

Math 7 - Sections 1.1-1.3
Review Problems
Station # 1
Ratios AND Rates

Things to remember:

* Ratios should always be simplified
Ex. 10 to 5 becomes 2 to 1

* The order is important. The ratio of _____ to _____ means the first thing is in the numerator and the second is in the denominator. The rate _____ per _____ means the first thing is in the numerator and the second is in the denominator.

* ALWAYS write a WORD ratio or rate first !

* ALWAYS record the calculator display on your paper before rounding your answer.

1) There are 250 students in the 7th grade. If there are 75 boys, find the ratio of girls to boys.

2) Sara drove 280 miles in 3.5 hours. How many miles per hour is this?

3) There are 48 jolly ranchers in a 20 ounce bag that costs \$3.89.
A) Find the cost per jolly rancher.

B) Find the weight of each jolly rancher. Round to the nearest tenth of an ounce.

4) Tara typed for 12 minutes and produced 456 words. How many words per minute does she type?

5) There are 80 girls in the 7th grade at LMS. If there are 100 boys in the class, find the ratio of girls to the total number of students.

6) Write these percents as ratios in simplest form.

$40\% =$

$135\% =$

$2\% =$

$24\% =$

7) Write these ratios in simplest form.

A) 25:150

B) $\frac{24}{8}$

C) $\frac{40 \text{ inches}}{4 \text{ feet}}$

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Station # 2
Complex Fractions and Unit Rates

Things to remember:

- * Keep numbers in fraction form and show fraction computation.
- * The order is important. The rate _____ per _____ means the first thing is in the numerator and the second is in the denominator.
- * ALWAYS write a WORD rate first!

1) Simplify. Do not convert to decimals.

A) $\frac{2\frac{1}{4}}{36}$

B) $\frac{\frac{1}{10}}{\frac{4}{5}}$

2) It takes Linda 20 minutes to read $8\frac{1}{3}$ pages of a book. What is her average reading rate in pages per minute?

3) Write $11\frac{1}{9}\%$ as a fraction in simplest form.

4) On his last math quiz, Mr. Macy answered $5\frac{2}{3}\%$ of the questions incorrectly. Write this percent as a fraction in simplest form.

5) Mrs. Easton is making a curtain. She bought $2\frac{3}{4}$ yards of fabric. Her total cost was \$11. What was the cost per yard?

6) Use a complex fraction to find out the cost per yard for fabric Jen bought $3\frac{3}{4}$ yards of fabric for \$27. What was the cost per yard?

7) Use a complex fraction to help you find the following: In $1\frac{3}{4}$ hours, Sara runs $10\frac{1}{2}$ miles. Find her average rate of speed in miles per hour.

Math 7 - Sections 1.1-1.3
Review Problems
Station # 3
BEST BUY

Things to remember:

- * Organize your work clearly
- * You must compare with the same units.
- * Write the unit rate in words first.
- * Record your calculator display BEFORE you round to the nearest cent.

1) A 36 oz bottle of Shelly's shampoo costs \$4.32. A 28 oz bottle of Shelly's shampoo costs \$3.49. Which size is the better buy?

2) A bag of 24 jolly ranchers cost \$2.89. Another bag costs \$4.59 and contains 50 jolly ranchers. Find the best buy based on unit price.

3) A two pound bag of candy costs \$4.79. A twenty ounce bag costs \$2.75. Find the better buy based on unit price.

4) Two bottles of Spicy barbeque sauce, each bottle 24 ounces, cost \$4.89. Three bottles of Mild barbeque sauce, each bottle 18 ounces, cost \$6.29. Find the best buy based on unit price.

5) A three pound bag of candy costs \$6.49. A twenty-two ounce bag costs \$2.75. Find the better buy based on unit price.

6) There are 48 peppermint candies in a 24 ounce bag that costs \$3.60. There are 18 peppermint candies in a 9 ounce bag that costs \$1.39. Which is the better buy?

7) Four 10.75 oz cans of Campy soup cost \$1.69. Two 12 oz cans of Pro soup cost \$0.89. Which is the better buy based on unit price?

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Review Problems
Station # 4
Dimensional Analysis

Things to remember:

- * Write the original problem on far left of the paper.
- * Write the GOAL on the far right of the paper.
- * Record measurement units you use in the bottom right of your paper.
- * Choose names for 1 that will cancel out the measurement units you do not need.
- * Once you reach your goal, record the numbers from the numerator and denominator.
- * Do the arithmetic and remember to label your answer.

1) Use dimensional analysis to solve this problem. 54.6 inches = _____feet

2) Use dimensional analysis to convert 920 kilometers per hour to meters per hour.

3) Use dimensional analysis to convert 840 pounds per hour to ounces per minute.

4) Use dimensional analysis to convert 800 milliliters per minute to liters per hour.

5) Convert 240 quarts per hour to gallons per day

6) An elephant drinks about 5280 milliliters per day. Use dimensional analysis to show how many liters per hour this is.

7) Matt runs at a speed of 360 yards per minute. How many feet per hour is this? Show steps using dimensional analysis.

Math 7 - Sections 1.1-1.3
Review Problems
Station # 5
Mixed Practice

Things to remember:

- * Show steps clearly.
- * Show steps as we discussed in class.

1) Jen drove 800 miles in 16 hours, Sasha drove 300 miles in 5 hours, and Ellen drove 500 miles in 10 hours. If they were all driving at constant speeds, which two girls were driving at the same rate? Explain (show) your reasoning using the concept of unit rate.

2) If each mix is made with only these three ingredients, which one contains more chocolate per ounce?

<u>Awesome Snack Mix</u>	<u>Crunchy Snack Mix</u>
12 oz chocolate chips	9 oz chocolate chips
9 oz peanuts	3 oz peanuts
25 oz Cheerios	15 oz Cheerios

3) Use this data from a survey of 100 students to decide if the statement is true or false. If false show why it is false.
One out of eight students eat a snack as soon as they get home from school?

What do you do first when you get home from school?

Activity	Number of students
Eat a snack	40
Do homework	10
Watch TV	20
Go to sports practice	30

4) Find the BEST BUY based on unit price for these tissues.

Puffs (4 pack for \$6.79)
(Each box has 300 tissues)

Kleenex (1 box for \$2.89)
(175 tissues)

So Soft (2 boxes for \$4.29)
(Each box has 250 tissues)

5) Which of these trail mix recipes is more "chocolaty" (more chocolate per total ounces)? Explain your reasoning.

<u>Trail Mix A</u>	<u>Trail Mix B</u>
30 oz cheerios	40 oz cheerios
4 oz raisins	2 oz raisins
10 oz M&M's	12 oz M&M's

How many of these do you know without using the memory list?

1) 1 minute = _____ seconds

8) 1 pint = _____ cups

2) _____ inches = 1 yard

9) 1 yard = _____ feet

3) 1 gallon = _____ quarts

10) 1 cup = _____ fluid ounces

4) _____ millimeters = 1 meter

11) _____ grams = 1 kilogram

5) 1 century = _____ years

12) _____ ounces = 1 pound

6) 1 ton = _____ pounds

13) 1 centimeter = _____ millimeters

7) 1 mile = _____ feet

14) 1 millennium = _____ years

15) 1 liter = _____ milliliters

23) 1 kilometer = _____ meters

16) 1 day = _____ hours

24) _____ days = 1 year

17) _____ inches = 1 foot

25) _____ years = 1 decade

18) _____ cups = 1 quart

19) 1 kilogram = _____ grams

20) 1 hour = _____ minutes

21) _____ weeks = 1 year

22) _____ centimeters = 1 meter