 4.4 kilograms of apples. How many ounces of apples did she buy? Use the conversion rates 1 kilogram ≈ 2.20 pounds and 1 pound = 16 ounces. Round to the nearest ounce.
- **14.** Enzo needs to buy some sand for his sandbox. He can either buy a 10-pound bag of sand for \$18 or a 6-kilogram bag of sand for \$20.
  - a. Which is a better value? Explain.
  - **b.** If Enzo needs 18 pounds of sand, what should he buy so that he spends the least amount of money overall? Explain.

## Concepts and Skills Review

LESSON 5-1

Understand Ratios

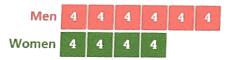
#### **Ouick Review**

A ratio is a relationship in which for every x units of one quantity there are y units of another quantity. A ratio can be written using the word "to," a colon, or a fraction bar to separate the two terms.

#### Example

The ratio of men to women at a small wedding is 6:4. If there are 16 women at the wedding, how many men are at the wedding?

Draw a diagram to represent the ratio. Because 4 boxes represent 16 women, each box represents 4 women.



There are 24 men at the wedding.

#### Practice

A florist uses 5 red roses for every 2 white roses in her bouquets.

- **1.** Write the ratio of white roses to red roses in three different ways.
- 2. Write the ratio of red roses to the total number of flowers in three different ways.
- 3. If the florist uses 10 red roses in a bouquet, how many white roses does she use?
- 4. If the florist uses 10 white roses in an arrangement, how many red roses does she use?

## **LESSON 5-2** Generate Equivalent Ratios

#### **Ouick Review**

You can multiply or divide both terms of a ratio by the same nonzero number to find equivalent ratios.

#### Example

Find two ratios that are equivalent to  $\frac{21}{126}$ .

One Way

**Another Way** 

Multiply.

324

Divide.

$$\frac{21 \times 2}{126 \times 2} = \frac{42}{252}$$

$$\frac{21 \div 3}{126 \div 3} = \frac{7}{42}$$

#### **Practice**

In 1-4, find two ratios equivalent to the given ratio.

1. 
$$\frac{5}{12}$$

**4.** 
$$\frac{7}{8}$$

**5.** For every 4 bagels sold at a bakery, 7 muffins are sold. How many muffins are sold when the bakery sells 24 bagels? Complete the table.

Bagels	4	8	12	16	20	24
Muffins	7					
Muffins	7	Account of the control of the contro				

To compare ratios, make a table to show each ratio and then find a value in which one of the terms is the same in both tables.

#### Example

. 1	-		
27		-	~=

-		120	
ĸ	27	7	<b>O</b> T
-			

Math Facts	Seconds	Math Facts	Seconds
25	30	38	50
50	60	76	100
75	90	114	150
100	120	152	200
125	150	190	250

Erica can complete more facts than Klayton.

#### **Practice**

- 1. The school soccer team buys 3 soccer balls for every 2 players. The school volleyball team buys 7 volleyballs for every 5 players. Which team buys more balls per player?
- 2. Jenna walks 12 miles in 5 days. Alex walks 7 miles in 3 days. Who walks more miles per day?

#### LESSON 5-4

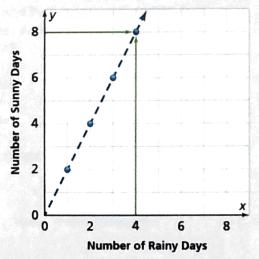
#### Represent and Graph Ratios

#### Quick Review

You can solve some ratio problems by making a table of equivalent ratios and then graphing the pairs of values on a coordinate plane.

#### Example

Days of Rain	1	2	3	n
Days of Sun	2	4	6	8



There will be 4 rainy days if there are 8 sunny days.

#### **Practice**

Run (laps)

**1.** In gym class, the sixth graders walk 2 laps for every 3 laps they run. If the students run 12 laps, how many laps will they walk? Complete the table. Then plot the pairs of values on the coordinate plane.

Walk (laps)	2	IC				
	y	na America curricos na America na construir			en frances an establish et e	
12		-				
10						
8	1 4 2					The second secon
6		-				
4		-				
2						
0						X
(	0 2	4	6	8	10	12
			a-clark/wageta			

12

A rate is a ratio that relates two quantities with different units. A unit rate relates a quantity to 1 unit of another quantity. You can use what you know about dividing fractions to write a ratio of fractions as a unit rate.

#### Example

Write 20 meters in 4 minutes as a rate and as a unit rate.

Rate:

Unit Rate:

$$\frac{20 \text{ meters } \div 4}{4 \text{ minutes } \div 4} = \frac{5 \text{ meters}}{1 \text{ minute}}$$

The unit rate is an equivalent rate with a denominator of 1 unit.

