

**Homework Sheet Unit #2**

Period: 1 2 3 4

(Rate, Ratio &amp; Proportional Reasoning)

***Rewrite the following ratios using proper "ratio language."***

1) 3 burgers : 4 hot dogs

2) 4 cats : 5 dogs

3) 9 boys : 11 girls

***Write the following ratios 3 ways.***

4) There are 2 drums and 4 flutes. What is the ratio of drums to flutes?

5) There are 4 sandwiches and 10 milk cartons. What is the ratio of milk to sandwiches?

6) There are 14 boys and 16 girls in math class. What is the ratio of boys to girls?

7) There are 6 dogs and 4 cats. What is the ratio of dogs to pets?

***Write the following ratios 3 ways.***

The table below represents a survey of Ms. Bothers' class about favorite ice cream flavors:

***Favorite Ice Cream Flavors***

Vanilla	15
Chocolate	10
Strawberry	6
Chocolate Chip	8
Cookie Dough	1

Don't forget to simplify!!!

8) What is the ratio of people who chose vanilla as their favorite flavor to those who chose chocolate?

9) What is the ratio of people who chose chocolate and strawberry to those who chose chocolate chip?

10) What is the ratio of those who chose vanilla as their favorite flavor to everyone that was surveyed?

11) What is the ratio of those who chose strawberry to those who chose cookie dough?

***List 3 equivalent ratios for the following ratios.***

12) 4:5

13) 10:2

14) 3:6

***Simplify the following ratios.***

15) 20:100

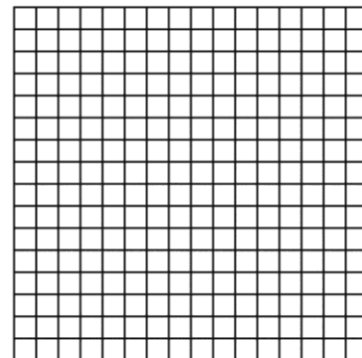
16) 16 to 8

17)  $\frac{15}{45}$

*Use the table to answer the questions below.*

18) The table below shows Lizzie's earnings at her job. Complete the table using equivalent fractions and plot the ordered pairs on the coordinate plane. (Don't forget to label the coordinate plane and choose an appropriate scale.)

Lizzie's Earnings		
Hours (x)	Dollars Earned (y)	Ordered Pair (x,y)
1	\$5	(1, 5)
2	\$10	( , )
3		( , )
		( , )



*Solve. (Don't forget to properly label your answers)*

- 19) Divide 33 photos into two groups so the ratio is 4 to 7.  
20) Divide 28 cans of soda into two groups so the ratio is 3 to 4.

*Use the following information and answer the questions below.*

The ratio of kittens to puppies in an animal shelter is 3 kittens and 1 puppies.

- 21) If there are 32 animals, how many kittens are there?  
22) If there are 24 kittens, how many puppies are there?  
23) What is the ratio of kittens to baby animals (puppies and kittens together)?

*Write the ratio as a unit rate.*

- 24) \$125 for 5 meals                      25) 12 meters in 28 seconds                      26) 72 oz. in 6 steaks  
27) \$48 for 12 tulips                      28) 45 miles in 3 hours                      29) 150 times in 15 min.

*Write as a unit rate using proper "unit rate language."*

- 30) 45 oranges in 5 minutes                      31) 18 miles in 30 minutes                      32) \$36 for 4 tickets

*Answer the following questions.*

- 33) Adam drove 360 miles and used 12 gallons of gas. How many miles did he drive per gallon of gas?  
34) Joshua's cousin pledged a total of \$33 for a charity walk. If Joshua walked 3 miles, how much did his cousin pay per mile?  
35) Jersey Mike's made 27 sandwiches. They used 12 pounds of turkey. How much turkey was used per sandwich?

