NAME _____ DATE _____ PERIOD _____

Lesson 1-1

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Complete each sentence with the word *fraction, denominator, or whole*.

1. Marty and his brother made a pizza and cut it into 6 slices. They ate all 6 slices of the pizza. Marty and his brother ate the _____ pie.

2. Nelia brought 10 pencils to school. She sharpened 4 pencils. Nelia sharpened a _____ of her pencils.

3. In the fraction $\frac{2}{5}$, 5 is the _____.

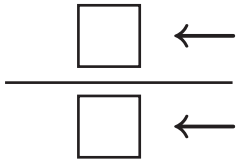
Definition Review

Fractions represent parts of a whole or part of a set.
The **denominator** is the number below the bar in a fraction; it tells how many equal parts are in a whole or set.
The **numerator** is the number above the bar in a fraction; it tells how many of the equal parts are being considered.

4. How many students are in your class? _____
This number will be the *denominator* of the fraction.

5. How many of the students in your class are girls? _____
This number will be the *numerator* of the fraction.

6. What fraction of the students in your class are girls?
Label the numerator and denominator of the fraction.



Application

Follow the directions to play the game.

- Students work in groups of 4 and are assigned the numbers 1 – 4.
- Place 10 red chips and 10 blue chips in a bag.
- Student #1 pulls a handful of chips out of the bag.
- Student #2 writes a fraction to describe the number of red chips pulled.
- Student #3 identifies the numerator and the denominator of the fraction.
- Student #4 writes a fraction to describe the number of blue chips pulled.
- Continue the game until all students have a turn pulling handfuls of chips and identifying the fraction, numerator and denominator.

NAME _____ DATE _____ PERIOD _____

Lesson 1-2

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

1. List three examples of times you use fractions in your daily life.

_____

2. For a typical 24-hour school day, what fraction of your time do you spend doing each of the following?

Sleeping: $\frac{\quad}{24}$

Attending school: $\frac{\quad}{24}$

Relaxing: $\frac{\quad}{24}$

Definition Review

Fractions represent parts of a whole or part of a set.

Complete each sentence with the word *unit fraction*, *numerator*, or *denominator*.

3. The _____ that represents the shaded area is $\frac{1}{5}$.

4. The _____ in the fraction $\frac{1}{5}$, is 1.

5. The _____ in the fraction $\frac{1}{5}$, is 5.

Use your knowledge of unit fractions to complete each sentence.

6. A unit fraction always has a numerator of _____.

7. When the _____ and _____ of a fraction are equal, the fraction equals 1.

NAME _____ DATE _____ PERIOD _____

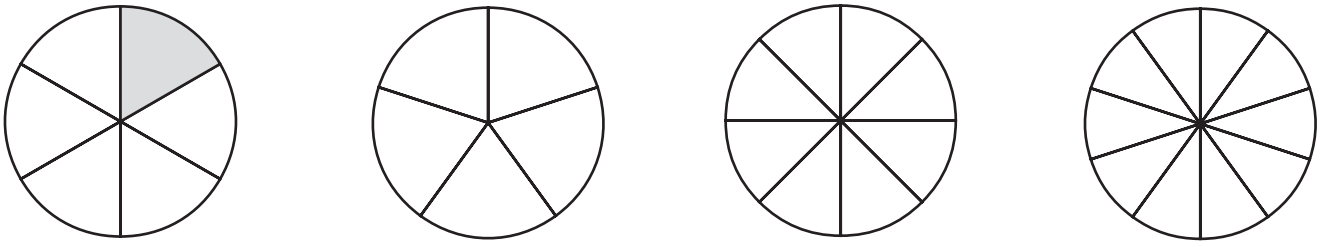
Lesson 1-3

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

A unit fraction is a fraction that has 1 in its numerator.

One slice of a pizza pie can be labeled as a unit fraction. What unit fraction represents a slice of each pizza pie?



1 _____ 2 _____ 3 _____ 4 _____

5 Which pizza has the largest slices? _____

6 Which pizza has the smallest slices? _____

Application

Follow the directions to play the game.