#### Practice

Write each statement as a unit rate.

- 1.78 miles on 3 gallons
- 2. 18 laps in 6 minutes
- 3.48 sandwiches for 16 people
- 4.49 houses in 7 blocks
- 5.6 desks in 2 rows

## LESSON 5-6 Compare Unit Rates

#### **Ouick Review**

A unit rate compares a quantity to 1 unit of another quantity. To compare unit rates, compare the first terms.

#### Example

On Pet Day, Meg's turtle crawled 30 feet in 6 minutes, and Pat's turtle crawled 25 feet in 5 minutes. Whose turtle crawled at a faster rate?

Write each rate.

326

Pat's turtle

Find each unit rate.

Both turtles crawled at the same rate.

#### **Practice**

- **1.** Which is the better value? Circle it. \$5.00 for 4 mangoes \$6.00 for 5 mangoes
- **2.** Who earned more each month? Circle it. Atif: \$84 over 3 months

  Jafar: \$100 over 4 months

**3.** Which is a faster rate? Circle it. 3 laps in 5 minutes

4 laps in 7 minutes

**4.** Which is the better value? Circle it.

3 sandwiches for \$15.00

4 sandwiches for \$21.00

**5.** Which is the greater rate? Circle it. 6 points in 3 attempts

15 points in 5 attempts

You can use a ratio table or a unit rate to solve problems involving ratios or rates.

#### Example

A plane travels at a rate of 780 miles in 2 hours. At this rate, how far will it travel in 3.5 hours?

Find the unit rate.

$$\frac{780 \text{ miles} \div 2}{2 \text{ hours} \div 2} = \frac{390 \text{ miles}}{1 \text{ hour}}$$

Find an equivalent rate.

$$\frac{390 \text{ miles} \times 3.5}{1 \text{ hour} \times 3.5} = \frac{1,365 \text{ miles}}{3.5 \text{ hours}}$$

The plane will travel 1,365 miles in 3.5 hours.

#### **Practice**

- 1. Doug has 5 hours to make an on-time delivery 273 miles away. Doug drives at a constant speed of 55 miles per hour. Will Doug make the delivery by the deadline? Explain.
- 2. Marie has 8 hours to write a 45-page chapter for her book. Marie writes at a constant speed of 4 pages per hour. Will Marie complete the chapter in time? Explain.

## LESSON 5-8

#### **Ratio Reasoning: Convert Customary Units**

#### **Quick Review**

You can convert customary measures by finding equivalent rates or by using dimensional analysis.

#### Example

How many pints are equivalent to 4 quarts?

Find an equivalent rate:

2 pints = 1 quart ..... Identify the conversion rate.

$$\frac{2 \text{ pints} \times 4}{1 \text{ quart} \times 4} = \frac{8 \text{ pints}}{4 \text{ quarts}}$$

Use dimensional analysis:

4 quarts 
$$\times \frac{2 \text{ pints}}{1 \text{ quart}} = 8 \text{ pints}$$
 Multiply by the conversion factor

So, 8 pints are equivalent to 4 quarts.

#### **Practice**

In 1-4, complete each conversion.

**5.** The hippo at the zoo weighs 1.5 tons. How many pounds does the hippo weigh?

To convert metric units, use the same methods used for converting customary units. Either use the conversion rate to find an equivalent rate or use dimensional analysis.

#### Example

Tariq rode his bike 15,100 meters. How many kilometers did he ride his bike?

Find an equivalent rate:

$$1,000 \text{ meters} = 1 \text{ kilometer}$$

$$\frac{1,000 \text{ m} \times 15.1}{1 \text{ km} \times 15.1} = \frac{15,100 \text{ m}}{15.1 \text{ km}}$$

Use dimensional analysis:

15,100 
$$\text{m} \times \frac{1 \text{ km}}{1,000 \text{ m}} = \frac{15,100}{1,000} \text{ km} = 15.1 \text{ km}$$

Tariq rode 15.1 kilometers.

#### **Practice**

In 1–4, complete each conversion.

**3.** 
$$4.2 \text{ kg} = \boxed{g}$$

**5.** Li needs to buy 2 kilograms of apples. If she buys 9 apples that each weigh approximately 150 grams, will she have enough? Explain.

## **LESSON 5-10**

#### **Relate Customary and Metric Units**

#### **Quick Review**

To convert between metric and customary units, use the conversion rate and find an equivalent rate, or use dimensional analysis. Most conversions will be approximate because, except in the case of inches to centimeters, the conversion rates are approximate.