*Complete the ratio tables.*

36)

3		21	
4	20		36

37)

6		6,000	
10	100		1,000,000

*State whether the ratios are proportional. Write yes or no.*

38)  $\frac{8}{16}$  ,  $\frac{4}{8}$

39)  $\frac{5}{6}$  ,  $\frac{10}{18}$

40)  $\frac{8}{9}$  ,  $\frac{9}{10}$

*Solve each proportion for the given variable.*

41)  $\frac{5}{45} = \frac{u}{9}$

42)  $\frac{r}{15} = \frac{5}{20}$

43)  $\frac{3}{6} = \frac{20}{y}$

44)  $\frac{s}{30} = \frac{3}{5}$




45)  $\frac{3.5}{7} = \frac{j}{4}$

46)  $\frac{12}{a} = \frac{18}{6}$



Find the following metric conversions.

## Metric Conversion

<b>K</b> ing	<b>H</b> enry	<b>D</b> ied	<b>U</b> nusually 	<b>D</b> rinking	<b>C</b> hocolate	<b>M</b> ilk
Kilo  10 x 10 x 10 x <b>LARGER</b> than a unit  1 kilo = 1,000 units	Hecto  10 x 10 x <b>LARGER</b> than a unit  1 hecto = 100 units	Deca  10 x <b>LARGER</b> than a unit  1 deca = 10 units	* Unit *  <b>Meter</b> (length) <b>Liter</b> (liquid volume) <b>Gram</b> (mass/weight) <b>1 unit</b>	Deci  10 x <b>SMALLER</b> than a unit  10 deci = 1 unit	Centi  10 x 10 x <b>SMALLER</b> than a unit  100 centi = 1 unit	Milli  10 x 10 x 10 x <b>SMALLER</b> than a unit  1,000 milli = 1 unit
km = kilometer kL = kiloliter kg = kilogram	hm = hectometer hL = hectoliter hg = hectogram	dam = decameter daL = decaliter dag = decagram	m = meter L = liter g = gram	dm = decimeter dL = deciliter dg = decigram	cm = centimeter cL = centiliter cg = centigram	mm = millimeter mL = milliliter mg = milligram

Example: 5 kilo

50 hecto

500 deca

5,000 units

50,000 deci

500,000 centi

5,000,000 milli

 **DIVIDE** numbers by 10 if you are getting bigger (same as moving decimal point one space to the left)

**MULTIPLY** numbers by 10 if you are getting smaller (same as moving decimal point one space to the right) 

- 83) 14.24 mL = \_\_\_\_\_ L      84) 20.43 cm = \_\_\_\_\_ mm  
 85) 0.92 g = \_\_\_\_\_ mg      86) 1342 km = \_\_\_\_\_ m  
 87) 30 cm = \_\_\_\_\_ mm      88) 0.4 km = \_\_\_\_\_ m  
 89) A jug holds 2.4 L. How many mL does it hold?  
 90) A string is 20.43 cm long. How many mm long is the string?

Find the following customary conversions. (1 foot = 12 inches,

**U.S. Customary Unit Conversion Chart**

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**Measuring Length**

12 inches = 1 foot  
36 inches = 1 yard  
3 feet = 1 yard  
5280 feet = 1 mile  
1760 yards = 1 mile

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**Measuring Weight**

16 ounces = 1 pound  
2000 pounds = 1 ton

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**Measuring Capacity**

3 teaspoons = 1 tablespoon  
2 tablespoons = 1 fluid ounce  
8 fluid ounces = 1 cup  
2 cups = 1 pint  
2 pints = 1 quart  
4 quarts = 1 gallon

91) 1 yard = \_\_\_\_\_ ft

92) 2 feet = \_\_\_\_\_ inches

93) 3 tons = \_\_\_\_\_ pounds

94) 6 cups = \_\_\_\_\_ pints

95) 4 gallons = \_\_\_\_\_ quarts

96) 3 quarts = \_\_\_\_\_ cups

97) 2 miles = \_\_\_\_\_ ft

98) 90 feet = \_\_\_\_\_ yards