10 Understand Fractions

- **What games do you like to play?**

- **How can you use fractions in your daily life? How might a game involve fractions?**

Chapter Learning Target:
Understand fractions.

Chapter Success Criteria:
- ☐ I can name equal parts.
- ☐ I can identify a unit fraction.
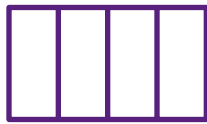- ☐ I can write a fraction.
- ☐ I can plot a fraction.

Name _____

Organize It

Use the review words to complete the graphic organizer.

Parts that are the same size are called _____ .

Define It

Use your vocabulary cards to complete the definition.

1. numerator: tells how many _____ parts are being _____

2. denominator: tells how many _____ parts are in a _____

3. eighths: There are _____ equal _____ in the whole.

4. sixths: There are _____ equal _____ in the whole.

Chapter 10 Vocabulary Cards

denominator

eighths

fraction

numerator

sixths

unit fraction

whole

whole numbers

The whole is divided into eight equal parts, or **eighths**.

The part of a fraction that represents how many equal parts are in a whole.

$$\frac{1}{6} \leftarrow \text{denominator}$$

The part of a fraction that represents how many equal parts are being counted.

$$\frac{1}{6} \leftarrow \text{numerator}$$

A number that represents part of a whole

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

Represents one equal part of a whole

The fraction $\frac{1}{6}$ is a unit fraction.

The whole is divided into six equal parts, or **sixths**.

The numbers 0, 1, 2, 3, and so on

All of the parts of one shape or group

Learning Target: Identify equal parts of a whole and name them.

Success Criteria:
- I can tell whether shapes show equal or unequal parts.
- I can name equal parts.
- I can divide a shape into equal parts.

Explore and Grow

Use the name of the equal parts to divide each rectangle. Write the number of equal parts for each rectangle.
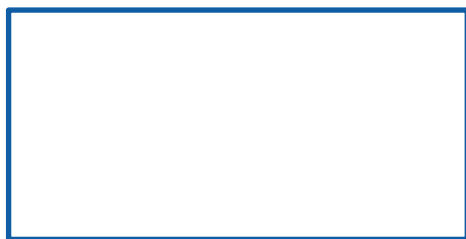
halves

_____ equal parts

thirds

_____ equal parts

fourths

_____ equal parts

sixths

_____ equal parts

Repeated Reasoning How many equal parts are in a rectangle that is divided into eighths? Explain.

Think and Grow: Equal Parts of a Whole

The rectangle represents a whole. A **whole** is all of the parts of one shape or group.

2 equal parts, or halves

3 equal parts, or thirds
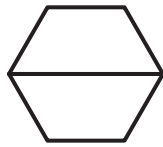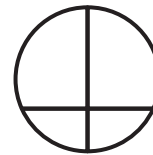
4 equal parts, or fourths

6 equal parts, or **sixths**

8 equal parts, or **eighths**

Example Tell whether the shape shows equal parts or unequal parts. If the shape shows equal parts, then name them.
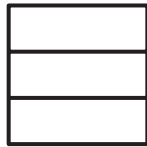
_____ parts

_____

_____ parts

_____

Show and Grow

Tell whether the shape shows equal parts or unequal parts. If the shape shows equal parts, then name them.

1.

_____ parts

_____

2.

_____ parts

_____

✓ Apply and Grow: Practice

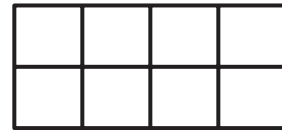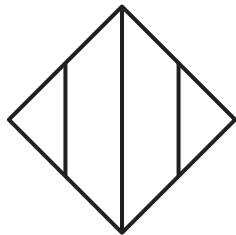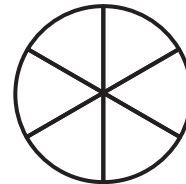Tell whether the shape shows equal parts or unequal parts. If the shape shows equal parts, then name them.

3.

_____ parts

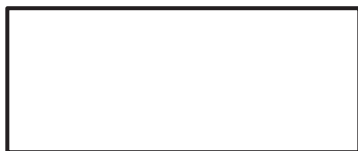_____

4.

_____ parts
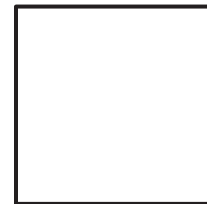
_____

5.

_____ parts

_____

6.

_____ parts

_____

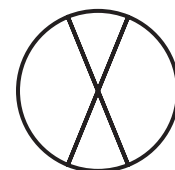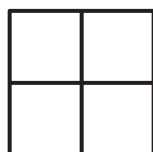**7.** Divide the rectangle into 2 equal parts. Then name the equal parts.

_____

8. Divide the square into 6 equal parts. Then name the equal parts.

_____

9. YOU BE THE TEACHER Newton says he divided each shape into fourths. Is he correct? Explain.

Think and Grow: Modeling Real Life

Three students want to share a whiteboard to solve math problems. Each student wants to use an equal part of the board. Should the students divide the whiteboard into halves, thirds, or fourths?

Draw to show:

The students should divide the whiteboard into _____ .

Show and Grow

10. Six friends want to share an egg casserole. Each friend wants an equal part. Should the friends cut the casserole into halves, fourths, or sixths?

11. Eight students need to sit around two tables. Each student needs an equal part of a table. Should the tables be divided into thirds, fourths, or sixths?
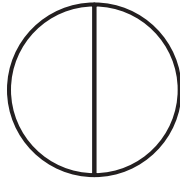
12. **DIG DEEPER!** Ten friends want to share five rectangular sheets of paper. Each friend wants an equal part. Should the friends cut the sheets of paper into halves or thirds? Explain.
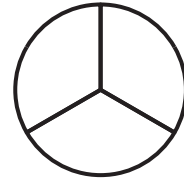
Name _____

Learning Target: Identify equal parts of a whole and name them.
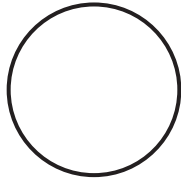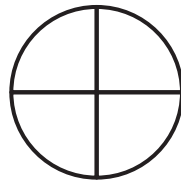
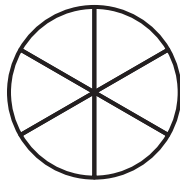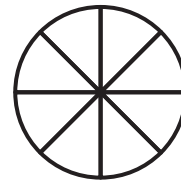

1 equal part, or whole

2 equal parts, or halves

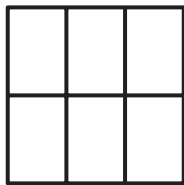3 equal parts, or thirds

4 equal parts, or fourths

6 equal parts, or sixths

8 equal parts, or eighths

Tell whether the shape shows equal parts or unequal parts. If the shape shows equal parts, then name them.
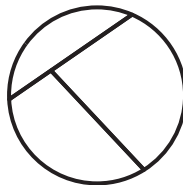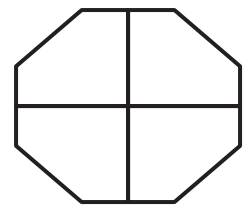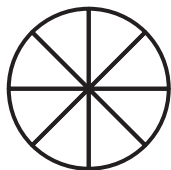
1.

_____ parts

_____

2.

_____ parts

_____

3.

_____ parts

_____

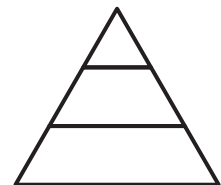**4.**
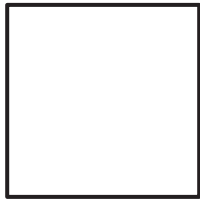

_____ parts

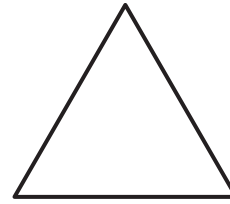_____

5.

_____ parts

_____

6.
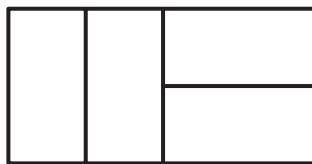
_____ parts

_____

7. Divide the square into 3 equal parts. Then name the equal parts.

_____

8. Divide the triangle into 2 equal parts. Then name the equal parts.

_____

9. (MP) **Patterns** Use the pattern to divide the square into equal parts. Name the equal parts.

