

Add.

①  $\frac{1}{3} + \frac{1}{2}$

②  $\frac{7}{10} + \frac{1}{5}$

③  $\frac{2}{9} + \frac{1}{6}$

④  $\frac{5}{32} + \frac{1}{4}$

⑤  $\frac{1}{6} + \frac{2}{3}$

⑥  $\frac{5}{11} + \frac{1}{2}$

⑦  $\frac{3}{16} + \frac{3}{4}$

⑧  $\frac{3}{7} + \frac{1}{3}$

⑨  $\frac{5}{12} + \frac{3}{8}$

Solve.

*Show your work.*

- ⑩ Of the people who attended the school play,  $\frac{5}{12}$  were students and  $\frac{1}{8}$  were teachers. What fraction of the total audience were students or teachers?
- \_\_\_\_\_

- ⑪ Mara bought  $\frac{2}{3}$  yard of yellow ribbon and  $\frac{1}{4}$  yard of blue ribbon. How many yards of ribbon did she buy altogether?
- \_\_\_\_\_

- ⑫ For breakfast, Oliver drank  $\frac{5}{16}$  of a pitcher of juice. His brother Joey drank  $\frac{3}{8}$  of the pitcher of juice. What fraction of a pitcher did they drink together?
- \_\_\_\_\_

- ⑬ A recipe calls for  $\frac{1}{3}$  cup of brown sugar and  $\frac{3}{4}$  cup of white sugar. How much sugar is this altogether?
- \_\_\_\_\_

Solve for  $n$  or  $d$ .

1  $\frac{1}{6} = \frac{n}{24}$  \_\_\_\_\_

2  $\frac{3}{4} = \frac{15}{d}$  \_\_\_\_\_

3  $\frac{9}{54} = \frac{1}{d}$  \_\_\_\_\_

4  $\frac{10}{18} = \frac{n}{9}$  \_\_\_\_\_

5  $\frac{3}{7} = \frac{18}{d}$  \_\_\_\_\_

6  $\frac{3}{5} = \frac{n}{40}$  \_\_\_\_\_

7  $\frac{27}{36} = \frac{n}{4}$  \_\_\_\_\_

8  $\frac{14}{49} = \frac{2}{d}$  \_\_\_\_\_

9  $\frac{5}{6} = \frac{n}{48}$  \_\_\_\_\_

10  $\frac{1}{3} = \frac{20}{d}$  \_\_\_\_\_

11  $\frac{21}{56} = \frac{3}{d}$  \_\_\_\_\_

12  $\frac{20}{25} = \frac{n}{5}$  \_\_\_\_\_

Add or subtract.

13  $1\frac{1}{3} + 2\frac{1}{3}$  \_\_\_\_\_

14  $3\frac{3}{5} - 1\frac{1}{5}$  \_\_\_\_\_

15  $6\frac{3}{8} + 3\frac{5}{8}$  \_\_\_\_\_

16  $6\frac{3}{8} - 3\frac{5}{8}$  \_\_\_\_\_

17  $1\frac{5}{6} + 2\frac{5}{6}$  \_\_\_\_\_

18  $7 - 5\frac{1}{4}$  \_\_\_\_\_

Compare.

19  $\frac{3}{4} \bigcirc \frac{6}{7}$

20  $\frac{7}{15} \bigcirc \frac{2}{5}$

21  $\frac{1}{8} \bigcirc \frac{3}{20}$

22  $\frac{6}{100} \bigcirc \frac{6}{101}$

23  $\frac{19}{20} \bigcirc \frac{20}{21}$

24  $\frac{4}{5} \bigcirc \frac{7}{9}$

Solve.

