I can *compute* and *compare* unit rates.

Unit Rate: A ratio with a denominator of ___1___.   Keyword: __per__ ; Operation: __divide__

1. Sam drives 120 miles in 3 hours. How many miles does he drive **per** hour?

$$\frac{120\ mi}{3\ hr} = 40\frac{mi}{hr}$$

2. It takes Liz two minutes to type 300 words. How many words does she type per minute?

$$\frac{300\ words}{2\ min} = 150\ words/min$$

3. Ed drives from Jefferson to Holden, a distance of 250 miles. He then travels on to Paxton, which is 25 miles from Holden. If it takes him 5.5 hours to complete the entire trip, how fast is he traveling if he is traveling at a constant speed?

$$\frac{275\ mi}{5.5\ hr} = 50\ mph$$

4. Four gallons of gasoline cost $16.80.

(a) What is the price per gallon? __$4.20/gal__

(b) What is the price of gasoline in terms of gallons per dollar? __0.238 gal/dollar__

a) $\frac{\$16.80}{4\ gal}$

b) $\frac{4\ gal}{\$16.80}$

Comparing Unit Rates

1. Mike and Mark want to race their pet turtles. Mark claims that his turtle can move 3 feet in 45 seconds. Mike says that his turtle can move 5 feet in 70 seconds. Identify which turtle has the faster speed. Show work to support your conclusion.

Mark $\frac{3\ ft}{45\ sec} = .0\overline{6}\ ft/sec$

(Mike) $\frac{5\ ft}{70\ sec} = .07\ ft/sec$

2. After exercising, two students checked their pulses to see how fast their hearts were beating. Marit's heart beat 13 times in 10 seconds. Coleman's heart beat 18 times in 15 seconds. Identify each student's heart rate. Who has the faster rate?

(Marit) $\frac{13}{10} = 1.3\ bps$

Coleman $\frac{18}{15} = 1.2\ bps$

3. Which is the better buy? A pack of 12 granola bars for $5.00 or a pack of 10 granola bars for $4.50?

$\frac{\$5}{12\ bars} = \$0.42\ per\ bar$ (12-pack)

$\frac{\$4.50}{10\ bars} = \$0.45\ per\ bar$

4. Which is the better buy? A 12-fl-oz bottle of apple juice for $3.05 or a 8 fl-oz bottle for $2.59?

$\frac{\$3.05}{12\ oz} = \$0.25/oz$ (12-ounce)

$\frac{\$2.59}{8\ oz} = \$0.32/oz$