_____
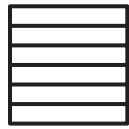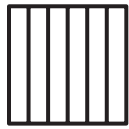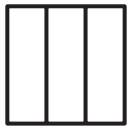
10. Modeling Real Life Eight friends want to share a lasagna. Each friend wants an equal part. Should the friends cut the lasagna into fourths, sixths, or eighths?

11. DIG DEEPER! Twelve friends want to pull weeds from three community gardens. Each friend wants to pull weeds from an equal part. Should the friends divide each garden into thirds, fourths, or sixths?

Review & Refresh

Find the product.

12. $2 \times (3 \times 3) =$ _____

13. $(4 \times 2) \times 9 =$ _____

14. $2 \times (8 \times 5) =$ _____

Learning Target: Identify and write a unit fraction.
Success Criteria:
- I can identify a unit fraction.
- I can write a unit fraction.
- I can explain what a unit fraction is.
- I can explain what the numerator and denominator are in a fraction.

Explore and Grow
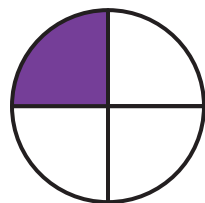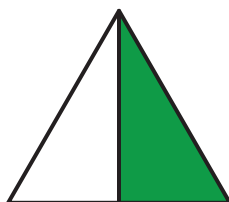
Match each shaded part to its name.

one-sixth

one-fourth

one-half

MP **Precision** What is the same about each shape? What is different?

A **fraction** is a number that represents part of a whole.

The **numerator** represents how many equal parts are being counted.

$\frac{1}{4}$

The **denominator** represents how many equal parts are in a whole.

A **unit fraction** represents one equal part of a whole.

Example What fraction of the whole is shaded?

There are _____ equal parts in the whole.

_____ of the equal parts is shaded.

$\dfrac{\Box}{\Box}$ is shaded.

Each equal part is $\frac{1}{6}$.

Show and Grow

What fraction of the whole is shaded?

1.
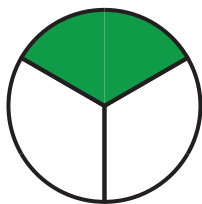
There are _____ equal parts in the whole.

_____ of the equal parts is shaded.
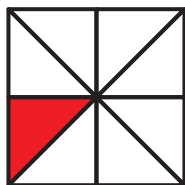
$\dfrac{\Box}{\Box}$ is shaded.
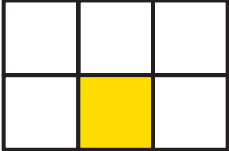
2. $\dfrac{\Box}{\Box}$ is shaded.

3. $\dfrac{\Box}{\Box}$ is shaded.

✔ Apply and Grow: Practice

What fraction of the whole is shaded?

4.
$\frac{\square}{\square}$ is shaded.

5.
$\frac{\square}{\square}$ is shaded.

6.
$\frac{\square}{\square}$ is shaded.
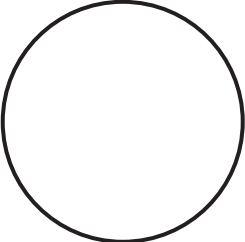
7.
$\frac{\square}{\square}$ is shaded.

8.
$\frac{\square}{\square}$ is shaded.

9.
$\frac{\square}{\square}$ is shaded.

10. Divide the circle into 4 equal parts. Shade one part. What fraction of the whole is shaded?

$\frac{\square}{\square}$ is shaded.

11. Divide the square into 3 equal parts. Shade one part. What fraction of the whole is shaded?

$\frac{\square}{\square}$ is shaded.

12. **YOU BE THE TEACHER** Descartes says the part he shaded can be represented by a unit fraction. Is he correct? Explain.
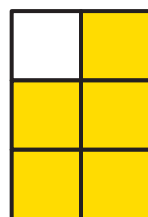
Think and Grow: Modeling Real Life

For which nation's flag can you use a unit fraction to represent the amount of green? Explain.

Flag of _____

Explain:

Nation	Flag
Nigeria	
Mauritius	
Seychelles	

Show and Grow

13. For which nation's flag can you use a unit fraction to represent the amount of red? Explain.

Nation	Flag
Bahrain	
Austria	
France	

14. You paint a plate that has 4 equal parts. You paint two parts orange and one part red. You paint the rest of the plate yellow. What fraction of the plate is yellow?

15. **DIG DEEPER!** Draw a quilt square that has blue, red, and white parts, but only the blue part can be represented by a unit fraction.

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Learning Target: Identify and write a unit fraction.

Example What fraction of the whole is shaded?

There are __4__ equal parts in the whole.

__1__ of the equal parts is shaded.

$\dfrac{1}{4}$ is shaded.

What fraction of the whole is shaded?
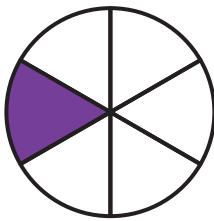
1.

There are _____ equal parts in the whole.

_____ of the equal parts is shaded.

$\dfrac{\square}{\square}$ is shaded.
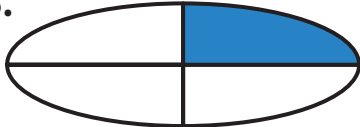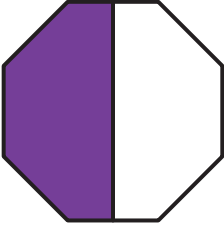
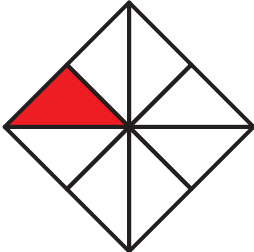**2.** $\dfrac{\square}{\square}$ is shaded.

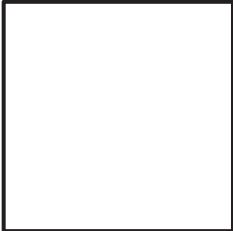**3.** $\dfrac{\square}{\square}$ is shaded.

4. $\dfrac{\square}{\square}$ is shaded.
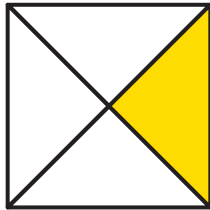
5. $\dfrac{\square}{\square}$ is shaded.

6. Divide the square into 6 equal parts. Shade one part. What fraction of the whole is shaded?
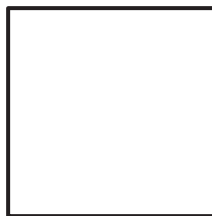
$\dfrac{\square}{\square}$ is shaded.

7. **MP Precision** Did Descartes label the shaded part correctly? Explain.

$$\frac{8}{1}$$
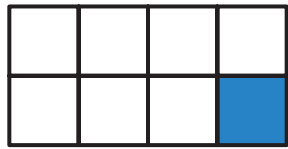
8. **DIG DEEPER!** You want to make a card. You fold a sheet of paper in half, then in half again. What fraction of the sheet of paper represents the front of the card?

9. **Writing** Explain how you know Newton ate $\frac{1}{3}$ of his taco.

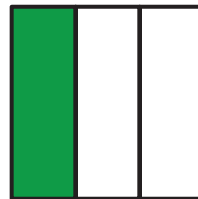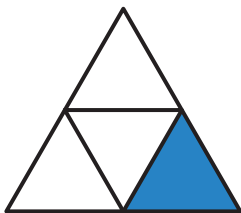**10.** **Modeling Real Life** For which foods can you use a unit fraction to represent the amount eaten? Explain.
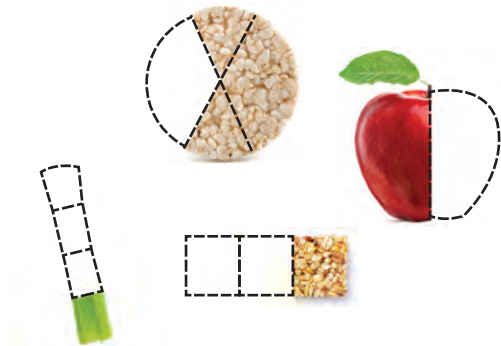
11. **Modeling Real Life** You prepare a rectangular dip tray that has 6 equal parts. Three parts are hummus, one part is *queso*, and one part is guacamole. The rest of the tray is salsa. What fraction of the tray is salsa?

