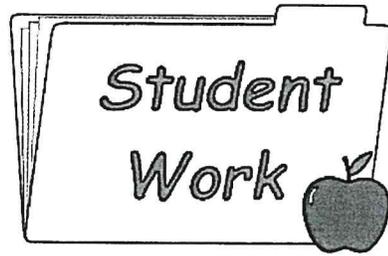


Unity Elementary School



MATH

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You can also use skip counting to solve division problems. Start from the total and skip count backward until you reach 0.

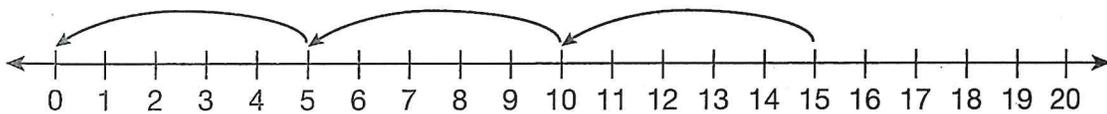
Example 3

Find the quotient.

$$15 \div 5 = \square$$

Strategy Skip count backward.

Step 1 Skip count backward by 5s from 15 to 0.



Step 2 Count how many times you skip counted backward.

You skip counted 3 times.

Solution $15 \div 5 = 3$

You can use repeated subtraction to solve division problems.

Example 4

Find the quotient.

$$27 \div 9 = \square$$

Strategy Use repeated subtraction.

Step 1 Start with 27. Subtract 9 until you reach 0.

$$27 - 9 = 18$$

$$18 - 9 = 9$$

$$9 - 9 = 0$$

Step 2 Count how many times you subtracted the number 9.

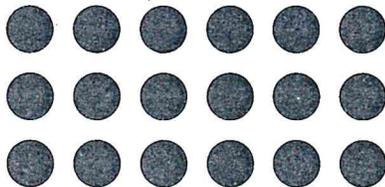
The number 9 was subtracted 3 times.

Solution $27 \div 9 = 3$



Coached Example

Write the division facts for this array.



Count the rows, the number of dots in each row, and the total number of dots.

How many rows? _____

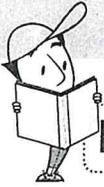
How many dots in each row? _____

How many dots in all? _____

Write the division facts.

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

**Lesson Practice • Part 1**

Choose the correct answer.

1. Find the quotient.

$$32 \div 4 = \square$$

- A. 16
 B. 12
 C. 9
 D. 8

2. Find the quotient.

$$70 \div 7 = \square$$

- A. 7
 B. 10
 C. 63
 D. 77

3. What is
- $81 \div 9$
- ?

- A. 6
 B. 7
 C. 8
 D. 9

4. Find the quotient.

$$28 \div 7 = \square$$

- A. 11
 B. 6
 C. 4
 D. 1

5. Find the quotient.

$$90 \div 10 = \square$$

- A. 8
 B. 9
 C. 10
 D. 11

6. Find the quotient.

$$42 \div 7 = \square$$

- A. 6
 B. 8
 C. 9
 D. 49

7. What is $45 \div 5$?

- A. 8
- B. 9
- C. 10
- D. 40

8. Find the quotient.

$$24 \div 2 = \square$$

- A. 26
- B. 22
- C. 12
- D. 10

9. Mark wants to find the quotient for the following division fact.

$$32 \div 8 = \square$$

A. Use repeated subtraction to find the quotient. Show your work.

B. Write two related multiplication facts for this division problem.



Lesson Practice • Part 2

Choose the correct answer.

1. Which number makes all of these sentences true?

$$54 \div \square = 9 \quad 54 \div 9 = \square$$

$$9 \times \square = 54 \quad \square \times 9 = 54$$

- A. 4
 B. 5
 C. 6
 D. 7

2. The divisor is 4. The quotient is a whole number. What happens to the quotient when 4 is added to the dividend?

- A. The quotient increases by 1.
 B. The quotient decreases by 1.
 C. The quotient increases by 4.
 D. The quotient stays the same.

