

# Assignment

Assignment for Lesson 1.1

Name \_\_\_\_\_ Date \_\_\_\_\_

1

## Money, Money, Who Gets the Money? Introduction to Picture Algebra

You and your friend Jamal go to lunch. You each order a cheeseburger and a large soft drink. Jamal also orders a small salad, which costs \$1.09. The total for both of you is \$6.27. How much does each of you owe?

1. Draw and label two “boards” that represent the amounts that you and Jamal owe.
  
  
  
  
  
  
  
  
  
  
2. Use the picture that you drew to help you solve the problem. What amount does each of you owe? Write your answer using a complete sentence.

Jamal and Carla mow a lawn together to earn some more money for the summer. Carla begins mowing 30 minutes before Jamal. Then they mow together for 75 minutes until they finish. How much time did Jamal and Carla each spend mowing?

3. Draw and label two “boards” that represent the amount of time that Jamal and Carla mowed.
  
  
  
  
  
  
  
  
  
  
4. Use the picture that you drew to determine the amount of time spent mowing. How much time did Jamal and Carla spend mowing? Write your answer using a complete sentence.
  
  
  
  
  
  
  
  
  
  
5. What was the total time spent mowing? Write your answer using a complete sentence.
  
  
  
  
  
  
  
  
  
  
6. Suppose that Jamal and Carla together are paid \$15.00. How much were they paid for each hour of work? Remember that 1 hour is equal to 60 minutes. Write your answer using a complete sentence.
  
  
  
  
  
  
  
  
  
  
7. Because he worked for 75 minutes, Jamal should receive \$6.25 of the \$15.00. How much should Carla receive? Use complete sentences to explain how you found the answer.

# Assignment

Assignment for Lesson 1.2

Name \_\_\_\_\_ Date \_\_\_\_\_

1

## Collection Connection Factors and Multiples

1. What factor of 24 is paired with 8? Write all of the factor pairs of 24.
2. What factor of 42 is paired with 6? Write all of the factors of 42.
3. What factor of 35 is paired with 5? Write all of the factors of 35.
4. A collection of 24 marbles is divided into equal-sized groups. What group sizes are possible?
5. Our number system is based on the number 10. The Babylonians based their number system on the number 60. Write all of the factors of 60.
6. Why do you think the Babylonians chose the number 60 as the base of their system? Write your answer using a complete sentence.
7. Lilly listed 1, 2, 3, 4, 8, 12, 24, 32, 48, and 96 as factors of 96. Is her list complete?
8. Caitlin has a collection of CDs. The number of CDs that she has is divisible by 2, 3, 4, 5, and 6. What is the least number of CDs that Caitlin can have in her collection?
9. Write four number sentences using the numbers 3, 6, and 18. Then complete the statements.

The number 3 is a \_\_\_\_\_ of 18.

The number 18 is a \_\_\_\_\_ of 6.

The numbers 3 and 6 are a \_\_\_\_\_ of 18.

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

1

## Dogs and Buns Least Common Multiple

Your club is packing bag lunches for an upcoming trip and wants to include at least one hard-boiled egg in each lunch. There are 8 students going on the trip. Eggs are sold in cartons of one dozen, or 12 eggs. The club wants to put an equal number of eggs in each lunch and have no eggs left over. How many dozens of eggs do they need to buy?

1. List the first ten multiples of 8.
2. List the first ten multiples of 12.
3. What numbers are in both sets of multiples?
4. Of the numbers that are in both sets, which is the smallest?
5. How many dozens of eggs does the club need to buy?

In a video game, a character needs to shine a light through two spinning wheels that have holes in them. The first wheel makes a complete rotation in 7 seconds. The second wheel makes a complete rotation in 9 seconds. The holes are lined up at 0 seconds. How many seconds will pass before they are lined up again?

6. List the first ten multiples of 7.
7. List the first ten multiples of 9.
8. What is the least common multiple of 7 and 9? Write a complete sentence to explain your answer.
9. How many seconds will pass before the holes are again lined up?
10. Find the least common multiple of each pair of numbers.

3 and 5

4 and 6

8 and 16

10 and 15

# Assignment

Assignment for Lesson 1.4

Name \_\_\_\_\_ Date \_\_\_\_\_

1

## Kings and Mathematicians Prime and Composite Numbers

Use the divisibility rules on page 18 in your text to decide whether each number is prime or composite. Use a complete sentence to explain your reasoning.

1. 51

2. 71

3. 45

4. 87

5. 41

All of the prime numbers up to 50 are listed below.

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47

6. List all of the even prime numbers.

7. Explain your answer to Question 6 using divisibility rules.

In each list, identify the number that is not prime. Then write a complete sentence that explains why it is not prime.

8. 59, 63, 71, 79

9. 101, 103, 105, 107

Name the property that is illustrated.

10.  $27 \times 1 = 27$

11.  $2 \times 3 = 3 \times 2$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_



## I Scream for Ice Cream Prime Factorization

Desmond's class invents a game that they call "Factor It." For each round, the teacher turns over a card with a number on it and the students write a factorization for the number. Students receive 1 point for each factor in their factorization. For example, suppose that the teacher turned over a card with 36 on it.

Desmond writes down  $3 \times 12$  and receives 2 points.

Cynthia writes down  $2 \times 2 \times 9$  and receives 3 points.

Juan writes down  $2 \times 2 \times 3 \times 3$  and receives 4 points.

Juan wins the round because he has the most points.

For each number on the cards that the teacher turns over, write a factorization that will get you the greatest number of points in the game. Construct a factor tree to check your answer.

1. 48

2. 72

3. 54

4. 128

5. 640

6. 1000

7. Suppose that the teacher turns over a card that has a 60 on it. Desmond writes  $(2 \times 2) \times 5 \times 3 = 4 \times 5 \times 3$ . Juan writes  $2 \times 2 \times (5 \times 3) = 2 \times 2 \times 15$ . Whose answer is correct? How do you know? Write a complete sentence to explain your reasoning.

# Assignment

Assignment for Lesson 1.6

1

Name \_\_\_\_\_ Date \_\_\_\_\_

## Powers That Be Powers and Exponents

1. How can divisibility rules help you to find the prime factorization of 513? Use complete sentences to explain.

For each power, identify the base and the exponent. Then evaluate the power.

2.  $6^5 =$  \_\_\_\_\_

Base: \_\_\_\_\_

Exponent: \_\_\_\_\_

3.  $1^{12} =$  \_\_\_\_\_

Base: \_\_\_\_\_

Exponent: \_\_\_\_\_

4.  $30^2 =$  \_\_\_\_\_

Base: \_\_\_\_\_

Exponent: \_\_\_\_\_

5.  $10^4 =$  \_\_\_\_\_

Base: \_\_\_\_\_

Exponent: \_\_\_\_\_

Use a factor tree to find the prime factorization of each number. Then use exponents to write the prime factorization.

6. 40

Prime factorization = \_\_\_\_\_

7. 98

Prime factorization = \_\_\_\_\_

8. 72

Prime factorization = \_\_\_\_\_

9. 128

Prime factorization = \_\_\_\_\_

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_



## Beads and Baubles Greatest Common Factor

1. Your aunt's club is planning to sell small bags of different types of beads to people who want to make their own bead jewelry. The table below lists the different types of beads and how many they have.

Type of Bead	Quantity
Oval bead	24
Metal bead	18

The club wants to divide these beads into bags so that each bag has exactly the same number of oval beads and metal beads. What is the greatest number of bags that they can make so that all of the beads are used and there is the same number of each bead in each bag? Write your answer using a complete sentence.