Review & Refresh

Compare.

12. $4 \times 6 \bigcirc 6 \times 6$

13. $6 \times 5 \bigcirc 4 \times 5$

14. $42 \bigcirc 6 \times 7$

Learning Target: Identify and write a fraction.
Success Criteria:
- I can identify a fraction.
- I can write a fraction.

Explore and Grow

Write a fraction for the shaded part of each whole.

☐
—
☐

☐
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☐

☐
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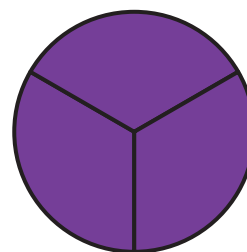
Reasoning All of the equal parts of a shape are shaded. What do you know about the numerator and denominator of the fraction that describes the shaded parts?

Example What fraction of the whole is shaded?

There are _____ equal parts in the whole.

_____ of the equal parts are shaded.

$\dfrac{\square}{\square}$ is shaded.

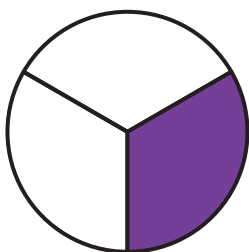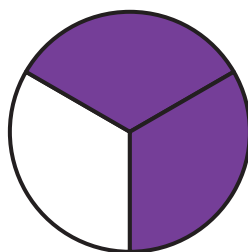Each equal part is $\dfrac{1}{3}$.
Two $\dfrac{1}{3}$s are shaded.

Show and Grow

What fraction of the whole is shaded?

1.

There are _____ equal parts in the whole.

_____ of the equal parts are shaded.

$\dfrac{\square}{\square}$ is shaded.

2.

There are _____ equal parts in the whole.

_____ of the equal parts are shaded.

$\dfrac{\square}{\square}$ is shaded.

3.

$\dfrac{\square}{\square}$ is shaded.

4.

$\dfrac{\square}{\square}$ is shaded.

Name _____
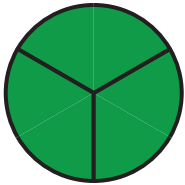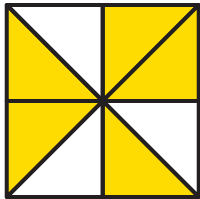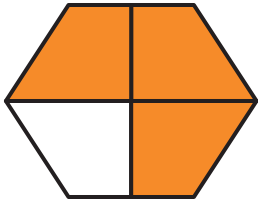
What fraction of the whole is shaded?

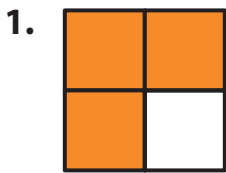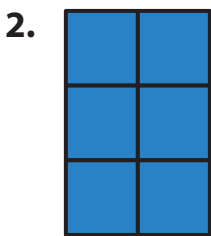**5.** ⬛⬛⬜ $\dfrac{\square}{\square}$ is shaded.
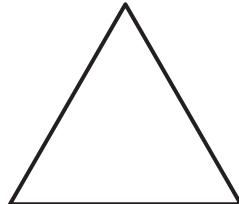
6. 🟢 $\dfrac{\square}{\square}$ is shaded.

7. 🔶 $\dfrac{\square}{\square}$ is shaded.

8. 🔶 $\dfrac{\square}{\square}$ is shaded.

9. Divide the rectangle into eighths. Shade three of the equal parts. What fraction of the whole is shaded?

$\dfrac{\square}{\square}$ is shaded.

10. Divide the triangle in half. Shade two of the equal parts. What fraction of the whole is shaded?

$\dfrac{\square}{\square}$ is shaded.

11. **DIG DEEPER!** Newton is thinking of a fraction. What is his fraction?

The whole is divided into sixths. The numerator of my fraction is an odd number. My fraction is greater than $\dfrac{3}{6}$.

Think and Grow: Modeling Real Life

You are making a stained glass window that has 6 equal parts. You finish 1 part of the window. What fraction of the window do you have left to finish?
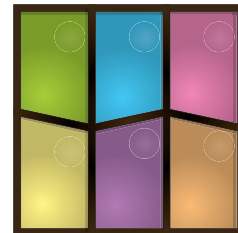
Draw to show:

You have $\dfrac{\square}{\square}$ of the window left to finish.

Show and Grow

12. You color 8 equal parts of a banner for a school play. You write the title in 4 of the parts. What fraction of the banner does *not* have the title?

13. A fruit tray has 4 equal parts. One part of the tray has grapes. Another part of the tray has pineapple. The rest of the tray has watermelon. What fraction of the tray has watermelon?

14. **DIG DEEPER!** You divide a flower bed into equal parts. You plant sunflowers in 1 part. You plant daisies in the other 2 parts. What fraction of the flower bed has sunflowers?

Learning Target: Identify and write a fraction.

Example What fraction of the whole is shaded?
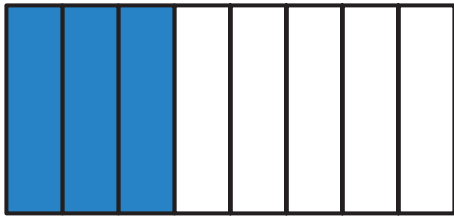
There are __8__ equal parts in the whole.

__3__ of the equal parts are shaded.

$\dfrac{3}{8}$ is shaded.
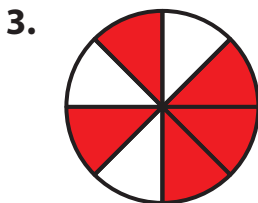
What fraction of the whole is shaded?
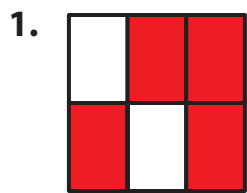
1. There are _____ equal parts in the whole.

_____ of the equal parts are shaded.
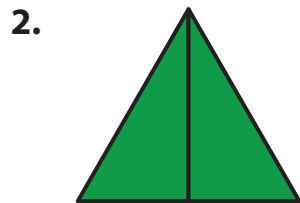
$\dfrac{\Box}{\Box}$ is shaded.
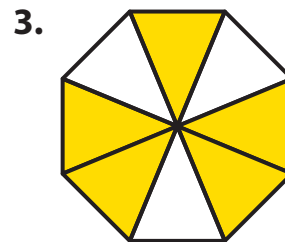
2. $\dfrac{\Box}{\Box}$ is shaded.
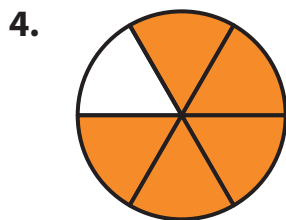
3. $\dfrac{\Box}{\Box}$ is shaded.
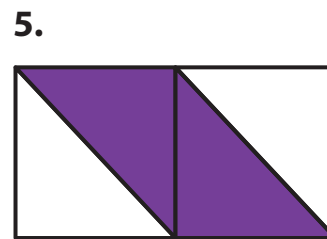
4. $\dfrac{\Box}{\Box}$ is shaded.

5. $\dfrac{\Box}{\Box}$ is shaded.

6. Divide the rectangle into sixths. Shade 2 of the equal parts. What fraction of the whole is shaded?
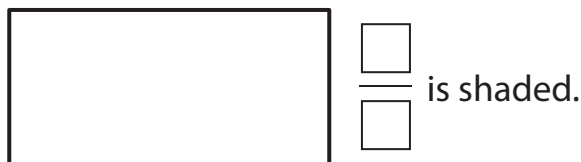
$\dfrac{\Box}{\Box}$ is shaded.

7. Divide the square into thirds. Shade 2 of the equal parts. What fraction of the whole is shaded?
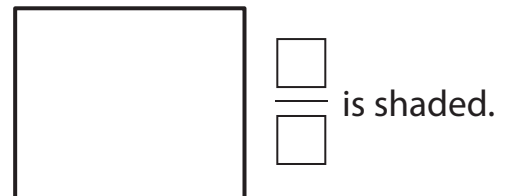
$\dfrac{\Box}{\Box}$ is shaded.