*Show your work.*

- 25 In a hockey game, Seth took 12 shots and scored 3 times. Zak took 10 shots and scored twice. Who scored on a greater fraction of his shots?
- \_\_\_\_\_

- 26 Jia rode her bike  $7\frac{7}{8}$  miles in the morning and another  $6\frac{5}{8}$  miles in the afternoon. How many miles did she ride altogether?
- \_\_\_\_\_

- 27 **Stretch Your Thinking** Last season, Jenny made 3 out of every 4 free throws she took. If she took 48 free throws, how many did she make?
- \_\_\_\_\_

**1-8  
Homework**

Name \_\_\_\_\_

Date \_\_\_\_\_

**Subtract.**

①  $\frac{1}{3} - \frac{1}{7}$

②  $\frac{4}{5} - \frac{8}{15}$

③  $\frac{5}{6} - \frac{2}{9}$

④  $\frac{61}{100} - \frac{7}{25}$

⑤  $\frac{4}{7} - \frac{1}{6}$

⑥  $\frac{6}{11} - \frac{1}{2}$

Circle the greater fraction. Then write and solve a subtraction problem to find the difference of the fractions.

⑦  $\frac{9}{10}$   $\frac{11}{12}$  \_\_\_\_\_

⑧  $\frac{5}{18}$   $\frac{1}{3}$  \_\_\_\_\_

**Solve.***Show your work.*

- ⑨ Marly passes the library on her way to school. The distance from Marly's house to the library is  $\frac{3}{8}$  mile. The distance from Marly's house to the school is  $\frac{4}{5}$  mile. How far is it from the library to Marly's school?
- \_\_\_\_\_

- ⑩ Tim spends about  $\frac{1}{3}$  of each weekday sleeping and about  $\frac{7}{24}$  of each weekday in school.

a. What fraction of a weekday does Tim spend either sleeping or in school?

\_\_\_\_\_

b. Is this more or less than  $\frac{1}{2}$  a day? \_\_\_\_\_

c. How much more or less? \_\_\_\_\_

Write each fraction as a mixed number.

1  $\frac{11}{5} =$  \_\_\_\_\_

2  $\frac{21}{8} =$  \_\_\_\_\_

3  $\frac{57}{6} =$  \_\_\_\_\_

Write each mixed number as a fraction.

4  $1\frac{5}{6} =$  \_\_\_\_\_

5  $11\frac{2}{3} =$  \_\_\_\_\_

6  $6\frac{1}{9} =$  \_\_\_\_\_

Add or subtract.

7  $\frac{3}{7} + \frac{2}{7}$

8  $\frac{7}{10} - \frac{3}{10}$

9  $\frac{3}{10} + \frac{2}{5}$

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

11  $6\frac{11}{12} - 2\frac{5}{12}$

12  $5\frac{1}{3} - 1\frac{2}{3}$

13  $4\frac{3}{4} + 4\frac{3}{4}$

14  $4 - 3\frac{5}{8}$

15  $\frac{3}{11} + \frac{1}{3}$

Solve.

*Show your work.*

- 16 Ayala and Sam were partners on a science project. Ayala spent  $2\frac{3}{4}$  hours working on the project. Sam spent  $1\frac{3}{4}$  hours working on the project. How long did they work altogether?
- \_\_\_\_\_

- 17 **Stretch Your Thinking** Marti grouped all her CDs into separate categories. She said, " $\frac{2}{5}$  of my CDs are rock music,  $\frac{1}{6}$  are jazz,  $\frac{1}{3}$  are hip hop, and  $\frac{1}{4}$  are country music." Explain why Marti's statement cannot be correct.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Add or subtract.

$$\begin{array}{r} \textcircled{1} \quad 7\frac{1}{2} \\ + 6\frac{5}{8} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad 2\frac{3}{5} \\ + 5\frac{1}{4} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{3} \quad 5\frac{3}{8} \\ + 2\frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{4} \quad 3\frac{4}{15} \\ - 1\frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{5} \quad 9\frac{5}{6} \\ - 4\frac{1}{8} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{6} \quad 1\frac{1}{9} \\ + 3\frac{5}{8} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{7} \quad 8\frac{1}{6} \\ - 2\frac{7}{12} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{8} \quad 6\frac{7}{9} \\ - 4\frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{9} \quad 3\frac{9}{14} \\ - 1\frac{2}{7} \\ \hline \end{array}$$

Solve.

