NAME:_____ DATE:_____ HOUR:____

Section 5.2 – 5.4 Review

For each of the following, find the missing value(s) in the ratio table.

1)

1	8
7	56

2)

6	42
5	35

3)

10	70	30
3	21	9

4)

15	5	60
18	6	72

Using equivalent **ratios**, determine the value in #5 - 6. You must **show work** as to how you calculate the missing value to earn full credit.

5) A class is made up of 18 girls and 16 boys. The class is split up into groups with the same ratio as girls to boys as the whole class. How many girls would be in the group with 8 boys?

Girls 18 ÷2 9
Boys 16 ÷2 8

9 girls

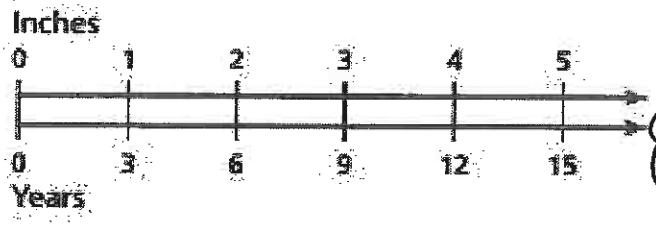
6) In a bag of writing utensils there are 45 markers and 36 crayons. The writing utensils are broken down into smaller amounts to make more bags but the ratio of markers to crayons stays the same. How many crayons would be in a bag with 15 markers?

Markers 45 ÷3 15
Crayons 36 ÷3 12

12 Crayons

Write **two** different **rates** that represents the situation.

7)



(2 possible examples)

→ 1 inch in 3 years
→ 2 inches in 6 years

For each of the following write the **unit rate** that represents the situation.

8) You travel 360 miles in 5 hours.

distance 360 ÷5 72
time 5 ÷5 1

$$5\overline{)360}\quad -35\downarrow \quad 10 \quad -10 \quad 0 \qquad 72$$

You travel 72 miles in 1 hour

9) 1092 calories in 7 servings

Calories 1092 ÷7 156
Servings 7 ÷7 1

$$7\overline{)1092}\quad -7\downarrow \quad 39 \quad -35\downarrow \quad 42 \quad -42 \quad 0 \qquad 156$$

156 calories in 1 serving

10) $11.00 for 4 gallons of milk

$$4\overline{)11.00}\quad -8\downarrow \quad 30 \quad -28\downarrow \quad 20 \quad -20 \quad 0 \qquad 2.75$$

$2.75 for 1 gallon of milk

11) $375 saved in 15 months

$$15\overline{)375}\quad -30 \quad 75 \quad -75 \quad 0 \qquad 25$$

$25 saved in 1 month

Using **equivalent rates**, determine the missing value. You must **show work** as to how you calculated the value to earn full credit.

12) Last night it took 32 minutes to complete 8 math problems. Tonight there are 4 math problems for homework. How long will it take to complete?

time 32 ÷2 16
problems 8 ÷2 4

16 minutes

13) A recipe calls for 3 cups of flour for every 1 ½ cups of sugar. If the baker mixed 6 cups of sugar, how much flour gets added for the recipe?

flour 3 ×4 12
sugar 1.5 ×4 6

12 cups flour

Solve the following by **comparing ratios**. **Explain** your answer for full credit.

14) Which car has a better gas mileage?

Option 1

Gallons of Gas	10	×3	30
Distance Traveled	310	×3	930

Option 2

Gallons of Gas	15	×2	30
Distance Traveled	450	×2	900

Option 1 because on the same amount of gas it traveled a longer distance

15) Which store is the better buy for chips?

Option 1

Bags of Chips	3	×8	24
Cost	$5.25	×8	$42

Option 2

Bags of Chips	8	×3	24
Cost	$10.00	×3	$30.

Option 2 because buying the same amount of bags of chips cost less money.

Solve the following by **comparing unit rates**. **Explain** your answer for full credit.

16) Which is a better buy?

Store A

Loaves of bread	6	1
Cost	$16.50	$2.75

÷6 →, ← ÷6

Store B

Loaves of bread	2	1
Cost	$5.60	$2.80

÷2 →, ← ÷2

Store A because the unit rate (cost for 1 loaf of bread) is less than Store B.

17) What car gets better gas mileage?

