

Understand Fractions as Numbers

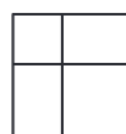
✓ Show What You Know

► **Equal Parts** Circle the shape that has equal parts.

1.



2.



► **Combine Plane Shapes** Write the number of  needed to cover the shape.

3.



_____ triangles

4.



_____ triangles

5.



_____ triangles

► **Count Equal Groups** Complete.

6.



_____ groups

_____ in each group

7.



_____ groups

_____ in each group

MATH in the

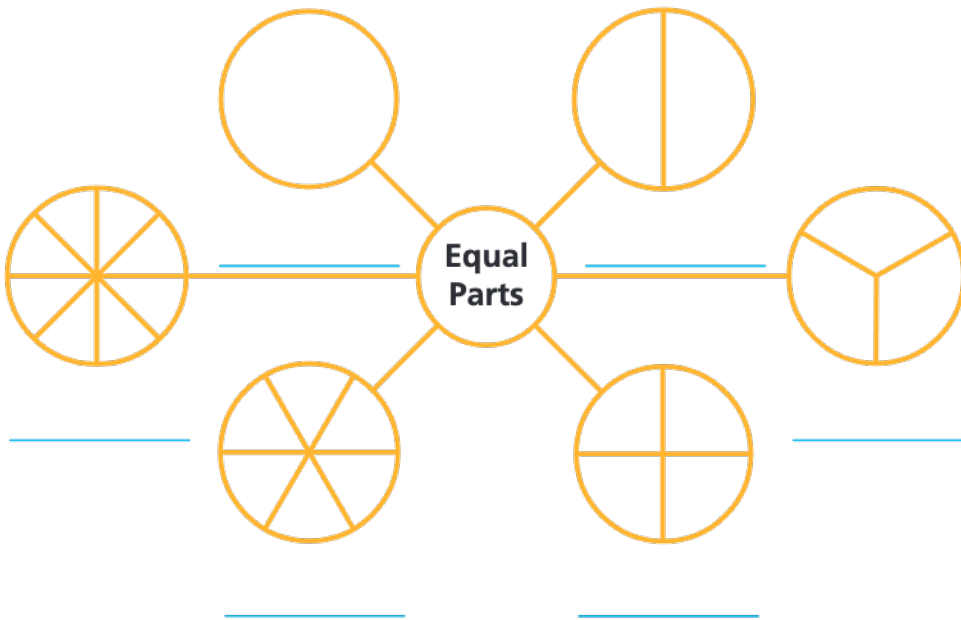


Casey shared a pizza with some friends. They each ate $\frac{1}{3}$ of the pizza. How many people shared the pizza?



► Visualize It

Complete the bubble map by using the words with a ✓.



Connect to Vocabulary

Review Words

- ✓ fourths
- ✓ halves
- ✓ thirds
- ✓ whole

Preview Words

- denominator
- ✓ eighths
- ✓ fifths
- fraction
- fraction greater than 1
- numerator
- ✓ sixths
- ✓ tenths
- ✓ twelfths
- unit fraction

► Understand Vocabulary

Write the preview word or phrase that matches the description.

1. It is a number that names part of a whole or part of a group. _____
2. It is the part of a fraction above the line, which tells how many parts are being counted.

3. It is the part of a fraction below the line, which tells how many equal parts there are in the whole or in the group. _____
4. It is a number that names 1 equal part of a whole and has 1 as its numerator. _____



Name _____

Describe Equal Parts of a Whole

I Can describe equal parts of a whole.

Florida's B.E.S.T.

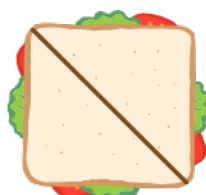
- Fractions 3.FR.1.1
- Mathematical Thinking & Reasoning
MTR.2.1, MTR.4.1, MTR.5.1, MTR.7.1



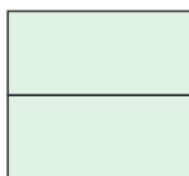
UNLOCK the Problem



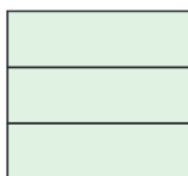
Lauren shares a sandwich with her brother. They each get an equal part. How many equal parts are there?



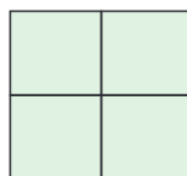
Each whole shape below is divided into equal parts. A **whole** is all of the parts of one shape or group. **Equal parts** are exactly the same size.



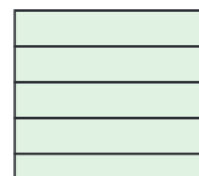
2 halves



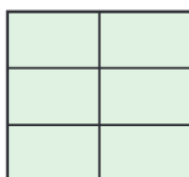
3 thirds



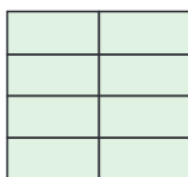
4 fourths



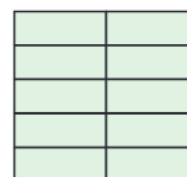
_____ fifths



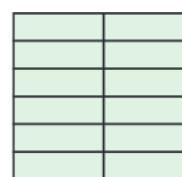
_____ sixths



_____ eighths



_____ tenths



_____ twelfths

Lauren's sandwich is divided into halves.

So, there are _____ equal parts.

- What do you need to find?

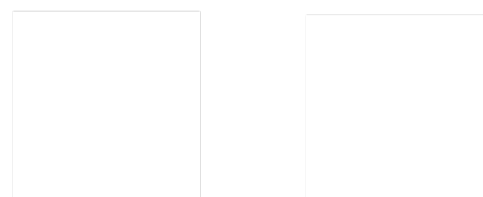
- How many people share the sandwich? _____

- Draw a picture to show a different way Lauren's sandwich could have been divided into halves.

Math Talk

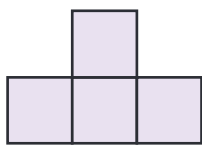
MTR 2.1 Demonstrate understanding in multiple ways.

Are your halves the same shape as your classmates' halves? Explain why both halves represent the same size.



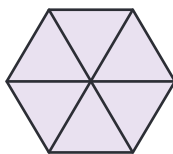
Try This! Write whether the shape is divided into *equal* parts or *unequal* parts.

A



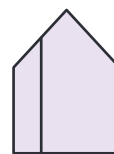
4 _____ parts
fourths

B



6 _____ parts
sixths

C



2 _____ parts
These are not halves.



Common Error

Be sure the parts are equal in size.



equal

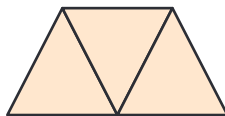


unequal

Share and Show

Math Board

1. This shape is divided into 3 equal parts. What is the name for the parts?



Math Talk

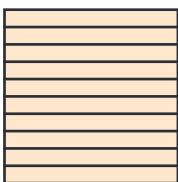
TR 3.1

Complete tasks with mathematical fluency.