8. Open-Ended Divide and shade the square to show more than $\frac{4}{8}$, but less than $\frac{8}{8}$. What fraction of the whole is shaded?
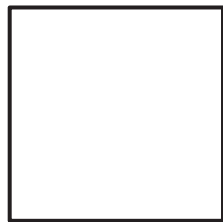
$\dfrac{\square}{\square}$ is shaded.

9. Reasoning A pool has 4 swim lanes. Swimmers are using all of the lanes. Draw and shade a model that represents the lanes being used. Then write a fraction for your model.

$\dfrac{\square}{\square}$ is shaded.

10. Patterns What fraction of each circle is shaded? Think: What do you notice about the numerators? Model and write the next fraction.

$\dfrac{\square}{6}$ $\dfrac{\square}{6}$ $\dfrac{\square}{6}$ $\dfrac{\square}{6}$
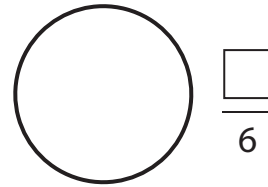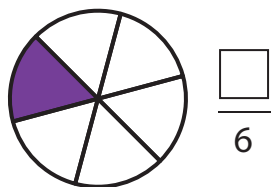
11. Modeling Real Life A vegetable tray has 8 equal parts. Three parts have peppers. One part has broccoli. Another part has tomatoes. The rest of the tray has carrots. What fraction of the tray has carrots?

**12.** **DIG DEEPER!** You divide an art canvas into equal parts. You paint 1 part blue, 2 parts orange, and the last part yellow. What fraction of the canvas is painted orange?

Review & Refresh

Complete the fact family.

13. $6 \times \underline{\hspace{1cm}} = 42$ $42 \div 7 = \underline{\hspace{1cm}}$

$\underline{\hspace{1cm}} \times 6 = 42$ $42 \div \underline{\hspace{1cm}} = 7$

14. $9 \times \underline{\hspace{1cm}} = 9$ $9 \div 1 = \underline{\hspace{1cm}}$

$\underline{\hspace{1cm}} \times 9 = 9$ $9 \div \underline{\hspace{1cm}} = 1$

Learning Target: Plot fractions less than 1 on a number line.

Success Criteria:
- I can divide a number line into equal parts.
- I can label fractions on a number line.
- I can plot a fraction.

Explore and Grow

Use the $\frac{1}{6}$ Fraction Strips to complete the fractions on the number line.

Then plot $\frac{3}{6}$ on the number line.

0     $\frac{1}{6}$ $\frac{2}{6}$ $\frac{\square}{6}$ $\frac{\square}{6}$ $\frac{\square}{6}$ 1
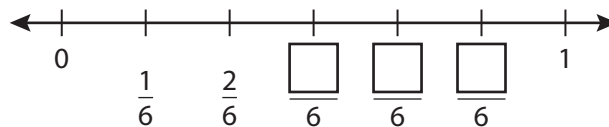
MP Precision Plot $\frac{6}{6}$ on the number line. What do you notice? Explain.

Every number on a number line represents a distance from 0. The distance from 0 to 1 is one whole. A number line can be divided into any number of equal parts or distances.
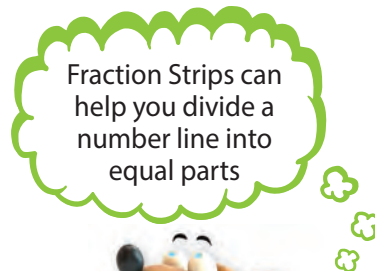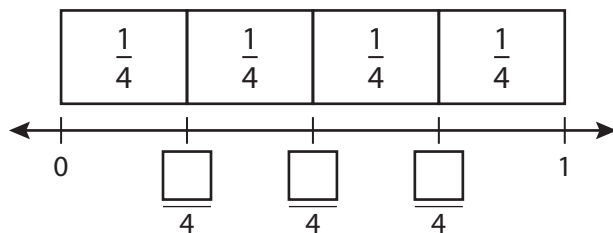
Example Plot $\frac{3}{4}$ on the number line.

Step 1: Divide the length from 0 to 1 into _____ equal parts.

Step 2: Label each tick mark on the number line.

Think: One $\frac{1}{4}$ is $\frac{1}{4}$. Two $\frac{1}{4}$s are $\frac{2}{4}$.

Step 3: Plot $\frac{3}{4}$ on the number line.

Think: _____ $\frac{1}{4}$s are $\frac{3}{4}$.

Fraction Strips can help you divide a number line into equal parts

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

0 ⬚/4   ⬚/4   ⬚/4   1

Show and Grow

Plot the fraction on the number line.

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

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

$\frac{1}{2}$	$\frac{1}{2}$

0   1

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

$\frac{\square}{\square}$ s are $\frac{2}{6}$.

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

0   1
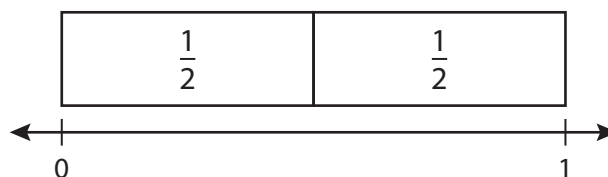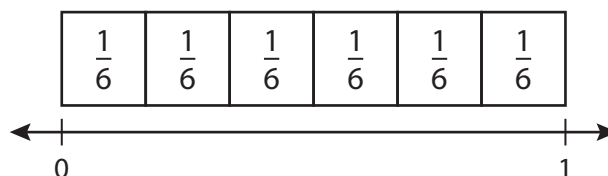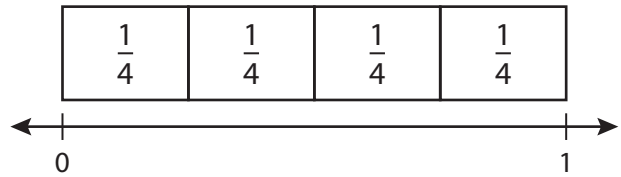
✓ Apply and Grow: Practice

Plot the fraction on a number line.

3. $\frac{2}{4}$
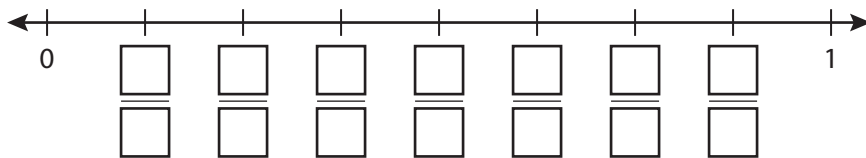
_____ $\frac{\square}{\square}$ s are $\frac{2}{4}$.

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

0 ———————————— 1

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

←——+————————————+——→
0   1

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

←——+————————————+——→

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

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

---

8. 〰️**Structure** Complete the number line.

←——+——+——+——+——+——+——+——+——→
0   □ □ □ □ □ □ □   1
    — — — — — — —
    □ □ □ □ □ □ □

---

9. **Writing** How are the number lines the same? How are they different?

←——+——+——●——+——+——+——→
0   1

←——+——+——●——+——+——+——+——→
0   1
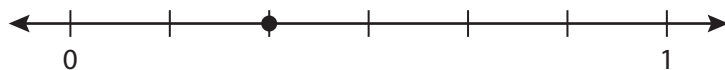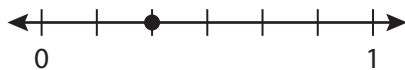
Three laps around a walking trail is 1 mile. How many laps does it take you to walk $\frac{2}{3}$ mile?

Model:

⟷

You need to walk _____ laps to walk $\frac{2}{3}$ mile.

Show and Grow

10. You follow a recipe and make four servings. How many servings can you make using $\frac{1}{4}$ of each ingredient in the recipe?

11. **DIG DEEPER!** A gymnast needs to take 8 equal-sized steps to get from one end of a balance beam to the other. She starts on the left end of the beam and takes 6 steps. What fraction of the beam is behind her? What fraction of the beam is in front of her?

