

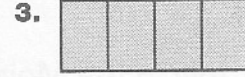
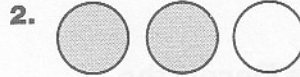
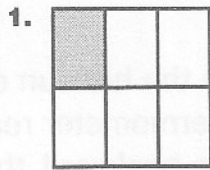
Name \_\_\_\_\_ Date \_\_\_\_\_

# Represent Fractions

**Example**

$\frac{3}{8}$

Write the fraction for the shaded part.



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\_\_\_\_\_

\_\_\_\_\_

Draw a picture to show each fraction.

4.  $\frac{1}{7}$

5.  $\frac{6}{8}$

6.  $\frac{2}{5}$

7.  $\frac{5}{10}$

8.  $\frac{2}{6}$

9.  $\frac{3}{7}$

10.  $\frac{3}{9}$

11.  $\frac{1}{3}$

12.  $\frac{5}{11}$

13.  $\frac{2}{4}$

14.  $\frac{3}{5}$

15.  $\frac{2}{12}$

## Problem Solving • Reasoning

16. Ann bought 13 apples. Eight of the apples were red. Five of the apples were green. What fraction of Ann's apples were red?

\_\_\_\_\_

17. Josh borrowed 6 books from the library. Two of the books were fiction. Four were non-fiction. What fraction of the books were non-fiction?

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Name \_\_\_\_\_ Date \_\_\_\_\_

## Fractional Parts of a Number

### Example

$$\frac{3}{4} \text{ of } 16$$

$$16 \div 4 = 4$$

$$3 \times 4 = 12$$

$$\frac{3}{4} \text{ of } 16 \text{ is } 12$$

Find the fractional part of each number.

1.  $\frac{1}{5}$  of 15 \_\_\_\_\_      2.  $\frac{1}{10}$  of 10 \_\_\_\_\_      3.  $\frac{2}{3}$  of 9 \_\_\_\_\_

4.  $\frac{7}{8}$  of 16 \_\_\_\_\_      5.  $\frac{1}{4}$  of 20 \_\_\_\_\_      6.  $\frac{2}{3}$  of 18 \_\_\_\_\_

7.  $\frac{3}{8}$  of 8 \_\_\_\_\_

8.  $\frac{1}{4}$  of 16 \_\_\_\_\_

9.  $\frac{2}{5}$  of 25 \_\_\_\_\_

10.  $\frac{3}{10}$  of 30 \_\_\_\_\_

11.  $\frac{1}{6}$  of 12 \_\_\_\_\_

12.  $\frac{1}{10}$  of 100 \_\_\_\_\_

13.  $\frac{2}{5}$  of 30 \_\_\_\_\_

14.  $\frac{9}{10}$  of 20 \_\_\_\_\_

15.  $\frac{1}{5}$  of 40 \_\_\_\_\_

16.  $\frac{3}{5}$  of 20 \_\_\_\_\_

17.  $\frac{3}{4}$  of 24 \_\_\_\_\_

18.  $\frac{1}{3}$  of 24 \_\_\_\_\_

### Problem Solving • Reasoning

19. Joe wrote a book report. The report was 10 pages long. Jake's book report was  $\frac{1}{5}$  as long as Joe's report. How long was Jake's report?
- \_\_\_\_\_

20. Lynn ate 6 cookies at lunch. Megan ate  $\frac{1}{3}$  as many cookies as Lynn ate. How many cookies did Megan eat?
- \_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_

## Modeling Equivalent Fractions

1. Draw fraction strips to find other fractions that are equivalent to  $\frac{1}{3}$ . Then complete the table.

Fractions Equivalent to $\frac{1}{3}$		
Fraction Strip	How many?	Equivalent Fraction
$\frac{1}{6}$		
$\frac{1}{12}$		

2. Draw fraction strips to find other fractions that are equivalent to  $\frac{2}{5}$ . Complete the table.

Fractions Equivalent to $\frac{2}{5}$		
Fraction Strip	How many?	Equivalent Fraction
$\frac{1}{10}$		
$\frac{1}{15}$		

Decide whether the fractions are equivalent.

Write *yes* or *no*. Use fraction strips to help you.

3.  $\frac{4}{9}$  and  $\frac{5}{7}$

4.  $\frac{3}{6}$  and  $\frac{4}{8}$

5.  $\frac{9}{12}$  and  $\frac{4}{5}$

6. **Write About It** What pattern do you notice about the equivalent fractions?
- 
- 

Write an equivalent fraction for each.