3. Which has a quotient of 7?

- A. $20 \div 2 = \square$
 B. $21 \div 3 = \square$
 C. $24 \div 4 = \square$
 D. $25 \div 5 = \square$

4. Which number makes all of these sentences true?

$$8 \times \square = 72 \quad \square \times 8 = 72$$

$$72 \div \square = 8 \quad 72 \div 8 = \square$$

- A. 9
 B. 8
 C. 7
 D. 6

5. The divisor is 6 and the dividend is 6. What is the quotient?

- A. 0
 B. 1
 C. 6
 D. 12

6. Which has the greatest quotient?

- A. $12 \div 6 = \square$
 B. $15 \div 5 = \square$
 C. $16 \div 4 = \square$
 D. $18 \div 3 = \square$

7. Find the quotient.

$$36 \div 6 = \square$$

- A. 4
- B. 5
- C. 6
- D. 7

8. Which has a quotient that is **not** the same as any of the others?

- A. $21 \div 3 = \square$
- B. $35 \div 5 = \square$
- C. $49 \div 7 = \square$
- D. $64 \div 8 = \square$

9. Find the quotient.

$$12 \div 4 = \square$$

- A. 6
- B. 5
- C. 4
- D. 3

10. Which has the least quotient?

- A. $28 \div 7 = \square$
- B. $25 \div 5 = \square$
- C. $24 \div 4 = \square$
- D. $21 \div 3 = \square$

11. Two of the numbers of a multiplication-division fact family are 7 and 63. In the fact family 63 is both the product and the dividend.

A. Write two multiplication facts using 7 and 63.

B. Write two division facts using 7 and 63.

Division Word Problems



Getting the Idea

With word problems, look carefully to see if a total is shared equally. If so, you can write a division sentence to solve the problem.

When you write a division sentence, remember to use a symbol or letter to represent the unknown number.

Example 1

Tony wants to share 12 pencils equally among 3 friends. How many pencils will each friend get?

Strategy Write a division sentence for the problem. Then divide.

Step 1

Write a division sentence. Use the symbol \square for the quotient.

There are 12 pencils. There are 3 friends.

total number of pencils	\div	number of friends	=	number of pencils each friend will get
----------------------------	--------	----------------------	---	---

$$12 \div 3 = \square$$

Step 2

Divide.

$$12 \div 3 = 4$$

Solution The three friends will get 4 pencils each.

Example 2

Casey picked 20 apples. She gave 4 apples each to some friends. She does not have any apples left. How many friends received apples from Casey?

Strategy Write a division sentence. Then divide.

Step 1

Write a division sentence. Use \square for the quotient.

There are 20 apples. Each friend got 4 apples.

total number of apples \div number of apples in each group = number of friends

$$20 \div 4 = \square$$

Step 2

Divide.

$$20 \div 4 = 5$$

Solution Five friends received 4 apples each from Casey.

Example 3

Mr. Frey has 24 students. He seated the students at 4 tables. Each table had the same number of students. How many students were at each table?

Strategy Write a division sentence. Then divide.

Step 1

Write a division sentence. Use \square for the quotient.

There are 24 students in all. There are 4 equal groups of students.

total number \div number of groups = number in each group

$$24 \div 4 = \square$$

Step 2

Divide.

$$24 \div 4 = 6.$$

Solution Six students were at each table.

**Coached Example**

A dozen flowers costs \$28 and a plant costs \$7. How many times as much does a dozen flowers cost as a plant?

Write a division sentence.

You know a dozen flowers costs \$_____ and a plant costs \$_____.

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \square$$

$$28 \div 7 = \underline{\hspace{2cm}}.$$

A dozen flowers costs _____ times as much as a plant.



Lesson Practice • Part 1

Choose the correct answer.

