

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
- II. Using Ratio to Calculate Totals
- III. Rate

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 losses 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.





[illegible]