12. **DIG DEEPER!** A tightrope walker needs to take 6 equal-sized steps to get from one end of a tightrope to the other. He starts on the left side of the rope and takes 5 steps. What fraction of the rope is behind him? What fraction of the rope is in front of him?
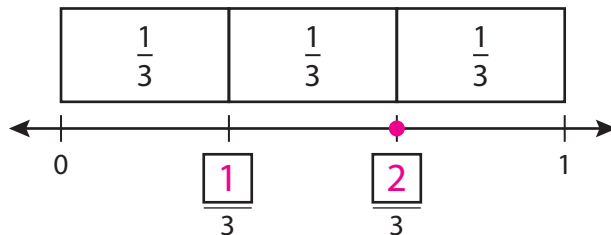
Name _____

Learning Target: Plot fractions less than 1 on a number line.

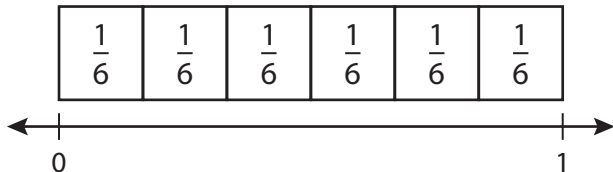**Example** Plot $\frac{2}{3}$ on the number line.

$\underline{2}$ $\frac{\boxed{1}}{\boxed{3}}$ s are $\frac{2}{3}$.

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

0    $\frac{\boxed{1}}{3}$ $\frac{\boxed{2}}{3}$ 1

Plot the fraction on a number line.

1. $\frac{4}{6}$

$\underline{}$ $\frac{\boxed{}}{\boxed{}}$ s are $\frac{4}{6}$.

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

0   1

2. $\frac{3}{8}$
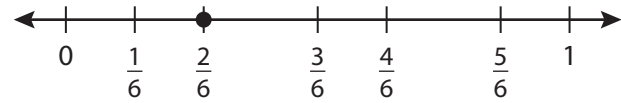
0   1

3. $\frac{1}{4}$
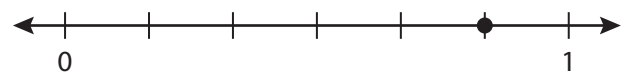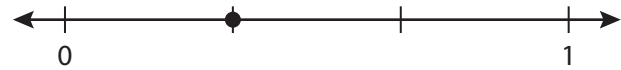
4. $\frac{2}{6}$

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

6. 🍎 **Logic** What fraction is located halfway between 0 and 1?

7. **Y😮U BE THE TEACHER** Your friend draws a number line and plots $\frac{2}{6}$. Is your friend correct? Explain.

| 0 | $\frac{1}{6}$ | $\frac{2}{6}$ | $\frac{3}{6}$ | $\frac{4}{6}$ | $\frac{5}{6}$ | 1 |

8. 🍎 **Structure** Which number line shows $\frac{2}{3}$?


9. **Modeling Real Life** Four laps around a soccer field is 1 mile. How many laps does it take you to run $\frac{3}{4}$ mile?

10. **DIG DEEPER!** A diver needs to take 8 equal-sized steps before diving into the pool. She starts at the beginning of the diving board and takes 6 steps. What fraction of the diving board is behind the diver? What fraction of the diving board is in front of the diver?
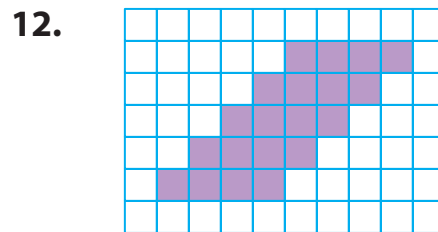
Review & Refresh

Find the area of the shape.

11.

Area = _____ square units

12.
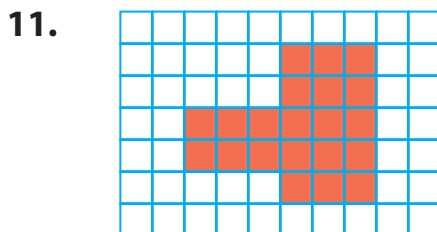
Area = _____ square units

Learning Target: Plot fractions greater than 1 on a number line.
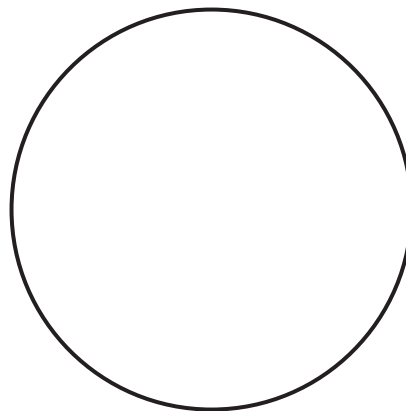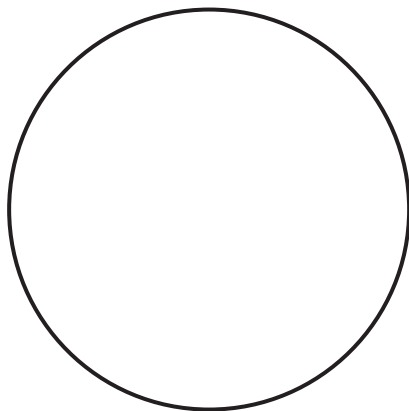
Success Criteria:
- I can divide a number line into equal parts.
- I can label fractions on a number line.
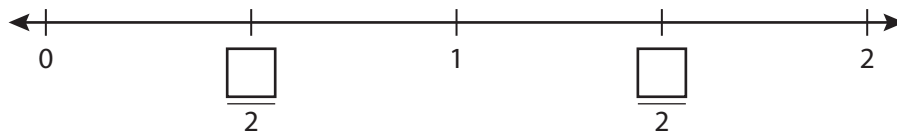- I can plot a fraction.

Explore and Grow

Divide each circle into halves. Shade three halves. Write the fraction.

$$\frac{\boxed{}}{\boxed{}}$$

MP **Precision** Complete the fractions on the number line.

Plot $\frac{3}{2}$ on the number line. What do you notice? Explain.

0       $\frac{\boxed{}}{2}$ 1 $\frac{\boxed{}}{2}$ 2

When the numerator is greater than the denominator, the fraction is greater than one whole.

Each square is one whole. Six $\frac{1}{4}$s are shaded. So, $\frac{6}{4}$ is shaded.

You can show fractions greater than one whole on a number line.

Example Plot $\frac{6}{4}$ on the number line.

Step 1: Divide each whole into _____ equal parts.

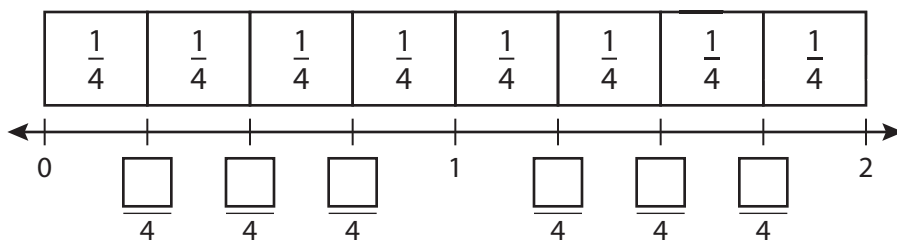The numbers 0, 1, 2, 3, and so on are called **whole numbers**.

Step 2: Label each tick mark on the number line.

Think: One $\frac{1}{4}$ is $\frac{1}{4}$. Two $\frac{1}{4}$s are $\frac{2}{4}$.
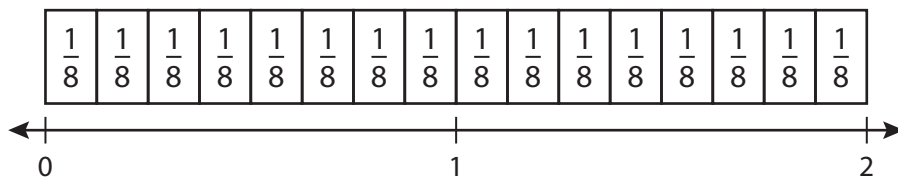
Step 3: Plot $\frac{6}{4}$.

