

Name _____

Fraction Fun

Solve each problem.

1. Gina ate $\frac{1}{6}$ of an apple pie. Greg ate $\frac{1}{2}$ of the same pie. How much of the apple pie was left?

$$\frac{1}{3}$$

2. So far, John has run $\frac{1}{4}$ of the way to school and walked $\frac{3}{8}$ of the way. What fraction of the distance to school does John have left?

$$\frac{3}{8}$$

3. Ann, Nan, and Jan snacked on a plate of fruit slices while doing their homework. Ann ate $\frac{1}{5}$ of the fruit slices, Nan ate $\frac{2}{5}$ of the fruit slices, and Jan ate $\frac{1}{5}$ of the fruit slices. What fraction of the fruit slices are left on the plate?

$$\frac{1}{5}$$

4. While watching a movie, Ned, Fred, and Jed shared a bowl of popcorn. Ned ate $\frac{1}{2}$ of the popcorn, Fred ate $\frac{1}{4}$ of the popcorn, and Jed ate $\frac{1}{8}$ of the popcorn. What fraction of the bowl of popcorn is left?


$$\frac{1}{8}$$

5. In a grid of squares, Alice colored $\frac{3}{4}$ of the squares blue. She colored $\frac{1}{8}$ of the squares red. She colored the rest of the squares yellow. What fraction of the squares did Alice color yellow?

$$\frac{1}{8}$$

6. Pierre bounced a ball for $\frac{1}{3}$ of his recess time. He threw the ball in the air and caught it $\frac{3}{6}$ of the time. He carried the ball the rest of the time. For what fraction of his recess time did he carry the ball?

$$\frac{1}{6}$$

7.  Write Math How did you solve Problem 6? **Explain.**

Possible answer: $\frac{1}{3}$ is the same as $\frac{2}{6}$; 2 sixths + 3 sixths = $\frac{5}{6}$. Since $\frac{6}{6}$ represents the total recess time, Pierre carried the ball for $\frac{1}{6}$ of his recess time.

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Mixed-Up Sums

Match each fraction on the left with an addition problem on the right.

- | | |
|-------------------|---|
| 1. $\frac{7}{8}$ | $\frac{3}{8} + \frac{2}{8} + \frac{1}{8}$ |
| 2. $\frac{6}{10}$ | $\frac{2}{10} + \frac{2}{10} + \frac{2}{10}$ |
| 3. $\frac{4}{8}$ | $\frac{1}{10} + \frac{3}{10} + \frac{2}{10} + \frac{3}{10}$ |
| 4. $\frac{9}{10}$ | $\frac{1}{8} + \frac{5}{8} + \frac{1}{8}$ |
| 5. $\frac{6}{8}$ | $\frac{1}{10} + \frac{3}{10} + \frac{2}{10} + \frac{1}{10}$ |
| 6. $\frac{7}{10}$ | $\frac{1}{8} + \frac{1}{8} + \frac{2}{8}$ |

7. **Stretch Your Thinking** Write another possible sum for Exercise 4.

Possible answer: $\frac{3}{10} + \frac{3}{10} + \frac{3}{10}$

8. **Stretch Your Thinking** Write another possible sum for Exercise 5. Use $\frac{1}{4}$ for one of the addends. Explain how you found your answer.

Possible answer: $\frac{1}{4} + \frac{3}{8} + \frac{1}{8}$; $\frac{1}{4}$ is

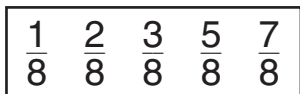
the same as $\frac{2}{8}$. So, $\frac{2}{8} + \frac{3}{8} + \frac{1}{8} = \frac{6}{8}$.

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Sum Fractions!

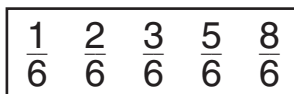
Find the two fractions that have the sum shown. Use each fraction only once. Use fraction strips to help.