2. Complete the table to find the greatest common factor of 100 and 64.

Number	Unique Factor Pairs	Unique Factors	Common Factors
100			
64			

The greatest common factor of 100 and 64 is \_\_\_\_\_.

3. Complete the table to find the greatest common factor of 36 and 48.

Number	Unique Factor Pairs	Unique Factors	Common Factors
36			
48			

The greatest common factor of 36 and 48 is \_\_\_\_\_.

Find the greatest common factor of each set of numbers.

4. 72 and 30  
6. 27 and 80  
8. 22, 55, and 110
5. 25 and 50  
7. 30 and 54  
9. 96, 48, and 80

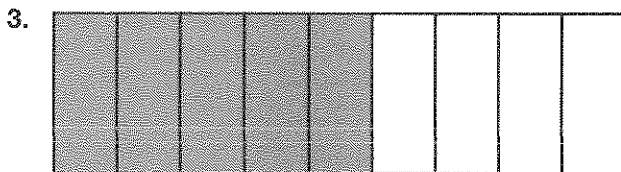
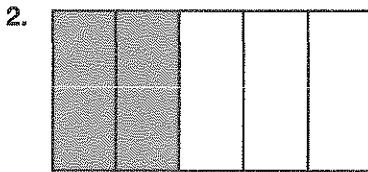
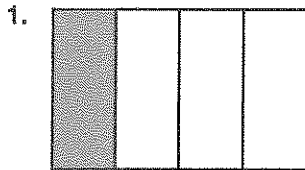
# Assignment

Assignment for Lesson 2.1

Name \_\_\_\_\_ Date \_\_\_\_\_

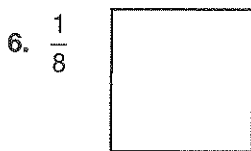
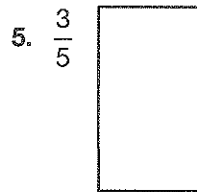
## Comic Strips Dividing a Whole into Fractional Parts

Write the fraction that is represented by the fraction model.

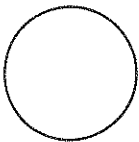


2

Divide and shade each rectangle to represent the fraction.



8. Divide and shade the circle to represent  $\frac{3}{8}$ .





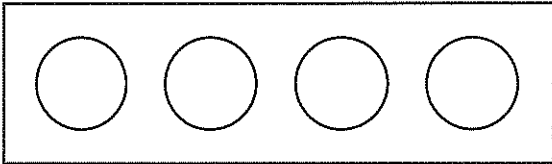
# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Dividing Quesadillas Dividing More than One Whole into Parts

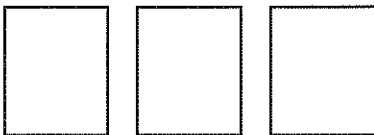
Six friends are sharing 4 quesadillas equally for lunch at a table in the cafeteria.

1. Show one way that you can divide the quesadillas equally. How many pieces would each person get? Use complete sentences to explain your reasoning.



**2**

2. Juanita divided all of the quesadillas into thirds. How many pieces would each person get? Write your answer using a complete sentence.
3. Dwayne said he would divide each quesadilla into six pieces. How many pieces would each person get? Is that the same amount of quesadillas that Juanita got? Use a complete sentence to explain your reasoning.
4. Gretchen made 3 pans of lasagna for her 5 friends. Show one way that she can cut up the pans so that her friends all have an equal amount of lasagna. Draw a picture and explain your solution.



# Assignment

Assignment for Lesson 2.3

Name \_\_\_\_\_ Date \_\_\_\_\_

## No "I" in Team Dividing Groups into Fractional Parts

The swim team is holding a bake sale to raise money for the end of season banquet. Team members donated 15 dozen chocolate chip cookies, 12 dozen oatmeal cookies, 8 dozen sugar cookies, 10 dozen peanut butter cookies, 6 dozen fudge cookies, 4 dozen lemon drop cookies, and 5 dozen thumbprint cookies.

2

1. Find the fraction of the cookies that are chocolate chip cookies.
2. Find the fraction of the cookies that are peanut butter cookies.
3. Find the fraction of the cookies that are oatmeal cookies.
4. Find the fraction of the cookies that are thumbprint cookies.
5. Find the fraction of the cookies that are fudge cookies.
6. Find the fraction of the cookies that are lemon drop cookies.
7. Find the fraction of the cookies that are sugar cookies.
8. Find the fraction of cookies that are oatmeal cookies or sugar cookies.
9. Find the fraction of cookies that are not chocolate chip cookies.
10. Find the fraction of cookies that are not fudge cookies or lemon drop cookies.
11. After three days of the sale, the swim team sold  $\frac{3}{4}$  of the cookies. How many cookies do they have left? Draw a diagram to show how you know that your answer is correct.

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Fair Share of Pizza Equivalent Fractions

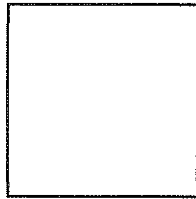
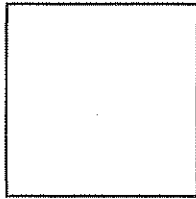
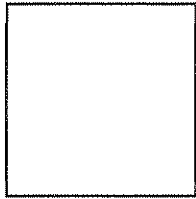
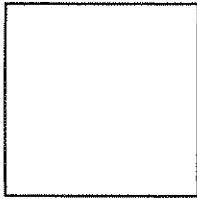
1. Divide each fraction model to determine four other fractions that are equivalent to  $\frac{1}{2}$ .

$$\frac{2}{4}$$

$$\frac{3}{6}$$

$$\frac{4}{8}$$

$$\frac{5}{10}$$



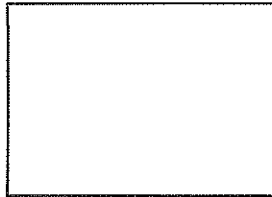
2

2. Divide each fraction model to determine three other fractions that are equivalent to  $\frac{2}{3}$ .

$$\frac{4}{6}$$

$$\frac{6}{9}$$

$$\frac{8}{12}$$



3. Explain what the numerator and denominator means in each of the fractions that are equivalent to  $\frac{2}{3}$ . Write your answer using a complete sentence.

4. Write three equivalent fractions that are equivalent to the given fraction.

$$\frac{1}{5}$$

$$\frac{3}{7}$$

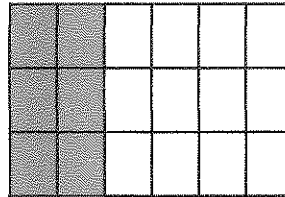
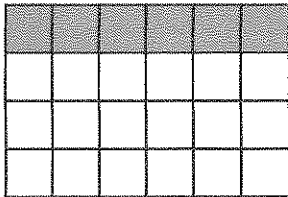
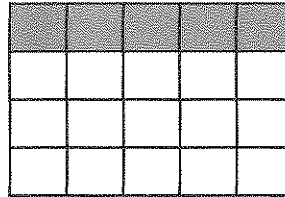
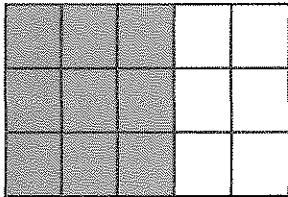
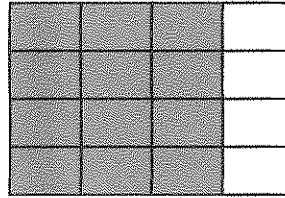
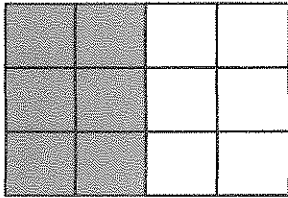
$$\frac{5}{8}$$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## When Twelfths Are Eighths Simplifying Fractions

1. Your aunt made coffee cakes for dessert and cut them in different ways. Write the fraction that is represented by the fraction model. Then write the fraction in simplest form.