- Work in pairs.
- Write the numbers 1 through 12 on small pieces of paper.
- Place each piece of paper face down.
- One student chooses a sheet of paper and uses the number as the denominator in a unit fraction. For example, student 1 chooses the number 6 and creates the unit fraction $\frac{1}{6}$.
- The second student chooses a sheet of paper and uses the number as the denominator in a unit fraction.
- Both students write an inequality statement using $<$, $=$, or $>$ to compare the fractions. If needed, draw a picture of the unit fraction to assist in comparing.
- The student with the larger unit fraction gets a point.
- Return the numbers face down and continue play until one student reaches 10 points.
- Challenge—play with more than 2 students and compare 3 unit fractions.

NAME _____ DATE _____ PERIOD _____

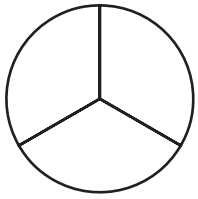
Lesson 2-1

Practice: Vocabulary and English Language Development

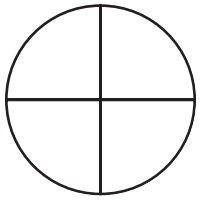
Activate Prior Knowledge

Answer.

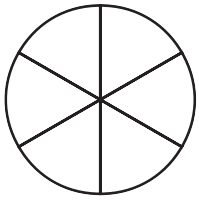
Sara, Carmen, and Josh each ate a whole quesadilla, which they each cut differently. Their quesadillas are shown below. Write equivalent forms of one to express the amount eaten by each person.



1 $\frac{\square}{\square} = 1$



2 $\frac{\square}{\square} = 1$



3 $\frac{\square}{\square} = 1$

Definition Review

Equivalent fractions are fractions that represent the same number.
An **equivalent form of one** is any nonzero number divided by itself.

Fill in the blank with *equivalent fractions*, or *equivalent forms of one*.

4 $\frac{3}{8}$ and $\frac{6}{16}$ are _____.

5 $\frac{7}{7}$ and $\frac{8}{8}$ are _____.

Application

- **Use fraction strips to model each fraction.**
- **Tell whether each pair of fractions is equivalent or not.**

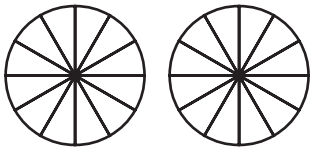
- $\frac{4}{5}$ _____ $\frac{6}{10}$
- $\frac{1}{2}$ _____ $\frac{4}{8}$
- $\frac{3}{8}$ _____ $\frac{4}{9}$
- $\frac{6}{10}$ _____ $\frac{3}{5}$
- $\frac{4}{6}$ _____ $\frac{2}{3}$
- $\frac{3}{9}$ _____ $\frac{2}{6}$

NAME _____ DATE _____ PERIOD _____

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Mr. Sanchez made two cheesecakes for his family. Each cheesecake has 12 slices. He served a total of 14 slices. Use the diagram below to model the number of slices he served. Then write an improper fraction and a mixed number to represent the total number of slices Mr. Sanchez served.



1 Improper fraction _____

2 Mixed number _____

Definition Review

An **improper fraction** has a numerator that is greater than or equal to the denominator.
A **mixed number** has a whole number part and a fraction part.

Label each number as an *improper fraction*, or a *mixed number*.

3 $1\frac{7}{8}$ _____

4 $\frac{12}{10}$ _____

5 $\frac{7}{7}$ _____

6 $8\frac{8}{9}$ _____

Application

Follow the directions below.

- Roll two number cubes and write down the sum of the numbers.
- Roll two number cubes again and write down the sum of the numbers.
- Write an improper fraction using the two numbers you rolled.
- Write the improper fraction as a mixed number.
- If the numbers are equal, roll again to find a new number.

NAME _____ DATE _____ PERIOD _____

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

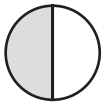
Write an equivalent form of one to represent the whole object.

1 

_____

2 

_____

3 

_____

Definition Review

A **common denominator** is the same denominator (bottom number) used in two or more fractions.
Equivalent forms of one are different expressions that represent one.

Find a common denominator for each pair of fractions.

4 $\frac{3}{5}$ and $\frac{7}{8}$ _____

5 $\frac{1}{2}$ and $\frac{2}{9}$ _____

6 $\frac{7}{16}$ and $\frac{3}{8}$ _____

7 $\frac{2}{3}$ and $\frac{9}{15}$ _____

Application

Follow the directions below.