*Show your work.*

- 10** Last year my elm tree was  $8\frac{5}{6}$  feet tall. This year it is  $10\frac{1}{12}$  feet tall. How much did it grow in one year?

\_\_\_\_\_

- 11** Luis rode his bicycle  $2\frac{3}{10}$  miles before lunch. He rode  $1\frac{1}{4}$  miles after lunch. How far did Luis ride altogether?

\_\_\_\_\_

- 12** Carrie spent  $2\frac{1}{2}$  hours trimming bushes and  $1\frac{1}{4}$  hours weeding the garden. She is supposed to work in the yard for 5 hours. How much longer does she need to work?

\_\_\_\_\_

Add or subtract. Try to do these in your head.

1  $3\frac{1}{4} + 2\frac{3}{4} =$  \_\_\_\_\_

2  $2\frac{3}{4} - \frac{1}{4} =$  \_\_\_\_\_

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

4  $6\frac{6}{7} - 5\frac{2}{7} =$  \_\_\_\_\_

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

6  $5\frac{6}{7} - 1\frac{2}{7} =$  \_\_\_\_\_

7  $3\frac{3}{5} + 3\frac{3}{5} =$  \_\_\_\_\_

8  $7\frac{7}{8} - 3\frac{3}{8} =$  \_\_\_\_\_

9  $5\frac{3}{8} + 3\frac{5}{8} =$  \_\_\_\_\_

Write the fractions in order from least to greatest.

10  $\frac{1}{9}, \frac{1}{3}, \frac{1}{6}, \frac{1}{2}$  \_\_\_\_\_

11  $\frac{4}{9}, \frac{2}{9}, \frac{8}{9}, \frac{1}{9}$  \_\_\_\_\_

12  $\frac{2}{3}, \frac{3}{5}, \frac{1}{2}, \frac{3}{4}$  \_\_\_\_\_

13  $\frac{11}{15}, \frac{3}{5}, \frac{2}{3}, \frac{19}{30}$  \_\_\_\_\_

List three fractions equivalent to the given fraction.

14  $\frac{1}{5}$  \_\_\_\_\_

15  $\frac{15}{18}$  \_\_\_\_\_

16  $\frac{4}{7}$  \_\_\_\_\_

17  $\frac{9}{12}$  \_\_\_\_\_

Solve.

*Show your work.*

- 18 Ted is making a bread recipe that uses  $3\frac{1}{4}$  cups of flour and a muffin recipe that uses  $2\frac{3}{4}$  cups of flour.

a. How much more flour is in the bread than in the muffins?

\_\_\_\_\_

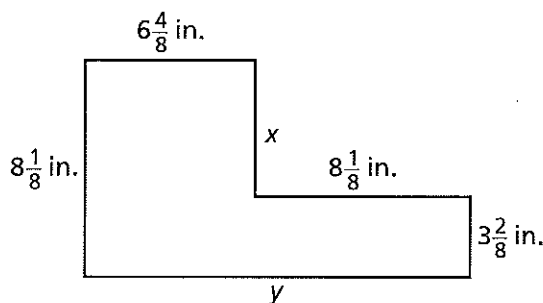
b. How much flour does Ted need for both recipes?

\_\_\_\_\_

- 19 **Stretch Your Thinking** Find the values of  $x$  and  $y$  in the drawing at the right.

