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Period _____

Unit 4 Rate and Percent Week of 1/14/19

Learning Targets from 6th Grade Common Core State Standards:

Lesson 2 Meanings of Division

- When given a division equation, I can write a multiplication equation that represents the same situation.
- I can explain two ways of interpreting a division expression such as $27 \div 3$.
- I can explain how multiplication and division are related.

Lesson 3 Interpreting Division Situations

- I can decide whether a division question is asking “how many groups?” or “how many in each group?”
- I can create a diagram or write an equation that represents division and multiplication questions.

Lesson 4 How many groups?(Part 1)

- I can use diagrams and multiplication and division equations to represent “how many groups?” questions.
- I can find how many groups there are when the amount in each group is not a whole number.

Lesson 5 How many groups?(Part 2)

- I can find how many groups there are when the number of groups and the amount in each group are not whole numbers.

This Week’s Vocabulary Words:

multiplication division quotient divisor group tape diagram

Homework is due the following day.

Day	Class work—All in Spiral using iPad ☺	Homework	Complete	Correct
Monday	Lesson 2 Meanings of Division PDF page 5	Pages 1 & 2: Lesson 2 Practice Problems—All	/4	/24
Tuesday	Lesson 3 Interpreting Division Situations PDF page 8	Pages 3 & 4: Lesson 3 Practice Problems—All	/4	/13
Wednesday	Lesson 4 How many groups (Part 1) PDF page 12	Pages 5 & 6: Lesson 4 Practice Problems—All	/4	/12
Thursday	Lesson 5 How many groups?(Part 2) PDF page 15	Pages 7 & 8: Lesson 5 Practice Problems—All	/4	/15
Friday	4.3 Cool Down and 5.3 Equal Groups/ Dreambox	None		
		Total	/16	
		Quality	/4	
		Total	/20	

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 4, Lesson 2: Meanings of Division

1. Twenty pounds of strawberries are being shared equally by a group of friends. The equation $20 \div 5 = 4$ represents the division of strawberries.

a. If the 5 represents the number of people, what does the 4 represent?

b. If the 5 represents the pounds of strawberries per person, what does the 4 represent?

2. A sixth-grade science club needs \$180 to pay for the tickets to a science museum. All tickets cost the same amount.

What could $180 \div 15$ mean in this context? Describe two interpretations of the expression. Then, find the quotient and explain what it means in each interpretation.

3. Write a multiplication equation that corresponds to each division equation.

a. $10 \div 5 = ?$

b. $4.5 \div 3 = ?$

c. $\frac{1}{2} \div 4 = ?$

4. Write a division or multiplication equation that represents each situation. Use a “?” for the unknown quantity.

a. 2.5 gallons of water are poured into 5 equally sized bottles. How much water is in each bottle?

b. A large bucket of 200 golf balls is divided into 4 smaller buckets. How many golf balls are in each small bucket?

c. Sixteen socks are put into pairs. How many pairs are there?

5. Find a value for a that makes each statement true.

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 a. $a \div 6$ is greater than 1

 c. $a \div 6$ is less than 1

 b. $a \div 6$ is equal to 1

 d. $a \div 6$ is equal to a whole number

(from Unit 4, Lesson 1)

6. Complete the table. Write each percentage as a percent of 1.

fraction	decimal	percentage
$\frac{1}{4}$	0.25	25% of 1
	0.1	
		75% of 1
$\frac{1}{5}$		
	1.5	
		140% of 1

(from Unit 3, Lesson 14)

7. Jada walks at a speed of 3 miles per hour. Elena walks at a speed of 2.8 miles per hour. If they both begin walking along a walking trail at the same time, how much farther will Jada walk after 3 hours? Explain your reasoning.

(from Unit 3, Lesson 8)

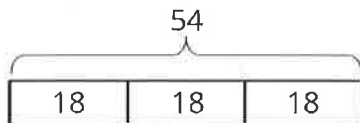
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Unit 4, Lesson 3: Interpreting Division Situations

1. Write a multiplication equation and a division equation that this diagram could represent.



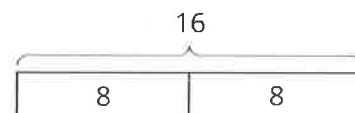
2. Mai has \$36 to spend on movie tickets. Each movie ticket costs \$4.50. How many tickets can she buy?

a. Write a multiplication equation and a division equation to represent this situation.

b. Find the answer. Draw a diagram, if needed.

c. Use the multiplication equation to check your answer.

3. Kiran said that this diagram can show the solution to $16 \div 8 = ?$ or $16 \div 2 = ?$, depending on how we think about the equations and the “?”.
Explain or show how Kiran is correct.



4. Write a sentence describing a situation that could be represented by the equation $4 \div 1\frac{1}{3} = ?$.
(from Unit 4, Lesson 2)

5. Noah said, “When you divide a number by a second number, the result will always be smaller than the first number.”

Jada said, “I think the result could be larger or smaller, depending on the numbers.”

Do you agree with Noah or Jada? Show or explain your reasoning.

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(from Unit 4, Lesson 1)

6. Mini muffins cost \$3.00 per dozen.

- Andre says, "I have \$2.00, so I can afford 8 muffins."
- Elena says, "I want to get 16 muffins, so I'll need to pay \$4.00."

Do you agree with either, both, or neither of them? Explain your reasoning.

(from Unit 3, Lesson 7)

7. A family has a monthly budget of \$2,400. How much money is spent on each category?

- a. 44% is spent on housing.
- b. 23% is spent on food.
- c. 6% is spent on clothing.
- d. 17% is spent on transportation.
- e. The rest is put into savings.