- Students work in pairs. Each pair needs 2 number cubes.
- The first student rolls the number cubes. Students use the lesser number as the numerator and the greater number as the denominator of a fraction. Write down the fraction.
- The second student rolls the number cubes and the pair does the some thing.
- Both students then write down three common denominators of the two fractions. If the two fractions already have the same denominator, roll again.
- Students check each other's common denominators and repeat exercise 5 times.

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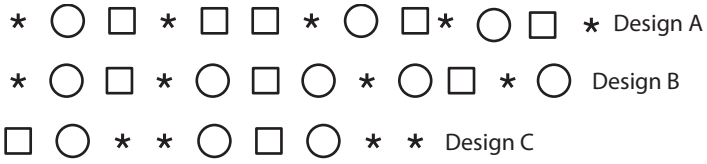
Lesson 2-4

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Use the designs to answer the questions.



1. Which design has the greatest fraction of stars? _____

2. Which design has the least fraction of circles? _____

3. List the designs in ascending order according to the fraction of squares in each.

   _____

Definition Review

Ascending order means moving from least to greatest.
Descending order means moving from greatest to least.

Complete each sentence using the words *ascending* or *descending*.

4. Juan wrote $\frac{3}{4}, \frac{2}{3}, \frac{1}{4}$.

   Juan wrote the fractions in _____ order.

5. Laura wrote $\frac{1}{4}, \frac{2}{3}, \frac{3}{4}$.

   Laura wrote the fractions in _____ order.

Application

Use a ruler to cut 4 strips of paper, each 12 inches long. Divide each strip of paper into equal parts to show the fractions below. Then write the fractions in order from least to greatest.

$\frac{1}{2}$
$\frac{1}{3}$
$\frac{1}{12}$
$\frac{1}{4}$

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Lesson 2-5

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Answer.

I List the names of ten friends or family members. Out of the people you listed, what fraction of them has a dog as a pet? Write your answer in simplest form.

_____

Definition Review

Match each term with its definition.

_____ 5. simplest form	A. a way of expressing a composite number as a product of its prime factors
_____ 6. greatest common factor	B. any whole number greater than 1 with exactly two factors, 1 and itself
_____ 7. prime number	C. a fraction in which the numerator and the denominator have no common factor greater than 1
_____ 8. prime factorization	D. a number greater than 1 with more than two factors
_____ 9. composite number	E. the largest number that divides evenly into two or more numbers

Application

Complete the graphic organizer.

Show the Prime Factorization for each number.	Find the Greatest Common Factor for each set of numbers.
20 _____	20 and 75 _____
35 _____	35 and 42 _____
42 _____	42 and 20 _____
75 _____	75 and 42 _____

NAME _____ DATE _____ PERIOD _____

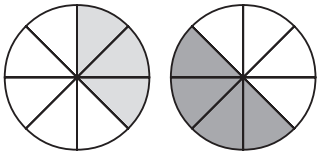
Lesson 3-1

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Answer.

1. Rama and Todd each ate the pizzas shown below for lunch. Rama ate $\frac{3}{8}$ of his pizza and Todd ate $\frac{4}{8}$ of his pizza. Fill in the circle below to represent the total number of pieces eaten by the boys.



2. Leon landed 5 of the 10 rings on the pole with his first turn and 3 of the 10 rings on his second turn. Write a fraction to represent the total number of rings he landed on the pole. _____

Is this fraction is simplest form? _____

If it is not in simplest form, rewrite it in simplest form. _____

Definition Review

A fraction is in **simplest form** when the numerator and denominator have no common factor greater than 1.

Like fractions are fractions that have the same denominator.

Write *yes* or *no* to tell if each fraction is in simplest form. If it is not in simplest form, write the fraction in simplest form.

3. $\frac{5}{8}$ _____

4. $\frac{12}{15}$ _____

5. $\frac{16}{36}$ _____

6. $\frac{11}{21}$ _____

Write *yes* or *no* to tell if each is a pair of like fractions.

7. $\frac{5}{7}$ AND $\frac{5}{9}$ _____

8. $\frac{3}{4}$ AND $\frac{4}{8}$ _____

9. $\frac{2}{5}$ AND $\frac{1}{5}$ _____

10. $\frac{3}{7}$ AND $\frac{4}{7}$ _____

Application

Follow the directions for the activity.