Think: _____ $\frac{1}{4}$s are $\frac{6}{4}$.

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

0   1   2

☐/4   ☐/4   ☐/4   ☐/4   ☐/4   ☐/4

Show and Grow

1. Plot $\frac{15}{8}$ on the number line.

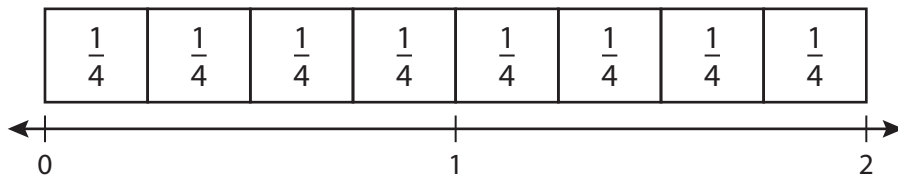| $\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

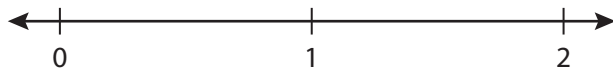0   1   2

✓ Apply and Grow: Practice

Plot the fraction on the number line.

2. $\dfrac{7}{4}$

| $\dfrac{1}{4}$ | $\dfrac{1}{4}$ | $\dfrac{1}{4}$ | $\dfrac{1}{4}$ | $\dfrac{1}{4}$ | $\dfrac{1}{4}$ | $\dfrac{1}{4}$ | $\dfrac{1}{4}$ |

```
0              1              2
```

3. $\dfrac{9}{6}$

```
0        1        2
```

4. $\dfrac{5}{3}$

```
0        1        2
```

Ⓜ Structure Complete the number line.

5.
```
0        1        2
```

6.
```
0              1
```
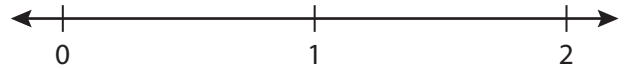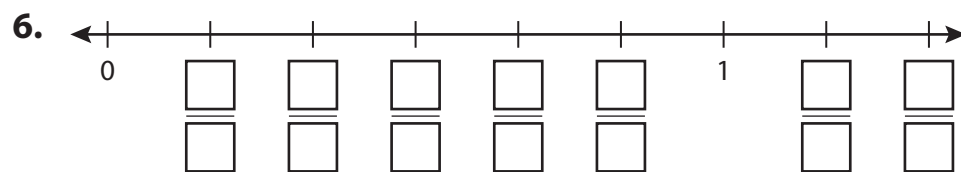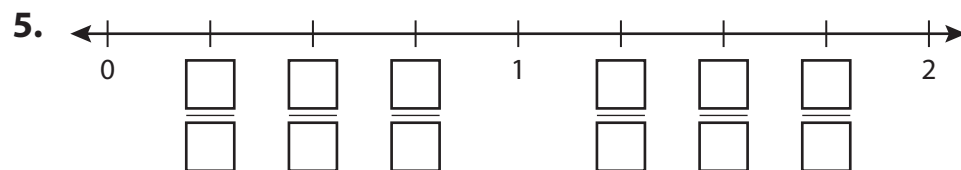
Ⓜ Number Sense Draw and shade a model for the plotted fraction.

7.

```
0        1   3/2   2
```

8.

```
0              1  5/4   2
```
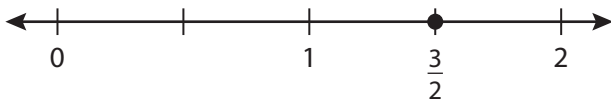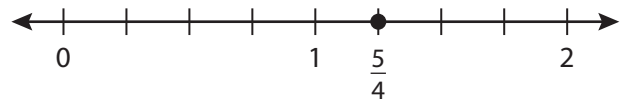
Think and Grow: Modeling Real Life

How far is the aquarium from the bank?

| Bank | Zoo | | Aquarium | Pool |

0 miles $\frac{1}{2}$ 1   2
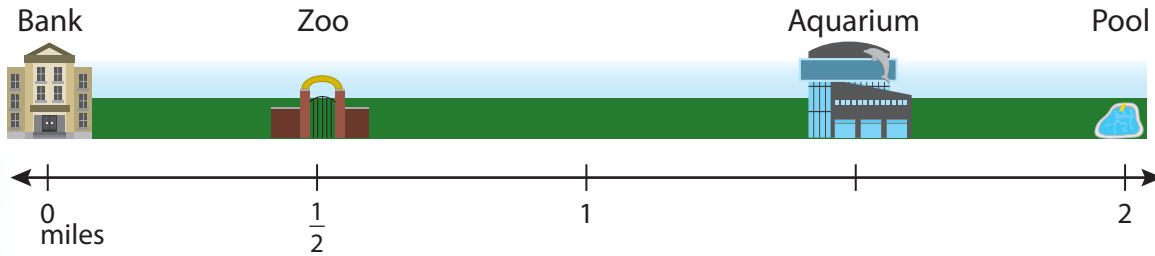
The aquarium is _____ miles from the bank.

Show and Grow

Use the number line to answer the questions.

School   Library   Gas Station   Amusement Park   Restaurant   Hospital

0 miles $\frac{3}{4}$ 1   2 $\frac{10}{4}$ 3
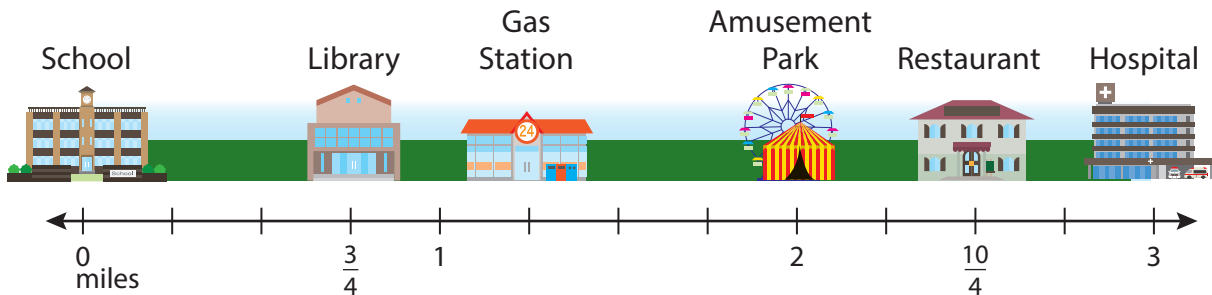
9. How far is the gas station from the school?

10. A post office is the same distance from the restaurant as it is from the hospital. How far is the post office from the school?

11. DIG DEEPER! How far is the gas station from the hospital?

12. DIG DEEPER! How far is the library from the amusement park?

Learning Target: Plot fractions greater than 1 on a number line.
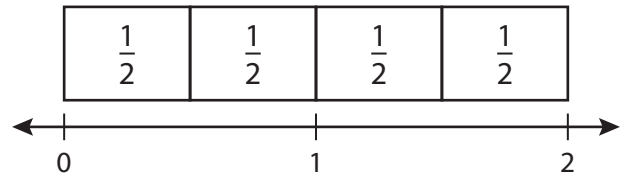
Example Plot $\frac{5}{3}$ on the number line.

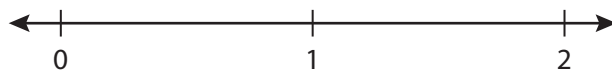| $\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$

0    $\frac{1}{3}$ $\frac{2}{3}$ 1 $\frac{4}{3}$ $\frac{5}{3}$ 2

Plot the fraction on a number line.

