

NAME \_\_\_\_\_

DATE \_\_\_\_\_

PERIOD \_\_\_\_\_

## Unit 5, Lesson 11: Dividing Numbers that Result in Decimals

1. Use long division to show that the fraction and decimal in each pair are equal.

a.  $\frac{3}{4}$  and 0.75

b.  $\frac{3}{50}$  and 0.06

c.  $\frac{7}{25}$  and 0.28

2. Mai walked  $\frac{1}{8}$  of a 30-mile walking trail. How many miles did Mai walk? Explain or show your reasoning.

3. Use long division to find each quotient. Write your answer as a decimal.

a.  $99 \div 12$

b.  $216 \div 5$

c.  $1,988 \div 8$

NAME \_\_\_\_\_

DATE \_\_\_\_\_

PERIOD \_\_\_\_\_

4. To find the decimal of  $\frac{9}{25}$ , Tyler reasoned: " $\frac{9}{25}$  is equivalent to  $\frac{18}{50}$  and to  $\frac{36}{100}$ , so the decimal of  $\frac{9}{25}$  is 0.36."

a. Use long division to show that Tyler is correct.

b. Is the decimal of  $\frac{18}{50}$  also 0.36? Use long division to support your answer.

5. Complete the calculations so that each shows the correct difference.

a.

$$\begin{array}{r} 5 \\ - \square\square\square\square \\ \hline 4.329 \end{array}$$

b.

$$\begin{array}{r} 1 \\ - \square\square\square\square \\ \hline 0.015 \end{array}$$

c.

$$\begin{array}{r} 1 \\ - \square\square\square\square \\ \hline 0.863 \end{array}$$

(from Unit 5, Lesson 4)

6. Use the equation  $124 \cdot 15 = 1,860$  and what you know about fractions, decimals, and place value to explain how to place the decimal point when you compute  $(1.24) \cdot (0.15)$ .

(from Unit 5, Lesson 6)

NAME \_\_\_\_\_

DATE \_\_\_\_\_

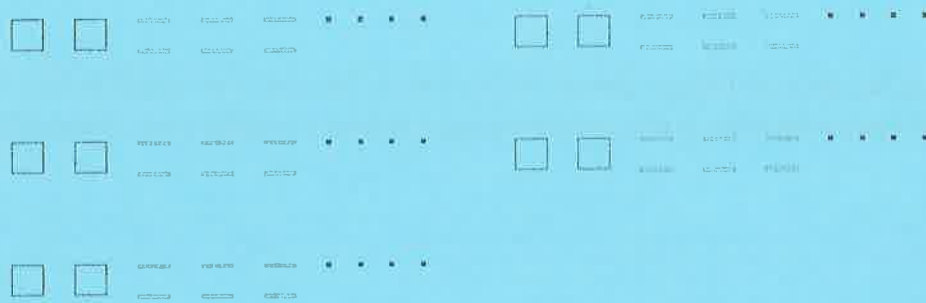
PERIOD \_\_\_\_\_

## Unit 5, Lesson 12: Dividing Decimals by Whole Numbers

1. Here is a diagram representing a base-ten number. The large rectangle represents a unit that is 10 times the value of the square. The square represents a unit that is 10 times the value of the small rectangle.



Here is a diagram showing the number being divided into 5 equal groups.



- If a large rectangle represents 1,000, what division problem did the second diagram show? What is its answer?
  - If a large rectangle represents 100, what division problem did the second diagram show? What is its answer?
  - If a large rectangle represents 10, what division problem did the second diagram show? What is its answer?
2. a. Explain why all of these expressions have the same value.
- $4500 \div 90$                        $450 \div 9$                        $45 \div 0.9$                        $4.5 \div 0.09$
- b. What is the common value?
3. Use long division to find each quotient.

NAME \_\_\_\_\_

DATE \_\_\_\_\_

PERIOD \_\_\_\_\_

a.  $7.89 \div 2$

b.  $39.54 \div 3$

c.  $0.176 \div 5$

4. Four students set up a lemonade stand. At the end of the day, their profit is \$17.52. How much money do they each have when the profit is split equally? Show or explain your reasoning.

5. a. A standard sheet of paper in the United States is 11 inches long and 8.5 inches wide. Each inch is 2.54 centimeters. How long and wide is a standard sheet of paper in centimeters?

b. A standard sheet of paper in Europe is 21.0 cm wide and 29.7 cm long. Which has the greater area, the standard sheet of paper in the United States or the standard sheet of paper in Europe? Explain your reasoning.

(from Unit 5, Lesson 8)

## Unit 5, Lesson 13: Dividing Decimals by Decimals

1. A student said, "To find the value of  $109.2 \div 6$ , I can divide 1,092 by 60."

a. Do you agree with this statement? Explain your reasoning.

b. Calculate the quotient of  $109.2 \div 6$  using any method of your choice.

2. Here is how Han found  $31.59 \div 13$ :

$$\begin{array}{r}
 2.43 \\
 13 \overline{) 31.59} \\
 \underline{-26} \phantom{00} \\
 55 \phantom{00} \\
 \underline{-52} \phantom{00} \\
 39 \phantom{00} \\
 \underline{-39} \phantom{00} \\
 0
 \end{array}$$

a. At the second step, Han subtracts 52 from 55. How do you know that these numbers represent tenths?

b. At the third step, Han subtracts 39 from 39. How do you know that these numbers represent hundredths?

c. Check that Han's answer is correct by calculating the product of 2.43 and 13.

3. a. Write two division expressions that have the same value as  $61.12 \div 3.2$ .

b. Find the value of  $61.12 \div 3.2$ . Show your reasoning.

4. A bag of pennies weighs 5.1 kilogram. Each penny weighs 2.5 grams. About how many pennies are in the bag?

- A. 20
- B. 200
- C. 2,000
- D. 20,000

NAME \_\_\_\_\_

DATE \_\_\_\_\_

PERIOD \_\_\_\_\_

## Unit 5, Lesson 14: Using Operations on Decimals to Solve Problems

1. A roll of ribbon was 12 meters long. Diego cut 9 pieces of ribbon that were 0.4 meter each to tie some presents. He then used the remaining ribbon to make some wreaths. Each wreath required 0.6 meter. For each question, explain your reasoning.

a. How many meters of ribbon were available for making wreaths?

b. How many wreaths could Diego make with the available ribbon?

2. The Amazon rainforest covered 6.42 million square kilometers in 1994. In 2014, it covered only  $\frac{50}{59}$  as much. Which is closest to the area of the Amazon forest in 2014? Explain how you know without calculating the exact area.

A. 6.4 million  $\text{km}^2$

B. 5.4 million  $\text{km}^2$

C. 4.4 million  $\text{km}^2$

D. 3.4 million  $\text{km}^2$

E. 2.4 million  $\text{km}^2$

5. Find these quotients. Show your reasoning.

a.  $24.2 \div 1.1$

b.  $13.25 \div 0.4$

c.  $170.28 \div 0.08$