- Students work in pairs. Each pair needs a bag of 24 assorted marbles.
- Arrange the marbles into groups of each color.
- Write fractions to represent the fraction of the marbles that is each color.
- Find the fractional sum of 2 colors write this fraction in simplest form.
- Students continue until they find the fractional sums for all colors.

NAME _____ DATE _____ PERIOD _____

Lesson 3-2

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Use each sentence to answer the question.

1. Rita bought 3 of the 5 books she needs for her book club.

   How many more books does she need to buy? _____

2. Sanjay delivered 8 of the 15 newspapers on his route.

   How many newspapers does he have left to deliver? _____

3. Lucy unpacked 4 of the 9 boxes.

   How many boxes does Lucy have left to unpack? _____

Definition Review

A fraction is in **simplest form** when the numerator and denominator have no common factor greater than 1.
Fractions that have the same bottom number have **common denominators**.

Write *yes* or *no* to tell if each fraction is in simplest form. If it is not in simplest form, write the fraction in simplest form.

4. $\frac{3}{8}$ _____
5. $\frac{18}{48}$ _____
6. $\frac{28}{35}$ _____
7. $\frac{11}{21}$ _____
8. $\frac{2}{4}$ _____
9. $\frac{18}{27}$ _____

Write yes or no to tell if each pair of fractions have common denominators.

10. $\frac{2}{5}$ AND $\frac{5}{10}$ _____
11. $\frac{1}{6}$ AND $\frac{2}{12}$ _____
12. $\frac{3}{8}$ AND $\frac{5}{8}$ _____
13. $\frac{1}{9}$ AND $\frac{5}{9}$ _____

Application

Students solve subtraction problems using fraction tiles.

- Students each make a fraction strip with 10 sections. Cut out the 10 sections.
- Students each need 10 plastic markers.
- Create and solve 10 subtraction problems using the fraction tiles. Write the problems and record the difference in simplest form.
- For example, if the problem is $\frac{3}{5} - \frac{1}{5}$, students place 5 tiles on the desk and put markers on 3 of the tiles. They then take off 1 marker and count the tiles that contain the remaining markers. This number is the numerator of the difference.

NAME _____ DATE _____ PERIOD _____

Lesson 3-3

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Complete the sentence by filling in the number according to the picture. Solve.

1 Dewayne bought _____ boxes of pencils with _____ pencils in each box.

How many pencils did Dewayne buy? _____

Definition Review

A **factor** is a number that divides into a whole number evenly.

Complete each sentence using the words *do* or *do not*.

2 To add fractions, the bottom numbers _____ need to be common denominators.

3 To subtract fractions, the bottom numbers _____ need to be common denominators.

4 To multiply fractions, the bottom numbers _____ need to be common denominators.

Write the factors for each number.

5 21 _____

6 27 _____

7 18 _____

8 14 _____

Application

Follow the directions for the activity.

- Students work in groups of 4. Each group needs a number cube.
- Each student rolls the cube and remembers the number.
- Each group makes 2 fractions using the students' numbers. Write down the fractions.
- Multiply the fractions and find the product in simplest form.
- Repeat the activity 10 times, using different fractions each time.
- For more variety, use 10 sided number cubes, or occasionally roll the die twice and use the sum for any given number.

NAME _____ DATE _____ PERIOD _____

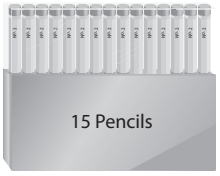
Lesson 3-4

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Solve.

1. Amal used $\frac{2}{5}$ of his pencils. How many pencils did he use? _____



2. Sondra marked on the calendar the days she ran this week. She ran an equal distance each day and she ran a total of $4\frac{1}{2}$ miles. How many miles did she run each day?

_____

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 ☆	2 ☆	3	4 ☆	5	6 ☆	7 ☆

3. Mr. Dixon has 24 students in his class. He divides the students equally among 8 tables. How many students sit at each table?

_____

Definition Review

The **quotient** is the answer to a division problem.
A **dividend** is a number that is being divided.
The **divisor** is the number by which the dividend is being divided.

Complete each sentence using the words *dividend, divisor,* or *quotient*.

4. In the division problem $10 \div 2 = 5$, the 10 is the _____.
5. In the division problem $12 \div 4 = 3$, the 3 is the _____.
6. In the division problem $48 \div 6 = 8$, the 6 is the _____.

