Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Learning Target 7:** I solve real world unit rate problems with decimals.

Objective: I can determine a unit rate with decimals using a proportion.

UNIT RATES

A **unit rate** is a rate per one unit. In unit rate the denominator is **ALWAYS** one. You can set up a proportion to solve a unit rate problem. To solve for the unit rate:

Step 1: Multiply the means and extremes (cross multiply).

Step 2: Divide by the number that has no partner.

Example: Miguel buys a pack of gum at the local deli. If 20 sticks of gum costs $1.20. How much does each stick cost?

$$\frac{\$1.20}{20 sticks} =\frac{?}{1 stick}$$

Step 1: Multiply $1.20 by 1 which equals $1.20.

Step 2: Divide by 20.

Answer: $.06 per stick

Guided Practice:

1. The cost of 4 watermelons is $3.00. What is the unit price?
2. A farmer sells peaches at a cost of 3 for $.99. What is the cost for one peach?
3. A 12-ounce box of Rice Krispy Treats costs $1.20 while a 16-ounce box of Rice Krispy Crackers costs $1.44. Which is the better deal—the 12 ounce box or the 16-ounce box?

Directions: Use the proportion technique to solve the following word problems.

1) Jean spent $37.50 for 500 paperclips. How much did he pay for each paperclip?

2) If it takes Tim 20 minutes to bike 6 miles, how many minutes will it take him to bike 144 miles?

 3) Matthew paid $5 for 8 toothbrushes. Jon paid $18 for 25 toothbrushes. Find the unit cost to determine how much each person paid per toothbrush.

4) A 16-oz jar of peanut butter costs $4.39. To the nearest cent, find the unit price in cents per ounce.

5) An 18-ounce box of Frosted Flakes cereal costs $3.60 while a 22-ounce box of Frosted Flakes cereal costs $4.18. Which is the better deal—the 18-ounce box or the 22-ounce box?

6) A 4-pack of bottled water costs $5.00. A 5-pack of bottled water costs $6.50. Each bottle contains 8 ounces of water. Which is the better deal?