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

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

0   1   2

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

$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

0   1   2

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

0   1   2
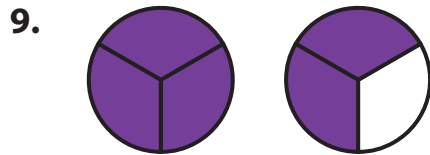
4. $\frac{7}{6}$
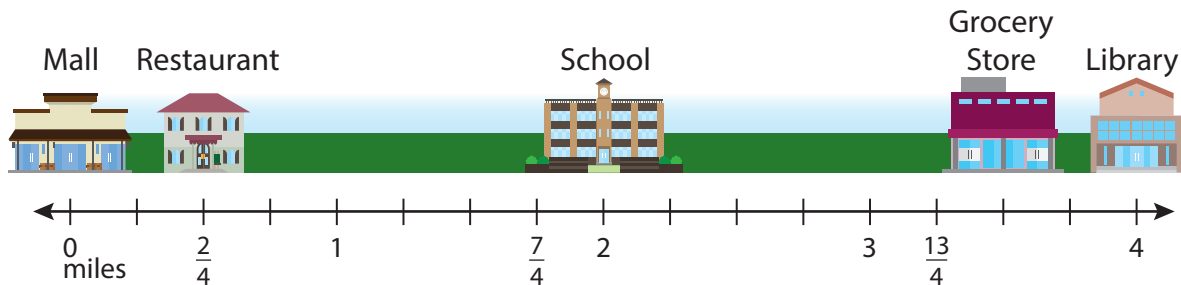
0   1   2
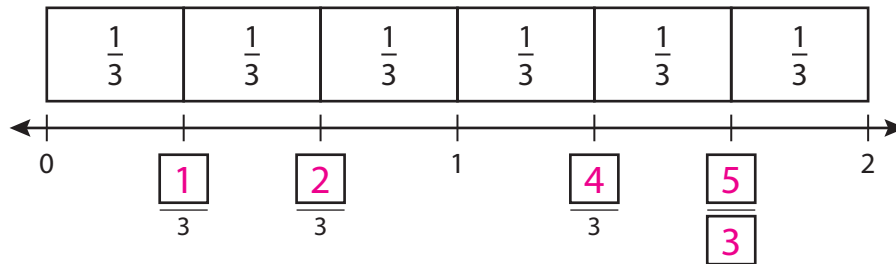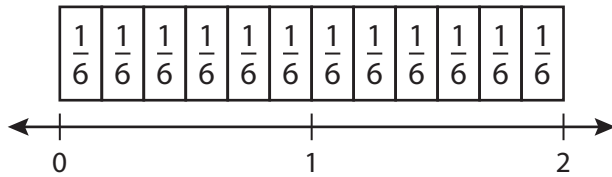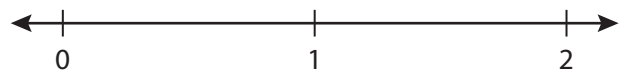
5. $\frac{4}{3}$

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

7. YOU BE THE TEACHER Newton says 2 is between 1 and $\frac{9}{8}$ on a number line. Is he correct? Explain.

8. Writing Explain what the numerator of the fraction $\frac{7}{4}$ represents.

DIG DEEPER! What fraction is shaded? Plot the fraction on the number line.

9.

10.
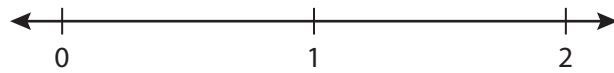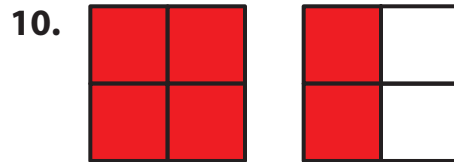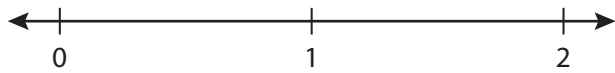
Modeling Real Life Use the number line to answer the questions.

11. How far is the grocery store from the school?

12. A playground is the same distance from the grocery store as it is from the library. How far is the playground from the mall?

Review & Refresh

Round.

13. 25   Nearest ten: _____

14. 182   Nearest hundred: _____

1. You, your friend, and your cousin are making spinners for a board game.

2 in.

2 in.

a. You design a spinner with 3 equal parts for your game. Draw the equal parts.
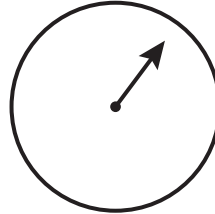
b. Your friend designs a spinner that is split into sixths. Does this spinner work for your game?

c. Your cousin wants to design a spinner that is $\frac{1}{3}$ blue, $\frac{2}{3}$ yellow, and $\frac{1}{3}$ red. Is your cousin correct? Explain.
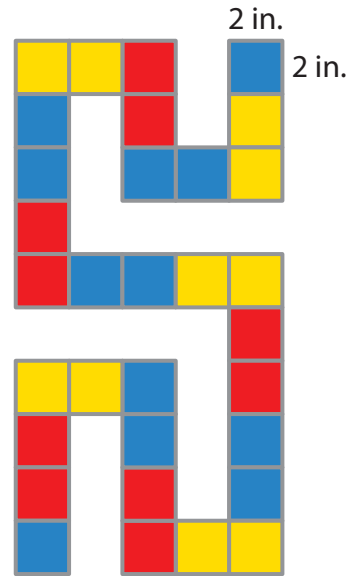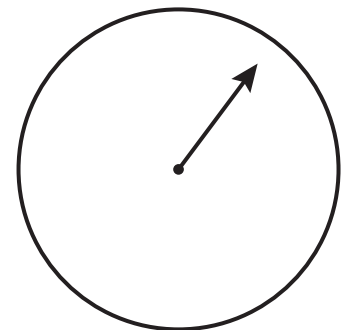
2. Use the game board above to find the area of each color in square inches. Which color has the greatest area?

3. Design a spinner that has 8 equal parts. One part is red, two parts are blue, one part is yellow, and the rest is green.

a. What fraction of the spinner is green?

b. Which color are you most likely to spin? Explain.
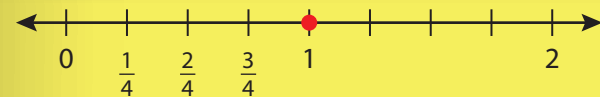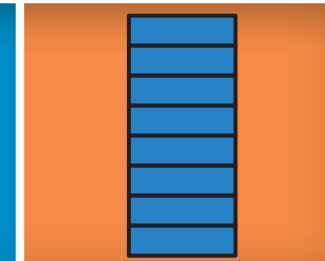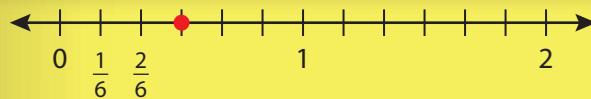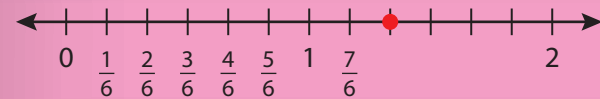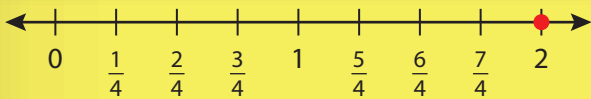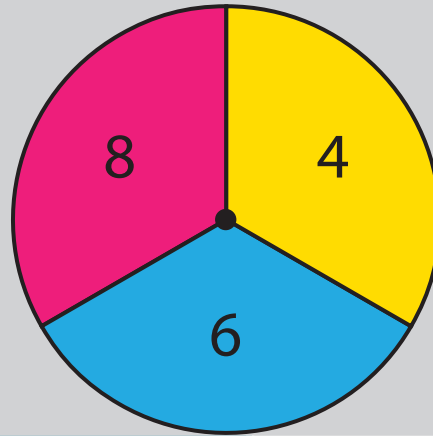
Fraction Spin and Cover

Directions:

1. Take turns using the spinners to find which fraction model to cover.
2. Use a counter to cover the fraction model.
3. Repeat this process until you cover all of the models.
4. The player with the most fraction models covered wins!