Write the reciprocal of each fraction.

7. $\frac{4}{17} =$ _____
8. $\frac{12}{100} =$ _____
9. $\frac{5}{30} =$ _____
10. $\frac{89}{6} =$ _____
11. $\frac{1}{2} =$ _____
12. $\frac{3}{8} =$ _____

NAME _____ DATE _____ PERIOD _____

Lesson 3-5

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

There is a saying that you can not compare apples to oranges because they are too unlike. They are, however, alike because they are all pieces of fruit.

Identify a category in which each is alike. Add to find the number of items in each category.

1 Pens and Pencils _____

2 Socks and Shirts _____

Definition Review

Prime factorization is a way of expressing a composite number as a product of its prime factors.

Name the LCD for each set of fractions.

3 $\frac{5}{6}, \frac{1}{9}$ _____

4 $\frac{3}{5}, \frac{2}{7}$ _____

5 $\frac{9}{10}, \frac{7}{8}$ _____

6 $\frac{20}{21}, \frac{6}{7}$ _____

Write the prime factorization for each composite number.

7 $16 =$ _____

8 $56 =$ _____

9 $45 =$ _____

10 $12 =$ _____

11 $33 =$ _____

12 $27 =$ _____

Application

Solve fractions using coins.

- Students work in pairs. Each group needs 2 quarters, 2 dimes, 2 nickels, and 2 pennies. (If these are unavailable, use counters, assigning coin values to different colors.)
- Students determine the value of each coin as a fraction of $1.
- Students create 5 different addition problems using different combinations of coins. (Example: 2 quarters + 2 dimes = 70 cents.)
- Students then represent each sum using the fraction of $1 that each coin represents. (Example: $\frac{2}{4} + \frac{2}{10} = \frac{7}{10}$)
- Students then multiply the sum by 100 to check their answers. (Example: $7\backslash 10 \times 100 = 70$ cents.)

NAME _____ DATE _____ PERIOD _____

Lesson 3-6

Practice: Vocabulary and English Language Development

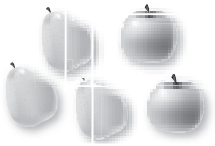
Activate Prior Knowledge

There is a saying that you can not compare apples to oranges because they are too unlike. They are, however, alike because they are all pieces of fruit.

Identify a category in which each of these items is alike. Add to find the number of items in each category.

1. Squares and Circles _____

2. Apples and Pears _____



Definition Review

Prime factorization is a way of expressing a composite number as a product of its prime factors.

Name the LCD for each set of fractions.

3. $\frac{2}{5}, \frac{5}{6}$ _____
4. $\frac{3}{4}, \frac{2}{3}$ _____
5. $\frac{3}{8}, \frac{1}{7}$ _____
6. $\frac{5}{16}, \frac{7}{32}$ _____

Write the prime factorization for each composite number.

7. $21 =$ _____
8. $28 =$ _____
9. $25 =$ _____
10. $32 =$ _____
12. $42 =$ _____
13. $8 =$ _____

Application

Follow the directions for the activity.

- Students work in pairs. Each group needs 2 quarters, 2 dimes, 2 nickels, and 2 pennies. (If these are unavailable, use counters assigning coin values to different colors.)
- Students determine the value of each coin as a fraction of \$1.
- Students create 5 different subtraction problems using different combinations of coins. (Example: 2 quarters – 2 dimes = 30 cents.)
- Students then represent each difference using the fraction of \$1 that each coin represents. (Example: $\frac{2}{4} - \frac{2}{10} = \frac{3}{10}$)
- Students then multiply the difference by 100 to check their answers. (Example: $\frac{3}{10} \times 100 = 30$ cents.)

NAME _____ DATE _____ PERIOD _____

Lesson 4-1

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Complete the sentence with *right*, *left*, *first*, or *second*.

1

The shirt is to the _____ of the hat.

2 

The blue triangle is the _____ triangle.

Definition Review

Identify the place value for each digit in the number: 8,495.26.

3 2 _____

4 4 _____

5 5 _____

6 6 _____

7 8 _____

8 9 _____

Application

Fill in the place value and the words for the digits of each number.

Follow the example.