1. The sum is $\frac{7}{8}$.



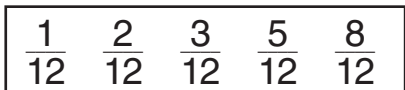
$\frac{2}{8}, \frac{5}{8}$

2. The sum is $\frac{5}{6}$.



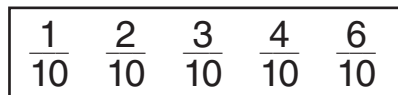
$\frac{2}{6}, \frac{3}{6}$

3. The sum is $\frac{9}{12}$.



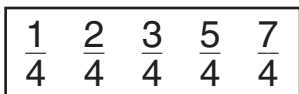
$\frac{1}{12}, \frac{8}{12}$

4. The sum is $\frac{6}{10}$.



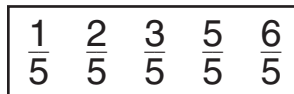
$\frac{2}{10}, \frac{4}{10}$

5. The sum is $\frac{4}{4}$.



$\frac{1}{4}, \frac{3}{4}$

6. The sum is 1.



$\frac{2}{5}, \frac{3}{5}$

7. **Stretch Your Thinking** Suppose you could use a fraction more than once. What other answer could you find for Exercise 5? Which other exercise would have more than one answer?

$\frac{2}{4}, \frac{2}{4}$; Exercise 4: $\frac{3}{10}, \frac{3}{10}$

8. **Write Math** Write a fraction sum problem similar to the ones above.

Check students' work.

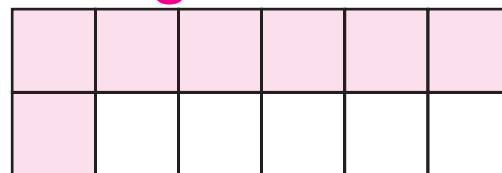
Name _____

Fraction Food

The Foodly family just finished dinner. Help them determine how much food is left. Shade the models to help.

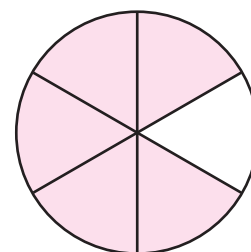
Check students' diagrams.

1. The lasagna was cut into 12 equal pieces. The Foodly family ate 7 pieces of lasagna. What fraction of the lasagna is left?



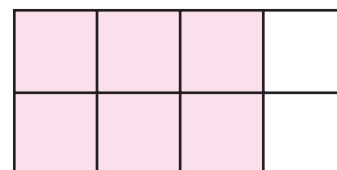
$$\underline{12} \text{ twelfths} - \underline{7} \text{ twelfths} = \underline{5} \text{ twelfths or } \underline{\frac{5}{12}}$$

2. The green bean casserole was divided into 6 equal servings. The Foodly family ate 5 servings. What fraction of the casserole is left?



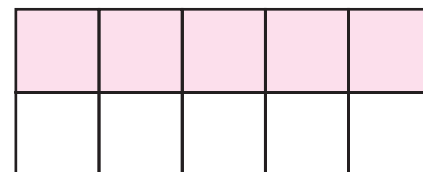
$$\underline{6} \text{ sixths} - \underline{5} \text{ sixths} = \underline{1} \text{ sixth or } \underline{\frac{1}{6}}$$

3. The gelatin salad was cut into 8 equal servings. The Foodly family ate 6 servings of the salad. What fraction of the gelatin salad is left?



$$\underline{8} \text{ eighths} - \underline{6} \text{ eighths} = \underline{2} \text{ eighths or } \underline{\frac{2}{8}}$$

4. The pumpkin bread was cut into 10 equal pieces. The Foodly family ate 5 pieces. What fraction of the pumpkin bread is left?



$$\underline{10} \text{ tenths} - \underline{5} \text{ tenths} = \underline{5} \text{ tenths or } \underline{\frac{5}{10}}$$

5. **Stretch Your Thinking** The Foodly family had 2 pans of cornbread. Each pan was cut into 5 equal pieces. They ate only 2 pieces. What fraction of the pans of cornbread is left? Draw a model to help.



