

Learning Targets

Introducing Ratios

Lesson 1: Introducing Ratios and Ratio Language

- I can write or say a sentence that describes a ratio.
- I know how to say words and numbers in the correct order to accurately describe the ratio.

Lesson 2: Representing Ratios with Diagrams

- I can draw a diagram that represents a ratio and explain what the diagram means.
- I include labels when I draw a diagram representing a ratio, so that the meaning of the diagram is clear.

Lesson 3: Recipes

- I can explain the meaning of equivalent ratios using a recipe as an example.
- I can use a diagram to represent a recipe, a double batch, and a triple batch of a recipe.
- I know what it means to double or triple a recipe.

Lesson 4: Color Mixtures

- I can explain the meaning of equivalent ratios using a color mixture as an example.
- I can use a diagram to represent a single batch, a double batch, and a triple batch of a color mixture.
- I know what it means to double or triple a color mixture.

Lesson 5: Defining Equivalent Ratios

- If I have a ratio, I can create a new ratio that is equivalent to it.
- If I have two ratios, I can decide whether they are equivalent to each other.

Lesson 6: Introducing Double Number Line Diagrams

- I can label a double number line diagram to represent batches of a recipe or color mixture.
- When I have a double number line that represents a situation, I can explain what it means.

Lesson 7: Creating Double Number Line Diagrams

- I can create a double number line diagram and correctly place and label tick marks to represent equivalent ratios.
- I can explain what the word per means.

Lesson 8: How Much for One?

- I can choose and create diagrams to help me reason about prices.
- I can explain what the phrase “at this rate” means, using prices as an example.
- If I know the price of multiple things, I can find the price per thing.

Lesson 9: Constant Speed

- I can choose and create diagrams to help me reason about constant speed.
- If I know an object is moving at a constant speed, and I know two of these things: the distance it travels, the amount of time it takes, and its speed, I can find the other thing.

Lesson 10: Comparing Situations by Examining Ratios

- I can decide whether or not two situations are happening at the same rate.
- I can explain what it means when two situations happen at the same rate.
- I know some examples of situations where things can happen at the same rate.

Lesson 11: Representing Ratios with Tables

- If I am looking at a table of values, I know where the rows are and where the columns are.
- When I see a table representing a set of equivalent ratios, I can come up with numbers to make a new row.
- When I see a table representing a set of equivalent ratios, I can explain what the numbers mean.

Lesson 12: Navigating a Table of Equivalent Ratios

- I can solve problems about situations happening at the same rate by using a table and finding a “1” row.
- I can use a table of equivalent ratios to solve problems about unit price.

Lesson 13: Tables and Double Number Line Diagrams

- I can create a table that represents a set of equivalent ratios.
- I can explain why sometimes a table is easier to use than a double number line to solve problems involving equivalent ratios.
- I include column labels when I create a table, so that the meaning of the numbers is clear.

Lesson 14: Solving Equivalent Ratio Problems

- I can decide what information I need to know to be able to solve problems about situations happening at the same rate.
- I can explain my reasoning using diagrams that I choose.

Lesson 15: Part-Part-Whole Ratios

- I can create tape diagrams to help me reason about problems involving a ratio and a total amount.
- I can solve problems when I know a ratio and a total amount.

Lesson 16: Solving More Ratio Problems

- I can choose and create diagrams to help think through my solution.
- I can solve all kinds of problems about equivalent ratios.
- I can use diagrams to help someone else understand why my solution makes sense.

Lesson 17: A Fermi Problem

- I can apply what I have learned about ratios and rates to solve a more complicated problem.
- I can decide what information I need to know to be able to solve a real-world problem about ratios and rates.