How do you determine if a shape is divided into equal parts?

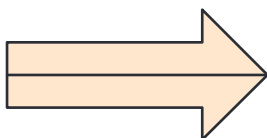
Write the number of equal parts. Then write the name for the parts.

2.



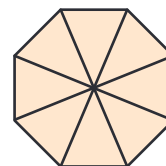
_____ equal parts

3.



_____ equal parts

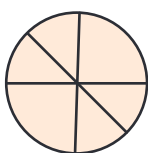
✓ 4.



_____ equal parts

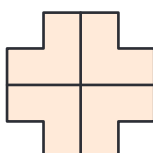
Write whether the shape is divided into *equal* parts or *unequal* parts.

5.



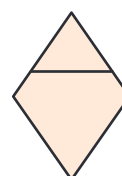
_____ parts

6.



_____ parts

✓ 7.



_____ parts

On Your Own

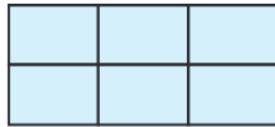
Write the number of equal parts. Then write the name for the parts.

8.



_____ equal parts

9.



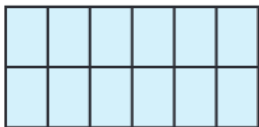
_____ equal parts

10.



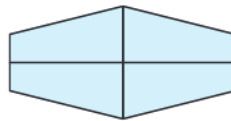
_____ equal parts

11.



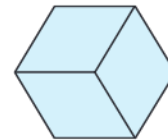
_____ equal parts

12.



_____ equal parts

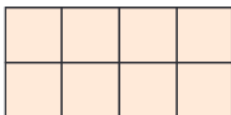
13.



_____ equal parts

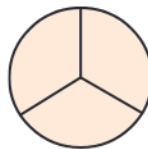
Write whether the shape is divided into *equal* parts or *unequal* parts.

14.



_____ parts

15.



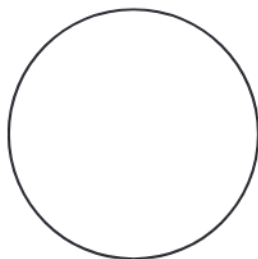
_____ parts

16.

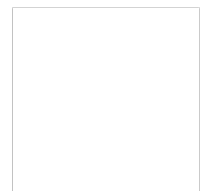


_____ parts

17. Draw lines to divide the circle into 8 eighths.



18. Thomas wants to divide a square piece of paper into 4 equal parts. Draw two different quick pictures to show what his paper could look like.



Problem Solving · Applications

Use the pictures for Problems 19–20.

19. Mrs. Rivera made 2 pans of corn casserole for a large family dinner. She cut each pan into parts. What is the name of the parts in Pan A?

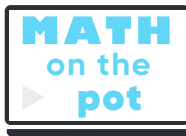


Pan A

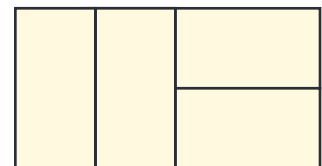


Pan B

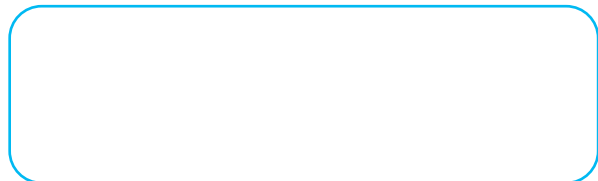
20. Alex said his mom divided Pan B into eighths. Does his statement make sense? Explain.



21. **TR** Explain why the rectangle is divided into 4 equal parts.



22. Shakira cut a triangle out of paper. She wants to divide the triangle into 2 equal parts. Draw a quick picture to show what her triangle could look like.



23. Parker divides a fruit bar into 3 equal parts. Circle the word that makes the sentence true.

The fruit bar is divided into

thirds
halves
fourths

Name _____

Represent and Name Unit Fractions

I Can represent and name one part of a whole that is divided into equal parts.

A **fraction** is a number that names part of a whole or part of a group.

In a fraction, the top number tells how many equal parts are being counted.

The bottom number tells how many equal parts are in the whole or in the group.

A **unit fraction** names 1 equal part of a whole. It has 1 as its top number. $\frac{1}{6}$ is a unit fraction.

→ $\frac{1}{6}$ →	one sixth	→ 1 sixth
→ $\frac{1}{6}$	word form	numeral-word form
standard form		

Florida's B.E.S.T.

- Fractions 3.FR.1.1, 3.FR.1.3
- Mathematical Thinking & Reasoning MTR.2.1, MTR.4.1, MTR.5.1, MTR.6.1, MTR.7.1



UNLOCK the Problem Real World

Omar's family picked strawberries. They put the washed strawberries in one part of a fruit platter. The platter had 6 equal parts. What fraction of the fruit platter had strawberries?



Find part of a whole.




Shade 1 of the 6 equal parts.

Word form: one sixth **Standard form:** $\frac{1}{6}$

Numeral-word form: 1 sixth

So, _____ of the platter had strawberries.

Use a fraction to find a whole.

This shape  is $\frac{1}{4}$ of the whole. Here are examples of what the whole could look like.

A



B



C



Math Talk

MTR 5.1

Use patterns and structure.

How can you make a whole if you know what one equal part looks like?

Try This! Look again at the examples at the bottom of page 581.

Draw two other pictures of how the whole might look.



TR 4.1 Engage in discussions on mathematical thinking.

When using a fraction model, how do you know what the bottom number of the fraction will be?

Share and Show



1. What fraction names the shaded part?

standard form: _____

word form: _____

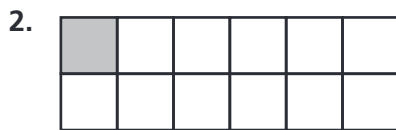
numeral-word form: _____

Think: 1 out of 3 equal parts is shaded.



Write the number of equal parts in the whole.

Then write the fraction that names the shaded part in three ways.