$\frac{8}{5}$ or $1\frac{3}{5}$; check students' drawings.

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Fraction Equations

Record the equation shown by the model. Write the answer in simplest form.

1.  X

$$\frac{8}{10} - \frac{4}{10} = \frac{4}{10} \text{ or } \frac{2}{5}$$

2.  H

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

3.  S

$$\frac{6}{8} - \frac{2}{8} = \frac{4}{8} \text{ or } \frac{1}{2}$$

4.  I

$$\frac{6}{12} + \frac{5}{12} = \frac{11}{12}$$

5.  T

$$\frac{3}{4} + \frac{1}{4} = \frac{4}{4} \text{ or } 1$$

To answer the riddle, write the letter above its answer.

Why did all the fractions think $\frac{1}{6}$ was special?

Because it had a S I X T H sense!

$\frac{3}{4}$ $\frac{11}{12}$ $\frac{2}{5}$ 1 $\frac{5}{6}$

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The Rename Game

Find the missing number.

1. $51 \frac{\square}{5} = \frac{256}{5}$

1

2. $72 \frac{\square}{3} = \frac{218}{3}$

2

3. $\square \frac{1}{2} = \frac{422}{4}$

105

4. $\square \frac{1}{4} = \frac{506}{8}$

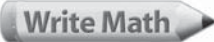
63

5. $102 \frac{5}{12} = \frac{\square}{12}$

1,229

6. $37 \frac{1}{3} = \frac{224}{\square}$

6

7.  Tell how you rename fractions greater than 1 as mixed numbers and mixed numbers as fractions greater than 1.

Possible answer: I can use division to rename fractions greater than 1 as mixed numbers. I can use multiplication and addition to rename mixed numbers as fractions greater than 1.

8. **Stretch Your Thinking** Is it possible for two fractions greater than 1 that have different numerators and denominators to be renamed as the same mixed number? Give an example.

Yes. Possible answer: $\frac{224}{6}$ and $\frac{112}{3}$ can both be renamed as $37\frac{1}{3}$.

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Finding Mixed Numbers

Solve each problem.

1. Find two mixed numbers so that the sum is $8\frac{4}{8}$ and the difference is $2\frac{2}{8}$.

$$5\frac{3}{8} \text{ and } 3\frac{1}{8}$$

2. Find two mixed numbers so that the sum is $7\frac{2}{4}$ and the difference is 5.

$$6\frac{1}{4} \text{ and } 1\frac{1}{4}$$

3. Find two mixed numbers so that the sum is $7\frac{2}{8}$ and the difference is $2\frac{4}{8}$.

$$4\frac{7}{8} \text{ and } 2\frac{3}{8}$$

4. Find two mixed numbers so that the sum is $21\frac{1}{6}$ and the difference is $4\frac{3}{6}$.

$$12\frac{5}{6} \text{ and } 8\frac{2}{6}$$

5. Find two mixed numbers so that the sum is $15\frac{3}{10}$ and the difference is $8\frac{5}{10}$.

$$11\frac{9}{10} \text{ and } 3\frac{4}{10}$$

6. Find two mixed numbers so that the sum is 16 and the difference is 5.

$$10\frac{1}{2} \text{ and } 5\frac{1}{2}$$

7. **Stretch Your Thinking** Find three mixed numbers so that the sum is 18 and the difference between the greatest number and the least number is $5\frac{1}{5}$.

$$8\frac{2}{5}, 6\frac{2}{5}, \text{ and } 3\frac{1}{5}$$

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Leftovers

The fraction strips shown represent the whole number 33. Subtract the numbers below from 33 by shading the fraction strips. The fraction $\frac{3}{4}$ is shown as an example.

Check students' shadings.

