Name _____   Period _____

Unit 5 Base 10 Week of 3/16/2020

Learning Targets from 6th Grade Common Core State Standards:

Lesson 11 Dividing numbers that result in decimals
- I can use long division to find the quotient of two whole numbers when the quotient is not a whole number.

Lesson 12 Dividing decimals by whole numbers
- I know how multiplying both the dividend and the divisor by the same factor affects the quotient.
- I can divide a decimal by a whole number.
- I can explain the division of a decimal by a whole number in terms of equal-sized groups.

Lesson 13 Dividing decimals by decimals
- I can find the quotient of two decimals.
- I can explain how multiplying dividend and divisor by the same power of 10 can help me find a quotient of two decimals.

Lesson 14 Using Operations on Decimals to Solve Problems
- I can use addition, subtraction, multiplication, and division on decimals to solve problems.

This Week's Vocabulary Words:

decimal	bundle	regroup	quotient	power of 10	addition
place value	unbundle	decompose	divident	multiplication	subtraction
			divisor	division	

Homework is due the following day.

Day	Class work—All in Spiral using iPad	Homework	Complete	Correct
Monday	U5 L11 Dividing numbers that result in decimals	U5 L11 HW Problems—Look carefully you get to skip some	/4	/10
Tuesday	U5 L12 Dividing decimals by whole numbers	U5 L12 HW Problems, 5b is the Challenge	/4	/11
Wednesday	U5 L13 Dividing decimals by decimals	U5 L13 HW Problems	/4	/14
Thursday	Quiz on Division	None	None	
Friday	Catch up and Odds and Ends	None have a great spring break	None	
		Total	/12	
		Quality	/4	
		Total	/16	

Homework Quality—Remember, if you don't know how to complete a problem you should read it again and write down the information you have, draw a picture, or write a question you have, please do not leave blank or write "?" or idk. You can also come in and get help before school☺!

☐ Work is *thorough* with *detailed* explanations (2 pts)
☐ Homework is corrected (with additions needed) in a different color pen/pencil (2 pts)

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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. *Choose 2!*

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

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

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

/2

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

/1

3. Use long division to find each quotient. Write your answer as a decimal. *Choose 2!*

   a. $99 \div 12$

   b. $216 \div 5$

   c. $1,988 \div 8$

/2

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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.

/2

5. Complete the calculations so that each shows the correct difference. *Choose 2!*

    a.

$$5.000$$
$$-\boxed{\,\boxed{}\,\boxed{}\,\boxed{}}$$
$$4.329$$

    b.

$$1.000$$
$$-\boxed{\,\boxed{}\,\boxed{}\,\boxed{}}$$
$$0.015$$

    c.

$$1.000$$
$$-\boxed{\,\boxed{}\,\boxed{}\,\boxed{}}$$
$$0.863$$

(from Unit 5, Lesson 4)

/2

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)

/1

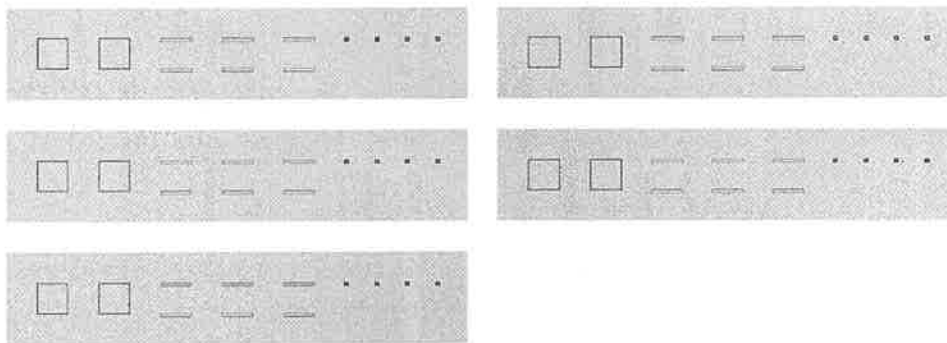NAME   DATE   PERIOD

Unit 5, Lesson 12: Dividing Decimals by Whole Numbers /11

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.

a. If a large rectangle represents 1,000, what division problem did the second diagram show? What is its answer?

b. If a large rectangle represents 100, what division problem did the second diagram show? What is its answer?

c. If a large rectangle represents 10, what division problem did the second diagram show? What is its answer? /3

2.   a. Explain why all of these expressions have the same value.

$4500 \div 90$ $450 \div 9$ $45 \div 0.9$ $4.5 \div 0.09$

/2

b. What is the common value?

3. Use long division to find each quotient.

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a. $7.89 \div 2$ b. $39.54 \div 3$ c. $0.176 \div 5$

/3

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.

/1

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?

11 inches = _____ cm

8.5 inches = _____ cm

/2

Challenge 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)

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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

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

```
        2 : 4  3
  13 / 3  1 : 5  9
    - 2  6 :
         5 : 5
       -  5 : 2
            : 3  9
          - : 3  9
            :    0
```

   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?

/1
/3

   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.

/2

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

    A. 20

    B. 200

    C. 2,000

    D. 20,000

/1

5. Find each difference. If you get stuck, consider drawing a diagram.

    SKIP   *SKIP*

    a. $2.5 - 1.6$ b. $0.72 - 0.4$ c. $11.3 - 1.75$ d. $73 - 1.3$

/2

(from Unit 5, Lesson 3)

6. Plant B is $6\frac{2}{3}$ inches tall. Plant C is $4\frac{4}{15}$ inches tall. Complete the sentences and show your reasoning.

    a. Plant C is _____ times as tall as Plant B.

    b. Plant C is _____ inches _____ (taller or shorter) than Plant B.

/2

(from Unit 4, Lesson 12)

7. At a school, 460 of the students walk to school.

    a. The number of students who take public transit is 20% of the number of students who walk. How many students take public transit?

    b. The number of students who bike to school is 5% of the number of students who walk. How many *students bike to school?*

/2