



## Fractions

Unit 8 has two primary objectives:

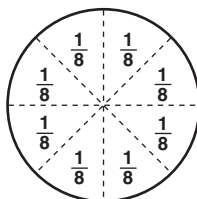
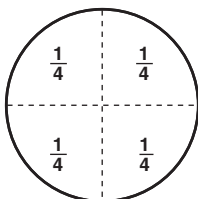
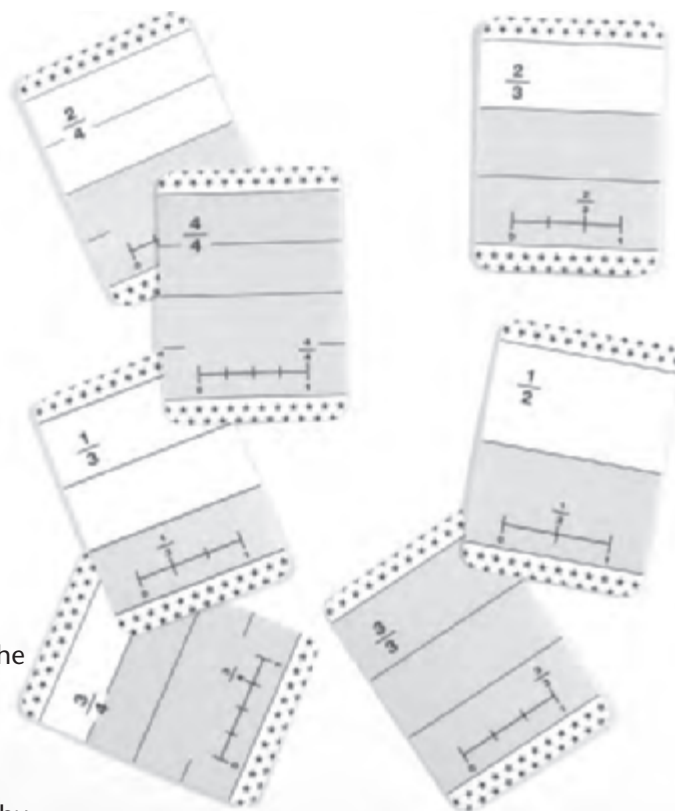
- ◆ to review the uses of fractions and fraction notation
- ◆ to help children develop a solid understanding of equivalent fractions, or fractions that have the same value

The second objective is especially important, because understanding equivalent fractions will help children compare fractions and, later, calculate with fractions.

Children will build their understanding of equivalent fractions by working with Fraction Cards and name-collection boxes. Fraction Cards are shaded to show a variety of fractions.

Name-collection boxes contain equivalent names for the same number. For example, a  $\frac{1}{2}$  name-collection box can contain fractions such as  $\frac{2}{4}$ ,  $\frac{3}{6}$ , and  $\frac{4}{8}$  and the decimal 0.50.

Children will also generate lists of equivalent fractions by folding circles and rectangles into different numbers of equal parts.



Throughout this unit, children will make up and solve number stories involving fractions in everyday contexts. They will solve number stories about collections of real-world objects such as crayons, books, and cookies.

Finally, children will begin to name quantities greater than 1 with fractions such as  $\frac{3}{2}$  and  $\frac{5}{4}$  and with mixed numbers such as  $2\frac{1}{3}$ .

$\frac{1}{2}$	
$\frac{1}{4} + \frac{1}{4}$	$\frac{3}{6}$
$1 - \frac{1}{2}$	$\frac{5}{10}$
$1 \div 2$	$\frac{3}{4} - \frac{1}{4}$

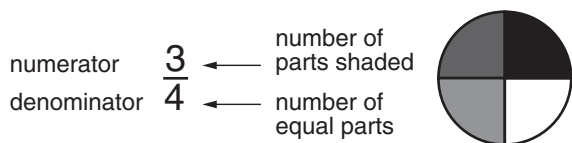
**Please keep this Family Letter for reference as your child works through Unit 8.**

## Vocabulary

Important terms in Unit 8:

**fraction** A number in the form  $\frac{a}{b}$  where  $a$  and  $b$  are whole numbers and  $b$  is not 0. A fraction may be used to name part of a whole, to compare two quantities, or to represent division. For example,  $\frac{2}{3}$  can be thought of as 2 divided by 3.