#### Example

Gwen has a cooler that holds 3 quarts. About how many liters does the cooler hold?

$$1 \text{ qt} \approx 0.95 \text{ L}$$

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$$3 \text{ gt} \times \frac{0.95 \text{ L}}{1 \text{ gt}} = (3 \times 0.95) \text{ L} = 2.85 \text{ L}$$

Gwen's cooler holds approximately 2.85 liters.

#### **Practice**

In 1-4, find the equivalent measure. Round to the nearest tenth.

**5.** The science class is raising monarch caterpillars. One of the caterpillars weighs 2.3 ounces. About how many grams does the caterpillar weigh? Round to the nearest tenth.

6-1

A **percent** is a rate in which the first term is compared to 100. The 100 represents 1 whole. The first term tells what part of 100 a quantity is. The word *percent* means "for each 100."

$$\frac{41}{100} = 41\%$$

$$18\% = \frac{18}{100}$$

$$\frac{99}{100} = 99\%$$

$$31\% = \frac{31}{100}$$

1. In a survey of 5 people, 3 said they prefer bananas over apples.

The number line shows the number of people surveyed. Draw a point on the number line to show the number of people who preferred bananas.



2. Complete the number line to 100 by labeling the tick marks between 0 and 100. Draw a point at the same position that you did on the number line above.



3. What percent of the people in the survey preferred bananas?

**4.** The circle below has \_\_\_\_\_ parts, and \_\_\_\_\_ parts are shaded.



5. What fraction represents the shaded part of the diagram?

**6.** Write an equivalent fraction with a denominator of 100.

7. What percent of the diagram is shaded?

#### On the Back!

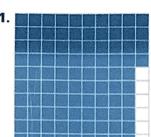
8. Write the percent of the figure that is shaded.

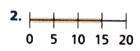
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## 6-1 Additional Practice

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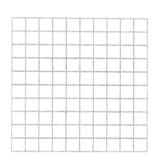


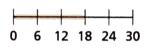


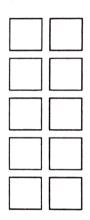


In 4-6, shade each model to represent the given percent.









- 7. Jana divided a sheet of paper into 5 equal sections and colored 2 of the sections red. What percent of the paper did she color?
- 8. Model with Math Water makes up about 60% of the average adult's body weight. Represent this percent by shading in the squares. MP.4



- 9. Reasoning Kelly saved \$150. That is 50% of the money she earned this summer. How much did Kelly earn this summer? MP.2
- 10. When students were asked to name their favorite type of music, 3 out of every 5 students chose rock music. What percent of the students chose another type of music?

6-2

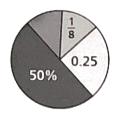
A fraction is a number that can describe parts of a whole.

If the fraction  $\frac{7}{10}$  describes the shaded portion of a circle, then the whole circle has 10 equal parts and 7 of them are shaded.

A decimal can also describe parts of a whole.

The fraction  $\frac{7}{10}$  can be written as the decimal 0.7. The fraction  $\frac{85}{100}$  can be written as the decimal 0.85.

The diagram shows how Roscoe, Ariana, and Fujita shared a pizza. Roscoe ate 0.25 of the pizza, Ariana ate  $\frac{1}{8}$  of the pizza, and Fujita ate 50% of the pizza.



1. Fill in the boxes to write 0.25 as a fraction and as a percent.

Fraction: 
$$0.25 = \frac{25 \div 25}{100} = \frac{25 \div 25}{100 \div 25} = \frac{1}{100}$$

Percent: 
$$0.25 = \frac{25}{25} = \frac{25}{25}$$

2. Fill in the boxes to write  $\frac{1}{8}$  as a decimal and as a percent.

Decimal: 
$$\frac{1}{8} = \frac{1 \times 12.5}{8 \times 12.5} = \frac{100}{100} = \frac{1}{100}$$

Percent: 
$$0.125 = \frac{125}{100} = \frac{125 \div 10}{100} = \frac{100}{100} = \frac{100}{100}$$

3. Fill in the boxes to write 50% as a fraction and as a decimal.

Fraction: 50% = 
$$\frac{1}{100} = \frac{\div}{100 \div} = \frac{1}{100}$$

Decimal: 
$$50\% = \frac{50}{}$$

#### On the Back!

4. Write 0.78 as a fraction and as a percent.







#### Scan for Multimedia

## 6-2 Additional Practice

In 1-9, write each number in two equivalent forms as a fraction, a decimal, or a percent.

