Rate, Ratios, and Unit Rate

Ratio - a comparison between two quantities and can be written _____ different ways.

    a. As a fraction $\frac{4}{5}$

    b. Using a colon ____ : ____

    c. Using the word "to" 4 to 5

Rate - is a type of ratio that specifically compares two _____ _____ of measurement.

    a. $\frac{60\ miles}{2\ hours}$ b. $\frac{15\ dollars}{5\ notebooks}$

Remember: when writing rates, _____ always goes in the denominator and money goes in the _____!

Unit Rate - is a type of rate that always has a _____ of 1 unit.

    a. $\frac{3\ dollars}{1\ cookie}$ b. $\frac{40\ miles}{1\ hour}$

Complex Fractions - when you have a _____ as a numerator, denominator, or both.

    a. $\frac{\frac{2}{3}}{\frac{3}{4}+\frac{1}{2}}$ b. $\frac{\frac{4}{5}}{\frac{1}{2}}$

Finding ratio and rates

Example 1: Finding the rate

There are 45 males and 60 females in a subway car. The subway car travels 2.5 miles in 5 minutes. Find the ratio of males to females.

How do you decide which unit comes first? _____

_____

What is the problem comparing? _____ to _____

$$\frac{Males}{Females} =$$

Rate, Ratios, and Unit Rate

There are 45 males and 60 females in a subway car. The subway car travels 2.5 miles in 5 minutes. Find the ratio of males to females.

When finding speed, you are finding the unit rate.

$$\frac{2.5 \text{ miles}}{5 \text{ minutes}} =$$

Example 2: Finding a rate from a table

The ratio table shows the cost for different amounts of artificial turf. Find the unit rate in dollars per square foot.

Amount (square feet)	25	100	400	1600
Cost (dollars)	100	400	1600	6400

To find the unit rate, you divide the _____ by the _____ or ___ divided by ___.

The problem is asking me to find the _____ per _____ _____.

$$\frac{\text{cost}}{\text{square foot}} =$$

Always _____ your fractions!

Example 3: Finding unit rate with complex fractions

Rate, Ratios, and Unit Rate

Find the speed of a subway car that travels ¼ mile in ½ minute.

What is a vocabulary term for "keep, times, flip?"_____ by the reciprocal.

$$\frac{\text{¼ mile}}{\text{½ minute}}$$

The subway car can travel _____ per _____.

Try This

Write the ratio as a fraction in simplest form.

1) 51 correct: 9 incorrect

Find the unit rate.

2) $4.80 for 6 cans