Review Packet
Rates Ratios and Proportions Quiz

Use the diagram to answer questions 1 and 2

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Be able to identify and write ratios *three different ways*

1)   Write the given ratio three different ways

   a. white triangles to circles

   _____   _____   _____

   b. squares : black circles

   _____   _____   _____

   c. total shapes to black triangles

   _____   _____   _____

Be able to write and simplify ratios from given information or diagrams

2)   Give each ratio in simplest form

   a. triangles : squares   _____   b. circles to triangles   _____

   c. white to black   _____   d. circles to squares   _____

● Be able to find equal ratios

3) **Please write three equal ratios to represent the number of dogs to the number of cats.**

_____

_____

_____

4) **Can you write the ratio of total animals to cats as a unit rate?**

_____

● Be able to test given ratios for equivalency (making a proportion)

5) **Prove whether each pair of ratios form a proportion.**

work

a. **12 : 30 and 2 : 5**   **Yes or No**

b. $\frac{7}{9}$ and $\frac{9}{11}$ **Yes or No**

c. **8 cats to 18 dogs
and
36 cats to 81 dogs**   **Yes or No**

● Be able to identify rates and unit rates as unique types of ratios

6) **Tell whether each given pair of numbers is a ratio, rate, or unit rate.**

   Check *ALL* that apply

		Ratio	Rate	Unit Rate
a.	4 : 3	_____	_____	_____
b.	$\dfrac{3\ boys}{1\ boy}$	_____	_____	_____
c.	21 to 1	_____	_____	_____
d.	$\dfrac{4\ chairs}{2\ tables}$	_____	_____	_____
e.	45 miles every hour	_____	_____	_____
f.	1 mile : 5280 feet	_____	_____	_____
g.	12 eggs to 1 carton	_____	_____	_____
h.	$\dfrac{3\ clusters}{210\ students}$	_____	_____	_____

7) **Give an example of a unit rate using money.**   _____

8) **Give an example of a ratio that is not a rate.**   _____

9) **Give an example of a rate that is not a unit rate.**   _____

10) **What two things does a ratio need to be a unit rate?**   1. _____

   2. _____

- Be able to make a unit rate

(by simplifying)

11) **What is the unit rate for kittens to tea cups?**

_____

12) **Convert the following ratios to unit rates.**

a. $\dfrac{180 \; beats}{3 \; minutes} =$

b. **72 sweet tarts : 2 packs =**

c. **54 tires to 3 trucks =**

d. **10 fingers : 2 hands =**

e. **Steve types 135 words in 3 minutes.**

f. **Mrs. Ruminski runs 35 miles this week.**

(by converting units)

g. **3 practices : 7 days =**

h. **4 quarters to 100 cents =**

i. **(tricky)** **A student in Mr. Haycock's typing class types 135 words in 180 seconds.**

- Be able to identify a proportion that is true and whose units are set up correctly

Tell whether each pair of ratios is a proportion. If not, give a reason why it is NOT a proportion

Yes or **No with Reason:**

13) $\dfrac{1\ teacher}{20\ students} = \dfrac{80\ students}{4\ teachers}$ _____

14) $\dfrac{20\ dimes}{2\ dollars} = \dfrac{40\ miles}{4\ hour}$ _____

15) $\dfrac{8\ quarts}{2\ gallons} = \dfrac{12\ quarts}{3\ gallons}$ _____

16) $\dfrac{144\ boxes}{12\ cases} = \dfrac{12\ cases}{1\ box}$ _____

- Be able to find the missing value in a proportion

(by finding a relationship between the ratios)

17)   **a.** $\dfrac{14\ jugs}{4\ crates} = \dfrac{x}{2\ crates}$ **b.** $\dfrac{3}{12} = \dfrac{27}{x}$

     c. $\dfrac{600\ ft}{2\ fields} = \dfrac{x}{6\ fields}$ **d.** $\dfrac{3\ pounds}{x} = \dfrac{9\ pounds}{144\ ounces}$

(by *creating an equation* from cross products and dividing)

e. $\dfrac{26 \ bagels}{2 \ dozen} = \dfrac{91 \ bagels}{d}$

f. $\dfrac{4 \ packs}{60 \ cards} = \dfrac{5 \ packs}{x}$

equation: _____

equation: _____

work:

work:

solution: _____

solution: _____

- Set up a proportion from a word problem and find the missing value

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18. **Jim drinks approximately 128 fluid ounces of water in 2 days. At this rate, how many fluid ounces will he drink in one week?**

19. **Elmo and Zoe both walk at the same rate. If Elmo walks 18 miles in 3 hours, how far does Zoe walk in 7 hours?**

20. **Curious George swings 15 miles in 5 hours. What is his unit rate of swinging?**

Good Luck! Some practice problems have already been given.This is the final review Packet. If you can do these problems, then you should be all set. I am available for help on the morning of the quiz from 7 to 7:30 a.m.