	Thousands	Hundreds	Tens	Ones	·	Tenths	Hundredths
4,076.38	4	0	7	6		3	8
words	four thousand		seventy-six		and	thirty-eight hundredths	
7,529.5	7	5	2	9	·	5	0
words	seven thousand	five hundred	twenty-nine		and	five tenths	

NAME _____ DATE _____ PERIOD _____

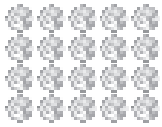
Lesson 4-2

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Identify the value of each in dollars and cents.

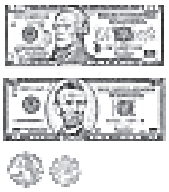
1 _____ nickels = _____



Definition Review

Identify the largest denomination in each group.

2 _____



Identify the smallest denomination in each group.

3 _____

Application

Follow the directions for the activity.

- Organize students into groups of 3 or 4.
- Assign a type of store, such as grocery or toy to each group.
- Using play money assign equal amounts of money to each student and equal amounts to each store.
- Each group draws 10 to 15 items that might be sold in their store and determines appropriate prices for each item.
- Allow some of the students to shop at the stores with their play money while the others run their stores and cash registers. Students should be adding and subtracting money to pay and receive change for items.
- Each student should have the chance to shop and to be in charge of the cash register.
- Each student should buy 2 to 3 items in the classroom stores.

NAME _____ DATE _____ PERIOD _____

Lesson 4-3

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Complete each sentence with *before* or *after*.

1. 8:05 AM is _____ 8:35 AM
2. 5:32 PM is _____ 5:23 PM
3. 10:10 AM is _____ 10:01 AM
4. 1:45 PM is _____ 1:54 PM

Definition Review

Identify the place value of the underlined number.

5. 48.<u>7</u>6 _____
6. 39<u>1</u>.27 _____
7. <u>6</u>52.48 _____
8. 77.3<u>1</u> _____
9. 8<u>4</u>6.59 _____
10. 29.1<u>4</u> _____

Application

Follow the directions for the activity.

- Teachers write two consecutive whole numbers on the board or overhead.
- Each student writes down a decimal (not to exceed the hundredths place) within the range of the two whole numbers.
- Teachers select 5 to 6 students from the class to come to the front of the room.
- Students compare their numbers and put themselves in order from least to greatest. Each student should display his or her number.
- The seated students then check to see if the students are ordered correctly.
- Repeat all of the steps with new numbers each time until each student has an opportunity to take his or her number to the front of the class.

NAME _____ DATE _____ PERIOD _____

Lesson 4-4

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Circle the correct answer.

1. One foot equals 12 inches. Which is greater?

   3 feet 10 inches

2. One hour equals 60 minutes. Which is greater?

   10 hours 18 minutes

3. One pound equals 16 ounces. Which is greater?

   5 pounds 476 ounces

4. One week equals 7 days. Which is greater?

   4 weeks 30 days

Definition Review

Identify whether the number is a fraction or a decimal. Write the equivalent form of each as either a fraction or a decimal

5. 0.19 _____

6. 8.94 _____

7. $2\frac{5}{8}$ _____

8. 3.2 _____

9. $\frac{3}{4}$ _____

10. $10\frac{7}{12}$ _____

Application

Follow the directions for the activity.

- Teachers divide the class into two groups.
- One half of the class comes up with a decimal between 0 and 1.
- The other half of the class comes up with a fraction between 0 and 1.
- Select one student from each group to come to the front of the class with the group's number.
- The class compares the two numbers. Which is greater?
- Teachers and students discuss strategies for comparing the numbers mentally without converting any numbers.
- Continue to repeat until each student has had a turn.

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Lesson 4-5

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Add the money.

1  = _____

2  = _____

Definition Review

Write the decimal of each sum.

3 6 tens + 2 ones _____

4 4 ones and 8 hundredths + 7 tenths and 1 hundredth _____

5 2 tens and 5 tenths + 9 tenths _____

6 8 tens and 2 tenths + 7 ones and 9 hundredths _____

Application

Follow the directions for the activity.

- Students bring in various receipts from home. Make sure each student has at least one receipt.
- Students work in groups of 3 or 4.
- Students tear off the bottom of each receipt just above the total charge so that all of the individual prices are still on the top portion.
- Students trade receipts within the groups.
- Students find the total of each receipt.
- Students check with each other to see if answers are correct.
- Students repeat the process by trading receipts and finding the new sums.