$x =$  \_\_\_\_\_ inches

$y =$  \_\_\_\_\_ inches



**1-10  
Homework**

Name \_\_\_\_\_

Date \_\_\_\_\_

Add or subtract.

$$\begin{array}{r} \textcircled{1} \quad 3 \\ - 1\frac{2}{5} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad 2\frac{7}{10} \\ + 2\frac{4}{5} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{3} \quad 7\frac{5}{9} \\ - 3\frac{2}{15} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{4} \quad 4\frac{5}{6} \\ + \frac{6}{7} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{5} \quad 5\frac{1}{8} \\ - 4\frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{6} \quad 4\frac{79}{100} \\ + 5\frac{9}{10} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{7} \quad \frac{13}{16} \\ + \frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{8} \quad 8\frac{1}{4} \\ - 3\frac{9}{20} \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{9} \quad 7\frac{8}{9} \\ + 9\frac{7}{8} \\ \hline \end{array}$$

Solve.

- 10** The Taylors have four dogs. Molly eats  $4\frac{1}{2}$  cups of food each day, Roscoe eats  $3\frac{2}{3}$  cups, Milo eats  $1\frac{3}{4}$  cups, and Fifi eats  $\frac{3}{4}$  cup. How much do the Taylors' dogs eat each day altogether?

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- 11** Refer to Problem 10. How much more food does Molly eat each day than Roscoe?

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- 12** The vet told the Taylors (from Problem 10) to decrease the amount Molly eats by  $\frac{3}{4}$  cup. After Molly's food is adjusted, will she eat more or less than Roscoe each day? How much more or less?

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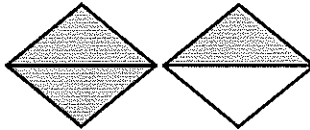
What mixed number is shown by each shaded part?

1



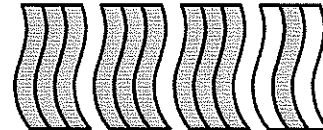
\_\_\_\_\_

2



\_\_\_\_\_

3



\_\_\_\_\_

Answer the questions about the bar graph. Give your answers as simple fractions.

4 How many cookies are there altogether? \_\_\_\_\_

5 What fraction of the cookies are chocolate chip? \_\_\_\_\_

6 What fraction of the cookies are oatmeal? \_\_\_\_\_

7 What fraction of the cookies are peanut butter? \_\_\_\_\_

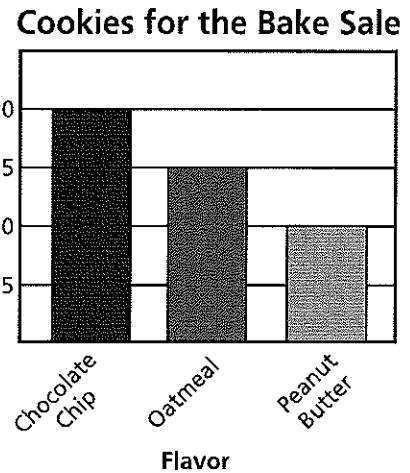
8 Melanie baked 25 cookies. Did she bake more or less than half of the cookies? \_\_\_\_\_

How do you know?

\_\_\_\_\_

\_\_\_\_\_

9 **Stretch Your Thinking** Colby nailed together four wood boards as shown at the right. All four boards are  $5\frac{1}{2}$  inches wide.

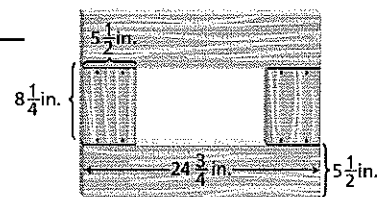


a. Find the perimeter of the outside rectangle.

\_\_\_\_\_

b. Find the perimeter of the inside rectangle.

\_\_\_\_\_





**1-11  
Homework**

Name \_\_\_\_\_

Date \_\_\_\_\_

Use benchmarks of  $0$ ,  $\frac{1}{2}$ , and  $1$  to estimate the sum or difference.  
Then find the actual sum or difference.