- Nick has 48 DVDs in his collection. He keeps 6 DVDs on each shelf in a cabinet. How many shelves does Nick use for his DVDs?
 A. 42
 B. 8
 C. 7
 D. 6
- Three friends share 30 marbles. Each friend gets the same number of marbles. How many marbles does each friend get?
 A. 3
 B. 4
 C. 10
 D. 27
- Mrs. Martinez gave her 5 children \$25 to share equally. How much money did each child receive?
 A. \$4
 B. \$5
 C. \$6
 D. \$20
- Emma had 18 extra comic books to share. She divided them equally among 3 friends. How many comic books did each friend get?
 A. 3
 B. 6
 C. 9
 D. 15
- Brenna has 16 flowers. She puts the same number of flowers into 4 bouquets. How many flowers are in each bouquet?
 A. 4
 B. 12
 C. 32
 D. 64
- A bag of apples costs \$6 and that is 3 times as much as a box of blueberries. How much does a box of blueberries cost?
 A. \$18
 B. \$12
 C. \$3
 D. \$2

7. There are 32 students who signed up for a clean-up project. They formed teams of 8 students each. How many teams did they form?

- A. 4
- B. 6
- C. 24
- D. 40

8. Will's toy train is 9 inches long. Lane's toy train is 36 inches long. How many times longer is Lane's train than Will's train?

- A. 27
- B. 18
- C. 9
- D. 4

9. Lilly baked 40 cookies. She shared her cookies equally among 4 friends. How many cookies did each friend receive?

A. Draw a model of the problem.

B. Write a division sentence for the problem. Use \square for the quotient.

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \square$$

C. How many cookies did each friend receive?



Lesson Practice - Part 2

Choose the correct answer.

- Jason spent \$15 to buy 3 books. Each book cost the same. How much money did each book cost?
 A. \$4
 B. \$5
 C. \$6
 D. \$7
- Terrance baked 12 muffins. He kept 3 for himself. He gave each of his 3 best friends the same number of muffins. How many muffins did each friend receive?
 A. 9
 B. 7
 C. 6
 D. 3
- Lily wrote 16 pages in her journal on Saturday. That was twice as many pages as she wrote in her journal on Friday. How many pages did Lily write in her journal on Friday?
 A. 2
 B. 8
 C. 14
 D. 18
- The Tornadoes scored 28 points in its last football game. The team scored the same number of points in all 4 quarters. How many points did the team score in each quarter?
 A. 9
 B. 8
 C. 7
 D. 6
- Mr. Lee had 36 water bottles. He kept 12 in a refrigerator and put the rest in 3 coolers. Each cooler has the same number of water bottles. How many water bottles are in each cooler?
 A. 8
 B. 16
 C. 21
 D. 27
- Each carton contains 18 eggs. Each row in the carton can hold 9 eggs. How many rows are there in 6 cartons?
 A. 3
 B. 8
 C. 12
 D. 15

7. It costs \$30 to rent a bicycle for 3 hours. What is the cost for each hour?
- A. \$10 C. \$8
 B. \$9 D. \$7
8. There are 19 students in a class. Four of the students are absent today. The rest of the students are split into teams of 5. How many teams are there?
- A. 3 C. 10
 B. 5 D. 20
9. Mr. Silver bought 72 feet of fencing. Each piece of fence is 8 feet long and costs \$50. How much money did Mr. Silver spend on the fencing?
- A. \$300 C. \$400
 B. \$350 D. \$450
10. Maura and her two friends have a total of 18 cards. How many cards does each person have?
- A. 9 C. 7
 B. 8 D. 6

11. Tim and Neil each have 12 model cars. Both have an equal number of model cars on each of their shelves. Tim has 4 shelves and Neil has 3 shelves.

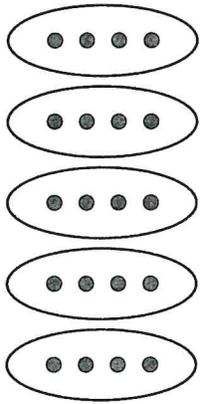
- A. Without dividing who has the greater number of model cars on each shelf? Explain your answer.

- B. If Neil loses a shelf, how many more model cars will he have to put on each shelf? Explain your answer.

