Using Ratio/Rate Tables

Lesson 2-13

DATE TIME

Math Message

All of the comparisons below are ratios.

These ratios are rates:	These ratios are NOT rates:
12 inches per foot (12 : 1)	3 children out of 8 children (3 : 8)
$3 per pound (3 : 1)	4 tiles for every 7 tiles (4 : 7)
6 inches every 2 years (6 : 2)	5 miles out of every 10 miles (5 : 10)
100 miles to 4 gallons (100 : 4)	12 stamps out of every 20 stamps (12 : 20)

1. What makes a ratio a rate?

The problems below involve some common rate situations.
Draw ratio/rate tables to solve the problems. Circle the unit rate for each.

2. One ounce of dry-roasted cashews has 165 calories.
How many calories are in an 8-ounce bag of dry-roasted cashews? _____

$\frac{\text{Ounces}}{\text{Calories}} = \frac{1}{165} \rightarrow \frac{8}{X}$

$1X = 1{,}320$

$X = 1{,}320$

$\begin{array}{r} 165 \\ \times\ 8 \\ \hline 1320 \end{array}$

3. Hank drove 120 miles in 2 hours.
If he continues at the same rate, how long will it take him to drive 300 miles? _____

Ounces	1	2	4	8
Calories	165	330	660	1320

4. On a trip to France, Jorge bought a soccer jersey for €72 (72 euros).
The exchange rate was €1 : $1.25. How much did the jersey cost in dollars? _____

Using Unit Rates

Lesson 2-13

DATE TIME

Draw ratio/rate tables and use unit rates to calculate the better buy.
Write an inequality to represent the situation.

1. Are Bright Bulbs at 4 for $2.48 or Beautiful Bulbs at 6 for $3.54 a better buy?

$\frac{\text{Bulbs}}{\$} = \frac{4}{2.48} = \frac{1}{x}$

$\frac{4x}{4} = \frac{2.48}{4}$

$x = .62$

$\frac{\text{Bulbs}}{\$} = \frac{6}{3.54} = \frac{1}{x}$

$\frac{6x}{6} = \frac{3.54}{6}$

$x = .59$

Answer: _____ Inequality: _____

2. Are Sparkle pens at 6 for $4.38 or Zebra pens at 5 for $3.60 a better buy?

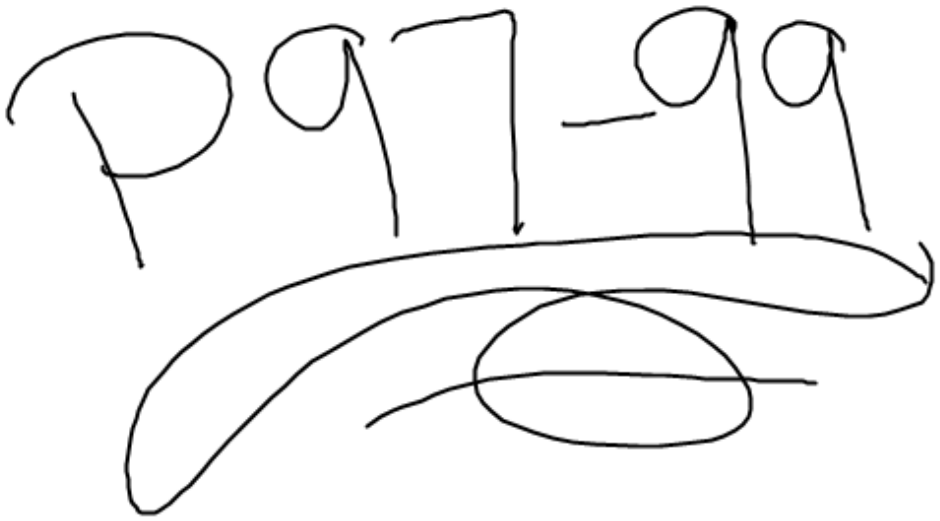
Answer: _____ Inequality: _____

3. Are tropical bananas at 9 for $3.51 or organic bananas at 8 for $3.28 a better buy?

Answer: _____ Inequality: _____

4. A hybrid car went 322 miles on 7 gallons. A diesel-fueled car went 270 miles on 6 gallons. Which car got better gas mileage?

Answer: _____ Inequality: _____


P97-99

Math Boxes

Lesson 2-13

DATE TIME

1 Create a dot plot using the data set below. Think of a context for the data and give your dot plot a title.

2, 0, 2, 1, 3, 2, 3, 1, 2, 1, 5, 3, 0, 2

Describe the context.

_____

_____

_____

SRB 263

2 Divide.

a. ____ $= \frac{7}{5} \div \frac{1}{2}$

b. $\frac{3}{4} \div \frac{2}{3} =$ ____

c. ____ $= \frac{9}{2} \div \frac{4}{5}$

d. $\frac{3}{10} \div \frac{2}{5} =$ ____

SRB 195-196

3 Antoinette has $\frac{5}{12}$ of a bag of trail mix left. She hikes 3 miles and then stops for a snack. She eats $\frac{1}{3}$ of the remaining trail mix. How much trail mix did she eat?

Number model: _____

Solution: _____

SRB 32

4 Solve.

a. $16 \div (19 - 11) =$ _____

b. _____ $= (39 - 12) \div (11 - 2)$

c. $100 * (7 + 3) =$ _____

d. _____ $= 9 * (88 - 77)$

SRB 203

5 **Writing/Reasoning** What information was important for helping you solve Problem 3?