

9/15/15

LESSON 1: RATIOS

Lesson Objective: You will understand that a ratio is an ordered pair of non-negative numbers, which are not both zero. You will understand that a ratio is often used instead of describing the first number as a multiple of the second.

Classwork

Order Matters!

# Boys		# Girls		Total	
4	3	1	2	5	5
8	6	2	4	10	10
12	9	3	6	15	15
12		8			20

Example 1

The coed soccer team has four times as many boys on it as it has girls. We say the ratio of the number of boys to the number of girls on the team is 4:1. We read this as "four to one."

Suppose the ratio of number of boys to number of girls on the team is 3:2.

Example 2: Class Ratios

Record a ratio for each of the examples Mrs. Thompson provides.

	<u>Symbol</u>	<u>Word</u>	<u>Fraction</u>
1. <u>8 10</u>	10:13	10 to 13	$\frac{10}{13}$
3. <u>23</u>	23:0	23 to 0	$\frac{23}{0}$
5. <u>10</u>	10:13 13:10	10 to 13	$\frac{10}{13}$

Exercise 1

My own ratio compares boys
to girls

My ratio: 12:11
12 to 11
 $\frac{12}{11}$

Exercise 2

Using words, describe a ratio that represents each ratio below.

- a. 1 to 12 For every one year, there are 12 months.
- b. 12:1 For every 12 months, there is one year.
- c. 2 to 5 For every 2 non-school days, there are 5 school days.
- d. 5 to 2 _____
- e. 10:2 For every 10 toes, there are 2 feet.
- f. 2:10 _____

LESSON SUMMARY...

A ratio is an ordered pair of non-negative numbers, which are not both zero. The ratio is written $A:B$ or A to B to indicate the order of the numbers. The number A is first, and the number B is second.

The order of the numbers is important to the meaning of the ratio. Switching the numbers changes the relationship. The description of the ratio relationship tells us the correct order for the numbers in the ratio.

Problem Set

- At the 6th grade Costume Ball, there are 132 boys, 89 girls, and 14 adults.
 - Write the ratio of number of boys to number of girls. **132:89**
 - Write the same ratio using another form ($A:B$ vs. A to B).
 - Write the ratio of number of boys to number of adults.
 - Write the same ratio using another form.
- In the cafeteria, 100 milk cartons were put out for breakfast. At the end of breakfast, 27 remained.
 - What is the ratio of milk cartons taken to total milk cartons?
 - What is the ratio of milk cartons remaining to milk cartons taken?
- Choose a situation that could be described by the following ratios, and write a sentence to describe the ratio in the context of the situation you chose.

For example: 3:2 When making pink paint, the art teacher uses the ratio 3:2. For every 3 cups of white paint she uses in the mixture, she needs to use 2 cups of red paint.

 - 1 to 2
 - 29 to 30