7.  $\frac{5}{6}$

8.  $\frac{3}{9}$

9.  $\frac{5}{10}$

10.  $\frac{4}{8}$

11.  $\frac{6}{9}$

12.  $\frac{3}{5}$



Name \_\_\_\_\_ Date \_\_\_\_\_

# Equivalent Fractions

Multiply or divide to find the equivalent fraction.

### Example

$$\frac{2}{3} = \frac{2 \times 4}{3 \times 4} = \frac{8}{12}$$

1.  $\frac{2}{3} = \frac{2 \times 2}{3 \times \square} = \underline{\hspace{2cm}}$

2.  $\frac{2}{3} = \frac{2 \times 5}{3 \times \square} = \underline{\hspace{2cm}}$

3.  $\frac{4}{6} = \frac{4 \div 2}{6 \div \square} = \underline{\hspace{2cm}}$

Is each fraction in simplest form? Write *yes* or *no*.

4.  $\frac{5}{6}$  \_\_\_\_\_

5.  $\frac{8}{10}$  \_\_\_\_\_

6.  $\frac{2}{6}$  \_\_\_\_\_

7.  $\frac{5}{9}$  \_\_\_\_\_

8.  $\frac{3}{9}$  \_\_\_\_\_

9.  $\frac{1}{8}$  \_\_\_\_\_

10.  $\frac{3}{7}$  \_\_\_\_\_

11.  $\frac{4}{20}$  \_\_\_\_\_

12.  $\frac{2}{13}$  \_\_\_\_\_

13.  $\frac{4}{8}$  \_\_\_\_\_

14.  $\frac{3}{21}$  \_\_\_\_\_

15.  $\frac{2}{14}$  \_\_\_\_\_

Write each fraction in simplest form.

16.  $\frac{6}{18}$  \_\_\_\_\_

17.  $\frac{4}{24}$  \_\_\_\_\_

18.  $\frac{3}{30}$  \_\_\_\_\_

19.  $\frac{5}{35}$  \_\_\_\_\_

20.  $\frac{5}{25}$  \_\_\_\_\_

21.  $\frac{2}{100}$  \_\_\_\_\_

### Problem Solving • Reasoning

22. Sue read  $\frac{2}{3}$  of the newest mystery book by her favorite author. Jack read  $\frac{2}{6}$  of the same book. Did Sue and Jack read the same amount?

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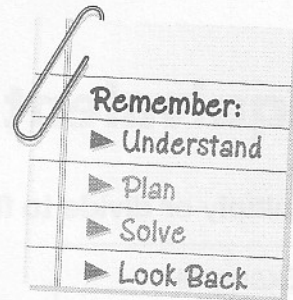
23. Erin and Kenya ran laps around the running track at recess. Erin ran  $\frac{6}{8}$  of a mile. Kenya ran  $\frac{3}{4}$  of a mile. Did they run the same distance?

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Name \_\_\_\_\_

Date \_\_\_\_\_

# Problem-Solving Strategy: Draw a Picture



The fourth grade students did surveys of groups of students in the school. Use the Draw a Picture strategy to solve each problem.

1. Of the first graders who were asked,  $\frac{1}{6}$  like math best,  $\frac{2}{3}$  like reading best, and 12 like science best. How many first graders were asked their favorite subject?
2. Of the second graders who were asked,  $\frac{1}{2}$  like baseball best,  $\frac{1}{8}$  like hockey best, and 30 like football best. How many second graders were asked their favorite sport?

**Think:**

Into how many equal parts should the picture be divided?

\_\_\_\_\_

**Think:**

Into how many equal parts should the picture be divided?

\_\_\_\_\_

3. Of the third graders who were asked,  $\frac{2}{5}$  like pizza the best,  $\frac{3}{15}$  like hamburgers best, and 18 like macaroni the best. How many third-graders were asked their favorite food?
4. Of the fifth graders who were asked,  $\frac{3}{7}$  like red best,  $\frac{5}{14}$  like blue best, and 12 like green best. How many fifth graders were asked their favorite color?

\_\_\_\_\_

\_\_\_\_\_

Solve. Use these other strategies.

## Problem-Solving Strategies

• Draw a Picture

• Make a Table

• Write an Equation

• Guess and Check

5. Ninety fourth graders voted about how to display the results of the surveys they took. Twice as many students voted to make a poster as voted to write a report. How many students voted to make a poster?
6. The students spent 3 hours preparing the survey and 4 hours asking the questions. They spent 2 hours totaling the answers and 6 hours making the poster. How much time did they spend on the survey altogether?