$\frac{3}{4}$ $3\frac{9}{16}$ $1\frac{7}{8}$ $2\frac{4}{5}$ $1\frac{7}{10}$ $\frac{5}{6}$ $1\frac{1}{3}$ $\frac{5}{12}$ $1\frac{3}{8}$ $1\frac{3}{5}$ $2\frac{1}{2}$ $1\frac{2}{3}$ $\frac{1}{6}$
 $\frac{5}{16}$ $1\frac{3}{10}$ $\frac{5}{8}$ $\frac{7}{12}$ $1\frac{5}{6}$ $1\frac{2}{3}$ $\frac{3}{4}$ $1\frac{3}{5}$ $\frac{1}{3}$ $\frac{1}{6}$ $\frac{1}{10}$ $1\frac{9}{10}$ $\frac{1}{4}$

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1. List the leftover fractions in the fraction strips.

$\frac{2}{16}, \frac{1}{8}, \frac{1}{4},$ and $\frac{1}{2}$

2. What is the difference represented by the leftover fractions?

1

3. **Stretch Your Thinking** How can you model subtracting $\frac{1}{5}$ if you have only $\frac{1}{10}$ fraction strips?

Possible answer: I can

subtract $\frac{2}{10}$ for each $\frac{1}{5}$

fraction bar.

Name _____

Mixing Properties

Use addition properties to help you solve each problem.

1. Robyn cut a length of ribbon into four pieces to wrap four gifts. The lengths she cut were $16\frac{7}{12}$ inches, $10\frac{3}{12}$ inches, $4\frac{9}{12}$ inches, and $10\frac{2}{12}$ inches. If she used the whole ribbon, how long was her ribbon?
2. Emily enjoys riding her bike. During a four-day biking trip, she rode $8\frac{1}{8}$ miles, $4\frac{3}{8}$ miles, $5\frac{4}{8}$ miles, $2\frac{7}{8}$ miles, and $6\frac{1}{8}$ miles. How many miles in all did she ride during the trip?


$41\frac{9}{12}$ inches

27 miles

3. Ben's family likes bananas. On Monday, they ate $1\frac{3}{4}$ pounds of bananas. On Tuesday, they ate $2\frac{2}{4}$ pounds. On Wednesday, they ate $2\frac{1}{4}$ pounds. On Thursday, they ate $1\frac{2}{4}$ pounds. How many pounds of bananas did Ben's family eat during the four days?
4. Ms. Cleary runs a catering business. She is buying fruit to make a large order for fruit salad. She buys $5\frac{3}{10}$ pounds of apples, $3\frac{4}{10}$ pounds of oranges, $2\frac{1}{10}$ pounds of bananas, $4\frac{3}{10}$ pounds of green grapes, and $5\frac{4}{10}$ pounds of red grapes. How many pounds of fruit did Ms. Cleary buy in all?

8 pounds

$20\frac{5}{10}$ pounds

5.  **Write Math** Explain how you used the commutative and associative properties to help you add the mixed numbers.

Possible answer: I first looked for fractions

that had a sum of 1. I then ordered and

grouped the addends so the fractions with a

sum of 1 were together.

Name _____

Problem Solving with Fractions

Solve each problem.

1. Cornelia cut equal lengths of ribbon each $\frac{7}{10}$ feet long. The ribbon was $3\frac{1}{2}$ feet long. How many pieces did Cornelia cut?

5 pieces

2. Tim walks $\frac{2}{3}$ mile to school each day. He walks the same distance home. How far does he walk to and from school during a regular school week (5 days)?

$6\frac{2}{3}$ miles

3. At a class pizza party, each pizza ordered had $\frac{2}{8}$ of the pizza left over after the party. In all, $1\frac{1}{2}$ pizzas were left over. How many pizzas were ordered?

6 pizzas

4. A teacher had 10 pounds of raisins. He has 16 students. He gave each student $\frac{3}{5}$ pound. The teacher kept the leftover raisins for himself. How much did he keep for himself?

$\frac{2}{5}$ pound

5. **Stretch Your Thinking** Explain how you solved Exercise 4.

Possible explanation: after giving

$\frac{3}{5}$ pound to each of 16 students, $\frac{48}{5}$ pounds

have been used. To make 10 whole pounds,

$\frac{2}{5}$ pound more is needed, so $\frac{2}{5}$ pound is

the leftover amount.