

## Warmup

1. Write  $\frac{3}{15}$  in simplest form.

2.  $\frac{5}{7} - \frac{2}{8} = \underline{\hspace{2cm}}$

3. The perimeter of a square is 48 inches. What is the length of each side?  
Each side =          inches

4. Write the decimal numbers

Four tenths:         

Four hundredths:         

Forty-four hundredths:         

Four and four tenths:         

Four and forty-four hundredths:         

5. A class has 130 students. How many boys are in the class if there are 80 girls?

## I. Ratio

**Ratio:** A comparison of two numbers by division. A ratio shows the relationship between the numbers. Most ratios have an *unstated* total.

Three girls to four boys is written: 3 to 4    3:4     $\frac{3}{4}$

Use the information from Warmup #5 to write the following ratios:  
**boys to girls**

         boys to          girls             boys :          girls     $\frac{\text{boys}}{\text{girls}}$

**girls to boys**

         girls to          boys             girls :          boys     $\frac{\text{girls}}{\text{boys}}$

**girls to total students**

         girls to          students             girls :          students     $\frac{\text{girls}}{\text{students}}$

Express each relationship as a ratio in reduced form. (Ratios should be left as an improper fraction)

6. two adults to twelve children

\_\_\_\_\_ to \_\_\_\_\_

7. ten wins to five loses

\_\_\_\_\_ : \_\_\_\_\_

8. six plants to eight animals

(Use a fraction bar)

\_\_\_\_\_

9.

\_\_\_\_\_ : \_\_\_\_\_ to \_\_\_\_\_

## II. Using Ratio to Calculate Totals

The team won  $\frac{6}{9}$  of the games and lost the rest. What is the teams win-loss ratio?

1. How many games did the team play? \_\_\_\_\_
2. How many games did they win? \_\_\_\_\_
3. How many games did they lose? \_\_\_\_\_
4. What is ratio to express the wins to loses? \_\_\_\_\_

The bag contains red marbles and green marbles. The ratio of the marbles is 5:8. What fraction of the marbles are red?

Eight hundred tickets were sold for a concert. The ratio of child to adult tickets sold is  $\frac{1}{7}$ . What is the ratio of the adult to the total number of tickets sold?

10. Express blue cars to total cars as a ratio or rate in simplest form when the ratio of blue cars to grey cars is 30 to 9.

$$\frac{\text{blue cars}}{\text{total cars}}$$

11. Express wins to total games as a ratio or rate in simplest form when the ratio of wins to loses is 14 to 14.

$$\frac{\text{wins}}{\text{total games}}$$

12.

### III. Rate

**Rate:** A ratio of two measurements with different units. A unit rate is a rate simplified so it has a denominator of 1.

Four miles to One hour is written: 4 to 1    4:1     $\frac{4}{1}$

Express each ratio as a unit rate.

**13.** 35 dollars for 7 hours  
\_\_\_\_\_ to \_\_\_\_\_

**14.** 300 revolutions per 5 hours  
\_\_\_\_\_ : \_\_\_\_\_

**15.**

### IV. Practice

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