# EUREKA MATH™ TIPS FOR PARENTS

KEY CONCEPT OVERVIEW

In Lessons 7 through 11, students explore **equivalent** fractions by using multiplication and division. To explain how fractions can be equivalent, students use **area models** and the **number line**.

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

- Express equivalent fractions in a **number sentence** by using multiplication (e.g., $\frac{1}{5} = \frac{1 \times 2}{5 \times 2} = \frac{2}{10}$).
- Express equivalent fractions in a number sentence by using division (e.g., $\frac{2}{10} = \frac{2 \div 2}{10 \div 2} = \frac{1}{5}$).
- Draw area models to represent number sentences and to prove fractions are equivalent.
- Draw number lines to show equivalence.

SAMPLE PROBLEM *(From Lesson 9)*

Compose the shaded fraction into larger **fractional units**. Express the equivalent fractions in a number sentence by using division.

$$\frac{8}{10} = \frac{8 \div 2}{10 \div 2} = \frac{4}{5}$$
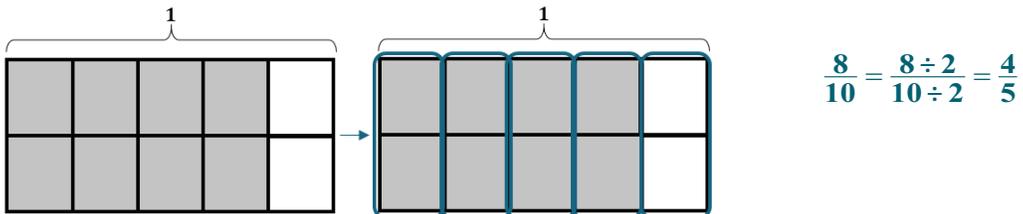
Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

- With your child, take turns drawing area models, such as the one above, and shading a fraction of each. After you have drawn and shaded each area model, work together to determine whether you can compose the fraction into larger units.

- Challenge your child to think about common **factors**. Write a fraction such as $\frac{4}{10}$. Ask your child to name the factors of 4 (1, 2, 4) and the factors of 10 (1, 2, 5, 10), and then ask him to name the common factors (1 and 2). Continue with other fractions.

TERMS

Compose: To change a smaller unit for an equivalent larger unit (e.g., convert fourths to halves: $\frac{2}{4} = \frac{1}{2}$).

Decompose: To break apart into smaller parts (e.g., partition a tape diagram equally into smaller parts to show equivalence).

Equivalent: Identifies the same amount. For example, $2 \times \frac{1}{3} = \frac{2}{3}$ is equivalent to $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$.

Factor: A number that is multiplied by another number. For example, in 3 × 4 = 12, the numbers 3 and 4 are factors; therefore, 3 and 4 are factors of 12.
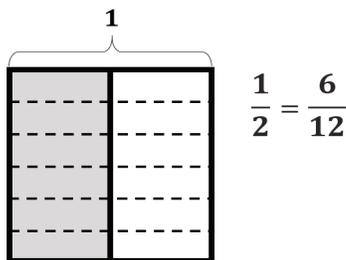
Fractional units: The result of dividing a unit into parts. For example, halves, thirds, and fourths are fractional units.

Number sentence: An equation for which both expressions are numerical and can be evaluated to a single number. For example, $\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$ and $\frac{1}{10} + \frac{2}{10} + \frac{3}{10} = \frac{6}{10}$ are number sentences. Number sentences do not have unknowns.
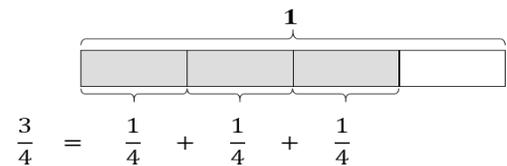
Unit fraction: A fraction with a numerator of 1. For example, $\frac{1}{2}, \frac{1}{3}$, and $\frac{1}{4}$ are all unit fractions.

MODELS

Area Model

$$\frac{1}{2} = \frac{6}{12}$$

Tape Diagram

$$\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$$

Number Line