(from Unit 3, Lesson 15)

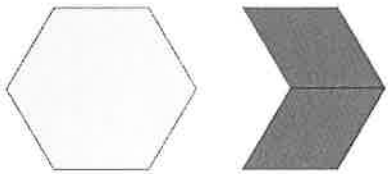
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Unit 4, Lesson 4: How Many Groups? (Part 1)

- A shopper buys cat food in bags of 3 lbs. Her cat eats $\frac{3}{4}$ lb each week. How many weeks does one bag last?
 - Draw a diagram to represent the situation and label your diagram so it can be followed by others. Answer the question.
 - Write a multiplication or division equation to represent the situation.
 - Multiply your answer in the first question (the number of weeks) by $\frac{3}{4}$. Did you get 3 as a result? If not, revise your previous work.
- Use the diagram to answer the question: How many $\frac{1}{3}$ s are in $1\frac{2}{3}$? The hexagon represents 1 whole. Explain or show your reasoning.



- Which question can be represented by the equation $? \cdot \frac{1}{8} = 3$?

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A. How many 3s are in $\frac{1}{8}$?

B. What is 3 groups of $\frac{1}{8}$?

C. How many $\frac{1}{8}$ s are in 3?

D. What is $\frac{1}{8}$ of 3?

4. Write two division equations for each multiplication equation.

a. $15 \cdot \frac{2}{5} = 6$

b. $6 \cdot \frac{4}{3} = 8$

c. $16 \cdot \frac{7}{8} = 14$

5. Noah and his friends are going to an amusement park. The total cost of admission for 8 students is \$100, and all students share the cost equally. Noah brought \$13 for his ticket. Did he bring enough money to get into the park? Explain your reasoning.

(from Unit 4, Lesson 2)

6. Write a division expression with a quotient that is:

a. greater than $8 \div 0.001$

b. less than $8 \div 0.001$

c. between $8 \div 0.001$ and $8 \div \frac{1}{10}$

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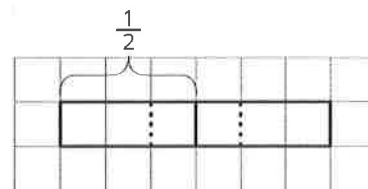
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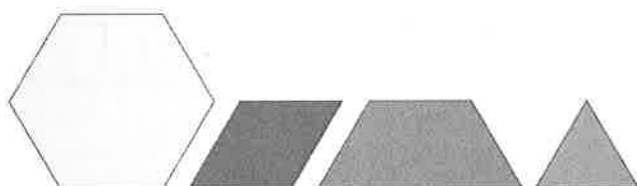
Unit 4, Lesson 5: How Many Groups? (Part 2)

1. Use the tape diagram to represent and find the value of $\frac{1}{2} \div \frac{1}{3}$.

Mark up and label the diagram as needed.



2. What is the value of $\frac{1}{2} \div \frac{1}{3}$? Use pattern blocks to represent and find this value. The yellow hexagon represents 1 whole. Explain or show your reasoning.

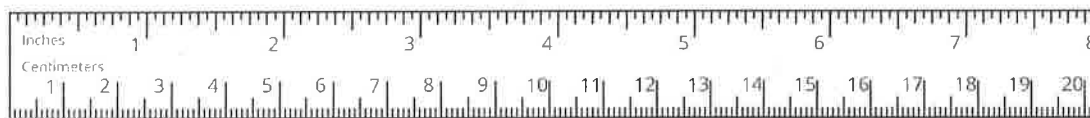


3. Use a standard inch ruler to answer each question. Then, write a multiplication equation and a division equation that answer the question.

a. How many $\frac{1}{2}$ s are in 7?

b. How many $\frac{3}{8}$ s are in 6?

c. How many $\frac{5}{16}$ s are in $1\frac{7}{8}$?



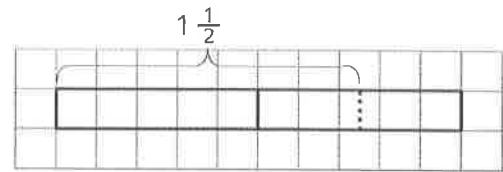
4. Use the tape diagram to represent and answer the question: How many $\frac{2}{5}$ s are in $1\frac{1}{2}$?

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Mark up and label the diagram as needed.

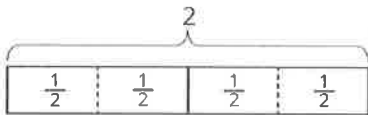


5. Write a multiplication equation and a division equation to represent each question, statement, or diagram.

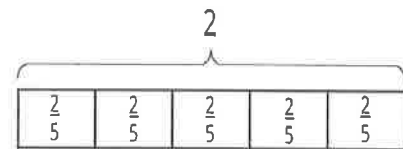
a. There are 12 fourths in 3.

c. How many $\frac{2}{3}$ s are in 6?

b.



d.



(from Unit 4, Lesson 4)

6. At a farmer's market, two vendors sell fresh milk. One vendor sells 2 liters for \$3.80, and another vendor sells 1.5 liters for \$2.70. Which is the better deal? Explain your reasoning.

(from Unit 3, Lesson 5)

7. A recipe uses 5 cups of flour for every 2 cups of sugar.

a. How much sugar is used for 1 cup of flour?

b. How much flour is used for 1 cup of sugar?

c. How much flour is used with 7 cups of sugar?

d. How much sugar is used with 6 cups of flour?