

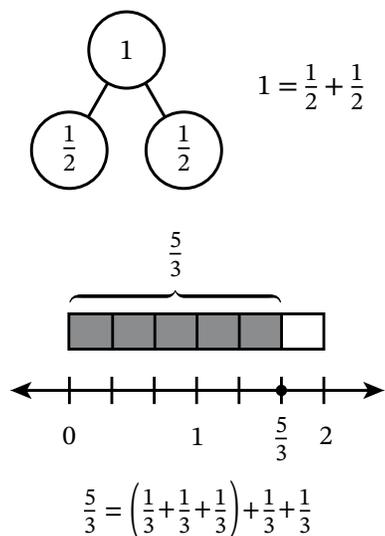
FAMILY MATH

Fraction Decomposition and Equivalence

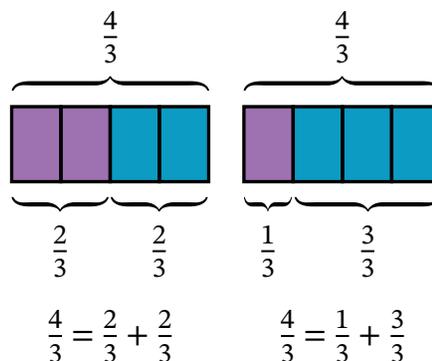
Dear Family,

Your student is learning that fractions, like whole numbers, can be decomposed into sums of parts. For example, the whole number 4 is the sum of 1 + 3 and the fraction $\frac{4}{5}$ is the sum of $\frac{1}{5} + \frac{3}{5}$. They break apart fractions and write addition equations with the parts. They use models to break apart whole numbers and fractions and see that fractions can be broken apart in many ways. They combine whole numbers with fractions less than 1 to write mixed numbers. Your student also learns to rename a mixed number as a fraction. Renaming fractions with models and equations prepares your student for adding and subtracting fractions in future lessons.

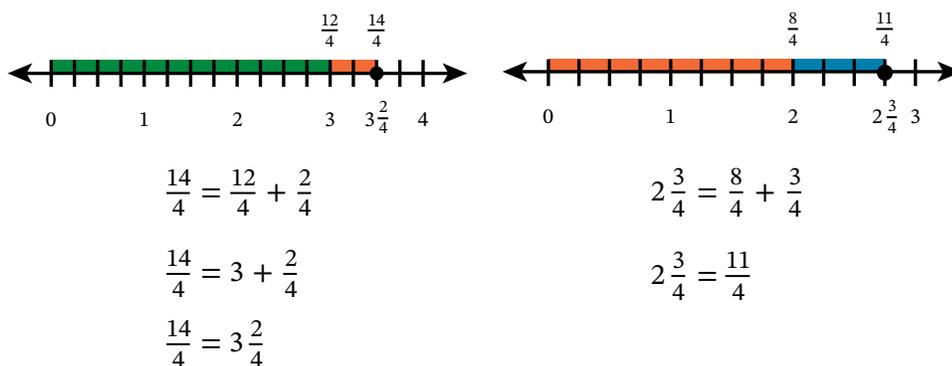
Key Term
mixed number



Students use familiar models, such as number bonds and tape diagrams, to break apart numbers into the sums of fractions.



Students use tape diagrams to see how fractions can be broken apart in different ways.



Students use number lines to support their understanding when writing a fraction as an equivalent mixed number or when writing a mixed number as an equivalent fraction.

At-Home Activity

Is This Share Equal?

Help your student practice breaking apart fractions in different ways. Start with a food item that is already divided into equal parts, such as a chocolate bar. Another option is to cut a food item, such as a piece of bread or fruit, into an even number of equal parts. Ask your student what fraction describes 1 part of the whole. Ask them what fraction of the whole each of you would get if you shared the whole equally. Then discuss an example of a share that is not equal such as the following example. This example is for a chocolate bar that has 12 sections.

- The fraction that describes 1 part would be $\frac{1}{12}$.
- To share equally between two people, each person gets $\frac{6}{12}$ of the bar. Discuss all the different ways you could decompose $\frac{6}{12}$ such as $\frac{6}{12} = \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$ or $\frac{6}{12} = \frac{2}{12} + \frac{4}{12}$ and so on. Ask whether there is a way to share $\frac{6}{12}$ equally such as $\frac{6}{12} = \frac{3}{12} + \frac{3}{12}$.
- A share that is not equal would happen when one person gets $\frac{3}{12}$ of the whole bar and the other person gets $\frac{9}{12}$.