Algebra 1

- Warm Up
- Check HW
- Notes on 3.4 Ratio & Proportions
- Classwork/Homework

OBJECTIVE

Students will be able to ratios & rates and solve proportions.

Warm Up

Solve each of these.

$3-5(2x - 1) + 6 = 6(x-3)$

$\frac{5x + 6}{5} - 3 = 2(x+2)$

Solving Proportions

$\frac{x}{5} = \frac{12}{6}$

$\frac{18}{m} = \frac{5}{8}$

$\frac{3}{10} = \frac{10}{x}$

Solving Multi-Step Proportions

$$\frac{2x + 3}{} = \frac{3x - 1}{4}$$

$$\frac{y - 15}{y + 4} = \frac{35}{7}$$

Using Unit Rates

Prices of Apple Cider

$1.29 - 16 oz. $\longrightarrow \frac{\text{cost}}{\text{ounces}} \longrightarrow \frac{1.29}{16} =$

$ 1.89 - 32 oz. $\longrightarrow \frac{\text{cost}}{\text{ounces}} \longrightarrow \frac{1.89}{32} =$

$ 2.89 - 64 oz. $\longrightarrow \frac{\text{cost}}{\text{ounces}} \longrightarrow \frac{2.89}{64} =$

You Try!

1. Main Street florist sells two dozen roses for $24.60. Flowers for You Florist sells six roses for $7.50. Find the unit rate for each. Which florists has the lower cost per rose?

2. At Barber Depot, I can by a 12 pack of Coke for $3.29. At Grants Groceries, I can by a 24 pack of Coke for $6.11. Find the unit rate for each. Which place has the lowers cost per can?

Using Unit Rates

distance = rate * time d = rt

In 2004, Lance Armstrong raced in the tour de France, completing the 3391 km course in about 83.6 hours. Find Lance's unit rate, which is his average speed. Write a rule to describe the distance he cycles d, as a funciton of time.

Use a distance function to find out how long it took him to bike 1289 km.

Converting Rates

A cheetah ran 300 feet in 2.92 seconds. What was the cheetahs average speed in MILES per HOUR?

$$\frac{300\text{ ft}}{2.92\text{ sec}} \cdot \frac{1\text{ mile}}{5280\text{ ft}} \cdot \frac{60\text{ sec}}{1\text{ min}} \cdot \frac{60\text{ min}}{1\text{ hour}}$$

$$= 70\text{ mi/hr}$$

Convert...

$5.85/hr ⟶ $/year

If a snail moves at a rate of 0.4 in/min, find its movement rate in ft/week.

Classwork/Homework

Pg 145 #5-8, 22-36.