2

2. Draw cuts and shade in the coffee cake below to represent  $\frac{16}{20}$ .  
Then write the fraction in simplest form.



Simplest form of  $\frac{16}{20} =$  \_\_\_\_\_

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## When Bigger Means Smaller Comparing and Ordering Fractions

1. Compare the fractions. Then use the symbol  $>$  or  $<$  to make each statement true.

$$\frac{1}{2} \bigcirc \frac{1}{3}$$

$$\frac{4}{5} \bigcirc \frac{7}{8}$$

$$\frac{3}{5} \bigcirc \frac{3}{4}$$

$$\frac{3}{4} \bigcirc \frac{2}{3}$$

$$\frac{2}{5} \bigcirc \frac{2}{3}$$

$$\frac{11}{12} \bigcirc \frac{9}{10}$$

2. Write a complete sentence to explain how you can tell which fraction is greater if both fractions have the same numerator.

3. Write a complete sentence to explain how you can tell which fraction is greater if both fractions have numerators that are one number less than their denominators.

4. Find the least common denominator (LCD) of the fractions. Then use the symbol  $>$  or  $<$  to complete the statement.

$$\frac{5}{8} \bigcirc \frac{13}{20} \quad \text{LCD} = \underline{\hspace{2cm}}$$

$$\frac{19}{20} \bigcirc \frac{54}{60} \quad \text{LCD} = \underline{\hspace{2cm}}$$

5. Tell what method you would use to compare each pair of fractions. Then use the symbol  $>$  or  $<$  to complete the statement.

$$\frac{3}{7} \bigcirc \frac{3}{5}$$

$$\frac{17}{18} \bigcirc \frac{16}{18}$$

$$\frac{4}{9} \bigcirc \frac{11}{27}$$

2

# Assignment

Assignment for Lesson 3.1

Name \_\_\_\_\_ Date \_\_\_\_\_

## Who Gets What? Adding and Subtracting Fractions with Like Denominators

Timothy is copying his large CD collection to MP3s so he can store them on his MP3 player.

On Monday, he copied  $\frac{3}{16}$  of his music. On Tuesday, he copied  $\frac{5}{16}$  of his music. On Wednesday,

he copied  $\frac{7}{16}$  of his music. On Thursday, he copied the rest.

1. What fraction of his music did Timothy copy on Monday and Tuesday? Simplify your answer, if possible. Show all your work.
2. What fraction of his music did Timothy copy on Tuesday and Wednesday? Simplify your answer, if possible. Show all your work.
3. What fraction more of his music did Timothy copy on Wednesday than he copied on Tuesday? Simplify your answer, if possible. Show all your work.
4. What fraction of his music did Timothy copy on Thursday? Remember that you can write 1 as  $\frac{16}{16}$ . Simplify your answer, if possible. Show all your work.

3

Find each sum or difference. Simplify your answer, if possible.

5.  $\frac{5}{24} + \frac{7}{24} =$

6.  $\frac{7}{60} + \frac{4}{60} + \frac{9}{60} =$

7.  $\frac{7}{12} - \frac{5}{12} =$

8.  $\frac{15}{18} - \frac{3}{18} =$

# Assignment

Assignment for Lesson 3.2

Name \_\_\_\_\_ Date \_\_\_\_\_

## Old-Fashioned Goodies

### Adding and Subtracting Fractions with Unlike Denominators

1. Find the least common multiple of each pair of numbers.

3 and 4

4 and 6

2 and 4

8 and 6

2. Your little brother is making chocolate chip cookies for his class. The recipe he is using calls for  $\frac{1}{4}$  cup brown sugar and  $\frac{1}{2}$  cup white sugar. What is the total amount of sugar needed for this recipe? Use a complete sentence to explain how you found your answer.

3. Linn had  $\frac{3}{4}$  of a cake left after her tea party. Then she gave Paul  $\frac{3}{8}$  of the cake. What fraction of the cake did Linn have left? Show all your work.

4. Sammy read  $\frac{5}{8}$  of a science fiction book. He then read another  $\frac{1}{3}$  of the book. What fraction of the book did Sammy read? Show all your work.

3

### Find the sum or difference.

5.  $\frac{1}{2} + \frac{3}{8} =$

6.  $\frac{3}{4} - \frac{5}{8} =$

7.  $\frac{1}{3} + \frac{4}{9} =$

8.  $\frac{9}{10} - \frac{3}{5} =$

9.  $\frac{1}{5} + \frac{2}{3} =$

10.  $\frac{1}{4} + \frac{2}{3} =$

11.  $\frac{5}{9} + \frac{2}{5} =$

12.  $\frac{4}{5} - \frac{1}{4} =$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Fun and Games Improper Fractions and Mixed Numbers

Lewis is measuring  $4\frac{1}{4}$  cups of flour for a recipe. He does not want to dirty two measuring cups. He thinks that he can use the  $\frac{1}{4}$  measuring cup to measure the flour.

1. Rewrite  $4\frac{1}{4}$  as an improper fraction. Show all your work.
2. How many times will Lewis have to fill the  $\frac{1}{4}$  measuring cup? Write your answer using a complete sentence.

3

Lewis wants to measure  $2\frac{2}{3}$  cups of milk. He thinks that he can measure this amount by using only the  $\frac{1}{3}$  measuring cup.

3. Rewrite  $2\frac{2}{3}$  as an improper fraction. Show all your work.
4. How many times will Lewis have to fill the  $\frac{1}{3}$  measuring cup? Write your answer using a complete sentence.

**Rewrite each mixed number as an improper fraction. Show all your work.**

5.  $3\frac{1}{5} =$

6.  $7\frac{1}{2} =$

**Rewrite each improper fraction as a mixed number. Show all your work.**

7.  $\frac{25}{6} =$

8.  $\frac{32}{9} =$

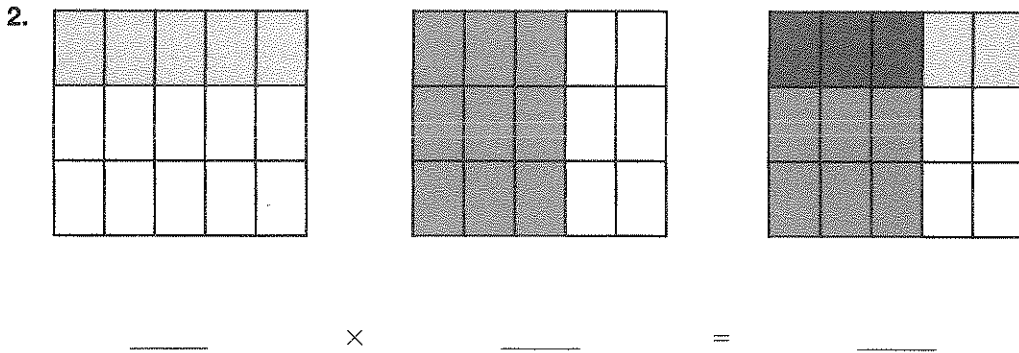
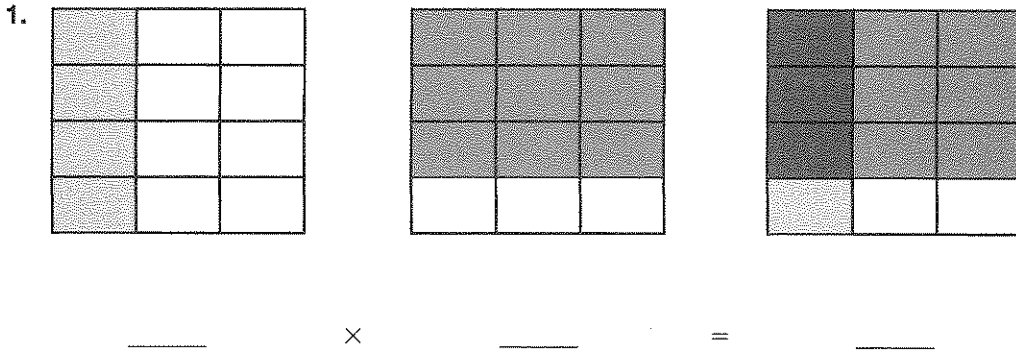


# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Parts of Parts Multiplying Fractions

Write the multiplication problem that is shown by the area model.



**3**

3. Find each product. Be sure to simplify your answers, if possible.

$$\frac{3}{8} \times \frac{1}{2} =$$

$$\frac{5}{6} \times \frac{3}{4} =$$

$$\frac{5}{6} \times \frac{3}{5} =$$

$$\frac{2}{3} \times \frac{3}{5} =$$

$$\frac{2}{5} \times \frac{10}{12} =$$

$$\frac{3}{8} \times \frac{4}{9} =$$

4. Three fourths of the 8th grade class tried out for the school play. If  $\frac{5}{6}$  of those students won a part, what part of the 8th grade class will be in the play? Show all your work.

# Assignment

Assignment for Lesson 3.5

Name \_\_\_\_\_ Date \_\_\_\_\_

## Parts in a Part Dividing Fractions

Jordan is going to do some baking. While gathering his ingredients, he finds that he has only  $\frac{3}{4}$  cup of baking mix.

1. It takes  $\frac{1}{4}$  cup of the mix to make a batch of biscuits. How many batches of biscuits can Jordan make? Show all your work. Use a complete sentence to write your answer.

2. It takes  $\frac{1}{2}$  cup of the mix to make a pie crust. How many pie crusts can Jordan make? Show all your work. Use a complete sentence to write your answer.

3. Jordan lives  $\frac{1}{2}$  mile from school. Each block in his neighborhood is  $\frac{1}{10}$  mile long. How many blocks are between Jordan's house and his school? Show all your work. Use a complete sentence to write your answer.

3

Find each quotient. Simplify your answer, if possible.

4.  $\frac{6}{8} \div \frac{3}{8} =$

5.  $\frac{12}{12} \div \frac{3}{12} =$

6.  $\frac{7}{10} \div \frac{2}{5} =$

7.  $\frac{1}{6} \div \frac{2}{3} =$

8.  $\frac{11}{12} \div \frac{5}{8} =$

9.  $\frac{6}{15} \div \frac{3}{10} =$

10.  $\frac{5}{18} \div \frac{2}{12} =$

11.  $\frac{3}{2} \div \frac{5}{6} =$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## All That Glitters Adding and Subtracting Mixed Numbers

1. Carlos is using ribbon to wrap a present for his aunt. He has  $1\frac{3}{4}$  feet of gold ribbon,  $2\frac{5}{8}$  feet of blue ribbon, and  $1\frac{7}{8}$  feet of red ribbon. Estimate the number of feet of ribbon Carlos has to the nearest whole number.
2. Is your estimate in Question 1 greater than or less than the exact amount? How can you tell? Explain your reasoning using a complete sentence.
3. What is the exact amount of ribbon that Carlos has? Show all your work. Write your answer using a complete sentence.
4. Carlos used only  $1\frac{3}{4}$  feet of the  $2\frac{5}{8}$  feet of blue ribbon to wrap his aunt's present. How many feet of blue ribbon does he have left? Does he have enough blue ribbon to wrap another present if he uses the same amount of ribbon? Show all your work. Write your answer using a complete sentence.

3

Find each sum. Show all your work. Simplify your answer, if possible.

5.  $9\frac{1}{4} + 3\frac{5}{6} =$

6.  $3\frac{5}{6} + 4\frac{3}{10} =$

7.  $1\frac{3}{8} + 2\frac{7}{12} + 3\frac{1}{4} =$

Find each difference. Show all your work. Simplify your answer, if possible.

8.  $3\frac{7}{8} - 1\frac{3}{4} =$

9.  $5\frac{1}{3} - 1\frac{5}{6} =$

10.  $3\frac{1}{4} - 2\frac{5}{6} =$

11.  $8 - 4\frac{3}{8} =$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Project Display Multiplying and Dividing Mixed Numbers

1. Cynthia needs  $1\frac{2}{3}$  cups of sugar to make one pound of taffy. She wants to make  $3\frac{1}{2}$  pounds of taffy. How many cups of sugar will she need? Show all your work. Write your answer using a complete sentence.
  
2. Tamara is making enlargements of a picture to include in her science report. The width of the picture is  $4\frac{1}{2}$  inches. She is enlarging the picture to  $1\frac{3}{4}$  times its size. What will the width of the new picture be? Show all your work. Write your answer using a complete sentence.
  
3. Farmers were able to harvest  $30\frac{5}{6}$  bushels of grain from  $2\frac{1}{3}$  acres. How many bushels did each acre produce? Show all your work. Write your answer using a complete sentence.

3

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Find each product or quotient. Show all your work. Simplify your answer, if possible.

4.  $2\frac{1}{6} \times 3\frac{4}{5} =$

5.  $6\frac{1}{4} \times 3 =$

6.  $3\frac{1}{4} \times 4\frac{1}{3} =$

7.  $5\frac{1}{2} \times 2\frac{2}{3} =$

8.  $5\frac{5}{6} \div 5 =$

9.  $6\frac{3}{5} \div 1\frac{1}{2} =$

10.  $9\frac{1}{5} \div 3\frac{3}{15} =$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Carpenter, Baker, Mechanic, and Chef Working with Customary Units

1. Tommy was weaving different-sized squares of yarn for a class quilt. He had a skein of yarn that was  $5\frac{2}{3}$  yards long. He made two squares using  $2\frac{3}{8}$  feet, one square using  $2\frac{1}{2}$  feet, and one square using  $3\frac{1}{4}$  feet. How many feet of yarn does Tommy have left? Give your answer in feet and in yards. Show all your work. Write your answer using a complete sentence.

3

2. The baker decides that walnuts would be good in his bread. He knows that a batch for 4 loaves of bread will use  $2\frac{2}{25}$  ounces of walnuts, a batch for 10 loaves of bread will use  $5\frac{1}{5}$  ounces of walnuts, and a batch for 12 loaves of bread will use  $6\frac{6}{25}$  ounces of walnuts. Will a one-pound bag of walnuts be enough if the baker wants to make all three batches of bread? Will he have enough to make another 4 loaves? Show your work. Write your answers using complete sentences.

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Cents Sense Decimals as Special Fractions

Different countries use different units of money. It is possible to use exchange rates to convert from one system of money to another. In the United Kingdom, the currency is called the pound. Rates of exchange change from day to day.