Chapter 4

NAME _____ DATE _____ PERIOD _____

Lesson 4-6

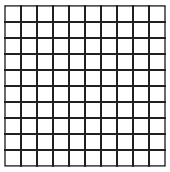
Practice: Vocabulary and English Language Development

Activate Prior Knowledge

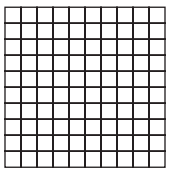
Follow the steps to subtract fractions by converting each to its decimal equivalent.

$\frac{3}{4} - \frac{7}{25} = ?$

1. Shade $\frac{3}{4}$ of the 100-block grid below.



2. Shade $\frac{7}{25}$ of the 100-block grid below.



Definition Review

Decimal models can be used to subtract decimals.

Fill in the blanks.

3. To subtract decimals, you can write the numbers vertically and line up the _____.

4. When there is not a large enough number in a certain place value from which to subtract, the number must be _____.

5. The answer to a subtraction problem is the called the _____.

6. A _____ is a number that represents both whole numbers and fractions. In such a number, the _____ separates the whole number and fraction parts.

Application

Follow the directions to play the game.

- Students work in competing pairs.
- Each pair creates 5 subtraction problems with fractions or mixed numbers, writing them on a piece of paper. Mixed numbers must be between 0 and 10. Fractions must have the numbers 2, 4, 5, 10, 20, 25, or 50 as denominators.
- Two student pairs trade papers and solve the fractional subtraction problems.
- The students discuss answers and check solutions on a calculator. The pair with the most correct responses wins.

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Lesson 4-7

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Follow the steps to multiply a fraction and a decimal.

Alvin bought a pair of jeans. The original price of the jeans was $21.95 and they were marked at $\frac{1}{4}$ off the original price. How much did the jeans cost after the discount?

1. What decimal is equivalent to the fraction $\frac{1}{4}$? _____

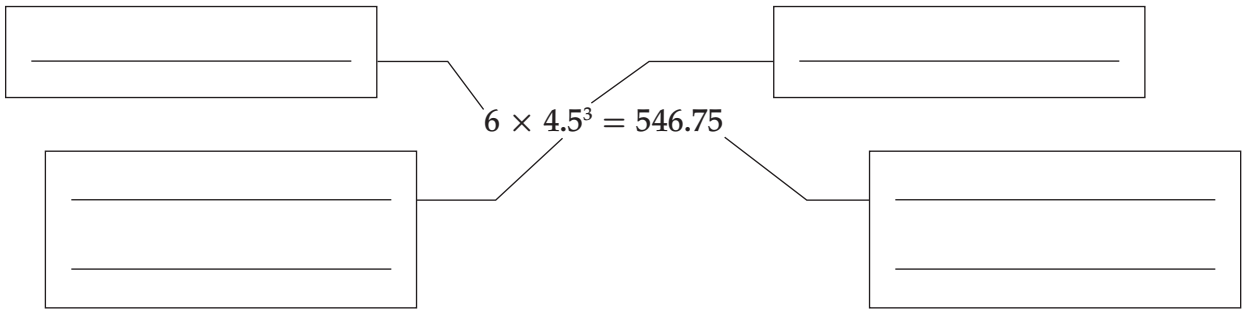
2. In application problems, the word "of" often means to multiply. Find $\frac{1}{4}$ of $21.95 using the decimal equivalent of the fraction. _____

Definition Review

To multiply **decimals**, multiply the numbers as if they were whole numbers. Then place the decimal point in the **product**.

Identify the parts of the decimal multiplication problem.

3. Fill in each box with the correct vocabulary term: *exponent*, *decimal*, *factor*, *product*. Terms may be used more than once.



Application

Follow the directions to find a pattern.

- Students work in pairs.
- Students use paper and pencil to 0.5^2, 1.5^2, 2.5^2, 3.5^2, 4.5^2, 5.5^2, and 6.5^2
- Groups examine the results for a pattern and write a rule for squaring decimals numbers with ".5" as the fractional part. For any decimal number of the form $n.5$, the square is found by multiplying the whole number part n by $n + 1$ (the next larger whole number) and attaching 0.25 (the square of 0.5). Example: 6.5^2 is found by $6 \times 7 = 42$ (7 is next whole number after 6) and .25 to get 42.25.
- Test the rule for 7.5^2, 8.5^2, and 9.5^2
- Compare results with other students.