**denominator** The number below the line in a fraction. A fraction may be used to name part of a whole. If the whole is divided into equal parts, the denominator represents the number of equal parts into which the whole (the ONE or unit whole) is divided. In the fraction  $\frac{a}{b}$ ,  $b$  is the denominator.



**numerator** The number above the line in a fraction. A fraction may be used to name part of a whole. If the whole (the ONE or unit whole) is divided into

equal parts, the numerator represents the number of equal parts being considered. In the fraction  $\frac{a}{b}$ ,  $a$  is the numerator.

**equivalent fractions** Fractions with different denominators that name the same number. For example,  $\frac{1}{2}$  and  $\frac{4}{8}$  are equivalent fractions.

**mixed number** A number that is written using both a whole number and a fraction. For example,  $2\frac{1}{4}$  is a mixed number equal to  $2 + \frac{1}{4}$ .

## Building Skills through Games

In Unit 8, your child will practice multiplication skills, build his or her understanding of fractions, and practice skills related to chance and probability by playing the following games. For detailed instructions, see the *Student Reference Book*.

### Baseball Multiplication

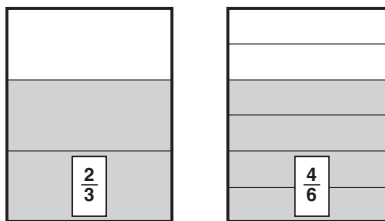
Players use multiplication facts to score runs. Team members take turns pitching by rolling two dice to get two factors. Then players on the batting team take turns multiplying the two factors and saying the product.

### Equivalent Fractions Game

Players take turns turning over Fraction Cards and try to find matching cards that show equivalent fractions.

### Fraction Top-It

Players turn over two Fraction Cards and compare the shaded parts of the cards. The player with the larger fraction keeps all the cards. The player with more cards at the end wins!



### The Block-Drawing Game

Without letting the other players see the blocks, a Director puts five blocks in a paper bag and tells the players how many blocks are in the bag. A player takes a block out of the bag. The Director records the color of the block for all players to see. The player replaces the block. At any time, a player may say *Stop!* and guess how many blocks of each color are in the bag.

## Do-Anytime Activities

To work with your child on the concepts taught in this unit and in previous units, try these interesting and rewarding activities:

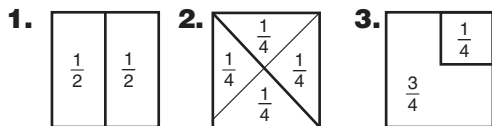
1. Help your child find fractions in the everyday world—in advertisements, on measuring tools, in recipes, and so on.
2. Count together by a 1-digit number. For example, start at 0 and count by 7s.
3. Dictate 5-, 6-, and 7-digit numbers for your child to write, such as *thirteen thousand, two hundred forty-seven* (13,247) and *three million, two hundred twenty-nine thousand, eight hundred fifty-six* (3,229,856). Also, write 5-, 6-, and 7- digit numbers for your child to read to you.
4. Practice extended multiplication and division facts such as  $3 \times 7 = \underline{\quad}$ ,  $30 \times 7 = \underline{\quad}$ , and  $300 \times 7 = \underline{\quad}$ , and  $18 \div 6 = \underline{\quad}$ ,  $180 \div 6 = \underline{\quad}$ , and  $1,800 \div 6 = \underline{\quad}$ .



# As You Help Your Child with Homework

As your child brings home assignments, you may want to go over the instructions together, clarifying them as necessary. The answers listed below will guide you through this unit's Home Links.