1. On a given day, one U.S. dollar is equal to 0.524 pounds. Complete the statements.

$$\begin{aligned} &0.524 \text{ pounds} \\ &= 0 \text{ pounds} + (5 \times \boxed{\phantom{00}} \text{ of a pound}) + (2 \times \boxed{\phantom{00}} \text{ of a pound}) + (4 \times \boxed{\phantom{00}} \text{ of a pound}) \\ &= \underline{\quad} \text{ ones} + \underline{\quad} \text{ tenths} + \underline{\quad} \text{ hundredths} + \underline{\quad} \text{ thousandths} \\ &= \underline{\quad} 1\text{s} + \underline{\quad} \frac{1}{10}\text{s} + \underline{\quad} \frac{1}{100}\text{s} + \underline{\quad} \frac{1}{1000}\text{s} \end{aligned}$$

2. On another day, 3.5 pounds is worth the same as 6.5798 U.S. dollars. Complete the statements.

$$\begin{aligned} &6.5798 \text{ dollars} \\ &= 6 \text{ dollars} + (5 \times \boxed{\phantom{00}} \text{ of a dollar}) + (7 \times \boxed{\phantom{00}} \text{ of a dollar}) + (9 \times \boxed{\phantom{00}} \text{ of a dollar}) + \\ &(8 \times \boxed{\phantom{00}} \text{ of a dollar}) \\ &= \underline{\quad} \text{ ones} + \underline{\quad} \text{ tenths} + \underline{\quad} \text{ hundredths} + \underline{\quad} \text{ thousandths} + \underline{\quad} \text{ ten thousandths} \\ &= \underline{\quad} 1\text{s} + \underline{\quad} \frac{1}{10}\text{s} + \underline{\quad} \frac{1}{100}\text{s} + \underline{\quad} \frac{1}{1000}\text{s} + \underline{\quad} \frac{1}{10,000}\text{s} \end{aligned}$$

3. On another day, 128 pounds is worth the same as 245.389 U.S. dollars. Complete the statements.

$$\begin{aligned} &245.389 \text{ dollars} \\ &= 245 \text{ dollars} + (3 \times \boxed{\phantom{00}} \text{ of a dollar}) + (8 \times \boxed{\phantom{00}} \text{ of a dollar}) + (9 \times \boxed{\phantom{00}} \text{ of a dollar}) \\ &= \underline{\quad} \text{ hundreds} + \underline{\quad} \text{ tens} + \underline{\quad} \text{ ones} + \underline{\quad} \text{ tenths} + \underline{\quad} \text{ hundredths} + \underline{\quad} \text{ thousandths} \\ &= \underline{\quad} 100\text{s} + \underline{\quad} 10\text{s} + \underline{\quad} 1\text{s} + \underline{\quad} \frac{1}{10}\text{s} + \underline{\quad} \frac{1}{100}\text{s} + \underline{\quad} \frac{1}{1000}\text{s} \end{aligned}$$

4

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## What's in a Place? Place Value and Expanded Form

1. The fastest average speed recorded for a stage of the Tour de France is 50.349 kilometers per hour. Identify the place value of the given digit for this speed.

What is the place value of the 5?

What is the place value of the 4?

What is the place value of the 3?

What is the place value of the 0?

What is the place value of the 9?

2. The winning time for the 200-meter 4-man relay in the 2004 Summer Olympics was 175.91 seconds. Identify the digit of the given place value for this time.

What digit is in the ones place?

What digit is in the hundredths place?

What digit is in the hundreds place?

What digit is in the tenths place?

What digit is in the tens place?

3. Rewrite the word form of each decimal as a number.

Five hundred eighty-three and seven tenths

Thirty and twenty-one hundredths

One hundred fifty and one hundred thirty-five thousandths

Two and five thousandths

Four hundred thirty-seven thousandths

4. Write each decimal in word form. Remember to write the decimal point as the word "and."

31.5

104.29

300.03

6.025

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## My Dog is Bigger Than Your Dog Decimals as Fractions: Comparing and Rounding Decimals

Rewrite each decimal as a mixed number.

1. 13.242 =
2. 1.708 =
3. 3.754 =
4. 125.026 =

5. The table below lists rainfall records for Memphis, Tennessee, for certain days in January according to the National Weather Service. Place the rainfall amounts in order from least to greatest.

Rank	1	2	3	4	5	6	7	8
Amount	2.58	3.33	2.13	2.86	2.92	1.83	4.53	4.40
Year	1875	1951	1949	1939	1880	1913	1930	1946

6. The table below lists the life expectancy at birth in various countries according to the CIA World Fact Book. Round each age as indicated in the table.

Country	Life Expectancy at Birth (years)	Round to the Nearest Ten	Round to the Nearest One	Round to the Nearest Tenth
Aruba	79.14			
United States	77.71			
China	72.25			
India	64.35			
Botswana	33.87			



# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Making Change and Changing Hours Adding and Subtracting Decimals

1. Jenny works in a convenience store. She wants to find how much time she spends driving to and from work. She notices that the amount of time to get to work depends on the day that she is driving. She drives for 1.3 hours on Monday, 1.05 hours on Tuesday, and 0.95 hours on Saturday.

Draw the outlines for the base-ten pieces to represent each decimal. Then use the base-ten pieces to find the total time spent driving for the week.

2. Draw the outlines for the base-ten pieces to represent each decimal and the sum.

$$1.73 + 0.05 =$$

$$1.1 + 0.9 + 1.03 =$$

3. A customer used a \$10 bill to pay for a 39-cent energy bar. Jenny returned 61 cents. What mistake did Jenny make? Explain how she should correct her mistake.

4

Find each sum or difference. Use estimation to check your answer.

4.  $2.231 + 10.6 =$

5.  $6.7 + 13.3 =$

6.  $2.35 - 0.66 =$

7.  $4.7 + 0.32 =$

8.  $53 - 15.535 =$

9.  $76.30 - 0.03 =$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Rules Make the World Go Round Multiplying Decimals

A grocery store is selling ground beef for \$1.89 per pound.

1. How much does it cost to buy 2.5 pounds? Round your answer to the nearest cent.
2. How much does it cost to buy 7.25 pounds? Round your answer to the nearest cent.
3. How much does it cost to buy 4.35 pounds? Round your answer to the nearest cent.
4. Spring Hill Park is on a rectangular piece of land that measures 0.75 mile by 1.25 miles. Draw and label a rectangle to represent the park. Then find the area of the park by multiplying the park's length by its width.

**4**

5. The table shows the running speeds in feet per second of several animals. Complete the table by finding the distance that each animal can run for the given number of seconds.

Animal	Speed (feet per second)	Time (seconds)	Distance (feet)
Quarter horse	69.7	12	
Rabbit	51.33	35.5	
Giraffe	46.93	50.5	
Chicken	13.2	100.25	

Perform the indicated multiplication.

6.  $25 \times 0.31 =$
7.  $890 \times 0.23 =$
8.  $1 \times 0.23 =$
9.  $7 \times 6.59 =$
10.  $52 \times 0.86 =$
11.  $7.05 \times 3.72 =$

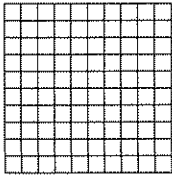
# Assignment

Assignment for Lesson 4.6

Name \_\_\_\_\_ Date \_\_\_\_\_

## The Better Buy Dividing Decimals

1. Use the base-ten piece to show  $0.18 \div 6$ .



Use estimation to place the decimal point in the correct position in each quotient.

