EUREKA MATH™ TIPS FOR PARENTS

KEY CONCEPT OVERVIEW

In Topic B, students continue their work with equivalent ratios, representing equivalent ratios in various ways, and noting the advantages and disadvantages of each model: **ratio tables**, tape diagrams, **double number line diagrams**, **equations**, and graphs on **coordinate planes**. Students also study the additive and multiplicative patterns of the ratios presented in ratio tables.

You can expect to see homework that asks your child to do the following:

- Make a ratio table presenting equivalent ratios.
- Use a ratio table to answer questions and make comparisons.
- Use various models to answer questions.
- Write an equation to represent a situation.
- Locate the value of the ratio in a table or an equation.
- Make a graph from the ratio table.

SAMPLE PROBLEM *(From Lesson 15)*

Also on the news broadcast, a chef from a local Italian restaurant demonstrated how he makes fresh pasta daily for his restaurant. The recipe for his pasta is below.

<div align="center">

3 eggs, beaten
1 teaspoon salt
2 cups all-purpose flour
2 tablespoons water
2 tablespoons vegetable oil

</div>

Determine the ratio of the number of tablespoons of water to the number of eggs.   **2:3**

Provided the information in the table below, complete the table to determine ordered pairs. Use the ordered pairs to graph the relationship of the number of tablespoons of water to the number of eggs.

Tablespoons of Water	Number of Eggs	
2	3	(2, 3)
4	6	(4, 6)
6	9	(6, 9)
8	12	(8, 12)
10	15	(10, 15)
12	18	(12, 18)
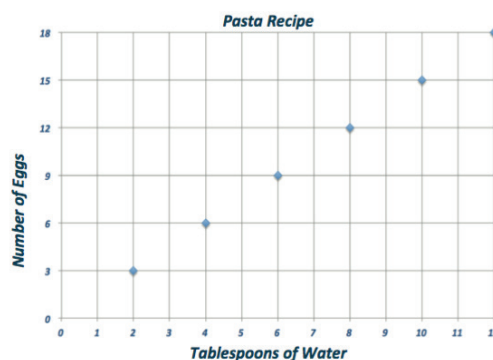
Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

You can help at home in many ways. Here are just a few tips to help you get started:

- Ask your child to explain the advantage(s) and disadvantage(s) of using a table, double number line diagram, equation, or graph to represent equivalent ratios. For example, a table presents the information in an organized way but doesn't necessarily show the relationship between the two values as nicely as a graph does.

- Have your child draw a ratio table (with 5 rows) and complete it using five equivalent ratios. Provide or ask your child to generate a context; for example, you might state that a lemonade recipe calls for one cup of lemon juice for every six cups of water and have your child create a table showing 1:6 and four equivalent ratios. Next, ask your child to graph the ordered pairs on a coordinate plane (using graph paper) and find the value of the ratio. Finally, challenge your child to write an equation using the value of the ratio, and explain her work to you.

- Team up with your child. Make ratio cards by writing ratios on notecards or flashcards. Hold up the cards one at a time. State an equivalent ratio for each card, and challenge your child to state a different equivalent ratio. Ask your child to identify the nonzero number c for each set of equivalent ratios and to explain how he figured this out.

TERMS

Additive Comparison: Description of the relationships between two quantities or amounts by asking or telling how much/many more (or less) one is compared to the other (e.g., "three more apples than oranges").
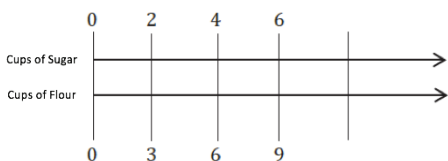
MODELS

Coordinate Plane
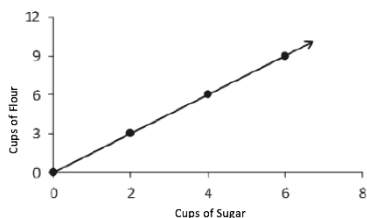
Multiplicative Structure of the Ratio Table

Gallons of Red Paint		Gallons of White Paint
3	× 4	12
6	× 4	24
12	× 4	48
21	× 4	84

Double Number Line Diagram

Ratio Table

Cups of Sugar	Cups of Flour
2	3
4	6
6	9

Equation

$$R = 4B$$
$$B = \frac{1}{4}R$$