1.0.24

2.  $\frac{2}{100}$ 

3.16%

4. 0.43

5. 18%

6.  $\frac{1}{8}$ 

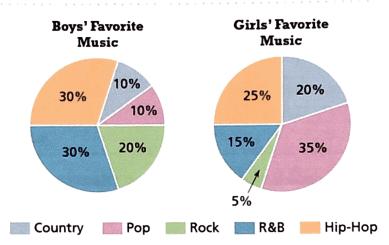
7. 1/4

8.5%

9.  $\frac{3}{8}$ 

In 10-15, use the circle graphs.

- 10. Reasoning What decimal shows the combined portion of boys who like pop and country music? @ MP.2
- 11. What type of music did  $\frac{1}{5}$  of the girls choose as their favorite?
- 12. Which types of music are the favorites for the most boys? Write the percent of each as a fraction.



- 13. Which type of music is the least favorite music for the girls? What is that percent as a decimal?
- 14. Which two types of the girls' favorite music combined represent 0.45? Write each percent as a fraction.
- 15. Which types of music are the boys' least favorite? Write each percent as a fraction and a decimal.

6-3

**Equivalent** means "having the same value." Equivalent percents, decimals, and fractions name the same part of a whole.

1. Circle the values that are equivalent.

 $\frac{1}{5}$ 

 $\frac{1}{10}$ 

20%

10

0.02

0.2

2. Last year, a bakery earned 135% of its total expenses. Write a fraction that is equivalent to 135%.

Percents can be written as a fraction with a denominator of

$$135\% = \frac{100}{100}$$

Divide the numerator and the denominator by the same number to write an equivalent fraction.

3. Write a decimal that is equivalent to 135%.

You know that  $135\% = \frac{135}{100}$ . Because the denominator is \_\_\_\_\_, the decimal equivalent

is the numerator with its decimal point moved \_\_\_\_\_ place(s) to the left.

Place the decimal point in the correct place. 135% = 135

**4.** Victoria's savings account has a monthly interest rate of  $\frac{1}{4}$ %. Write a fraction that is equivalent to  $\frac{1}{4}$ %.

$$\frac{1}{4}\% = \frac{1}{4} \div \boxed{ } = \frac{1}{4} \times \boxed{ } = \frac{1}{4}$$

**5.** Write a decimal that is equivalent to  $\frac{1}{4}$ %.

$$\frac{1}{4}\% = 0.$$
  $\% = \frac{100}{10,000} = \frac{1}{10,000} = \frac{1}{10,000}$ 

#### On the Back!

6. Write 296% as a fraction and as a decimal.







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## **6-3** Additional Practice

Scan for Multimedia

In 1-12, write each percent as a fraction and as a decimal.

1. 137%

- **2.** 115%
- 3.  $\frac{3}{4}\%$

**4.** 0.4%

**5**. 450%

- **6.** 101%
- 7.  $\frac{9}{25}\%$

**8.** 0.22%

9.810%

- 10.  $\frac{3}{10}$ %
- 11. 0.25%
- 12.0.35%

- **13.** The area of the Simpsons' new house is 150% of the area of their old house. Write this percent as a fraction and as a decimal.
- 14. The price of a gallon of gas decreased by  $\frac{9}{10}$ % in one month. How do you express  $\frac{9}{10}$ % as a fraction and as a decimal?

- **15.** Only 0.6% of the students at a high school did not attend the first football game. Write 0.6% as a fraction and as a decimal.
- is 250% of what it was 20 years ago. She says that her salary is 2.5 times what it was 20 years ago. Is she correct? Explain.
- 17. Reasoning The interest rate on a credit card increased by  $\frac{1}{2}\%$ . Is  $\frac{1}{2}\%$  less than, equal to, or greater than 0.005? Explain. 

  MR2
- **18.** About 0.45% of the students in Hannah's school have a landline phone at home. How do you express 0.45% as a fraction and as a decimal?

- 1. Vocabulary Explain how fractions, decimals, and percents are related. Lesson 6-2
- 2. Draw a line to match each fraction to the equivalent percent.

Lessons 6-1 and 6-3

4 5	35%
<del>7</del> <del>20</del>	2.5%
94	80%
25 1,000	225%

- 3. Which number is equivalent to 40%? Select all that apply. Lesson 6-2
  - <u>40</u> 100
- 0.04
- 0.4

- 40
- 4. Complete the table. Lessons 6-2 and 6-3

Percent	Fraction	Decimal
70%		
		1.25
	<u>11</u> 20	
0.2%		

- 5. A basketball player made 17 out of 20 free throws at practice. What percent of the free throws did the player miss? Lesson 6-1
- 6. A section of rope 5 inches long represents 20% of the length of the entire rope. How long is the rope? Lesson 6-1

How well did you do on the mid-topic checkpoint? Fill in the stars.

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