Name _____ Period _____

Unit 2 Ratio Week of 11/12/18

Learning Targets from 6th Grade Common Core State Standards:

Lesson 14:
- ☐ I can decide what information I need to know to solve problems about situations happening at the same rate.
- ☐ I can explain my reasoning using diagrams that I choose.

Lesson 15:
- ☐ I can solve problems when I know a ratio and a total amount (part, part, whole).
- ☐ I can create tape diagrams to explain my reasoning using diagrams that I choose.

Lesson 16:
- ☐ I can use diagrams to help me think through a solution.
- ☐ I can use diagrams to help someone understand my reasoning.

This Week's Vocabulary Words:
ratio   equivalent ratios   per   rate   double number line   ratio table

Homework is due the following day.

Day	Class work—All in Spiral using iPad ☺	Homework— Pink	Complete	Correct
Monday	No School Veteran's Day			
Tuesday	Lesson 14 Solving Equivalent Ratio Problems	Pages 1 & 2: Lesson 14 Practice Problems, Challenge is #3, do number 6 carefully	/4	/9
Wednesday	Lesson 15 Part-Part-Whole	Pages 3 & 4: Lesson 15 Practice Problems ALL	/4	/11
Thursday	Lesson 16 More Ratios Review for Assessment	Pages 5 & 6: Lesson 16 Review for Assessment Practice Problems, Challenges are #2 and #6 ONLY do if you have time	/4	/4
Friday	Unit 2 Assessment	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☺!

- ☐ The date is written at the beginning of the assignment (1 pt)
- ☐ Work is *thorough* with *detailed* explanations (2 pts)
- ☐ Homework is corrected (with additions needed) in a different color pen/pencil (1 pt)

NAME   DATE   PERIOD

Unit 2, Lesson 14: Solving Equivalent Ratio Problems

1. A chef is making pickles. He needs 15 gallons of vinegar. The store sells 2 gallons of vinegar for $3.00 and allows customers to buy any amount of vinegar. Decide whether each of the following ratios correctly represents the price of vinegar.

   a. 4 gallons to $3.00

   b. 1 gallon to $1.50

   c. 30 gallons to $45.00

   d. $2.00 to 30 gallons

   e. $1.00 to $\frac{2}{3}$ gallon

2. A caterer needs to buy 21 pounds of pasta to cater a wedding. At a local store, 8 pounds of pasta cost $12. How much will the caterer pay for the pasta there?

   a. Write a ratio for the given information about the cost of pasta.

   b. Would it be more helpful to write an equivalent ratio with 1 pound of pasta as one of the numbers, or with $1 as one of the numbers? Explain your reasoning, and then write that equivalent ratio.

   c. Find the answer and explain or show your reasoning.

3. Lin is reading a 47-page book. She read the first 20 pages in 35 minutes. CHALLENGE

   a. If she continues to read at the same rate, will she be able to complete this book in under 1 hour?

   b. If so, how much time will she have left? If not, how much more time is needed? Explain or show your reasoning.

NAME   DATE   PERIOD

4. Diego can type 140 words in 4 minutes.

    a. At this rate, how long will it take him to type 385 words?

    b. How many words can he type in 15 minutes?

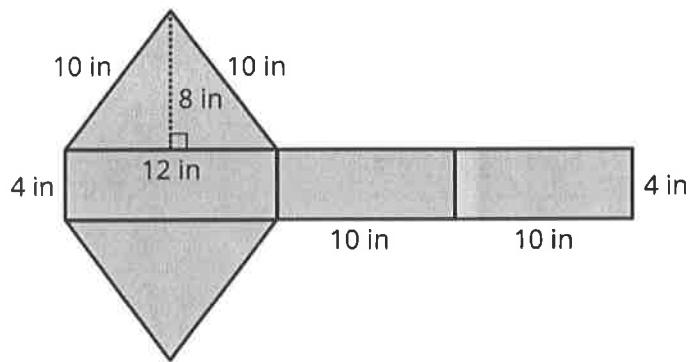   If you get stuck, consider creating a table.   /2

5. A train that travels 30 miles in $\frac{1}{3}$ hour at a constant speed is going faster than a train that travels 20 miles in $\frac{1}{2}$ hour at a constant speed. Explain or show why.