①  $\frac{2}{5} + \frac{4}{7}$

Estimate: \_\_\_\_\_

Sum: \_\_\_\_\_

②  $\frac{13}{20} - \frac{3}{10}$

Estimate: \_\_\_\_\_

Difference: \_\_\_\_\_

③  $\frac{13}{18} + \frac{1}{2}$

Estimate: \_\_\_\_\_

Sum: \_\_\_\_\_

Estimate the sum or difference by rounding each mixed number to the nearest whole number. Then find the actual sum or difference.

④  $3\frac{5}{8} - 1\frac{1}{2}$

Estimate: \_\_\_\_\_

Difference: \_\_\_\_\_

⑤  $6\frac{4}{9} + 5\frac{7}{12}$

Estimate: \_\_\_\_\_

Sum: \_\_\_\_\_

⑥  $7\frac{11}{18} - 4\frac{1}{15}$

Estimate: \_\_\_\_\_

Difference: \_\_\_\_\_

Tell whether the answer is reasonable or unreasonable.  
Explain how you decided.

⑦  $2\frac{1}{5} + 5\frac{1}{3} = 7\frac{8}{15}$

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⑧  $\frac{7}{8} - \frac{2}{11} = \frac{9}{19}$

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⑨  $\frac{3}{8} + \frac{4}{5} = \frac{7}{40}$

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

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**Solve.**

⑪ Estimate the difference  $8\frac{7}{12} - 4\frac{7}{8} - \frac{4}{10}$ .  
Explain how you found the answer.

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Add or subtract.

$$\begin{array}{r} 1 \quad 4 \\ -3\frac{7}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 2 \quad 5\frac{1}{2} \\ +6\frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 3 \quad 3\frac{1}{10} \\ -1\frac{5}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 4 \quad \frac{6}{7} \\ +\frac{3}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 5 \quad 10\frac{3}{8} \\ -1\frac{7}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 6 \quad 2\frac{13}{25} \\ +3\frac{99}{100} \\ \hline \end{array}$$

Compare.

$$7 \quad \frac{5}{7} \bigcirc \frac{5}{9}$$

$$8 \quad \frac{99}{100} \bigcirc \frac{100}{101}$$

$$9 \quad \frac{7}{15} \bigcirc \frac{9}{20}$$

$$10 \quad \frac{6}{11} \bigcirc \frac{4}{9}$$

$$11 \quad \frac{1}{21} \bigcirc \frac{1}{22}$$

$$12 \quad \frac{5}{16} \bigcirc \frac{1}{4}$$

Solve.

*Show your work.*

- 13 On the first math test, Octavia answered 24 out of 30 questions correctly. On the second math test, she answered 19 out of 25 questions correctly. On which test did she answer the greater fraction of the questions correctly?
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- 14 **Stretch Your Thinking** Isidro is riding his bike 22 miles to the art museum. He rode  $7\frac{1}{2}$  miles and then took a break. Since his break, he has ridden  $5\frac{7}{10}$  mile. How much farther does he have to ride to get to the museum?
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Solve. Explain why your answer is reasonable.

*Show your work.*

- ① Zoe had a board  $5\frac{1}{4}$  feet long. She cut off a piece. Now the board is  $3\frac{5}{6}$  feet long. How long was the piece she cut off?

Answer: \_\_\_\_\_

Why is the answer reasonable?

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- ② A rectangle has a length of  $10\frac{3}{16}$  inches and a width of  $6\frac{7}{8}$  inches. What is the perimeter of the rectangle?

Answer: \_\_\_\_\_

Why is the answer reasonable?

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- ③ Max is making trail mix. He combines  $\frac{2}{5}$  pound of dried fruit and  $\frac{1}{3}$  pound of mixed nuts. He adds sunflower seeds to make a total of 1 pound. What is the weight of the seeds?

Answer: \_\_\_\_\_

Why is the answer reasonable?