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Lesson 4-8

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Complete the following calculations and compare.

1. Find 8.24×1.6 and show steps.

_____

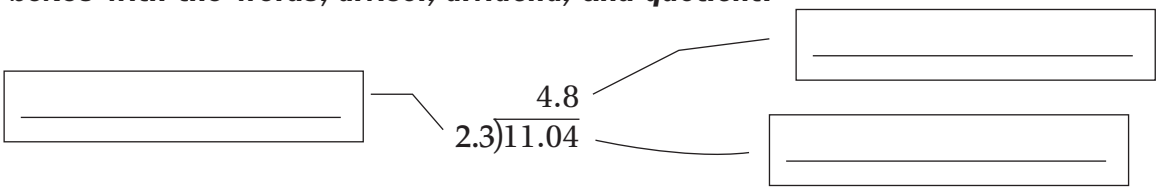
2. Find $13.184 \div 1.6$ and show steps.

_____

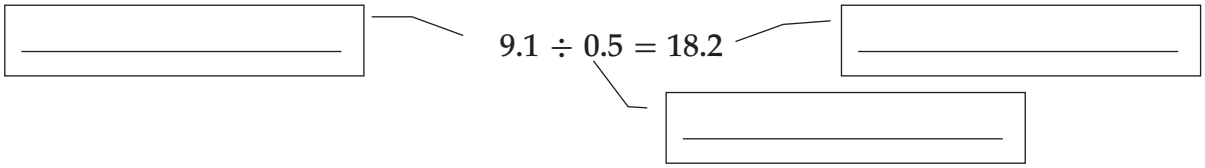
Definition Review

Fill in the boxes with the words, *divisor, dividend,* and *quotient*.

3.



4.



Application

Follow the directions to play the division game.

- Six students sit in a circle, each with paper and pencil. Several note cards are placed in the center of the circle.
- Each student thinks of two decimal numbers and multiplies them together. Both factors must be between 0 and 100 and have no more than two decimal places.
- Each student writes a division problem using the multiplication problem created. The problem is written on a note card without the solution and passed to the student on his/her left. Example: If $1.8 \times 2.5 = 4.5$ is created, $4.5 \div 2.5 = ?$ is written on the note card (and 1.8 is the quotient).
- Each student performs the division indicated on the card which has been passed to him or her. The quotient is checked with the student on the right.
- Any students who did not find the correct quotient leave the circle.
- Play continues, creating and passing new problems, until only one player remains.
- The last player remaining is the winner.

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Lesson 4-9

Practice: Vocabulary and English Language Development

Activate Prior Knowledge

Write +, –, ×, or ÷ beside each key word to indicate the operation it represents.

1. sum _____
2. increased by _____
3. ratio of _____
4. product _____
5. at _____
6. less than _____

Definition Review

Review the rules for operations involving signed numbers by filling in the blanks.

7. When adding one positive and one negative number, _____ the absolute values of the numbers and the sign will be _____

8. When subtracting signed numbers, the sign of the first number _____ and the sign of the second number _____. Then the appropriate addition rule is followed.

9. When multiplying two negative numbers, the result is always _____.

10. When multiplying a negative number and a positive number, the result is always _____.

Application

Follow the directions to play the game.

- Students compete in pairs. Students will need paper, pencils, and note cards.
- Students write each of the following on a different note card:
  $\frac{3}{4}$, 3.07, $-1\frac{1}{2}$, – 4.6, $-\frac{1}{5}$, $\frac{7}{10}$, 6, $7\frac{9}{20}$, $-2\frac{8}{25}$, –0.75, 1.82, $-\frac{1}{4}$, $-3\frac{11}{20}$, 0.08
- Cards are mixed together and each student is given 7 cards which are laid face down on the table.
- The two students each turn up one card at the same time, laying them on the table.
- Students race to find the sum of the two numbers which are face up. Students should say "Got it!" when they find the answer. If the first student to say "Got it!" finds the correct sum, he/she collects both cards. If this student is incorrect, the other student collects both cards.
- Play repeats until all 14 cards have been used. The player with the most collected cards is the winner.