    (from Unit 2, Lesson 10)   /1

6. Find the surface area of the polyhedron that can be assembled from this net. Show your reasoning.

    (from Unit 1, Lesson 14)

                                                    /2

                                        Total   /9

Unit 2, Lesson 15: Part-Part-Whole Ratios

1. Here is a tape diagram representing the ratio of red paint to yellow paint in a mixture of orange paint.
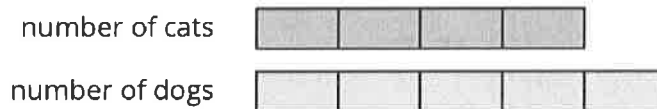
   a. What is the ratio of yellow paint to red paint?

   cups of red paint

3	3	3

   cups of yellow paint

3	3

   b. How many total cups of orange paint will this mixture yield?

   /2

2. At the kennel, the ratio of cats to dogs is 4 : 5. There are 27 animals in all. Here is a tape diagram representing this ratio.

   number of cats

   number of dogs

   a. What is the value of each small rectangle?

   b. How many dogs are at the kennel?

   c. How many cats are at the kennel?

   /3

3. Last month, there were 4 sunny days for every rainy day. If there were 30 days in the month, how many days were rainy? Explain your reasoning. If you get stuck, consider using a tape diagram.

   /1

4. Noah entered a 100-mile bike race. He knows he can ride 32 miles in 160 minutes. At this rate, how long will it take him to finish the race? Use each table to find the answer. Next, explain which table you think works better in finding the answer. (Next Page)

NAME   DATE   PERIOD

Table A:

| distance (miles)	elapsed time (minutes)
32	160
1	
100	

Table B:

distance (miles)	elapsed time (minutes)
32	160
96	
4	
100	

(from Unit 2, Lesson 12)

/2

5. A cashier worked an 8-hour day, and earned $58.00. The double number line shows the amount she earned for working different numbers of hours. For each question, explain your reasoning.

wages earned (dollars)   0   14.5   29   43.5   58
time worked (hours)   0   2   4   6   8
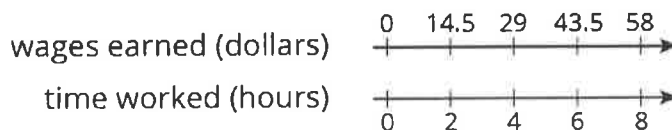
   a. How much does the cashier earn per hour?

   b. How much does the cashier earn if she works 3 hours?

(from Unit 2, Lesson 13)

/2

6. A grocery store sells bags of oranges in two different sizes.

   ○ The 3-pound bags of oranges cost $4.
   ○ The 8-pound bags of oranges for $9.

Which oranges cost less per pound? Explain or show your reasoning.
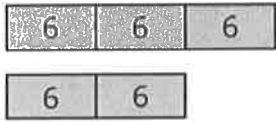(from Unit 2, Lesson 10)

1

Total /11

4 ^{2}

Unit 2, Lesson 16: Solving More Ratio Problems

1. Describe a situation that could be represented with this tape diagram.

2. There are some nickels, dimes, and quarters in a large piggy bank. For every 2 nickels there are 3 dimes. For every 2 dimes there are 5 quarters. There are 500 coins total. _CHALLENGE_

   a. How many nickels, dimes, and quarters are in the piggy bank? Explain your reasoning.

   b. How much are the coins in the piggy bank worth?

3. Two horses start a race at the same time. Horse A gallops at a steady rate of 32 feet per second and Horse B gallops at a steady rate of 28 feet per second. After 5 seconds, how much farther will Horse A have traveled? Explain or show your reasoning.

4. Andre paid $13 for 3 books. Diego bought 12 books priced at the same rate. How much did Diego pay for the 12 books? Explain your reasoning.
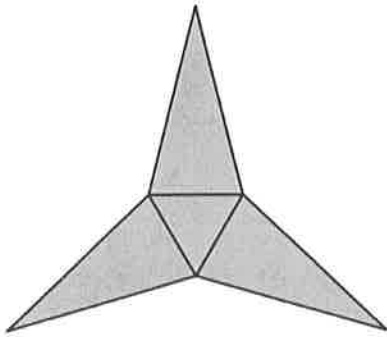   (from Unit 2, Lesson 10)

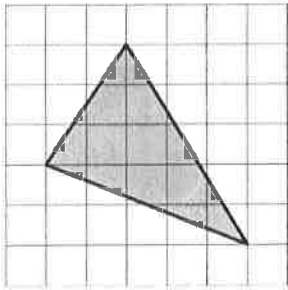5. Which polyhedron can be assembled from this net? _(Next Page)_

A. A triangular pyramid
B. A trapezoidal prism
C. A rectangular pyramid
D. A triangular prism

(from Unit 1, Lesson 15)

1

6. Find the area of the triangle. Show your reasoning. If you get stuck, consider drawing a rectangle
   around the triangle.

CHALLENGE

(from Unit 1, Lesson 10)

Total /4