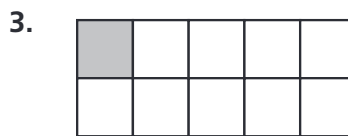


_____ equal parts

Standard form: _____

Word form: _____

Numeral-word form: _____

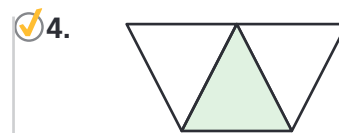


_____ equal parts

Standard form: _____

Word form: _____

Numeral-word form: _____

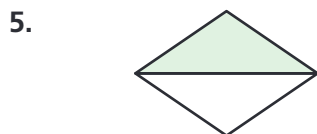


_____ equal parts

Standard form: _____

Word form: _____

Numeral-word form: _____

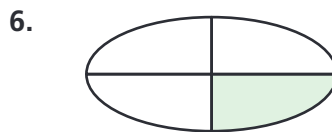


_____ equal parts

Standard form: _____

Word form: _____

Numeral-word form: _____

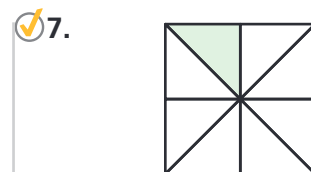


_____ equal parts

Standard form: _____

Word form: _____

Numeral-word form: _____



_____ equal parts

Standard form: _____

Word form: _____

Numeral-word form: _____

On Your Own

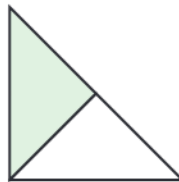
Write the number of equal parts in the whole.
Then write the fraction that names the shaded part.

8.



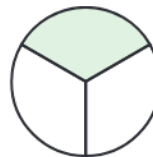
_____ equal parts

9.



_____ equal parts

10.



_____ equal parts

11.



_____ equal parts

12.



_____ equal parts

13.



_____ equal parts

MTR Draw a picture of the whole. Then write the fraction in numeral-word form.

14. $\frac{1}{2}$ is



15. $\frac{1}{3}$ is



16. $\frac{1}{6}$ is



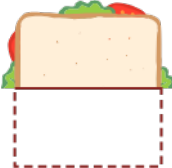

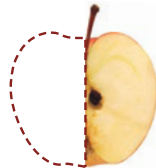
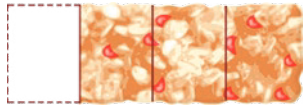
17. $\frac{1}{4}$ is




Problem Solving • Applications

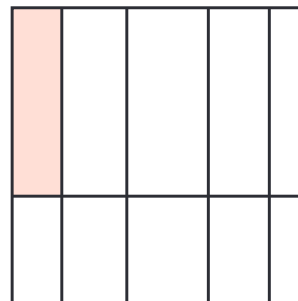
Use the pictures for Problems 18–19.

18. The missing parts of the pictures show what Kylie and Dylan ate for lunch.
What fraction of the pizza did Dylan eat? What fraction of the fruit bar did he eat?

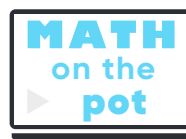
Kylie's Lunch	Dylan's Lunch
 sandwich	 pizza
 apple	 fruit bar

19. What fraction of the apple did Kylie eat? Write the fraction in standard form using numbers and also in word form.

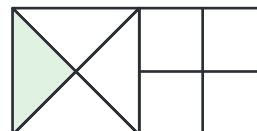
20.  Diego drew lines to divide the square into 10 pieces as shown. Then he shaded part of the square. Diego says he shaded $\frac{1}{10}$ of the square. Is he correct? Explain how you know.



21. Riley and Cho each have a granola bar broken into equal pieces. They each eat one piece, or $\frac{1}{4}$, of their granola bar. How many more pieces do Riley and Cho need to eat to finish both granola bars? Draw a picture to justify your answer.



22. What fraction names the shaded part?
Explain how you know how to write the fraction.



Name _____

Represent and Name Fractions of a Whole

Florida's B.E.S.T.

- Fractions 3.FR.1.1, 3.FR.1.3, 3.FR.1.2
- Mathematical Thinking & Reasoning MTR.4.1, MTR.5.1, MTR.6.1

I Can use a fraction to represent and name equal parts of a whole.



UNLOCK the Problem



The first pizzeria in America opened in New York in 1905. The pizza recipe came from Italy. Look at Italy's flag. What fraction of the flag is not red?

Name equal parts of a whole.

A fraction can name more than 1 equal part of a whole.

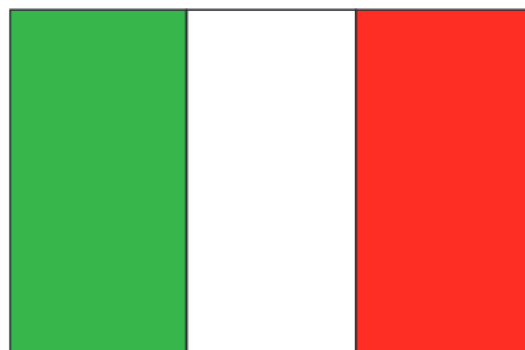
The flag is divided into 3 equal parts, and 2 parts are not red.

2 parts not red → 2 ← numerator
3 equal parts in all → 3 ← denominator

Read: two thirds or two parts out of three equal parts

Write: $\frac{2}{3}$

So, $\frac{2}{3}$ of the flag is not red.



▲ Italy's flag has three equal parts.

Math Idea

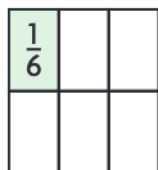
When all the parts are shaded, one whole shape is equal to all of its parts. It represents the whole number 1.

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

The **numerator** tells how many parts are being counted.

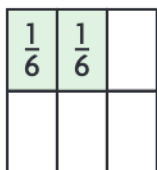
The **denominator** tells how many equal parts are in the whole or in the group.

You can count equal parts, such as sixths, to make a whole.



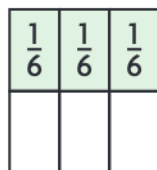
One $\frac{1}{6}$ part

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



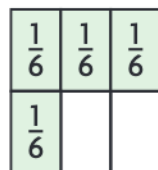
Two $\frac{1}{6}$ parts

$$\frac{2}{6}$$



Three $\frac{1}{6}$ parts

$$\frac{3}{6}$$



Four $\frac{1}{6}$ parts

$$\frac{4}{6}$$



Five $\frac{1}{6}$ parts

$$\frac{5}{6}$$



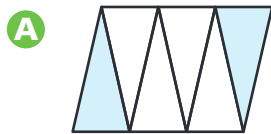
Six $\frac{1}{6}$ parts

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

For example, $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{6}{6}, \frac{6}{6} =$ one whole, or 1.

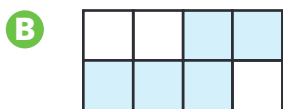
Go Online For more help

Try This! Write the missing word or number to name the shaded part.



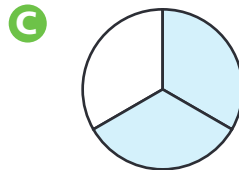
$$\frac{2}{6}$$

_____ sixths



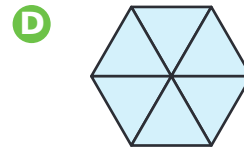
$$\frac{5}{8}$$

_____ eighths



$$\frac{2}{3}$$

two thirds



$$\frac{6}{6}, \text{ or } 1$$

six sixths, or one whole

Share and Show



- Shade two parts out of eight equal parts. Write a fraction in word form and in standard form to name the shaded part.

