

Week 1

MA123: Mathematical Reasoning & Modeling
(Spring 2021)

Instructor: Emmanuel Thompson

Ratios & Rates

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Ratios & Rates:

- Ratios are expressions that compare two quantities.
- Rates are a special type of ratio.
 - It is used to describe a relationship between two related quantities in different units.

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Example 1:

Simplify the rate of cans of soda compared to people

$$\frac{54 \text{ cans of soda}}{4 \text{ people}}$$

Example 2:

Enter the ratio as a fraction in lowest terms

45 minutes to 10 minutes

Example 3:

Write the ratio as a ratio of whole numbers in lowest terms

\$0.40 to \$0.50

Example 4:

Jayda takes 4 hours to deliver 248 newspapers on her paper route. What is the rate per hour at which she delivers the newspapers?

Example 5:

Which is the better deal?

- \$2.49 for 8 liters
- \$3.69 for 12 liters