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- ④ At the start of party, a bowl contains 16 pints of punch. Guests drink  $10\frac{1}{4}$  pints. Then the host adds another  $7\frac{1}{2}$  pints to the bowl. How much punch is in the bowl now?

Answer: \_\_\_\_\_

Why is the answer reasonable?

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Tell whether the answer is reasonable or unreasonable. Explain how you decided.

1  $\frac{8}{9} + \frac{1}{10} = \frac{39}{90}$

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2  $5\frac{1}{6} - 4\frac{2}{7} = 2\frac{37}{42}$

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3  $\frac{11}{12} - \frac{7}{8} = \frac{1}{24}$

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4  $5\frac{5}{6} + 1\frac{3}{4} = 5\frac{1}{12}$

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Add or subtract.

5  $\frac{7}{8} + \frac{5}{8} =$  \_\_\_\_\_

6  $\frac{4}{7} + \frac{2}{3} =$  \_\_\_\_\_

7  $\frac{7}{15} - \frac{3}{10} =$  \_\_\_\_\_

8  $\frac{3}{4} - \frac{5}{12} =$  \_\_\_\_\_

9  $5\frac{4}{5} - 2\frac{1}{3} =$  \_\_\_\_\_

10  $7\frac{5}{6} + 2\frac{11}{12} =$  \_\_\_\_\_

Compare.

11  $\frac{5}{8} \bigcirc \frac{5}{9}$

12  $1\frac{7}{12} \bigcirc 1\frac{2}{3}$

13  $\frac{5}{9} \bigcirc \frac{3}{7}$

14  $\frac{1}{89} \bigcirc \frac{1}{90}$

15  $\frac{5}{18} \bigcirc \frac{2}{9}$

16  $\frac{65}{66} \bigcirc \frac{55}{56}$

Solve.

- 17 **Stretch Your Thinking** Find two mixed numbers such that when you estimate their sum by rounding to the nearest whole number you get a *different* estimate than when you round to the nearest half. Demonstrate that your numbers satisfy this condition.

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In the space below, design and sketch a bird hotel. Assume your design will be made from wood, and includes these characteristics.

- ▶ Walls not exposed to weathering are  $\frac{1}{4}$ -inch thick.
- ▶ Walls exposed to weathering are  $\frac{1}{2}$ -inch thick.
- ▶ The rooms are identical.

State the number of birds your design will accommodate, and the dimensions of one room. Then use the dimensions to compute the overall length, width, and height of your hotel.

Add or subtract.

$$\begin{array}{r} 7\frac{1}{4} \\ - 4\frac{5}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 1\frac{9}{10} \\ + 1\frac{9}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ - 1\frac{6}{7} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{7}{10} \\ + 1\frac{11}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 4\frac{4}{5} \\ - 1\frac{7}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 3\frac{5}{12} \\ + 1\frac{2}{3} \\ \hline \end{array}$$

Compare.

$$7 \frac{1}{57} \bigcirc \frac{1}{47}$$

$$8 \frac{5}{7} \bigcirc \frac{4}{5}$$

$$9 \frac{14}{15} \bigcirc \frac{15}{16}$$

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

$$11 15\frac{3}{8} \bigcirc 15\frac{7}{10}$$

$$12 14\frac{1}{10} \bigcirc 13\frac{9}{10}$$

Solve.

- 13 Blake watched  $\frac{1}{6}$  of a movie on Friday,  $\frac{3}{5}$  of the movie on Saturday, and the rest on Sunday. What fraction of the movie did he watch on Sunday?

\_\_\_\_\_

- 14 **Stretch Your Thinking** Marshall surveyed his classmates and found that  $\frac{5}{7}$  have a sister,  $\frac{1}{2}$  have a brother, and  $\frac{3}{14}$  don't have any siblings.

a. What is the sum of the three fractions?

\_\_\_\_\_

b. Why does it make sense for the sum to be greater than 1 whole?

\_\_\_\_\_

\_\_\_\_\_

*Show your work.*