Think: Each part is $\frac{1}{8}$.



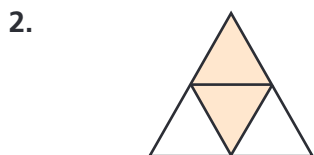
_____ eighths _____



TR 4.1 Engage in discussions on mathematical thinking.

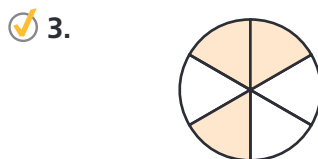
What do the numerator and denominator of a fraction tell you?

Write the fraction that names each part. Write a fraction in word form and in standard form to name the shaded part.



Each part is _____.

_____ fourths



Each part is _____.

_____ sixths



Each part is _____.

_____ fourths

On Your Own

Write the fraction that names each part. Write a fraction in word form and in standard form using numbers to name the shaded part.

5.



Each part is _____.

_____ fifths

6.



Each part is _____.

_____ thirds

7.



Each part is _____.

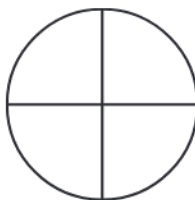
_____ sixths

Shade the fraction circle to model the fraction.
Then write the fraction in numbers.

8. six out of eight



9. three fourths



10. three out of three



11. A flag is divided into four equal sections. One section is shaded. What fraction of the flag is not shaded?

12. A garden has six sections. Two sections are planted with tomatoes. What fraction represents the part of the garden without tomatoes?

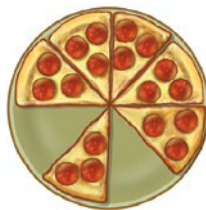
13. Jane is making a memory quilt from some of her old favorite clothes that are too small. She will use T-shirts for the shaded squares in the pattern. Using word form, write the fraction that describes the part of the quilt that will be made of T-shirts.



Problem Solving · Applications

Use the diagrams for Problems 14–15.

14. Mrs. Ormond ordered pizza. Each pizza had 8 equal slices. What fraction of the pepperoni pizza was eaten? What fraction of the cheese pizza is left?



Pepperoni



Cheese

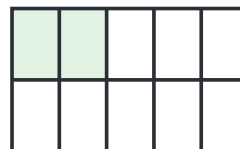


Veggie

15. Use the picture of the veggie pizza to write a problem that includes a fraction. Solve your problem.

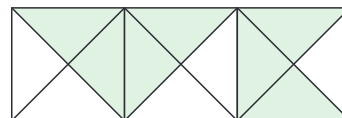


16. **TR** Kabir says that $\frac{2}{8}$ of the rectangle is shaded. Describe his error. Use the model to write the correct fraction for the shaded part.



17. Select a numerator and a denominator for the fraction that names the shaded part of the shape.

Numerator	Denominator
<input type="radio"/> 2	<input type="radio"/> 4
<input type="radio"/> 5	<input type="radio"/> 5
<input type="radio"/> 7	<input type="radio"/> 7
<input type="radio"/> 12	<input type="radio"/> 12



Name _____

Represent and Name Fractions on a Number Line

I Can represent, interpret, and locate fractions on a number line.

Florida's B.E.S.T.

- Fractions 3.FR.1.1, 3.FR.1.2, 3.FR.1.3
- Mathematical Thinking & Reasoning MTR.2.1, MTR.4.1, MTR.5.1



UNLOCK the Problem **Real World**

Mekhi's family is traveling from his house to his grandma's house. They stop at gas stations when they are $\frac{1}{4}$ and $\frac{3}{4}$ of the way there. How can you represent those distances on a number line?

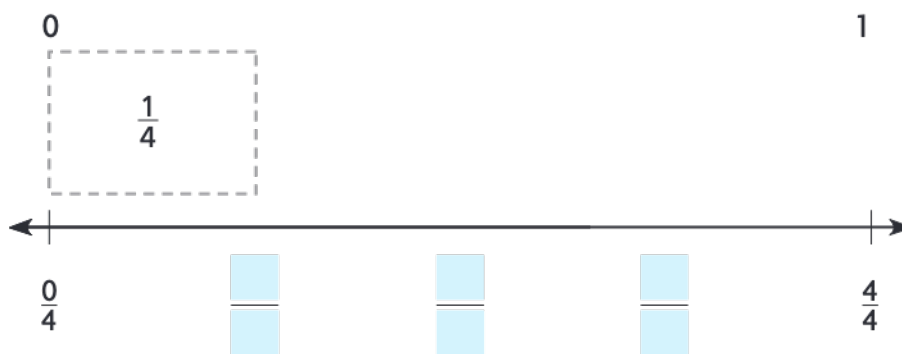
You can use a number line to show fractions. The length from one whole number to the next whole number represents one whole. The line can be divided into any number of equal parts, or lengths.

Activity Locate fractions on a number line.

Materials ■ fraction strips

Mekhi's House

Grandma's House



STEP 1 Divide the line into four equal lengths, or fourths.

Place four $\frac{1}{4}$ -fraction strips end-to-end above the line to help.

STEP 2 At the end of each strip, draw a mark on the line.

STEP 3 Count the fourths from zero to 1 to label the distances from zero.

STEP 4 **Think:** $\frac{1}{4}$ is 1 out of 4 equal lengths.

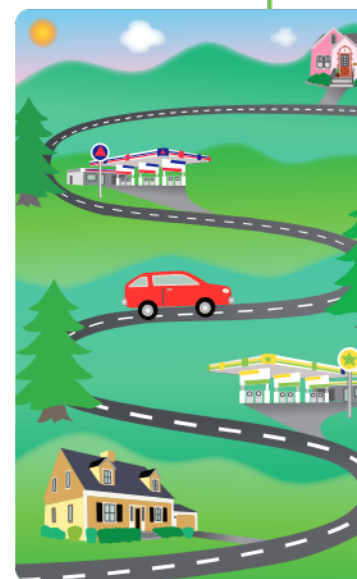
Draw a point at $\frac{1}{4}$ to represent the distance from 0 to $\frac{1}{4}$.
Label the point G1.

STEP 5 **Think:** $\frac{3}{4}$ is $\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$.

Draw a point at $\frac{3}{4}$ to represent the distance from 0 to $\frac{3}{4}$.
Label the point G2.

Math Idea

A point on a number line shows the endpoint of a length, or distance, from zero. A number or fraction can name the distance.