2. 
$$\begin{array}{r} 14 \\ 3 \overline{)4.2} \end{array}$$

3. 
$$\begin{array}{r} 232 \\ 21 \overline{)487.2} \end{array}$$

4. 
$$\begin{array}{r} 2325 \\ 4 \overline{)93} \end{array}$$

5. 
$$\begin{array}{r} 256 \\ 8 \overline{)204.8} \end{array}$$

Find each quotient. Estimate to check that your answer is reasonable.

6.  $8 \overline{)0.48}$

7.  $15 \overline{)16.2}$

8.  $231.2 \div 17$

9.  $256.186 \div 20$

10. The winning time for the middle school 4-person 100-meter relay was 62.59 seconds. Suppose that each runner ran exactly the same amount of time. What would the time be for each runner? Show all your work. Write your answer using a complete sentence.

4

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Bonjour! Working with Metric Units

Which metric unit of length would be most appropriate for measuring each item? From the measurements in the box, choose a reasonable estimate of the measurement of each item.

25 centimeters	2 meters	20 meters
240 kilometers	100 meters	8 centimeters

1. Height of a doorway
2. Length of a shoe
3. Distance from Los Angeles to San Diego
4. Height of a school building
5. Width of a calculator

Which metric unit of capacity would be most appropriate for measuring the amount contained in each item? From the measurements in the box, choose a reasonable estimate of the capacity of each item.

1 milliliter	40 liters	8 kiloliters
2 liters	0.001 milliliter	40 milliliters

6. Bathtub
7. Juice box
8. Raindrop
9. Swimming pool
10. Bottle of soda

Which metric unit of mass would be most appropriate for measuring the mass of each item? From the measurements in the box, choose a reasonable estimate of the mass of each item.

1 kilogram	2000 kilograms	2 kilograms
40 grams	2000 grams	2.5 grams

11. Automobile
12. Pair of shoes
13. Penny
14. Bag of sugar
15. Loaf of bread

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Heard It and Read It Ratios and Fractions

Write each phrase as a ratio in two ways.

1. The bakery had 5 loaves of wheat bread and 6 loaves of rye bread.
2. There are 3 roosters and 25 hens on the farm.
3. Alicia spent 30 minutes reading and 80 minutes using the computer.
4. The bracelet had 13 diamonds and 20 emeralds.
5. At the football game, there were 12 cheerleaders and 25 football players.
6. Write one ratio for each row in the table. Be sure to include the quantity names. If possible, simplify the ratio.

Club Membership at City High			
Club	Boys	Girls	Total Students
Spanish Club	32	16	48
Algebra Club	16	8	24
Drama Club	18	18	36
Music Club	15	45	60

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Equal or Not, That Is the Question Writing and Solving Proportions

1. Bill is painting his room a certain shade of green. The paint is a mixture of 3 parts blue paint to 2 parts yellow paint. To get the correct shade of green, how much yellow paint should he add to 6 quarts of blue paint? Find an equivalent ratio to determine the unknown quantity. Show all your work.
2. LaShaya answered 9 of 10 questions correctly on her math quiz. Her twin sister LaTeisha answered 22 out of 25 questions correctly. Did they have the same ratio of correct problems to total problems? Use the product of the means and extremes to determine the answer. Show all your work. Then write a complete sentence to explain your answer.

For each proportion, find an equivalent ratio to determine the unknown quantity. Check your answer using the product of the means and extremes.

3.  $\frac{16 \text{ miles}}{90 \text{ minutes}} = \frac{? \text{ miles}}{270 \text{ minutes}}$

4.  $\frac{16 \text{ sandwiches}}{3 \text{ bags}} = \frac{? \text{ sandwiches}}{12 \text{ bags}}$

5.  $\frac{72 \text{ dollars}}{12 \text{ hours}} = \frac{? \text{ dollars}}{6 \text{ hours}}$

6.  $\frac{9 \text{ tons}}{3 \text{ days}} = \frac{12 \text{ tons}}{? \text{ days}}$

7.  $\frac{112 \text{ ounces}}{? \text{ cans}} = \frac{24 \text{ ounces}}{3 \text{ cans}}$

8.  $\frac{3 \text{ goals}}{2 \text{ games}} = \frac{9 \text{ goals}}{? \text{ games}}$

9.  $\frac{? \text{ dollars}}{21 \text{ pounds}} = \frac{6 \text{ dollars}}{12 \text{ pounds}}$

10.  $\frac{48 \text{ books}}{? \text{ shelves}} = \frac{36 \text{ books}}{3 \text{ shelves}}$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## The Survey Says Using Ratios and Rates

Country	Population	Number of FM Radio Stations	Number of AM Radio Stations
United States	295,734,134	8950	4854
France	60,656,178	3500	41
Germany	82,431,390	787	51
United Kingdom	60,441,457	431	219

1. Write a rate to describe the number of people per FM radio station in each of the four countries listed. Be sure to label the quantities.
2. Write each rate that you wrote in Question 1 as a unit rate. Be sure to label the quantities being compared. Round the numerator of the unit rate to the nearest whole number.
3. Order the rates that you wrote in Question 2 from least to greatest.
4. Write a rate to describe the number of people per AM radio station in each of the four countries listed. Be sure to label the quantities being compared.
5. Write each rate that you wrote in Question 4 as a unit rate. Be sure to label the quantities being compared. Round the numerator of the unit rate to the nearest whole number.
6. Order the ratios you wrote in Question 5 from least to greatest.

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Who's Got Game? Using Proportions to Solve Problems

Write and solve a proportion to answer each problem. Show all your work.

1. Tommy types 50 words per minute, with an average of 3 mistakes. How many mistakes would you expect Tommy to make if he typed 300 words? Write your answer using a complete sentence.
2. Jackie wants to burn 2000 calories in one week. She can burn 250 calories per hour doing aerobics. How many hours should Jackie do aerobics that week?
3. Six cans of fruit juice cost \$2.50. Ned needs to buy 72 cans for a camping trip for the Outdoor Club. How much will he spend?
4. A safe following distance while driving is two car lengths for every ten miles per hour that you are traveling. If you are traveling at 65 miles per hour, how many car lengths is a safe following distance?

Use any process to solve each proportion. Be sure to show all of your work.

5.  $\frac{5 \text{ minutes}}{3 \text{ gallons}} = \frac{x \text{ minutes}}{27 \text{ gallons}}$

6.  $\frac{500 \text{ calories}}{5 \text{ miles}} = \frac{50 \text{ calories}}{x \text{ miles}}$

7.  $\frac{13 \text{ bats}}{8 \text{ hits}} = \frac{65 \text{ bats}}{x \text{ hits}}$

8.  $\frac{5 \text{ grams of protein}}{3 \text{ grams of fat}} = \frac{x \text{ grams of protein}}{21 \text{ grams of fat}}$



# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## One in a Hundred Percents

Certain fractions, decimals, and percents are used often. The amounts in the table below are used frequently for sales, commission amounts, interest rates, and tax rates. Fill in the missing fraction, decimal, or percent to complete the table.

Fraction	Decimal	Percent
	0.01	1%
$\frac{1}{10}$		10%
$\frac{1}{8}$	0.125	
$\frac{1}{5}$		20%
$\frac{1}{4}$	0.25	
	$0.\bar{3}$	$33\frac{1}{3}\%$
$\frac{1}{2}$	0.5	
$\frac{3}{8}$		37.5%
$\frac{2}{3}$	$0.\bar{6}$	
	0.75	75%
$\frac{4}{5}$		80%
	0.9	90%

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Brain Waves Making Sense of Percents

1. Find each percent of 45.

What is 1% of 45?

What is 10% of 45?

What is 40% of 45?

What is 95% of 45?

What is 225% of 45?