Domain 2: Cumulative Assessment for Lessons 9–18

1. Which is equal to 8×4 ?
- A. $4 + 4 + 4 + 4$
 - B. $8 + 8 + 8 + 8$
 - C. $8 + 8$
 - D. $8 + 4 + 8 + 4$
2. Which shows the associative property of multiplication?
- A. $1 \times 8 = 8$
 - B. $(5 \times 6) = (3 \times 10)$
 - C. $(5 \times 6) = (6 \times 5)$
 - D. $3 \times (5 \times 4) = (3 \times 5) \times 4$
3. Find the quotient.
- $$32 \div 4 = \square$$
- A. 28
 - B. 8
 - C. 6
 - D. 4
4. Which number makes both sentences true?
- $$36 \div \square = 4$$
- $$4 \times \square = 36$$
- A. 10
 - B. 9
 - C. 8
 - D. 7
5. Tasha has 5 sheets of stickers. Each sheet has 12 stickers on it. How many stickers does Tasha have in all?
- A. 60
 - B. 55
 - C. 50
 - D. 17
6. Which sentence is true?
- A. A number times 4 could be odd or even.
 - B. A number times 6 is always an even number.
 - C. A number times 7 is always an even number.
 - D. A number times 8 could be odd or even.

7. Which division fact does this picture show?



- A. $20 \div 2 = 10$
- B. $20 \div 5 = 4$
- C. $15 \div 3 = 5$
- D. $20 \div 1 = 20$

8. Which multiplication fact can be used to find the missing number?

$$42 \div \square = 7$$

- A. $2 \times 21 = 42$
- B. $3 \times 14 = 42$
- C. $6 \times 7 = 42$
- D. $42 \times 1 = 42$

9. Each Ferris wheel ride can seat 40 people. The Ferris wheel gives 6 rides each hour. What is the greatest number of people that can ride the Ferris wheel in an hour?
-

10. Mrs. Wagner has 8 bookshelves in her classroom. Each shelf has 7 books on it.
- A. Draw a model of the problem.

- B. Write a multiplication sentence for the problem. Use the symbol \square for the product.

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \square$$

- C. How many books are on Mrs. Wagner's bookshelves?
-



Domain 3

Number and Operations – Fractions

Lesson 19 Fractions
MGSE3.NF.1, MGSE3.NF.2a,
MGSE3.NF.2b

Lesson 20 Whole Numbers as Fractions
MGSE3.NF.3c

Lesson 21 Equivalent Fractions
MGSE3.NF.3a, MGSE3.NF.3b

Lesson 22 Compare Fractions
MGSE3.NF.3d

Domain 3: Cumulative Assessment for Lessons 19–22

Fractions



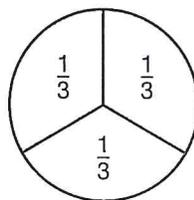
Getting the Idea

A **fraction** names part of a whole. The **numerator** is the top number in a fraction. It tells the number of equal parts included in the fraction.

The **denominator** is the bottom number in a fraction. It tells the total number of equal parts that make up the whole.

The circle shows 3 equal parts.

Each part is $\frac{1}{3}$ of the circle.



$$\frac{\text{number of shaded parts}}{\text{total number of equal parts}} \leftarrow \frac{2}{3}$$

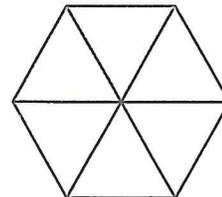
$\frac{2}{3}$ of the circle is shaded.

The fraction $\frac{2}{3}$ is read as *two-thirds*.

Example 1

What part of the hexagon is shaded?

How is the fraction read?



Strategy Find the denominator and the numerator.

Step 1

Count the total number of parts.

There are 6 parts. This is the denominator.

Step 2

Count the number of shaded parts.

There are 2 shaded parts. This is the numerator.

Step 3

Write the fraction.

$$\frac{\text{numerator}}{\text{denominator}} = \frac{2}{6}$$

Solution $\frac{2}{6}$ of the hexagon is shaded. It is read as *two-sixths*.

