Name _____

Team Name	Team Complete?	Team Did Not Agree On Questions…
		#'s

Quick Look

Today we learned to find equivalent ratios. Equivalent ratios are two or more ratios that describe the same comparison. You can find equivalent ratios the same way you find equivalent fractions—multiply or divide both parts of the ratio by the same number. One way to find equivalent ratios is to use a ratio table.

How many guests would be at the picnic if there are 8 watermelons?

Watermelons for Picnic

number of guests	number of watermelons
5	2
10	4
	8

×2   ×2

When there are 4 × 2 = 8 watermelons, then there are 10 × 2 = 20 guests.

Ratio tables are also helpful to compare two ratios:

Watermelons for Picnic

number of guests	number of watermelons
5	2
10	4
20	8

Watermelons for Brunch

number of guests	number of watermelons
4	1
8	2
20	5

By looking at the table we can see that if there are 20 guests, you will need more watermelons for the picnic than the brunch. You can also see that if there are 2 watermelons, you will feed more guests with it at the brunch than at the picnic**.**

Directions for questions 1–4: Use the tables to answer each question.

1) Fill in the missing information from the table for Ms. Lin's class.

Geoboards for Ms. Lin's class	
number of students	number of geoboards
4	3
8	6
16	
	18

Geoboards for Mr. Mark's class	
number of students	number of geoboards
6	3
18	9
24	12
30	15

2) If Ms. Lin has 12 students, how many geoboards does she need?

3) If both Ms. Lin and Mr. Mark have 48 students in their classes, which teacher needs more geoboards?

4) If Ms. Lin and Mr. Mark have 12 geoboards each, how many students do they have in all? Explain your thinking.

Directions for questions 5–8: Use the tables to answer each question.

5) Fill in the missing information from the table showing Jerry's punch recipe.

Jerry's punch	
raspberry juice (ounces)	lemonade (ounces)
1	15
	30
10	
20	

Della's punch	
raspberry juice (ounces)	lemonade (ounces)
2	10
3	15
4	20
6	30

6) If Jerry uses 45 ounces of lemonade, how much raspberry juice will he use?

_____

7) If both Jerry and Della use 2 ounces of raspberry juice, who will make more punch?

_____

8) If both Jerry and Della use 90 ounces of lemonade, who will use more raspberry juice? Explain your thinking.

_____

_____

_____

Mixed Practice

9) Divide.

6.512 ÷ 1.44 = _____

10) Is $\frac{13}{79}$ closest to 0, $\frac{1}{2}$, or 1?

_____

11) Nicki wrote the ratio 12:42 to compare the number of minutes she ran to the number of minutes she walked during her workout. Explain in your own words what the ratio means.

_____

_____

_____

12) Order the numbers from least to greatest.

1.501, 1.055, $1\frac{4}{9}$

_____

Word Problem

13) The ratio of girls to boys at Park Middle School is 8:9. How many boys are in the school if there are 340 students total?

_____

For the Guide on the Side
Today your student learned to find equivalent ratios. Equivalent ratios are two or more ratios that describe the same comparison. We found equivalent ratios the same way we found equivalent fractions—by multiplying or dividing both parts of the ratio by the same number. Making ratio tables is a useful tool to organize equivalent ratios. This way, we can also compare different quantities in two different ratios.

Your students should be able to answer these questions about finding equivalent ratios:
How do you know the ratios are equivalent?
What do you notice when you compare these two ratios?
How did you find the number(s) missing from the table?

Here are some ideas to work with finding equivalent ratios:
1) Select a recipe and find how much of each ingredient you need to make different amounts of the recipe. For example, how much sugar do you need to make half a batch of cookies? How about for three batches of cookies?
2) Find the price for two different brands of one product. Create a ratio table to compare how much different amounts of the products cost. If you compare the same amount of product, which brand is cheaper? If you spend the same amount of money, which brand gives you more product?
3) Use Khan Academy to review equivalent ratios:
http://www.khanacademy.org/math/arithmetic/basic-ratios-proportions/v/introduction-to-ratios--new-hd-version

Homework Answers

1)

Geoboards for Ms. Lin's Class	
number of students	number of geoboards
4	3
8	6
16	**12**
24	18

2) Ms. Lin needs 9 geoboards.

3) Ms. Lin needs more geoboards.

4) Ms. Lin and Mr. Mark have 40 students in all.
Possible explanation: If Ms. Lin has 12 geoboards, than she has 16 students. If Mr. Mark has 12 geoboards, then he has 24 students. Altogether they have 16 + 24 = 40 students.

5)

Jerry's Punch	
raspberry juice (ounces)	lemonade (ounces)
1	15
2	30
10	**150**
20	**300**

6) Jerry will use 3 ounces of raspberry juice.

7) Jerry will make more punch.

8) Della will need more raspberry juice.
Possible explanation: Jerry uses 2 ounces of raspberry juice for every 30 ounces of lemonade. So if he uses 2 × 30 = 60 ounces of lemonade, he will need 2 × 2 = 4 ounces of raspberry juice. Della uses 6 ounces of raspberry juice for every 30 ounces of lemonade. If she makes 2 × 30 = 60 ounces of lemonade, she will need 2 × 6 = 12 ounces of raspberry juice.

Mixed Practice

9) 4.52

10) $\frac{13}{79}$ is closest to 0.

11) *Possible answer:* This ratio means for every 12 minutes that Nicki ran during her workout, she walked for 42 minutes. 12 describes the number of minutes Nicki ran because it is the first number in the ratio.

12) 1.055, $1\frac{4}{9}$, 1.501

Word Problem

13) There are 180 boys in Park Middle School.