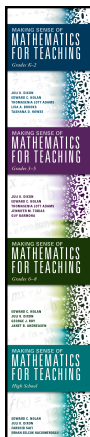


Fractions, Ratios, and Proportions, Oh My!

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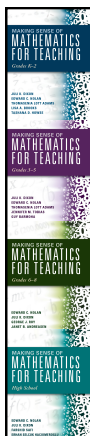


Write a Story

Write a story problem to model

$$\frac{1}{2} + \frac{2}{3}$$

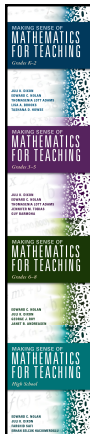
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Goals for this Session

- Make connections between fractions, ratios, and proportional reasoning.
- Consider mathematical connections and flexible ways of thinking about fractions and ratios.
- Develop a shared understanding of instruction through authentic classroom videos.

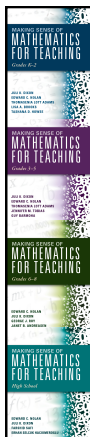
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Comparing Fractions and Ratios

- Write your definition of a fraction
- Write your definition of a ratio

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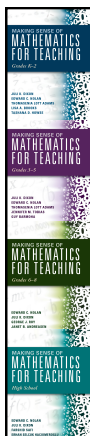


Comparing Fractions and Ratios

- Give fraction meanings to the following:

$$\frac{1}{2} \quad \frac{2}{3}$$
- Give ratio meanings for each.
- Model each with pattern blocks

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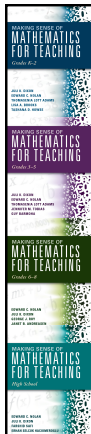
Equivalence

What is the difference in this equation if we are talking about fractions compared to ratios?

$$\frac{2}{3} = \frac{4}{6} = \frac{6}{9}$$

Source: http://commoncoretools.files.wordpress.com/2012/02/ccss_progression_rp_67_2011_11_12_corrected.pdf

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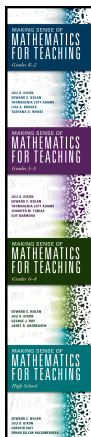


Content Connection

Grade 6

- Understand ratio concepts and use ratio reasoning to solve problems.
 - Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
 - Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship.
 - Use ratio and rate reasoning to solve real-world and mathematical problems

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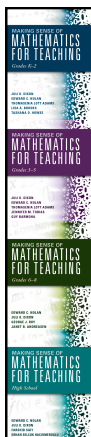


Content Connection

Grade 6

- Understand ratio concepts and use ratio reasoning to solve problems.
 - Use ratio and rate reasoning to solve real-world and mathematical problems
 - Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.

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Representations

PROBLEM

You work in a grocery store. Your boss gives you the following table to make sure that the prices of various sizes of lemonade are proportional.

Fill in the missing values in order to determine the price or size of each lemonade container.

Price (\$)			1.50	3		9	16
Container Size (Oz)	8	10		24	32	64	116

Create as many different representations for this relationship as you can.

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Representations

PROBLEM

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Price (\$)			1.50	3		9	16
Container Size (Oz)	8	10		24	32	64	116

What are different ways students can solve this problem?

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Plan with the TQE Process in Mind



- Select appropriate **T**asks to support identified learning goals,
- Facilitate productive **Q**uestioning during instruction to engage students in the Mathematical Practices, and
- Collect and use student **E**vidence in the formative assessment process during instruction.

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