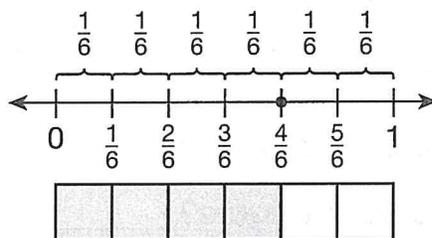
A fraction with 1 as its numerator is called a **unit fraction**.

All fractions are built from unit fractions, such as $\frac{1}{6}$.

For example, the number line below shows one whole from 0 to 1.

The whole is broken into 6 equal parts. Each equal part is $\frac{1}{6}$ of the whole.

There is a point located at $\frac{4}{6}$. So there are 4 parts of $\frac{1}{6}$ in $\frac{4}{6}$.



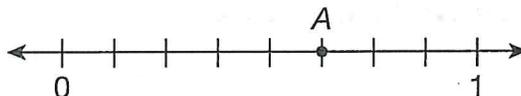
The number line shows a point at $\frac{4}{6}$.

The rectangle shows $\frac{4}{6}$ parts shaded.

The fraction $\frac{4}{6}$ is built by combining 4 of the unit fraction $\frac{1}{6}$.

Example 2

What fraction is located at point A on the number line?



Strategy Find how many equal parts the number line is divided into. Then find the denominator and the numerator.

Step 1

Count the number of equal parts between 0 and 1.

There are 8 parts. This is the denominator.

Step 2

Count the number of parts between 0 and point A.

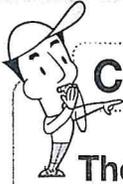
There are 5 parts. This is the numerator.

Step 3

Write the numerator over the denominator.

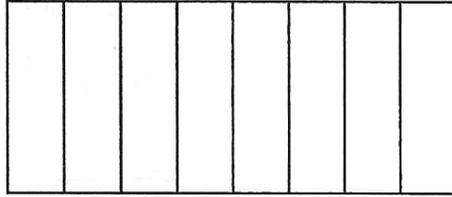
$$\frac{\text{numerator}}{\text{denominator}} = \frac{5}{8}$$

Solution Point A is located at $\frac{5}{8}$ on the number line.



Coached Example

The figure below represents a sandwich that was served for lunch. The shaded part shows the amount of the sandwich that was eaten.



What fraction of the sandwich was eaten?

How many equal parts make up the figure? _____

This is the _____ of the fraction.

How many parts of the figure are shaded? _____

This is the _____ of the fraction.

Write the fraction.

_____ ← numerator
 ← denominator

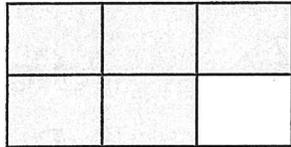
So, _____ of the sandwich was eaten.



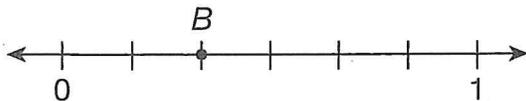
Lesson Practice • Part 1

Choose the correct answer.

1. What fraction of the figure is shaded?



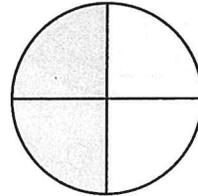
- A. $\frac{1}{6}$
 B. $\frac{2}{6}$
 C. $\frac{4}{6}$
 D. $\frac{5}{6}$
2. Which fraction has 5 for a numerator?
- A. $\frac{1}{4}$ C. $\frac{4}{7}$
 B. $\frac{3}{5}$ D. $\frac{5}{8}$
3. Where is point B located on the number line?



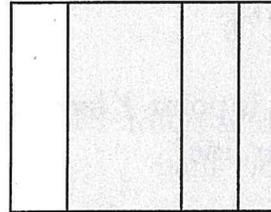
- A. $\frac{1}{6}$ C. $\frac{4}{6}$
 B. $\frac{2}{6}$ D. $\frac{5}{6}$

4. Which figure shows $\frac{3}{4}$ shaded?

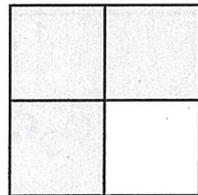
A.