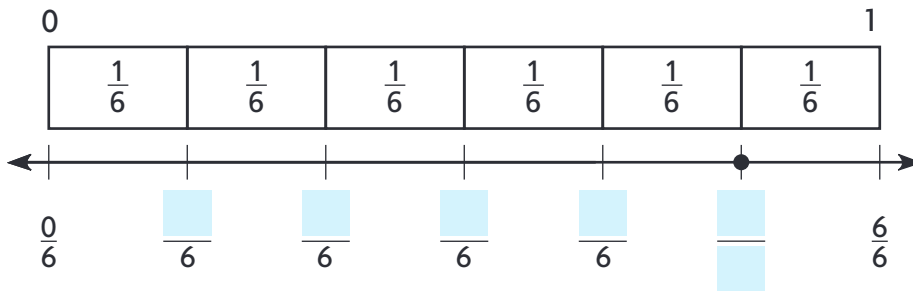
Example Complete the number line to name the point.

Materials ■ color pencils

Write the fraction that names the point on the number line.

Think: This number line is divided into six equal lengths, or sixths.

The length of one equal part is _____.



Shade the fraction strips to show the location of the point.

There are _____ out of _____ equal lengths shaded.

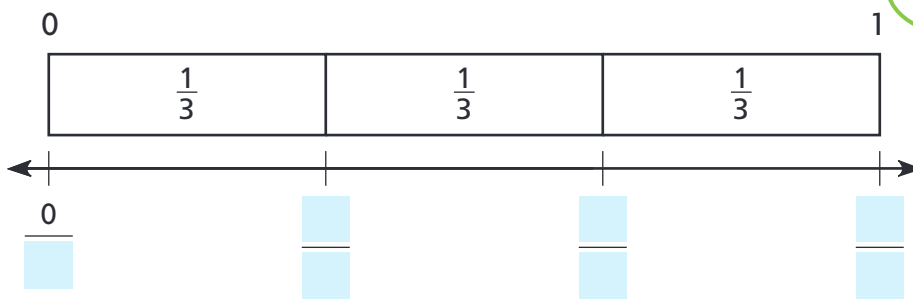
The shaded length shows $\frac{5}{6}$.

So, _____ names the point.

Share and Show



1. Complete the number line. Draw a point to show $\frac{2}{3}$.

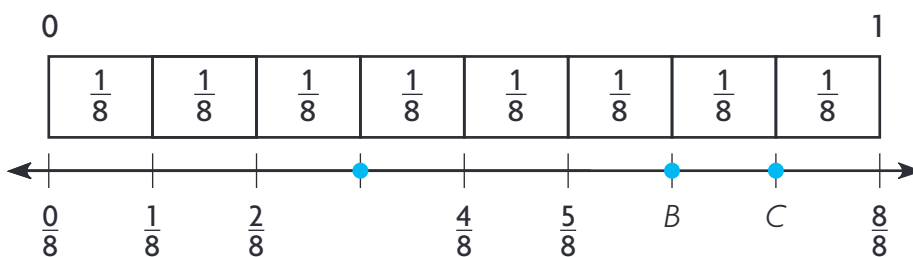


Math Talk

TR 4.1 Engage in discussions on mathematical thinking.

What does the length between each mark on this number line represent?

Write the fraction that names the point.



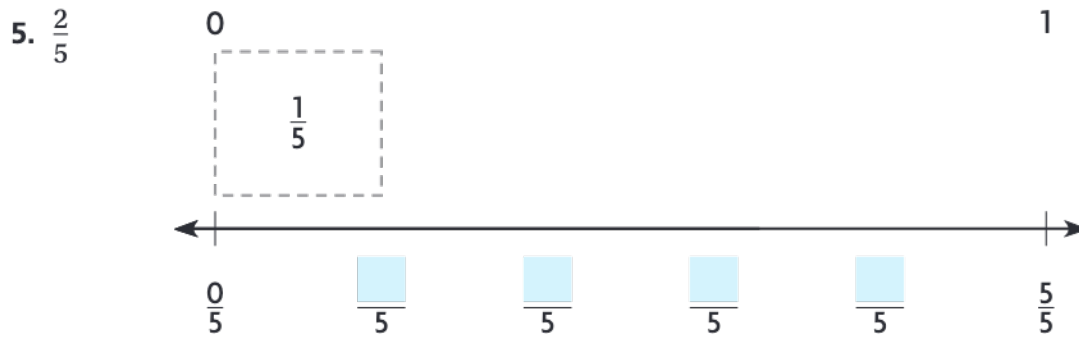
2. point A _____

✓ 3. point B _____

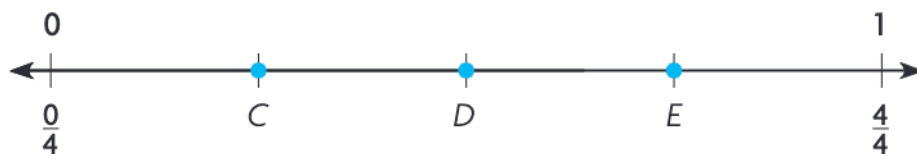
✓ 4. point C _____

On Your Own

Use fraction strips to help you complete the number line. Then locate and draw a point for the fraction.



Write the fraction that names the point.



7. point C _____

8. point D _____

9. point E _____

10. There is a walking trail at the park. Four laps around the trail is a distance of 1 mile. How many laps does it take to walk $\frac{3}{4}$ mile?

11. A recipe for pasta makes enough for ten servings. How many servings can be made using $\frac{5}{10}$ of each ingredient in the recipe?

Problem Solving • Applications



12. Javia ran 8 laps around a track to run a total of 1 mile on Monday. How many laps will she need to run on Tuesday to run $\frac{3}{8}$ of a mile?

a What do you need to find?

b How will you use what you know about number lines to help you solve the problem?



c  Make a model to solve the problem.



d Complete the sentences.

There are _____ laps in 1 mile.

Each lap represents _____ of a mile.

_____ laps represent the distance of three eighths of a mile.

So, Javia will need to run _____ laps to run $\frac{3}{8}$ of a mile.

13. Alan walked 2 fourths of the way to school. Locate and draw point F on the number line to represent the fraction $\frac{2}{4}$.



Name _____

Write Fractions as Sums of Unit Fractions

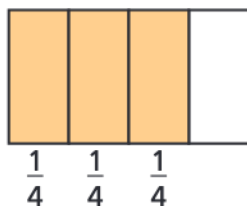
I Can represent and interpret fractions as the sum of unit fractions with the same denominator.



UNLOCK the Problem Real World

Liz made a carrot cake and cut it into 4 equal slices. She ate 1 slice, or $\frac{1}{4}$, of the cake. Her friends Sergio and Renee each ate $\frac{1}{4}$ of the cake. What fraction of the cake did Liz and her friends eat?

Write the fraction represented by the sum of unit fractions.



3 fourths of the rectangle is shaded.

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \underline{\hspace{2cm}}$$

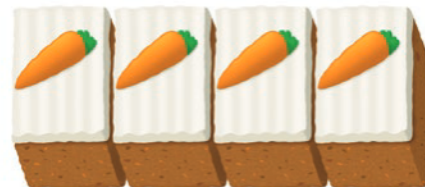
So, Liz and her friends ate $\underline{\hspace{2cm}}$ of the cake.

