

## Ratios Quiz on Friday 09/30 Study Guide

1. Can you write a given ratio three ways? Example: The recipe for a juice mix is 3 cups of concentrate for every 1 cup of water. Write the ratio of cups of concentrate to cups of water three different ways. #1-4

C : W  
3 : 1

3 to 1

$$\frac{3}{1}$$

part to part  
because the whole would be the parts combined to make juice

2. Can you read a table to solve problems and find ratios?

Example:

Which grade has the greatest ratio of students who prefer pizza to total number of students surveyed in that grade?

Food Preference Survey			
	6th Grade	7th Grade	8th Grade
pizza	10	18	20
salad	30	22	22
other	10	5	18

7<sup>th</sup> grade because  $\frac{2}{5} > \frac{1}{3} > \frac{1}{5}$   
pizza total in grade

7<sup>th</sup>  $\frac{2}{5}$   
18 pizza  
45 total

8<sup>th</sup>  $\frac{1}{3}$   
20 pizza  
60 total

Write 3 different ratios with the information given in the table.

the ratio of 8<sup>th</sup> graders who voted "other" to total 8<sup>th</sup> graders is  $\frac{18}{60}$

3. Can you determine if a given ratio is part to part or part to whole?

Example: #1-4

For every 6 students, 1 did not do their homework p:p or ~~p:w~~ w:p

For every 1 bicycle, there are 3 wheels p:p or p:w

↑ 2 diff things ↑

4. Can you simplify ratios to their lowest form?

Example:

48:16

39:26

12:42

$$\frac{48 \div 8}{16 \div 8} = \frac{6 \div 2}{2 \div 2} = \left(\frac{3}{1}\right)$$

$$\frac{39 \div 13}{26 \div 13} = \left(\frac{3}{2}\right)$$

$$\frac{12 \div 6}{42 \div 6} = \left(\frac{2}{7}\right)$$

#10-15 on your paper

5. Can you find unit rates/unit price to solve problems?

Example: Your cable bill is \$104 for 26 TV channels. What is the unit price for each channel?

6. Can you find the missing numbers in a ratio table?

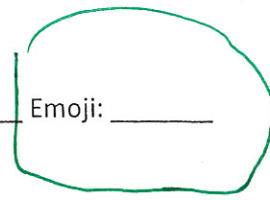
Example:

	7	14	21	28
13		26	39	52

channels |  $\div 26$   
1 | 26  
\$ | 104

unit rate  
 $\div 26$   
4 | 104  
26 · 4 = 104  
4 dollars  
1 channel

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Per: \_\_\_\_\_ Emoji: \_\_\_\_\_



1.) A café has 10 seats at the counter and 35 seats at tables. Of these, 20 seats are taken. Write the ratio of seats taken to empty seats in all three ways.

\_\_\_\_\_

2.) During a soccer season, a team won 40 games and lost 23 games. Write a ratio of wins to games played.

\_\_\_\_\_

3.) For every 900 people surveyed, 287 people said their favorite sport is tennis. Write this ratio in all three ways.

\_\_\_\_\_

4.) In an election Dan got 340 votes, Joe got 216 votes and Kyle got 1 vote. Write the ratio of Dan's votes to total votes in all 3 ways.

\_\_\_\_\_

***Tell whether the ratios in each pair are equivalent. Show your answer by simplifying.***

10.  $\frac{64}{80}$  and  $\frac{20}{25}$

11. 42 to 49 and 54 to 63

12. 18:42 and 20:44

13. 35 to 15 and 49 to 21

14. 144:36 and 72:32

15. 16 to 96 and 1 to 6

Express each as a unit rate. Show your work by setting up rates for 11-12 below:

11.) 30 km in 6 hours	12.) \$42 for 6 books
13.) \$24 for 8 tickets	14.) \$48 for 4 hours

15.) Amy drove to her mother's house, which is 204 miles away. If it took her 3 hours, what was her average speed?

16.) Six gallons of gasoline cost \$18.00. What is the price per gallon?

17.) What is the better buy? 7 shirts for \$42.00 - 4 shirts for \$16.00 - 5 shirts for \$55.00

18.) Pat wants to enter a typing contest. In order to enter, one has to be able to type 50 words per minute. Pat took 15 seconds to type 10 words. Can he enter the contest?