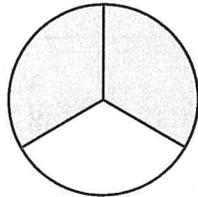
B.



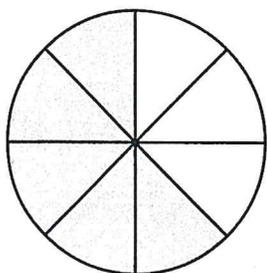
C.



D.

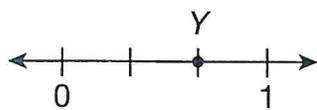


5. What fraction of the circle is shaded?



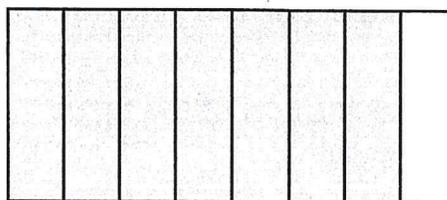
- A. $\frac{7}{8}$ C. $\frac{3}{8}$
 B. $\frac{5}{8}$ D. $\frac{1}{8}$

6. Where is point Y located on the number line?



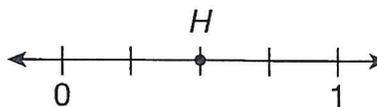
- A. $\frac{1}{4}$ C. $\frac{1}{2}$
 B. $\frac{1}{3}$ D. $\frac{2}{3}$

7. What fraction of the rectangle is shaded?



- A. $\frac{7}{8}$ C. $\frac{5}{8}$
 B. $\frac{6}{8}$ D. $\frac{1}{8}$

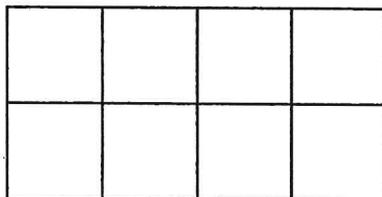
8. Where is point H located on the number line?



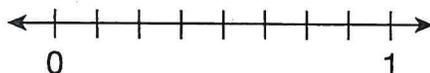
- A. $\frac{1}{4}$ C. $\frac{2}{3}$
 B. $\frac{2}{4}$ D. $\frac{3}{4}$

9. Lenny wants to show $\frac{3}{8}$ in two ways.

- A. Shade the rectangle below to show $\frac{3}{8}$.



- B. Draw point R at $\frac{3}{8}$ on the number line below.

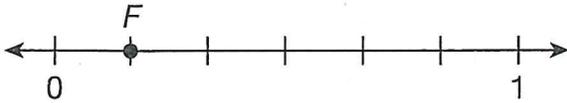




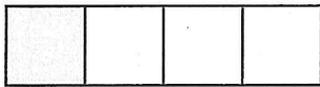
Lesson Practice • Part 2

Choose the correct answer.

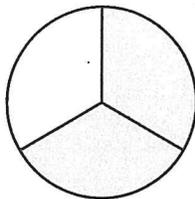
1. Where is point F located on the number line?



- A. $\frac{1}{6}$ C. $\frac{2}{6}$
 B. $\frac{1}{5}$ D. $\frac{2}{5}$
2. Which fraction of the rectangle is shaded?

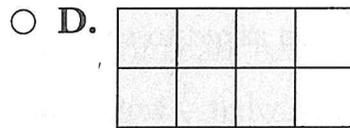
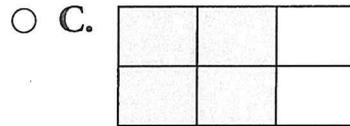
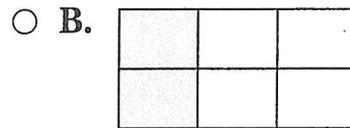
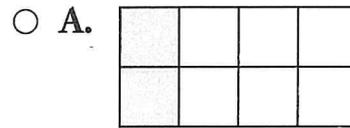


- A. $\frac{3}{4}$ C. $\frac{1}{3}$
 B. $\frac{2}{3}$ D. $\frac{1}{4}$
3. What fraction of the circle is shaded?