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_

# Compare and Order Fractions

Compare. Write  $>$ ,  $<$ , or  $=$  for each  $\bigcirc$ . Draw number lines to help you if you wish.

### Example

$$\frac{5}{7} \bigcirc \frac{6}{14}$$

$$\frac{10}{14} > \frac{6}{14}$$

1.  $\frac{5}{6} \bigcirc \frac{2}{3}$

2.  $\frac{5}{9} \bigcirc \frac{1}{3}$

3.  $\frac{6}{10} \bigcirc \frac{2}{5}$

4.  $\frac{1}{9} \bigcirc \frac{1}{3}$

5.  $\frac{2}{8} \bigcirc \frac{4}{16}$

6.  $\frac{2}{5} \bigcirc \frac{7}{10}$

7.  $\frac{8}{12} \bigcirc \frac{4}{6}$

Order each group of fractions from least to greatest.

8.  $\frac{7}{8}$   $\frac{4}{8}$   $\frac{9}{16}$  \_\_\_\_\_

9.  $\frac{2}{9}$   $\frac{6}{9}$   $\frac{2}{18}$  \_\_\_\_\_

10.  $\frac{3}{4}$   $\frac{1}{4}$   $\frac{1}{8}$  \_\_\_\_\_

11.  $\frac{6}{7}$   $\frac{3}{7}$   $\frac{1}{14}$  \_\_\_\_\_

12.  $\frac{1}{3}$   $\frac{2}{3}$   $\frac{3}{6}$  \_\_\_\_\_

13.  $\frac{4}{5}$   $\frac{1}{15}$   $\frac{3}{15}$  \_\_\_\_\_

14.  $\frac{3}{5}$   $\frac{4}{5}$   $\frac{1}{10}$  \_\_\_\_\_

15.  $\frac{8}{12}$   $\frac{3}{4}$   $\frac{3}{12}$  \_\_\_\_\_

16.  $\frac{3}{9}$   $\frac{7}{9}$   $\frac{2}{3}$  \_\_\_\_\_

### Problem Solving • Reasoning

17. Sidney calculated the fraction of students who bought the school lunch each day. On Monday,  $\frac{4}{12}$  of the students bought lunch. On Tuesday,  $\frac{1}{4}$  of the students bought lunch. On which day did fewer students buy lunch?
- \_\_\_\_\_

18. Ellen was learning to swim. The first day of lessons, she swam  $\frac{1}{6}$  of a lap. On the second day, she swam  $\frac{1}{3}$  of a lap. On the third day, she swam  $\frac{4}{6}$  of a lap. On which day did Ellen swim the farthest?
- \_\_\_\_\_



Name \_\_\_\_\_ Date \_\_\_\_\_

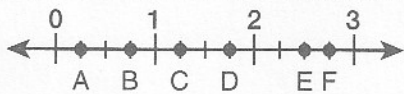
# Write Mixed Numbers

Write the letter from the number line that matches each fraction.

**Example**

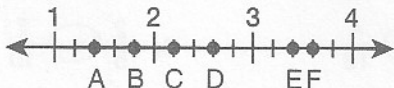
$$\frac{5}{4}$$

$$\frac{5}{4} = \mathbf{C}$$



1.  $\frac{1}{4}$  \_\_\_\_\_
2.  $\frac{10}{4}$  \_\_\_\_\_
3.  $\frac{3}{4}$  \_\_\_\_\_
4.  $\frac{11}{4}$  \_\_\_\_\_
5.  $\frac{7}{4}$  \_\_\_\_\_

Write an improper fraction and a mixed number for each letter on the number line.



6. B \_\_\_\_\_
7. D \_\_\_\_\_
8. A \_\_\_\_\_
9. F \_\_\_\_\_
10. C \_\_\_\_\_
11. E \_\_\_\_\_

Write a mixed number or whole number for each improper fraction.

12.  $\frac{10}{3}$  \_\_\_\_\_
13.  $\frac{5}{2}$  \_\_\_\_\_
14.  $\frac{18}{9}$  \_\_\_\_\_
15.  $\frac{8}{1}$  \_\_\_\_\_
16.  $\frac{6}{5}$  \_\_\_\_\_
17.  $\frac{9}{3}$  \_\_\_\_\_

Write an improper fraction for each mixed number.