Spinner A: Numerator

8   2   3   4   6

Spinner B: Denominator

8   4   6

$$0 \quad \frac{1}{4} \quad \frac{2}{4} \quad \frac{3}{4} \quad 1 \quad \frac{5}{4} \quad \frac{6}{4} \quad \frac{7}{4} \quad 2$$

$$0 \quad \frac{1}{6} \quad \frac{2}{6} \quad \frac{3}{6} \quad \frac{4}{6} \quad \frac{5}{6} \quad 1 \quad \frac{7}{6} \quad 2$$

$$0 \quad \frac{1}{6} \quad \frac{2}{6} \quad 1 \quad 2$$

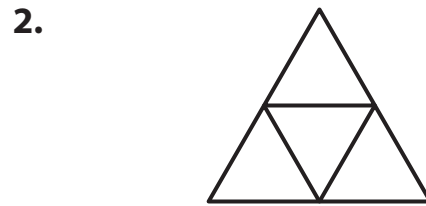$$0 \quad \frac{1}{4} \quad \frac{2}{4} \quad \frac{3}{4} \quad 1 \quad 2$$
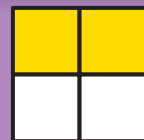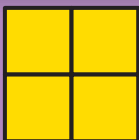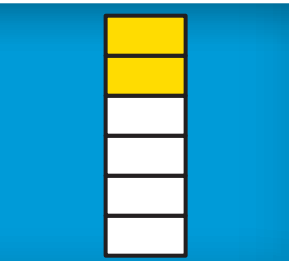
10.1 **Equal Parts of a Whole**

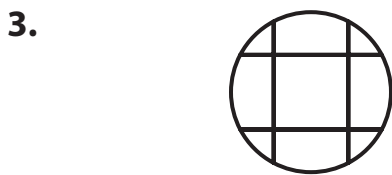Tell whether the shape shows equal parts or unequal parts. If the shape shows equal parts, then name them.
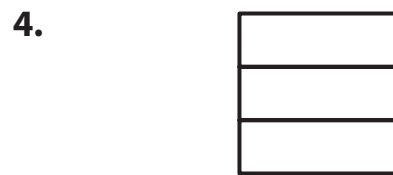
1.

_____ parts

_____

2.

_____ parts

_____

3.

_____ parts
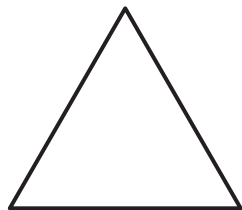
_____

4.

_____ parts

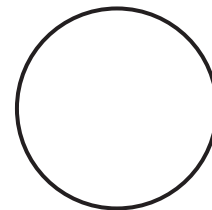_____

5. Divide the triangle into two equal parts. Then name the equal parts.

_____

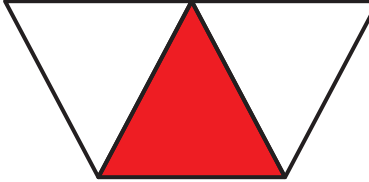**6.** Divide the circle into eight equal parts. Then name the equal parts.

_____

Understand a Unit Fraction

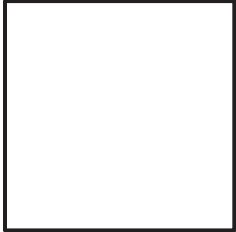What fraction of the whole is shaded?

7.

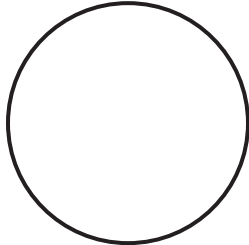$\dfrac{\square}{\square}$ is shaded.

8.

$\dfrac{\square}{\square}$ is shaded.

9. Divide the square into four equal parts. Shade one part. What fraction of the whole is shaded?

$\dfrac{\square}{\square}$ is shaded.

10. Divide the circle into eight equal parts. Shade one part. What fraction of the whole is shaded?
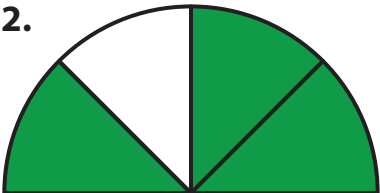

$\dfrac{\square}{\square}$ is shaded.

11. Modeling Real Life Descartes arranges his bedroom into four equal parts. His bed takes up two parts. His dresser takes up one part. The rest of his bedroom is free space. What fraction of Descartes's bedroom is free space?
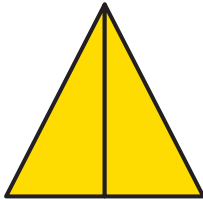
10.3 **Write Fractions of a Whole**
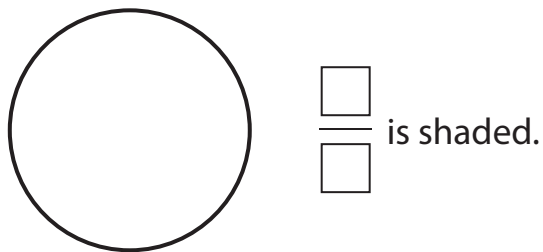
What fraction of the whole is shaded?

12.

$\dfrac{\square}{\square}$ is shaded.
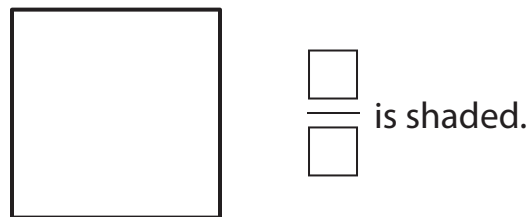
13.

$\dfrac{\square}{\square}$ is shaded.

14. Divide the circle into sixths. Shade 4 of the equal parts. Then write a fraction for the shaded parts.

$\frac{\Box}{\Box}$ is shaded.

15. Divide the square into thirds. Shade 2 of the equal parts. Then write a fraction for the shaded parts.
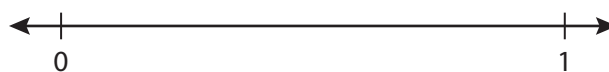
$\frac{\Box}{\Box}$ is shaded.

16. **Modeling Real Life** A circular mandala poster is divided into eight equal parts. You color one part red, three parts green, and two parts yellow. What fraction of the poster do you have left to color?
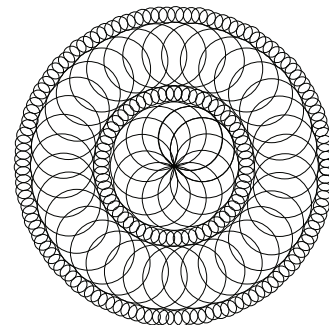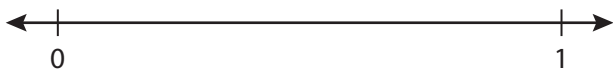

10.4 **Fractions on a Number Line: Less Than 1**

Plot the fraction on the number line.

17. $\frac{3}{4}$

$\underline{\hspace{1cm}}$ $\frac{\Box}{\Box}$ s are $\frac{3}{4}$.

0 ————————————— 1

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

0 ————————————— 1

19. $\frac{2}{3}$

Plot the fraction on a number line.
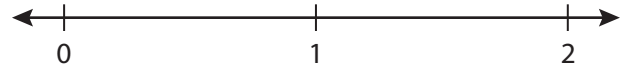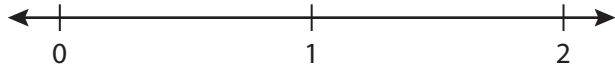
20. $\dfrac{3}{6}$

21. $\dfrac{5}{8}$

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22. Modeling Real Life You follow a recipe and make three servings. How many servings can you make using $\dfrac{1}{3}$ of each ingredient in the recipe?

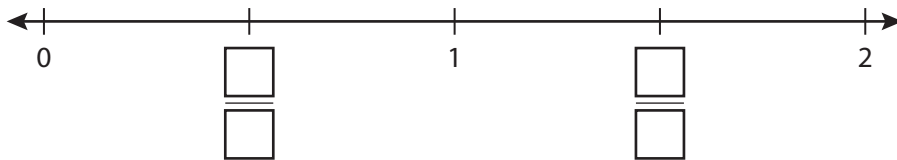**10.5 Fractions on a Number Line: Greater Than 1**

Plot the fraction on the number line.

23. $\dfrac{4}{3}$

0   1   2

24. $\dfrac{9}{6}$

0   1   2

---

25. Structure Complete the number line.

0   ▢/▢   1   ▢/▢   2

---

26. Number Sense What fraction is shaded? Plot the fraction on the number line.

0   1   2

480