- A. $\frac{1}{3}$ C. $\frac{2}{3}$
 B. $\frac{1}{2}$ D. $\frac{3}{3}$

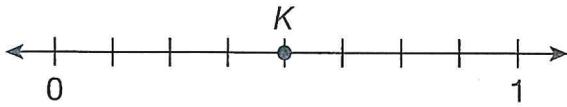
4. Which figure shows $\frac{2}{6}$ shaded?



5. LaToya split a circle into 8 sections. The sections have different sizes and she shaded 3 of the sections. Which sentence is true?

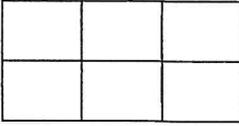
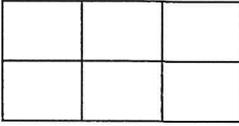
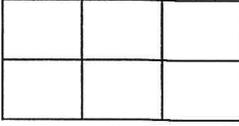
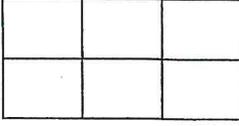
- A. LaToya shaded $\frac{3}{8}$ of the circle.
 B. LaToya shaded $\frac{5}{8}$ of the circle.
 C. It is not possible to know what fraction LaToya shaded because the sections are equal.
 D. It is not possible to know what fraction LaToya shaded because the sections are unequal.

6. Where is point K located on the number line?



- A. $\frac{2}{8}$
- B. $\frac{3}{8}$
- C. $\frac{4}{8}$
- D. $\frac{5}{8}$

7. Which represents a unit fraction?

- A. 
- B. 
- C. 
- D. 

8. Sam has been asked to show $\frac{3}{4}$ in two ways.

A. Describe what $\frac{3}{4}$ would look like if you were to draw a circle.

B. Draw point Z at $\frac{3}{4}$ on a number line.

Whole Numbers as Fractions

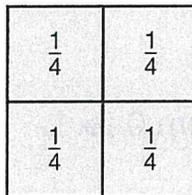


Getting the Idea

Fractions are a part of a whole. If you shade all parts, you can show a whole, or 1.

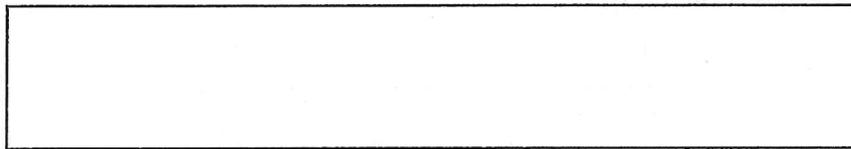
For example, the square below is divided into fourths.

Each part is $\frac{1}{4}$, and all four parts shaded show $\frac{4}{4}$.



Example 1

Kendra drew a rectangle. She wants to show the fraction $\frac{6}{6}$.

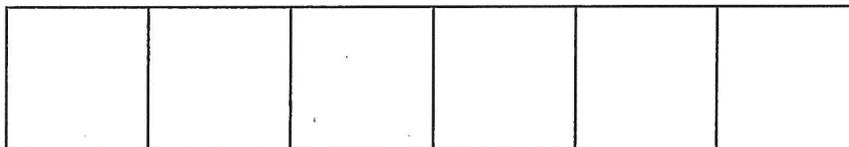


How can she show $\frac{6}{6}$ using her rectangle?

Strategy Divide the rectangle into sixths. Shade 6 parts.

Step 1

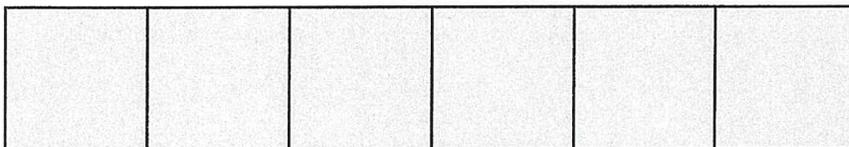
Divide Kendra's rectangle into 6 equal parts.



Step 2

Shade 6 parts of the rectangle.

