1.3 Unit Rates (6.RP.2, 6.RP.3, and 6.RP.3b)

Vocabulary Start-Up

Definition	Examples
fraction: A number that represents part of a whole or part of a set.	$\frac{1}{2}, \frac{3}{4}, \frac{9}{12}, \frac{45}{3}$
ratio: A comparison of two quantities by division.	2 out of 3, 2 to 3, 2:3, $\frac{2}{3}$
rate: A ratio comparing two quantities with different kinds of units.	$\frac{36 \text{ miles}}{3 \text{ hours}}$ 36 miles for every 3 hours \$26 for 5 bags 19 songs in 5 minutes
unit rate: A rate that is simplified so that it has a denominator of one (1).	$\frac{12 \text{ miles}}{1 \text{ hour}}$, 12 miles per hour \$5.20 for 1 bag 3.8 songs in 1 minute

Vocabulary

Rate – a ratio comparing two quantities with different kinds of units.

Unit Rate – a rate written as a fraction with a denominator of 1 unit.

Unit Price – a unit rate that is the cost per unit.

Guided Practice

Steps:

1. Write the two quantities as a rate.
2. Divide both numerator and denominator by the denominator.

1.3 Unit Rates (6.RP.2, 6.RP.3, and 6.RP.3b)

Write each rate as a unit rate.

1.) 44 points in 4 quarters

$\frac{44 \text{ points}}{4 \text{ quarters}} \div 4 \rightarrow \frac{11 \text{ points}}{1 \text{ quarter}}$

2.) 125 feet in 5 seconds

$\frac{125 \text{ ft}}{5 \text{ sec}} \div 5 \rightarrow \frac{25 \text{ ft}}{1 \text{ sec}}$

3.) 360 miles traveled on 12 gallons of gasoline.

$\frac{360 \text{ mi}}{12 \text{ gal}} \div 12 \rightarrow \frac{30 \text{ miles}}{1 \text{ gal}}$

4.) 12 meters in 28 seconds

$28\overline{)12} = \frac{12 \div 4}{28 \div 4} = \frac{3}{7}$

$\frac{12 \text{ m}}{28 \text{ sec}} \div 28 \rightarrow \frac{3/7 \text{ m}}{1 \text{ sec}}$

5.) Molly shot 20 baskets in 4 minutes. Nico shot 42 baskets in 6 minutes. How many more baskets did Nico shoot per minute?

Molly $\frac{20 \text{ bas}}{4 \text{ min}} \div 4 \rightarrow \frac{5 \text{ bas}}{1 \text{ min}}$ Nico $\frac{42 \text{ bas}}{6 \text{ min}} \div 6 \rightarrow \frac{7 \text{ bas}}{1 \text{ min}}$ 2 baskets

6.) For Caroline's birthday, her mom took her and 4 friends to a water park. Caroline's mom paid $40 for 5 student tickets. What was the price for one student ticket?

$\frac{\$40}{5 \text{ tickets}} \div 5 \rightarrow \frac{\$8}{1 \text{ ticket}}$

Building on the Essential Question – How are rates and ratios related?

A rate is a ratio that compares two quantities with different units (miles per hour).

Rate Yourself – Check the correct statement.

_____ I understand how to find an unit rate.

_____ I still have some questions about unit rate.

Rate Yourself! :)