# FAMILY MATH
Fractions and Division

Dear Family,

In earlier grades, your student worked to understand a fraction as a number. Now, your student is learning to interpret a fraction as the numerator divided by the denominator. They use equal-sharing models to understand how dividing whole numbers can result in a fraction or mixed number. Building on that understanding, your student writes remainders as fractions. When solving division word problems, your student reasons whether the answer makes more sense when written as a fraction or as a mixed number. Understanding the connection between fractions and division helps your student with fraction concepts that they learn later.

$$3 \div 2 = \frac{3}{2}$$
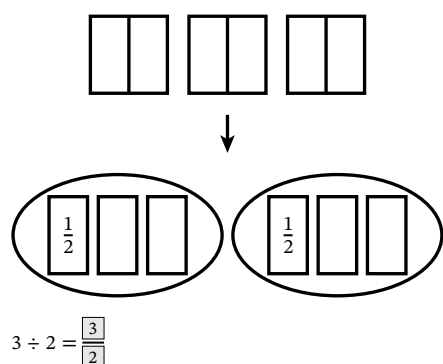
When 3 granola bars are shared equally between 2 people, each person gets $1\frac{1}{2}$ or $\frac{3}{2}$ granola bars.

$$5 \div 3 = 1\frac{2}{3}$$

$$3\overline{)5}$$ with -3, remainder 2, quotient 1
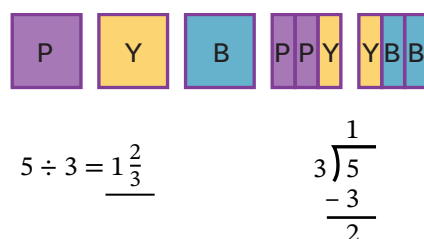
Dividing 5 by 3 is like sharing 5 brownies among 3 people. Each person gets 1 whole brownie and $\frac{2}{3}$ of another brownie.

Lacy has 10 gallons of water. She pours an equal number of gallons of water into each of 3 fish tanks. Her blue fish tank already had $\frac{1}{3}$ gallon of water in it. How many gallons of water are in the blue fish tank now?

$$10 \div 3 = \frac{10}{3}$$

$$\frac{10}{3} + \frac{1}{3} = \frac{11}{3} = 3\frac{2}{3}$$

Now there are $3\frac{2}{3}$ gallons of water in the blue fish tank.
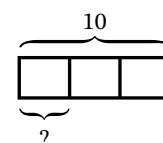
The answer to this word problem can be written as a fraction, $\frac{11}{3}$, or as an equivalent mixed number, $3\frac{2}{3}$. For this answer, the mixed number makes more sense when describing how much water is in the fish tank.

At-Home Activity

Mealtime Sharing

Use equal sharing at mealtime to help your student see fractions as division.

- If you have 4 dinner rolls to share equally among 3 people, ask your student how many rolls each person can have ($1\frac{1}{3}$ dinner rolls).
- If you have 10 tortillas to share equally among 4 people, ask your student how many tortillas each person can have ($2\frac{1}{2}$ tortillas).

- If you have 5 different types of cookies to share equally among 3 people, and everyone wants to try each type of cookie, ask your student how many cookies each person can have ($\frac{5}{3}$ or $1\frac{2}{3}$ cookies, when each cookie is cut into thirds and each person can have $\frac{1}{3}$ of each of the 5 cookies).

Have your student break up the food into equal shares and explain how they can make sure everyone has an equal amount. Encourage your student to say the fraction or mixed number that represents each share.