Florida's B.E.S.T.

- Fractions 3.FR.1.1, 3.FR.1.2
- Mathematical Thinking & Reasoning MTR.2.1, MTR.4.1, MTR.5.1, MTR.7.1

Remember

A unit fraction names 1 equal part of a whole. It has 1 as its numerator. $\frac{1}{6}$ is a unit fraction.



Mr. Rivera made a pan of brownies. He cut the pan into 6 equal pieces. Each piece is $\frac{1}{6}$ of the whole. His son Alex ate 2 pieces, so $\frac{4}{6}$ of the pan of brownies is left.

Write $\frac{4}{6}$ as a sum of unit fractions.



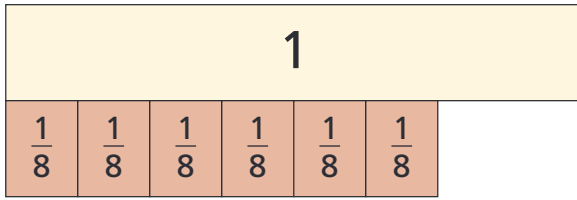
$$\frac{4}{6} = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$



Share and Show

Math
Board

1. Write $\frac{6}{8}$ as a sum of unit fractions.



$$\frac{6}{8} = \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad}$$

Math
Talk

TR 2.1 Demonstrate understanding in multiple ways.

Explain how the numerator in $\frac{6}{8}$ is related to the number of unit fractions in the sum.

Write the fraction as a sum of unit fractions.

✓ 2. $\frac{2}{3} = \underline{\quad}$

3. $\frac{3}{5} = \underline{\quad}$

Write the fraction represented by the sum of unit fractions.

✓ 4. $\frac{1}{4} + \frac{1}{4} = \underline{\quad}$

5. $\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} = \underline{\quad}$

On Your Own

6. Mrs. Agler cut a piece of yarn into 10 equal pieces. She used 1 piece for a craft project, so $\frac{9}{10}$ is left. How can you write $\frac{9}{10}$ as a sum of unit fractions?

7. **TR** Can you write the number 1 as a sum of four unit fractions? Explain.

8. Taylor made a loaf of pumpkin bread and cut it into 8 equal pieces.

Look back at the carrot cake example on page 599. Write a similar problem that can be solved by using the picture of Taylor's pumpkin loaf shown at the right. Then solve the problem.



Pose a problem.

Solve your problem.

9. **MTR** Write a similar problem by changing the number of equal slices in the loaf of pumpkin bread. Then solve the problem.

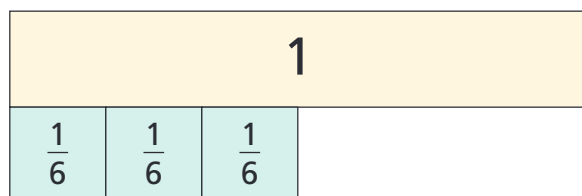
Problem Solving • Applications

Fill in the bubble for the correct answer choice.

10. Mrs. Danis made a large pot of soup for dinner. In all, she and her family ate $\frac{3}{4}$ of the soup. Which is $\frac{3}{4}$ written as a sum of unit fractions?

(A) $\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$ (C) $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$
 (B) $\frac{3}{1} + \frac{3}{1} + \frac{3}{1} + \frac{3}{1}$ (D) $\frac{3}{4} + \frac{3}{4} + \frac{3}{4}$

11. **TR** What fraction is represented by the sum $\frac{1}{6} + \frac{1}{6} + \frac{1}{6}$?



(A) $\frac{2}{6}$ (C) $\frac{4}{6}$
 (B) $\frac{3}{6}$ (D) $\frac{6}{6}$

12. Kiana cut a banana into eight equal pieces. She ate six pieces. Which is equal to the fraction of the banana Kiana did not eat?

(A) $\frac{2}{8} + \frac{2}{8}$ (C) $\frac{1}{8} + \frac{1}{8}$
 (B) $\frac{1}{8} + \frac{2}{8}$ (D) $\frac{1}{2} + \frac{1}{2}$

13. Which is $\frac{3}{8}$ written as a sum of unit fractions?

(A) $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ (C) $\frac{1}{8} + \frac{1}{8}$
 (B) $\frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ (D) $\frac{3}{8} + \frac{3}{8} + \frac{3}{8}$



Lesson Check

Fill in the bubble completely to show your answer.

9. What is $\frac{5}{6}$ written as the sum of unit fractions?

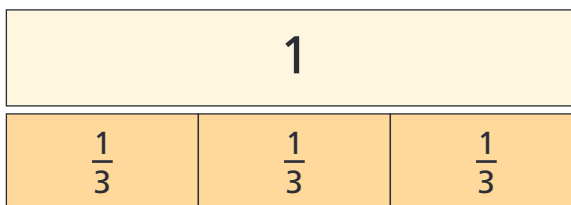
(A) $\frac{5}{6} + \frac{5}{6} + \frac{5}{6} + \frac{5}{6} + \frac{5}{6}$
(B) $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$
(C) $\frac{1}{6}$
(D) $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

10. Ross walks $\frac{3}{8}$ mile to school. What is $\frac{3}{8}$ written as the sum of unit fractions?

(A) $\frac{1}{8} + \frac{1}{8} + \frac{1}{8}$
(B) $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$
(C) $\frac{1}{8}$
(D) $\frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

11. What fraction is represented by the sum $\frac{1}{3} + \frac{1}{3} + \frac{1}{3}$?

(A) $\frac{0}{3}$
(B) $\frac{3}{3}$
(C) $\frac{1}{3}$
(D) $\frac{2}{3}$



Spiral Review

12. Jamal sliced an orange into four equal pieces. He ate one slice. What fraction of the orange did Jamal eat?

13. A bookshelf is divided into 6 equal cubbies. Each cubby has 12 books. How many books are on the bookshelf?

Name _____

Represent Numbers Greater Than One as Fractions

I Can represent and write numbers greater than one as fractions.

Florida's B.E.S.T.

- Fractions 3.FR.1.2, 3.FR.1.3, 3.FR.1.1
- Mathematical Thinking & Reasoning MTR.2.1, MTR.4.1, MTR.5.1

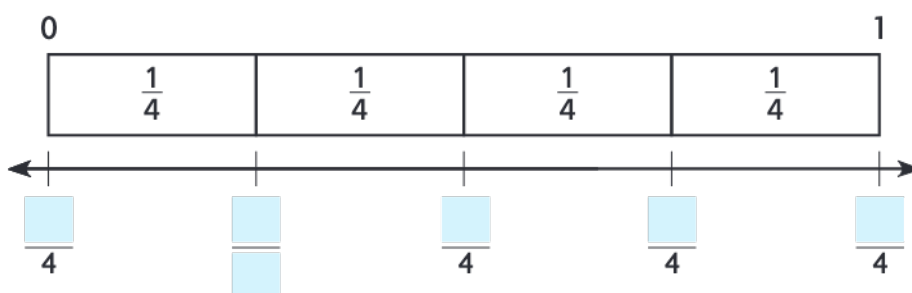


UNLOCK the Problem Real World

Serge ran 1 mile, and Jenna ran $\frac{4}{4}$ of a mile.
Did Serge and Jenna run the same distance?

