

## Grade 4 Module 5

# Tips for Families

## Key Concepts Overview

Focus TEKS: **4.3A, 4.3B, 4.3C, 4.3D, 4.3E, 4.3F, 4.9A, 4.9B**

The focus of Module 5 is exploring fraction equivalence and applying that understanding to compare, add, and subtract fractions, including mixed numbers and fractions greater than 1. Your student will:

- ☐ Decompose fractions as a sum of unit fractions (e.g.,  $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$ ).
- ☐ Draw strip diagrams and area models to show decomposition and to find equivalent fractions.
- ☐ Express equivalent fractions in a number sentence by using multiplication and division.
- ☐ Plot fractions on a number line and compare fractions by referring to **benchmarks**.
- ☐ Compare fractions with **common** and related **numerators** and **denominators**.
- ☐ Add and subtract fractions with like units and record answers as **mixed numbers**, where applicable.
- ☐ Use strip diagrams, number bonds, number lines, benchmarks, and area models to add, subtract, and compare fractions.
- ☐ Convert **fractions greater than 1** to mixed numbers, and vice versa.
- ☐ Create a **dot plot** and solve problems related to its data.
- ☐ Estimate the sum or difference of two mixed numbers.
- ☐ Add and subtract fractions and mixed numbers by using different strategies.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

## Additional Ways to Help at Home

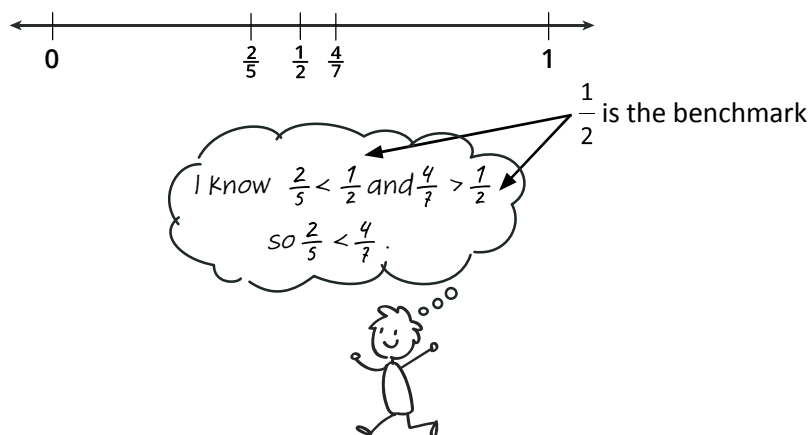
- Explore fractions as you make sandwiches. Give a sandwich to your student. Ask her how many whole sandwiches she has. Cut your student's sandwich in half. Ask her again how many whole sandwiches she has. Point to one half. Ask her to say the fraction that the piece represents. Point to the other half. Ask her again to say the fraction. Finally, ask her to say a number sentence that represents the decomposition ( $1 = \frac{1}{2} + \frac{1}{2}$ ). Continue with this activity by decomposing the halves into smaller units (e.g., fourths, eighths).
- Challenge your student to think about common factors. Write a fraction such as  $\frac{4}{10}$ . Ask your student 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.



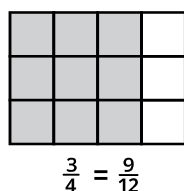
- Ask your student to teach you how to add and subtract fractions. Teaching you will help her to explain her thinking as she talks through the process. Ask your student to explain how the models (number bond, number line, and strip diagram) can help her solve.
- Find six pencils of different lengths. Help your student to measure each pencil to the nearest quarter inch, and then record the measurements. Next, ask him to use the data to create a dot plot, and then to create two questions based on the data.

## Terms

**Benchmark:** a standard or reference point by which something can be measured or compared



**Equivalent fractions** (*Fracción equivalente*): fractions that name the same size or amount and are located at the same point on the number line



**Fraction greater than 1:** a fraction with a numerator that is greater than the denominator

$$\frac{8}{5} \quad \leftarrow \text{The numerator is 8.}$$

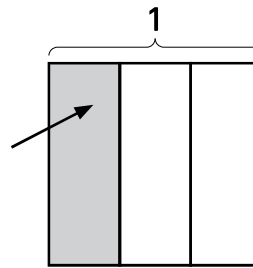
$$\frac{8}{5} \quad \leftarrow \text{The denominator is 5.}$$

Because 8 is greater than 5, the fraction  $\frac{8}{5}$  is a fraction greater than 1.



**Fractional unit** (*Unidad fraccionaria*): the unit created by partitioning a whole into a number of equal parts

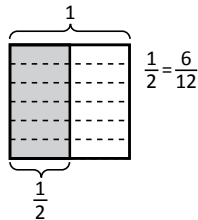
The whole is divided into three equal parts. The fractional unit is thirds.



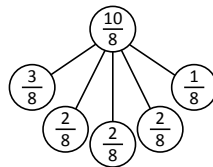
**Mixed number** (*Números mixtos*): a number made up of a whole number and a fraction (e.g.,  $3\frac{1}{2}$ )

## Models

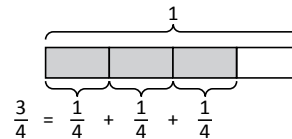
**Area Model**



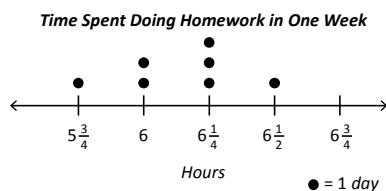
**Number Bond**



**Strip Diagram**



**Dot Plot**



**Number Line**