## Home Link 8•1



4.  $\frac{5}{7}$     5.  $\frac{2}{7}$   
6. 187    7. 587    8. 192

## Home Link 8•2

1. 0    2. 3    3. 6

4. 4

5. 198, 198, 198

## Home Link 8•3

1. 7  
2. 3  
3.  $\frac{1}{4}$ , or  $\frac{10}{40}$   
4.  $\frac{1}{5}$ , or  $\frac{10}{50}$   
5. ○○○○○○○○○○○○○○○○○○○○○

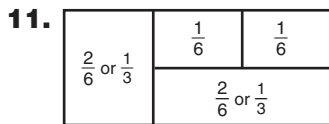
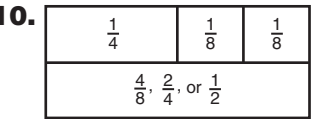
6. ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ○ ○ ○ ○

## Home Link 8•4

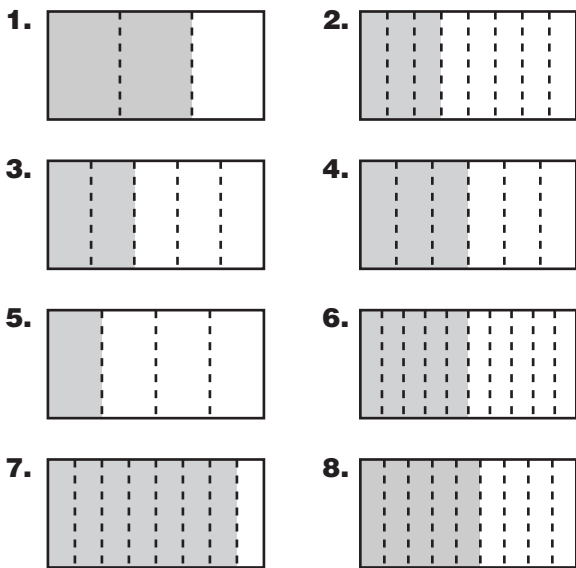
1. 9 pieces of fruit,  $\frac{4}{9}$ ,  $\frac{2}{9}$ ,  $\frac{3}{9}$ ,  $\frac{0}{9}$   
2.  $\frac{1}{3}$ ,  $\frac{2}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$ ,  $\frac{3}{4}$     3. 46  
4. 1,269    5. 210    6. 999

## Home Link 8•5

4.  $\frac{2}{4}$ ,  $\frac{1}{2}$     5.  $\frac{3}{6}$ ,  $\frac{1}{2}$     6.  $\frac{4}{8}$ ,  $\frac{1}{2}$   
8. 4 cats    9.  $\frac{4}{16}$



## Home Link 8•6



9.  $\frac{2}{3}$ ,  $\frac{7}{8}$ ,  $\frac{5}{9}$     10.  $\frac{3}{6}$ ,  $\frac{5}{10}$     11. >  
12. <    13. >    14. =    15. 56  
16. 9    17. 3    18. 72

## Home Link 8•7

1.  $6$ ;  $\frac{6}{4}$ ;  $1\frac{2}{4}$  or  $1\frac{1}{2}$     2.  $9$ ;  $\frac{9}{5}$ ;  $1\frac{4}{5}$     3.  $7$ ;  $\frac{7}{3}$ ;  $2\frac{1}{3}$   
4.  $\frac{1}{12}$     5.  $\frac{28}{12}$ ;  $2\frac{4}{12}$  or  $2\frac{1}{3}$     6. 13  
7. 46    8. 124    9. 230

## Home Link 8•8

1. 8 eggs    2.  $\frac{1}{4}$  of the lawn  
3. 2 miles    4.  $1\frac{1}{4}$  trays  
5.  $\frac{1}{4}$  gallon    6. 6,761  
7. 2,908    8. 9,524