Locate 1 and $\frac{4}{4}$ on a number line.

- Shade 4 lengths of $\frac{1}{4}$ and label the number line.
- Draw a point at 1 and $\frac{4}{4}$.



Since the distance _____ and _____ end at the same point, they are equal.

So, Serge and Jenna ran the _____ distance.

Math Idea

If two numbers are located at the same point on a number line, then they are equal and represent the same distance.



Try This! Complete the number line. Locate and draw points at $\frac{3}{6}$, $\frac{6}{6}$, and 1.



A Are $\frac{3}{6}$ and 1 equal? Explain.

Think: Do the distances end at the same point?

So, $\frac{3}{6}$ and 1 are _____.

B Are $\frac{6}{6}$ and 1 equal? Explain.

Think: Do the distances end at the same point?

So, $\frac{6}{6}$ and 1 are _____.

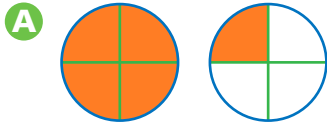
connect The denominator of a fraction shows the total number of equal parts in the whole. The number of parts being counted is the numerator. A **fraction greater than 1** has a numerator greater than its denominator.

Examples

Each shape is 1 whole. Write a fraction greater than 1 for the parts that are shaded.

Remember

$\frac{4}{1}$ ← numerator
1 ← denominator



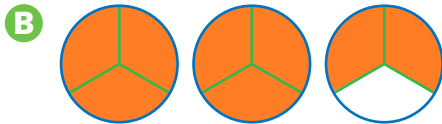
There are 2 wholes.

Each whole is divided into 4 equal parts, or fourths.

Read: _____ fourths

Write: _____

There are _____ equal parts shaded.



There are 3 wholes.

Each whole is divided into 3 equal parts.

Read: _____ thirds

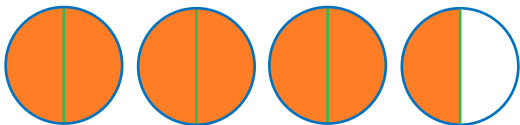
Write: _____

There are _____ equal parts shaded.

Explain what a fraction greater than 1 means.

Try This!

Each shape is 1 whole. Write a fraction greater than 1 for the parts that are shaded.



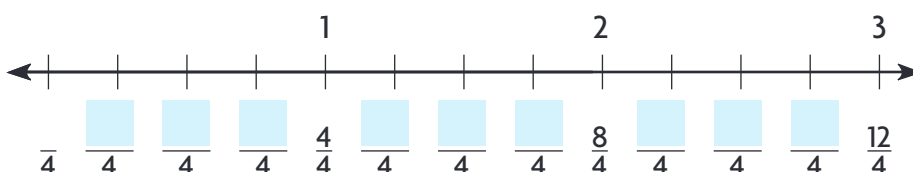
Read: _____ halves

Write: _____

Write a fraction greater than 1 for each sum of a unit fraction.

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \underline{\hspace{2cm}} \quad \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = \underline{\hspace{2cm}}$$

Complete the number line. Draw points at $\frac{6}{4}$ and $\frac{11}{4}$.



Share and Show

Math
Board

1. Each shape is 1 whole. Write a fraction greater than 1 for the parts that are shaded.



There are _____ wholes.

Each whole is divided into _____ equal parts.

There are _____ equal parts shaded.

Read: twelve _____

Write: _____

Use the number line to find whether the two numbers are equal. Write *equal* or *not equal*.



2. $\frac{5}{6}$ and 1 _____

3. $\frac{6}{6}$ and 1 _____

4. 2 and $\frac{12}{6}$ _____

On Your Own

Use the number line to find whether the two numbers are equal. Write *equal* or *not equal*.



5. $\frac{0}{3}$ and 1 _____

6. 1 and $\frac{2}{3}$ _____

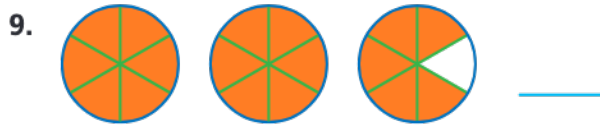
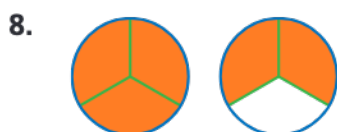
7. $\frac{3}{3}$ and 1 _____

Math
Talk

MTR 5.1 Use patterns and structure.

How do you know whether two fractions are equal or not equal when using a number line?

Each shape is 1 whole. Write a fraction for the parts that are shaded.



Write a fraction greater than 1 for each sum of a unit fraction.

10. $\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$ _____

11. $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$ _____

MTR Draw a model of the fraction or fraction greater than

1. Then write the fraction in word form, numeral-word form, and standard form.

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

13. $\frac{6}{6}$

14. $\frac{37}{8}$

Problem Solving • Applications

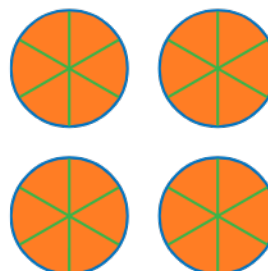
15. Quang rode his bike around a bike trail that was $\frac{1}{3}$ of a mile long. He rode around the trail 9 times. Write a fraction greater than 1 for the distance. How many miles did Quang ride?

16. Andrea drew the number line below. She said that $\frac{9}{8}$ and 1 are equal. Explain her error.



17. Larry drew four shapes and shaded them. Each shape is 1 whole. Which numbers name the parts that are shaded? Mark all that apply.

- ☐ (A) 4 ☐ (C) $\frac{26}{6}$ ☐ (E) $\frac{6}{4}$
☐ (B) 6 ☐ (D) $\frac{24}{6}$



Name _____

Represent and Name Fractions of a Set

I Can use a fraction to represent and name part of a set.

Florida's B.E.S.T.

- Fractions 3.FR.1.1, 3.FR.1.2, 3.FR.1.3
- Mathematical Thinking & Reasoning MTR.2.1, MTR.4.1, MTR.5.1, MTR.6.1, MTR.7.1



UNLOCK the Problem



Jake and Ezra each have a collection of marbles. What fraction of each collection is blue?

You can use a fraction to name part of a set.