18.  $5\frac{1}{3}$  \_\_\_\_\_
19.  $7\frac{2}{3}$  \_\_\_\_\_
20.  $2\frac{1}{6}$  \_\_\_\_\_
21.  $4\frac{3}{6}$  \_\_\_\_\_
22.  $2\frac{1}{9}$  \_\_\_\_\_
23.  $4\frac{2}{5}$  \_\_\_\_\_

## Problem Solving • Reasoning

24. Meg had a pizza party for her friends. They ate  $7\frac{1}{2}$  pizzas. Show the number of pizzas they ate as an improper fraction.
25. Katherine went to camp for  $2\frac{1}{7}$  months. Write the number of months as an improper fraction.

Name \_\_\_\_\_ Date \_\_\_\_\_

## Problem-Solving Skill: Choose How to Write the Quotient

Solve each problem. Explain why your answer is reasonable.

1. Pablo went to the baseball game with his mom, dad, and sister. They bought 10 hot dogs. How many hot dogs can each person have, if each person gets an equal amount?

**Think:**

What does the remainder represent?

\_\_\_\_\_

\_\_\_\_\_

2. Five caps were given away to fans with winning numbers on their tickets. Three tickets contained winning numbers. How many caps could be given to the winners if each winner got an equal number of caps?

**Think:**

What does the remainder represent?

\_\_\_\_\_

\_\_\_\_\_

3. At the souvenir shop Pablo bought 8 baseball cards. How many can he give to each of his three friends, if he gives each person an equal number?

\_\_\_\_\_

\_\_\_\_\_

4. During the baseball game, Pablo and his sister split three cups of soda. They both drank an equal amount. How many cups of soda did they each have?

\_\_\_\_\_

\_\_\_\_\_

Solve. Use these and other strategies.

### Problem-Solving Strategies

• Use Logical Thinking

• Guess and Check

• Work Backward

• Draw a Picture

5. An autographed baseball card costs \$5.00. How many autographed cards can you buy with \$12.50? How much money will you have left over?

\_\_\_\_\_

6. Pablo spent  $\frac{1}{4}$  of his money on soda and  $\frac{1}{2}$  on hot dogs. He spent \$2.00 on popcorn. How much money did he spend if he has no money left over?

\_\_\_\_\_



Name \_\_\_\_\_ Date \_\_\_\_\_

# Add With Like Denominators

Add. Write each sum in simplest form.

### Example

$$\begin{array}{r} 2\frac{2}{6} \\ +3\frac{1}{6} \\ \hline 5\frac{3}{6} = 5\frac{1}{2} \end{array}$$

1.  $1\frac{2}{6}$   
 $+2\frac{3}{6}$   
\_\_\_\_\_

2.  $2\frac{5}{8}$   
 $+3\frac{1}{8}$   
\_\_\_\_\_

3.  $3\frac{2}{5}$   
 $+4\frac{2}{5}$   
\_\_\_\_\_

4.  $5\frac{1}{7}$   
 $+2\frac{4}{7}$   
\_\_\_\_\_

5.  $3\frac{1}{10} + 4\frac{2}{10}$   
\_\_\_\_\_

6.  $3\frac{3}{8} + 2\frac{4}{8}$   
\_\_\_\_\_

7.  $\frac{6}{9} + 1\frac{2}{9}$   
\_\_\_\_\_

8.  $1\frac{3}{6} + 2\frac{1}{6}$   
\_\_\_\_\_

9.  $2\frac{4}{7} + 11\frac{1}{7}$   
\_\_\_\_\_

10.  $7\frac{3}{5} + 1\frac{1}{5}$   
\_\_\_\_\_

11.  $1\frac{2}{8} + 2\frac{2}{8}$   
\_\_\_\_\_

12.  $5\frac{1}{4} + 5\frac{1}{4}$   
\_\_\_\_\_

13.  $3\frac{6}{9} + 1\frac{1}{9}$   
\_\_\_\_\_

14.  $5\frac{5}{7} + 2\frac{1}{7}$   
\_\_\_\_\_

15.  $3\frac{3}{5} + 1\frac{1}{5}$   
\_\_\_\_\_

16.  $3\frac{7}{10} + 2\frac{2}{10}$   
\_\_\_\_\_

## Problem Solving • Reasoning

17. On Monday, Jared read for  $2\frac{1}{4}$  hours. On Tuesday, he read for  $1\frac{1}{4}$  hours. How many hours did he read over the two days?
- \_\_\_\_\_

18. A store clerk used  $\frac{3}{4}$  yard of ribbon to wrap one gift. She used  $\frac{2}{4}$  of a yard to wrap another gift. How many yards of ribbon did the clerk use for the two gifts?
- \_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_

## Subtract With Like Denominators

### Example

$$\begin{array}{r} 4\frac{2}{3} \\ - 1\frac{1}{3} \\ \hline 3\frac{1}{3} \end{array}$$

Subtract. Write each difference in simplest form.