2. Find each percent of 250.

What is 1% of 250?

What is 10% of 250?

What is 22% of 250?

What is 85% of 250?

What is 150% of 250?

3. Jai is a 28% shooter in basketball. That means when he shoots a free throw he makes a basket 28% of the time. Jai shoots 120 free throws in a season. How many baskets will he be likely to make? Use benchmark percents of 1% and 10% to help you find the answer. Write your answers using complete sentences.

What is 1% of 120?

What is 10% of 120?

What is 20% of 120?

What is 8% of 120?

4. In Tampa, Florida the sun shines about 66% of the year. About how many days does the sun shine in Tampa? Use benchmark percents of 1% and 10% to help you find the answer. Then use complete sentences to explain your answer.

# Assignment

Assignment for Lesson 6.3

Name \_\_\_\_\_ Date \_\_\_\_\_

## Commissions, Taxes, and Tips Finding the Percent of a Number

The items below are purchased in a city with a sales tax rate of 7%. Find the amount of sales tax on each purchase.

1. A DVD for \$18
2. A computer hard drive for \$40
3. A bathing suit for \$25
4. A bicycle for \$150

An advertising salesperson receives a 15% commission on all of the sales that she makes. Find the commission on each sale.

5. A quarter-page ad for \$250
6. A half-page ad for \$450
7. A full-page ad for \$800
8. The inside back cover ad for \$1200

A shoe store is having a 25% off sale on all of its shoes. Find the discount on each pair of shoes that sells for the original price listed below.

9. Men's running shoes for \$85
10. Women's cross training shoes for \$50
11. Softball cleat shoes for \$29.95
12. Golf shoes for \$120

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Find It on the Fifth Floor Finding One Whole, or 100%

1. Jamie and his friends have summer jobs. They need to save some of their money for college expenses. They each save a percent of their summer earnings. Find the money each friend saved using the information given in the table. Solve by finding 1% of the total earnings and then multiplying that answer by the percent saved.

Name	Percent Saved	Amount Saved	Total Earnings
Jamie	20%		\$620
Sammi	25%		\$608
Keith	10%		\$1350
Tara	15%		\$870

Write a proportion to answer each question. Then solve the proportion.

2. 50 is 40% of what number?
3. 8% of what number is 2?
4. 12 is 30% of what number?
5. You know that 20% of a number is 30. What is the number?
6. Tara read 45 pages of her summer novel on the bus to work. If this is 18% of the novel, how many pages are in the novel?

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## It's Your Money Finding Percents Given Two Numbers

1. Five co-workers are trying to figure out who received the highest percent of their wages for a bonus. Each person's total wages and bonus are listed in the table. Complete the table by calculating the percent bonus. Use any method to determine the percent. Show all your work.

Person	Wages	Total Bonus	Percent Bonus
Leah	\$4500	\$157.50	
Ratha	\$23,400	\$538.20	
Ed	\$35,350	\$636.30	
Chris	\$7500	\$315.00	
Mary	\$14,500	\$362.50	

2. The number 14 is what percent of 200?
3. The number 28 is what percent of 200?
4. What percent of 200 is 56?
5. What percent of 200 is 112?
6. What percent of 50 is 225?

# Assignment

Assignment for Lesson 6.6

Name \_\_\_\_\_ Date \_\_\_\_\_

## So You Want to Buy a Car Percent Increase and Percent Decrease

Use ratios to find the percent increase or percent decrease in each problem.

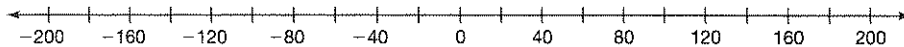
1. A dress that normally sells for \$72 is on sale for \$45. What is the percent decrease in the price?
2. A home purchased for \$120,000 in 2002 is sold for \$156,000 in 2005. What is the percent increase in the price?
3. The CD Warehouse purchases CDs for \$6 each and sells them for \$9 each. What is the percent increase in the price?
4. The CD Warehouse is having a clearance sale. A CD player that originally sells for \$60 is now priced at \$36. What is the percent decrease in the price?
5. The local high school sold 1914 tickets this year to its spring musical. That was 174 more tickets sold than last year. What is the percent increase in the number of tickets sold?
6. Ken's heart rate went from 74 beats per minute while resting to 148 beats per minute while exercising. What is the percent increase in his heart rate?
7. Bargain Basement is having a going-out-of-business sale. All merchandise is first marked down 50%. It is then marked down an additional 50%. Are they giving their merchandise away for free? Use an example and write complete sentences to explain your thinking.

# Assignment

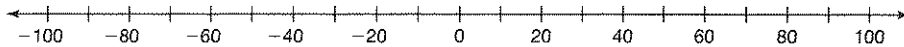
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## I Love New York Negative Numbers in the Real World

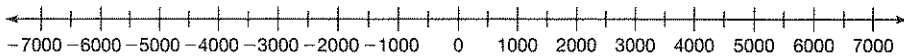
1. The highest temperature ever recorded on Earth was  $136^{\circ}\text{F}$  at Al Aziziyah, Libya, in Africa. The lowest temperature ever recorded on Earth was  $-129^{\circ}\text{F}$  at Vostok Station in Antarctica. Write each temperature as an integer. Use the number line to find the number of degrees between these two temperatures.



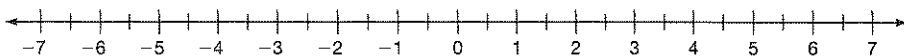
2. The highest recorded temperature in Anchorage, Alaska, was  $86^{\circ}\text{F}$  on June 25, 1953. The lowest recorded temperature in that city was  $-38^{\circ}\text{F}$  recorded on February 3, 1947. Write each temperature as an integer. Find the number of degrees between these two temperatures. Write your answer using a complete sentence.



3. The highest point in the U.S. is Mount McKinley, Alaska, at about 6773 yards above sea level. The lowest point in the U.S. is the Badwater Basin in Death Valley, California, at about 87 yards below sea level. Write each elevation as an integer. Use the number line to find the number of yards between the lowest and highest points.



4. The deepest point in the ocean is the Marianas Trench in the Pacific Ocean at about 6.9 miles below sea level. The highest point in the world is Mount Everest in the Himalayan Mountains at about 5.5 miles. Write each height as an integer. Use the number line to find the approximate number of miles between the lowest and highest points.



# Assignment

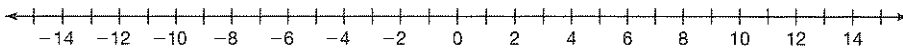
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**7**

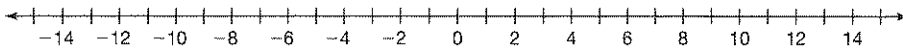
## Going Up? Adding Integers

Use the number line to illustrate each statement.

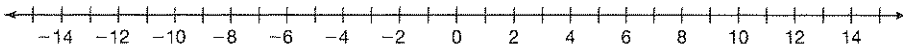
1. Write and evaluate an addition statement in which the addends are both positive.



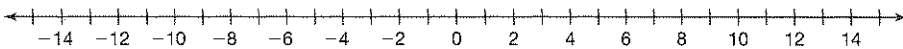
2. Write and evaluate an addition expression in which both addends are negative.



3. Write and evaluate an addition expression in which the addends have different signs.



4. Write an addition expression in which the sum is zero.



Find each sum without using a number line.