Jake's Marbles



number of blue marbles → $\frac{\quad}{\quad}$ ← numerator
total number of marbles → $\frac{\quad}{8}$ ← denominator

Read: three eighths, or three out of eight

Write: $\frac{3}{8}$

So, $\frac{3}{8}$ of Jake's marbles are blue.

Ezra's Marbles



bags of blue marbles → $\frac{\quad}{\quad}$ ← numerator
total number of bags → $\frac{\quad}{4}$ ← denominator

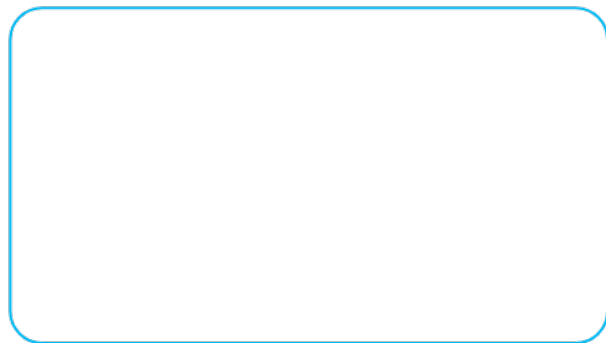
Read: one fourth, or one out of four

Write: $\frac{1}{4}$

So, $\frac{1}{4}$ of Ezra's marbles are blue.

Try This! Name part of a set.

Draw 2 red counters and 3 yellow counters.



Write the fraction of counters that are red.

$\frac{\quad}{\quad}$ ← number of red counters
 $\frac{\quad}{\quad}$ ← total number of counters

Write the fraction of counters that are not red.

$\frac{\quad}{\quad}$ ← number of yellow counters
 $\frac{\quad}{\quad}$ ← total number of counters

So, $\frac{\quad}{\quad}$ of the counters are red, and $\frac{\quad}{\quad}$ are not red.

Go Online For more help

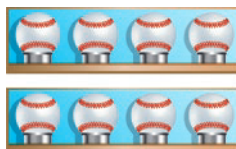
Fractions Greater Than 1

Sometimes a fraction can name more than a whole set in standard form and word form.

Dante collects baseballs. He has collected 8 so far. He puts them in cases that hold 4 baseballs each. What part of the baseball cases has Dante filled?

Think: 1 case = 1

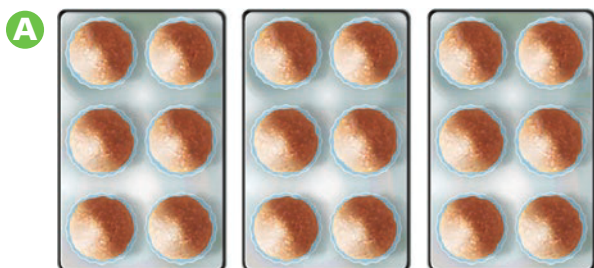
Dante has two full cases of 4 baseballs each.



So, 2, or $\frac{8}{4}$, or eight fourths, baseball cases are filled.



Try This! Complete the whole number and the fraction greater than 1 to name the part filled.



Think: 1 pan = 1

_____, or $\frac{\quad}{6}$, _____ sixths



Think: 1 box = 1

$\frac{\quad}{8}$, _____ eighths

Share and Show

Math Board

1. What fraction of the counters are red? _____



Think: How many red counters are there?
How many counters are there in all?

Write a fraction in standard form and word form to name the red part of each set.



Math Talk

TR 2.1 Demonstrate understanding in multiple ways

Explain another way to name the fraction for Exercise 3.

Write a whole number and a fraction greater than 1 in standard form and word form to name the part filled.

4.



Think: 1 carton = 1

5.



Think: 1 container = 1

On Your Own

Write a fraction in standard form and word form to name the blue part of each set.

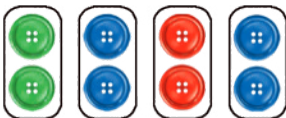
6.



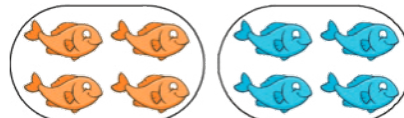
7.



8.



9.



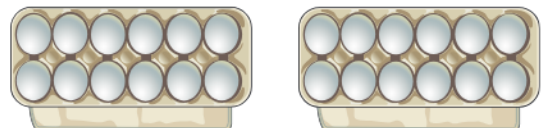
Write a whole number and a fraction greater than 1 in standard form and word form to name the part filled.

10.



Think: 1 container = 1

11.



Think: 1 carton = 1

Draw a quick picture on your MathBoard. Then write a fraction to name the shaded part of the set.

12. Draw 5 circles.
Shade 5 circles.

13. Draw 10 triangles.
Make 5 sets.
Shade 1 set.

14. Draw 4 rectangles. Shade 2 rectangles.

Problem Solving · Applications

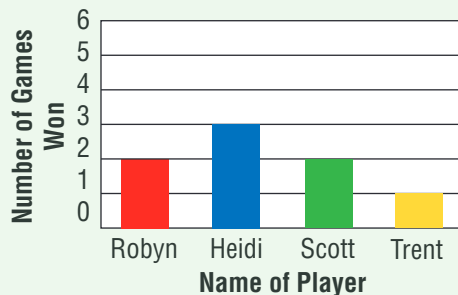


Use the graph for Problems 15–16.

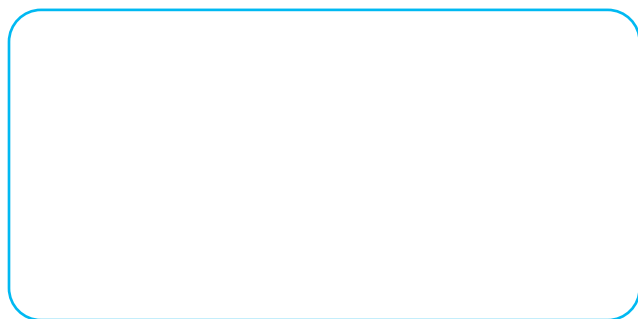
15. The bar graph shows the winners of a marble tournament. How many games were played? What fraction of the games did Scott win?

16. What fraction of the games did Robyn NOT win?

School Marble Tournament




17. Li has 6 marbles. Of them, $\frac{1}{3}$ are blue. The rest are red. Draw a picture to show Li's marbles.



Show the Math

Demonstrate Your Thinking



18.  *ath* A bag has 2 yellow cubes, 3 blue cubes, 6 green cubes, and 1 white cube. The answer is $\frac{1}{12}$. Write a question for the answer.

19. Makayla picked some flowers. What fraction of flowers are yellow or red? What fraction of the flowers are NOT yellow or red? Show your work.



20. Write the unit fraction that describes each situation.

20a. 1 out of 10 students _____

20b. 1 out of 3 meals _____

20c. 1 out of 12 months _____