

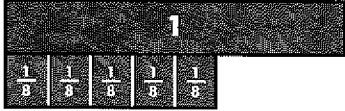


# Homework 11-2

## Decomposing Fractions

### Another Look!

Shannon wants to use  $\frac{5}{8}$  of her garden space for flowers. She wants to plant petunias and marigolds. How can she use the available space?



There are more than two solutions to this problem.



Write  $\frac{5}{8}$  as the sum of two fractions in two different ways.

$$\frac{5}{8} = \frac{1}{8} + \frac{4}{8} \quad \frac{5}{8} = \frac{2}{8} + \frac{3}{8}$$

Shannon could use  $\frac{1}{8}$  of the space for petunias and  $\frac{4}{8}$  for marigolds, or she could use  $\frac{2}{8}$  of the space for petunias and  $\frac{3}{8}$  for marigolds.

In **1** through **8**, write each fraction or mixed number as the sum of fractions in two different ways.

1.  $\frac{4}{7} = \frac{\square}{\square} + \frac{\square}{\square}$       $\frac{4}{7} = \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

2.  $\frac{7}{10} = \frac{\square}{\square} + \frac{\square}{\square}$       $\frac{7}{10} = \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

3.  $\frac{4}{5} =$   
 $\frac{4}{5} =$

4.  $\frac{3}{10} =$   
 $\frac{3}{10} =$

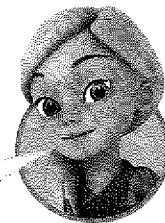
5.  $1\frac{1}{4} =$   
 $1\frac{1}{4} =$

6.  $2\frac{2}{3} =$   
 $2\frac{2}{3} =$

7.  $1\frac{3}{5} =$   
 $1\frac{3}{5} =$

8.  $1\frac{1}{2} =$   
 $1\frac{1}{2} =$

Challenge yourself! Include ways that break a fraction or mixed number into more than two parts.



9. **Number Sense** Yvonne ran  $\frac{3}{8}$  of the race before stopping for water. She wants to stop for water one more time before finishing the race. List two ways she can do this.



10. **Connect** In a class of 24 students, 8 students did **NOT** check out a book from the library. What fraction of the students did check out a book? Write the fraction again in simplest form.

11. **Reason** A teacher noticed that  $\frac{5}{9}$  of the students were wearing either blue shirts or white shirts. Write two different ways this could be done.

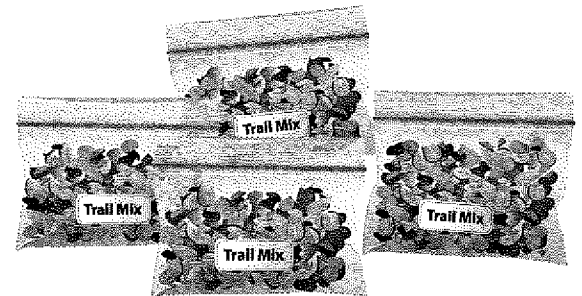
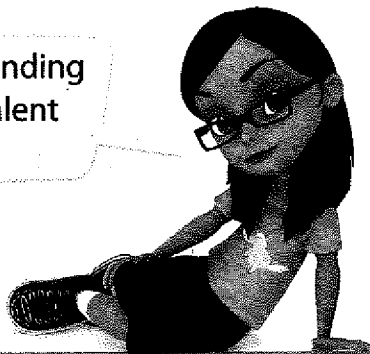
12. **Number Sense** Mrs. Evans asked the class to decompose  $1\frac{3}{4}$ . Which of the following is **NOT** a way to decompose  $1\frac{3}{4}$ ?

- A  $\frac{4}{4} + \frac{3}{4}$   
 B  $\frac{5}{4} + \frac{1}{4} + \frac{1}{4}$   
 C  $\frac{2}{4} + \frac{5}{4}$   
 D  $\frac{1}{4} + \frac{3}{4}$

13. **Extend Your Thinking** Mark said he can decompose the fraction  $\frac{5}{6}$  into three fractions with three different numerators. Is this possible? Explain.

14. **Connect** Connie made  $1\frac{1}{3}$  pounds of trail mix for a hike. Is there a way Connie can break up the trail mix into four equal bags without having any left over? Explain.

Start by finding an equivalent fraction.



15. **Justify** Marcus walked  $\frac{1}{8}$  mile to the park, then  $\frac{4}{8}$  mile to the store, and finally  $\frac{2}{8}$  mile home. To walk a mile, how much farther does Marcus need to walk? Explain how you know.