5.  $4 + (-8) =$

6.  $15 + (-7) =$

7.  $-13 + 18 =$

8.  $-25 + 17 =$

9.  $-5 + 5 =$

10.  $9 + (-9) =$

11.  $-5 + (-6) =$

12.  $-33 + (-7) =$



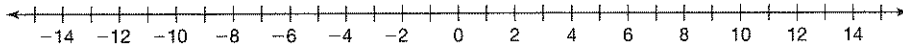
# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

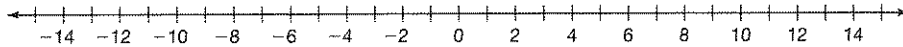
## Test Scores, Grades, and More Subtracting Integers

Use the number line to find the difference. Show all your work.

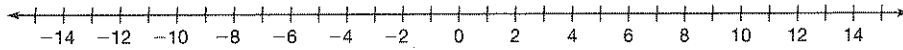
1.  $12 - 5 =$



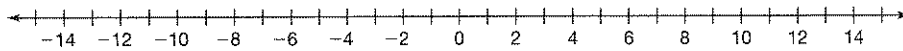
2.  $7 - (-6) =$



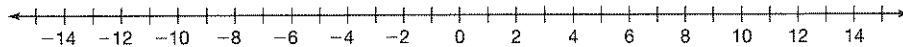
3.  $-4 - (-8) =$



4.  $-10 - (-4) =$



5.  $-5 - 10 =$



Find each difference without using a number line.

6.  $7 - (-13) =$

7.  $10 - (-1) =$

8.  $-16 - 3 =$

9.  $-9 - 7 =$

10.  $-1 - (-2) =$

11.  $-5 - (-5) =$

12.  $19 - (-19) =$

13.  $-8 - (-8) =$

14.  $40 - (-20) =$

15.  $-800 - (-300) =$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

7

## Checks and Balances Multiplying and Dividing Integers

Represent each problem as a multiplication problem. Then use repeated addition to solve the problem.

1. Tesha withdrew \$30 each week from her savings account to pay for her dance lesson. How much money did she withdraw in four weeks?
2. The average temperature dropped 2 degrees per hour for 5 hours. How many degrees did the temperature drop during that time period?

Rewrite each multiplication problem as the product of  $-1$  and a positive integer.

3.  $-3 \times -4 =$
4.  $-8 \times -7 =$
5.  $-4 \times -6 \times 5 =$

Rewrite each division problem as a related multiplication problem. Then find the quotient.

6.  $-25 \div 5$
7.  $-49 \div (-7) =$

Find each product or quotient.

- |                    |                   |
|--------------------|-------------------|
| 8. $3 \times 4 =$  | 9. $12 \div 3 =$  |
| $3 \times (-4) =$  | $-12 \div 3 =$    |
| $-3 \times (-4) =$ | $12 \div (-3) =$  |
| 10. $2 \times 5 =$ | 11. $10 \div 5 =$ |
| $2 \times (-5) =$  | $-10 \div 5 =$    |
| $-2 \times (-5) =$ | $10 \div (-5) =$  |
| 12. $6 \times 7 =$ | 13. $42 \div 6 =$ |
| $6 \times (-7) =$  | $-42 \div 6 =$    |
| $-6 \times (-7) =$ | $42 \div (-6) =$  |

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_



## Weight of a Penny Absolute Value and Additive Inverse

1. The table shows the lowest record temperatures for several states. Write the absolute value of the number that represents each temperature in the table.

State	Temperature (degrees Fahrenheit)	Absolute Value of Temperature
Florida	-2	
Tennessee	-32	
Texas	-23	
Hawaii	2	
Idaho	-60	

Find the sum or difference inside the absolute value symbol. Then find the absolute value of the result.

2.  $|-6 + 5| = |\square| =$

3.  $|-11 + 15| = |\square| =$

4.  $|8 + (-9)| = |\square| =$

5.  $|22 + (-7)| = |\square| =$

6.  $|-7 + (-3)| = |\square| =$

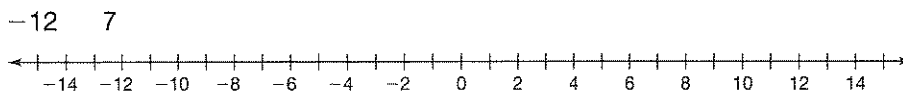
7.  $|-10 + (-10)| = |\square| =$

In Questions 8 and 9, find the distance between the numbers.

8. Distance between -2 and 3 =  $|\square| =$

9. Distance between 12 and -12 =  $|\square| =$

10. Graph each number on the number line. Then graph the opposite of the number.



11. A fellow student says that  $|-7 + 4|$  is the same as  $|-7| + |4|$ . Is she correct? Use a complete sentence to explain why or why not.

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

## Exploring the Moon Powers of Ten

- The world population in 1650 was approximately 550,000,000. By 1979, the world population had grown to about 4,336,000,000. Write each number in expanded form using powers of ten.
- Write each population in expanded form using powers of 10.  
Asia: 27,730,000,000 =  
Europe: 4,820,000,000 =  
Africa: 4,660,000,000 =
- A common influenza virus measures 0.0001 millimeter long. Write this measurement in expanded form using powers of ten. (Use negative powers of 10 to represent numbers less than 1.)
- For each situation, write the measure of energy generated in standard form. (A joule is a unit of energy.)  
Hurricane:  $4 \times 10^{15}$  joules  
Atom bomb:  $8 \times 10^{13} + 4 \times 10^{12}$  joules  
Man running:  $2 \times 10^6 + 5 \times 10^5$  joules  
Woman running:  $1 \times 10^6 + 8 \times 10^5$  joules  
Chirp of a cricket:  $9 \times 10^{-4}$  joules  
Moonlight on a face:  $8 \times 10^{-5}$  joules

### Use the rules below to find each product or quotient.

*When you multiply by powers of 10 that are greater than 1, you move the decimal point one place to the right for each zero in the power of 10.*

*When you multiply by powers of 10 that are less than 1, you move the decimal point one place to the left for each decimal place in the power of 10.*

*When you divide by powers of 10 that are greater than 1, you move the decimal point one place to the left for each zero in the power of 10.*

*When you divide by powers of 10 that are less than 1, you move the decimal point one place to the right for each decimal place in the power of 10.*

- $124 \times 10 =$
- $1045 \times 0.1 =$
- $981 \times 0.01 =$
- $3.217 \times 1000 =$
- $549 \div 100 =$
- $3.945 \div 10 =$
- $2.137 \div 0.1 =$
- $24,903 \div 0.001 =$

# Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_



## Expanding Our Perspective Scientific Notation

In the table are some facts about the universe. The very large and very small numbers are written in standard form or using scientific notation. Complete the table.

Description	Standard Form	Scientific Notation
Distance from Earth to the sun	93,000,000 mi	
Temperature of the sun at the core	27,000,000°F	
Number of protons in a gram		$6.022 \times 10^{23}$
Mass of a proton	0.00000000000000000000000016726 kg	
Mass of an electron		$9.11 \times 10^{-28}$ g
Mass of Earth		$5.974 \times 10^{24}$ kg
Mass of the sun		$1.9889 \times 10^{30}$ kg
Mass of a virus	0.0000000000000000000000035 g	
Wavelength of violet light	0.0000004 m	
Wavelength of gamma rays	0.0000000000000001 m	
Distance light travels in a year		$9.46 \times 10^{15}$ m
Approximate value of the U.S. debt	\$7,787,000,000,000	
Diameter of an atom		$4.2 \times 10^{-8}$ m
Diameter of an electron		$5.64 \times 10^{-15}$ m
Width of the Milky Way Galaxy	851,400,000,000,000,000 m	