Car A

Gallons of Gas	16	1
Distance Traveled	288	18

÷16 →, ÷16 →

Car B

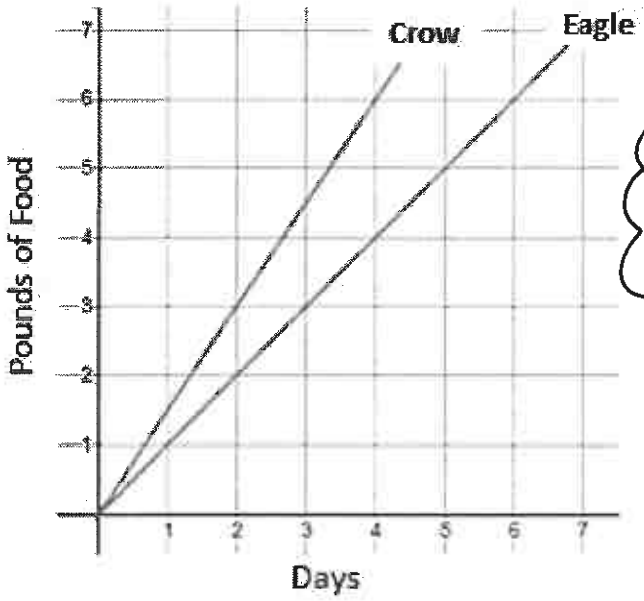
Gallons of Gas	20	1
Distance Traveled	340	17

÷20 →, ÷20 →

Car A because the unit rate (distance it can travel on 1 gallon of gas) is more than Car B.

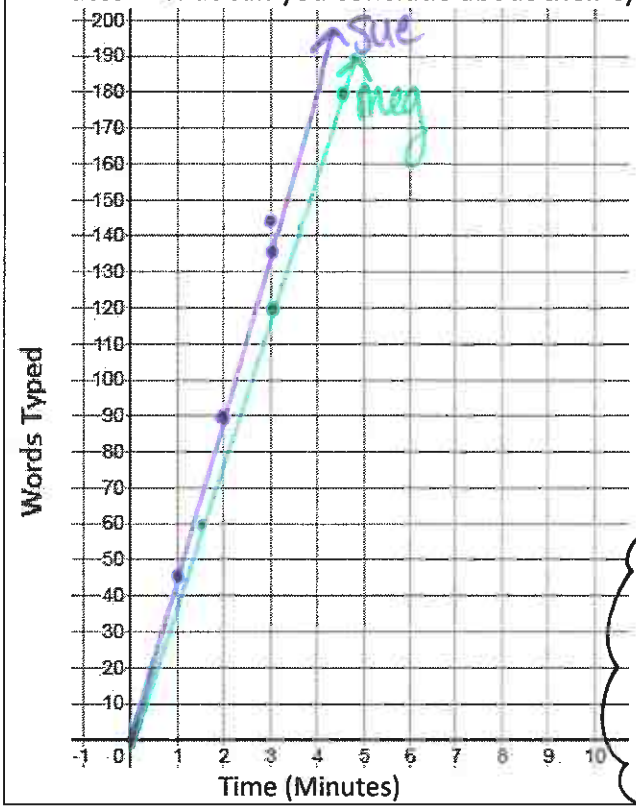
Solve the following by **comparing graphs**. **Explain** your answer for full credit.

18) An eagle eats about 1 pound of food in 1 day. A crow eats about 3 pounds of food in 2 days. What can you conclude about their eating habits? Explain.



You can conclude that the crow eats more food than the eagle due to the crow having a steeper graph.

19) On a recent typing test Sue typed 45 words in 1 minute and Meg typed 60 words in 1.5 minutes. What can you conclude about their typing speeds? Explain.



Sue
45 words in 1 minute
90 words in 2 minutes
135 words in 3 minutes

Meg
60 words in 1.5 minutes
120 words in 3 minutes
180 words in 4.5 minutes

You can conclude that Sue types faster because her graph is steeper / above the graph for Meg.

Determine if the following **rates** are **equivalent**. **Explain** your reasoning for full credit.

20) $72 for 4 shirts → $18 for 1 shirt
$80 for 6 shirts → $13.33 for 1 shirt

$$4\overline{)72}\quad 18 \qquad -4\downarrow \quad 32 \quad -32 \quad 0$$

$$6\overline{)80.0}\quad 13.3 \qquad -6 \quad 20 \quad -18\downarrow \quad 20 \quad -18 \quad 2$$

The rates are not equivalent because the unit rates are not equal.

21) 192 miles traveled on 8 gallons of gas
288 miles traveled on 12 gallons of gas

$$8\overline{)192}\quad 24 \qquad -16 \quad 32 \quad -32 \quad 0$$

$$12\overline{)288}\quad 24 \qquad -24 \quad 48 \quad -48 \quad 0$$

The rates are equivalent because the unit rates are equal.