

## KEY CONCEPT OVERVIEW

---

In Lessons 8 through 12, students learn to add and subtract fractions and mixed numbers with unlike denominators. They also apply their skills in real-world contexts.

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

- Add and subtract fractions and mixed numbers with unlike denominators by using the number line strategy.
- Solve fraction and mixed number word problems.

## SAMPLE PROBLEM (From Lesson 12)

---

Subtract.

$$3\frac{3}{5} - 2\frac{1}{2}$$

*Method 1: Rename fractions as tenths, and then subtract.*

*Method 2: Subtract whole numbers, and then subtract fractions.*

*Method 3: Decompose  $3\frac{3}{5}$  into two parts using a number bond. Subtract  $2\frac{1}{2}$  from 3 to get  $\frac{1}{2}$ , and then add the fractions.*

**Method 1:**

$$\begin{aligned} 3\frac{3}{5} - 2\frac{1}{2} \\ = 3\frac{6}{10} - 2\frac{5}{10} \\ = 1\frac{1}{10} \end{aligned}$$

**Method 2:**

$$\begin{aligned} 3\frac{3}{5} - 2\frac{1}{2} \\ = 1\frac{3}{5} - \frac{1}{2} \\ = 1\frac{6}{10} - \frac{5}{10} \\ = 1\frac{1}{10} \end{aligned}$$

**Method 3:**

$$\begin{aligned} & 3\frac{3}{5} - 2\frac{1}{2} \\ & \begin{array}{c} \diagup \quad \diagdown \\ 3 \quad \frac{3}{5} \end{array} \\ & = \frac{1}{2} + \frac{3}{5} \\ & = \frac{5}{10} + \frac{6}{10} \\ & = \frac{11}{10} \\ & = 1\frac{1}{10} \end{aligned}$$

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at [GreatMinds.org](http://GreatMinds.org).

**HOW YOU CAN HELP AT HOME**

- Play the Write the Whole or Mixed Number dice game with your child.
  1. Roll a die.
  2. Have your child roll a die.
  3. Both you and your child arrange the dice as a fraction, using the larger number rolled as the numerator and the smaller number rolled as the denominator.
  4. Write the fraction, and say, “Write the mixed number and then **simplify** it.”

For example, you roll the number 6. Your child rolls the number 4. Those numbers represent the fraction  $\frac{6}{4}$ . You write  $\frac{6}{4}$  and say, “Write  $\frac{6}{4}$  as a mixed number and then simplify it.” She writes  $1\frac{2}{4}=1\frac{1}{2}$ .

- Play the Add or Subtract Fractions card game with your child.
  1. Take out the jacks, queens, kings, aces, and jokers.
  2. Put the stack of remaining cards facedown.
  3. Flip two cards.
  4. Have your child flip two cards.
  5. Both you and your child arrange each pair of cards as a fraction, using the smaller number as the numerator and the larger number as the denominator.
  6. Using those two fractions, write an addition or subtraction fraction sentence, and ask your child to solve it. When writing a subtraction fraction sentence, the larger fraction should be written first.

For example, you flip two cards with the numbers 4 and 5. They represent the fraction  $\frac{4}{5}$ . Your child flips two cards with the numbers 3 and 2. They represent the fraction  $\frac{2}{3}$ . You write  $\frac{4}{5} + \frac{2}{3}$  or  $\frac{4}{5} - \frac{2}{3}$  and ask your child to solve it. He writes  $\frac{4}{5} + \frac{2}{3} = 1\frac{7}{15}$  or  $\frac{4}{5} - \frac{2}{3} = \frac{2}{15}$ .

**TERMS**

**Simplify:** Write a fraction or expression in simplest form. For example, the simplest form of  $\frac{3}{6}$  is  $\frac{1}{2}$ .