



Chapter 3

Rates and Ratios

3-1B Ratios

- Main Idea: Express ratios and rates in fraction form.

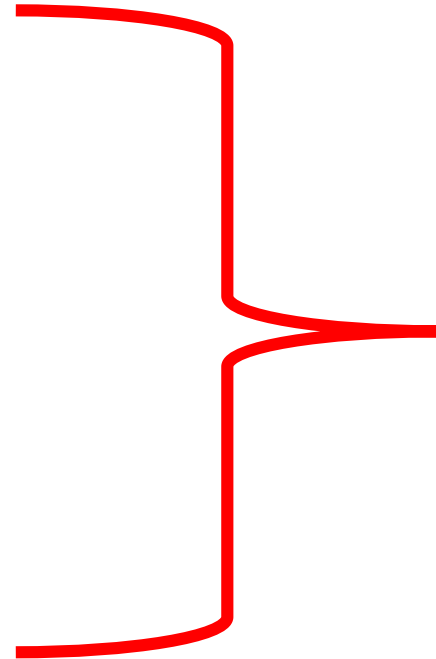
Ratio: a comparison of two numbers

■ Three ways to write a ratio:

1) Fraction

2) Colon

3) Words



All mean
the same thing

Note: **ALWAYS** simplify ratios by using the greatest common factor (GCF)



Example: What is the GCF of 30 and 24?

Factors of 30:

Factors of 24:

Example: Write the ratio in simplest form.

1) $\frac{\text{colored clips}}{\text{silver clips}} =$



2) 6:54

3) Find the ratio of boys to girls in this class.

4) Find the ratio of people with blue eyes to people without blue eyes.



Homework: Workbook p.37

3-1D Rates

- Main Idea: Determine unit rates.

Vocabulary:

- 1) Unit - Label (word(s))
- 2) Rate - a ratio that compares two quantities with different units.
- 3) Unit rate - a rate that has a denominator of 1 unit.

Examples: Write the following situations as a unit rate.

1) Daniel picked 45 apples in 5 minutes.

What does this mean?



Example 2:

Mrs. Sowatsky drove 228 miles in 3 hours.

What does this mean?

Example 3: (from p. 159 in text)

Adult	Baby
2100 beats for 30 minutes	2600 beats for 20 minutes

Difference =



Homework:

Groups 1 and 2: p. 160 #7-17 all

Group 3: p. 160 #7-17 odd, 19 - 24

3-2A Ratio Tables

- Main Idea: Use ratio tables to represent and solve problems involving equivalent ratios.



Vocabulary:

Equivalent Ratios:

Ratio Table:

Example:

To make yellow frosting, you mix 6 drops of yellow food coloring with 1 cup of white frosting. How much yellow food coloring should you mix with 5 cups of white frosting to get the same shade?

Cups of frosting			
Drops of yellow			

Example:

Joey Chestnut won a hot dog eating contest by eating nearly 66 hot dogs in 12 minutes. If he ate at a constant rate, determine about how many hot dogs he ate every two minutes.

Hot Dogs	66		
Minutes	12		

Example:

Cans of corn are on sale at 10 for \$4. Find the cost of 15 cans.

Cans of Corn	10		5		15
Cost (\$)	4		2		



Homework:

Group 1: #1 - 10

Groups 2 and 3: #5 - 25 odd


3-3A Equivalent Ratios

- Main Idea: Determine if two ratios are equivalent.

Equivalent Ratios: ratios that can be simplified to the same number.

Example: Are the ratios equivalent? Why or why not?

Miles	20	45
Hours	5	9



Example: Are the ratios equivalent? Why or why not?

Compare 3 cookies for \$21 and 5 cookies for \$35

Example: Are the rates equivalent? Explain.

A) If you read 60 pages in 3 days then another 90 pages in 6 days, are your reading rates equivalent?

B)

Pumpkins	5	7	15
Pies	3	5	9



Homework:

p. 176 #7 - 13 odd, 15- 17, 19 - 22



Chapter 3 Test