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

2.  $\frac{8}{9} - \frac{7}{9}$

3.  $\frac{9}{12} - \frac{9}{12}$

4.  $3\frac{4}{7} - 1\frac{1}{7}$

5.  $\frac{10}{15} - \frac{2}{15}$

6.  $2\frac{2}{7} - 1\frac{1}{7}$  \_\_\_\_\_

7.  $6\frac{7}{10} - 5\frac{1}{10}$  \_\_\_\_\_

8.  $6\frac{18}{19} - 2\frac{17}{19}$  \_\_\_\_\_

9.  $3\frac{2}{4} - 1\frac{1}{4}$  \_\_\_\_\_

10.  $\frac{7}{8} - \frac{1}{8}$  \_\_\_\_\_

11.  $8\frac{10}{11} - 8\frac{1}{11}$  \_\_\_\_\_

12.  $3\frac{7}{7} - 1\frac{6}{7}$  \_\_\_\_\_

13.  $9\frac{10}{13} - 8\frac{1}{13}$  \_\_\_\_\_

14.  $2\frac{15}{20} - 1\frac{10}{20}$  \_\_\_\_\_

15.  $7\frac{9}{10} - 3\frac{2}{10}$  \_\_\_\_\_

16.  $4\frac{20}{30} - 2\frac{2}{30}$  \_\_\_\_\_

17.  $5\frac{3}{14} - 4\frac{2}{14}$  \_\_\_\_\_

18.  $9\frac{6}{8} - 6\frac{2}{8}$  \_\_\_\_\_

19.  $7\frac{8}{17} - 5\frac{2}{17}$  \_\_\_\_\_

20.  $11\frac{11}{12} - 2\frac{3}{12}$  \_\_\_\_\_

### Problem Solving • Reasoning

21. Josh has  $2\frac{2}{3}$  boxes full of sports trading cards. Jamal has  $1\frac{1}{3}$  boxes of sports cards. How many more boxes of sports cards does Josh have than Jamal?

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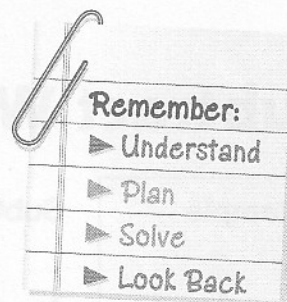
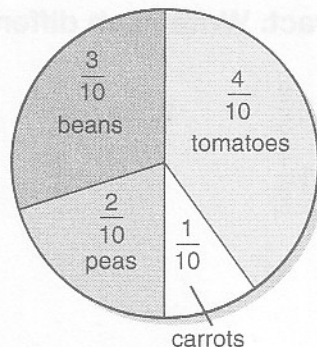
22. Erica has done a total of  $10\frac{2}{5}$  hours of volunteer work. Jimmy has done  $7\frac{1}{5}$  hours of volunteer work. How much longer has Erica worked than Jimmy?

\_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_

## Problem-Solving Application: Use Fractions

Susanna planted 80 vegetable plants in her garden. She planted tomatoes, carrots, peas, and beans.



- How many more tomato plants than carrot plants are there?
- How many more bean plants than pea plants are there?

**Think:**

What part of the circle is carrot plants?

\_\_\_\_\_

**Think:**

What part of the circle is pea plants?

\_\_\_\_\_

- Imagine that Susanna planted 20 more plants, but the circle graph stayed the same. How many pea plants would she have now?
- Look at the original circle graph. If rabbits ate 10 plants, but the circle graph stayed the same, how many carrot plants would she have now?

\_\_\_\_\_

\_\_\_\_\_

**Solve.** Use these or other strategies. Use the circle graph to solve the problems.

### Problem-Solving Strategies

- Use Logical Reasoning
- Work Backward
- Draw a Picture
- Make a Table

- Susanna spends 3 hours a week working on her garden. She spends  $\frac{1}{2}$  of her time weeding,  $\frac{1}{4}$  watering, and  $\frac{1}{4}$  picking vegetables. How much time does she spend weeding the garden each week?
- Susanna sells 4 pounds of carrots for \$1.00 per pound. She sells three pounds of peas for 75¢ a pound. How much money does she make altogether?

\_\_\_\_\_

\_\_\_\_\_