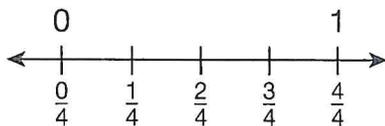
The entire rectangle should be shaded since $\frac{6}{6} = 1$.



Solution The answer is shown in Step 2.

You can use a number line to show a whole. This number line is from 0 to 1.

There are four equal parts between 0 and 1. Each part represents $\frac{1}{4}$. So, $\frac{4}{4} = 1$.



Example 2

How can you show $\frac{6}{6}$ as a whole on a number line?

Strategy Draw a number line.

Step 1

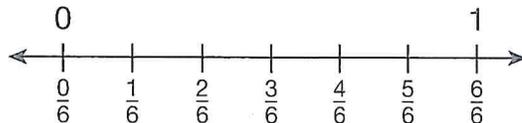
Draw a number line from 0 to 1.



Step 2

Divide the number line into 6 equal parts.

Label each part.



So, $\frac{6}{6} = 1$.

Solution $\frac{6}{6}$ is shown as a whole on the number line in Step 2.

You can show any whole number as a fraction.

When a whole number is the numerator and 1 is the denominator, the fraction is equal to the whole number. For example, $\frac{2}{1} = 2$.

Example 3

Mrs. Clark asked her class to write 8 as a fraction. What should her students write?

Strategy Write the whole number over 1.

Write 8 as the numerator.

Write 1 as the denominator.

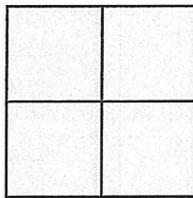
$\frac{8}{1}$ is the same as 8.

Solution Mrs. Clark's students should write $\frac{8}{1}$.



Coached Example

Write a fraction and a whole number for the shaded part of the square below.



Write a fraction for the square.

How many equal parts are in the square? _____

How many equal parts are shaded? _____

What fraction does the square show? _____

What whole number does the square show? $\frac{4}{4} =$ _____

The fraction is _____ and the whole number is _____.



Lesson Practice • Part 1

Choose the correct answer.

1. Which is the same as $\frac{3}{3}$?

- A. 3
- B. 2
- C. 1
- D. $\frac{1}{3}$

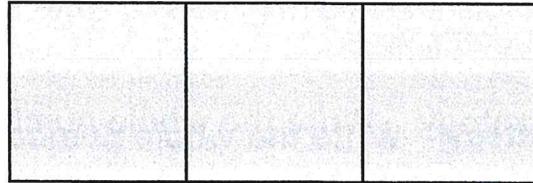
2. Which is another way to show the number 8?

- A. $\frac{8}{1}$
- B. $\frac{4}{4}$
- C. $\frac{8}{8}$
- D. $\frac{1}{8}$

3. Which fraction is equal to 1?

- A. $\frac{2}{1}$
- B. $\frac{2}{2}$
- C. $\frac{2}{3}$
- D. $\frac{2}{4}$

4. What fraction is shown by the picture below?



- A. $\frac{1}{3}$
- B. $\frac{2}{2}$
- C. $\frac{3}{3}$
- D. $\frac{3}{1}$

5. Which fraction is **not** equal to 1?

- A. $\frac{3}{3}$
- B. $\frac{5}{5}$
- C. $\frac{7}{7}$
- D. $\frac{9}{1}$

6. Which is another way to write the fraction $\frac{2}{2}$?

- A. $\frac{1}{2}$
- B. 1
- C. 2
- D. $\frac{2}{1}$

7. Which whole number is equal to $\frac{5}{1}$?

- A. 1
- B. 5
- C. 6
- D. 10

8. $\frac{10}{1} = \square$

- A. 10
- B. 9
- C. 5
- D. $\frac{1}{10}$

9. Mr. Torres asked his students to show $\frac{8}{8}$ with a rectangle and on a number line.

A. Shade the rectangle to show $\frac{8}{8}$.



B. Label the number line. Draw point A at $\frac{8}{8}$.





Lesson Practice Part 2

Choose the correct answer.

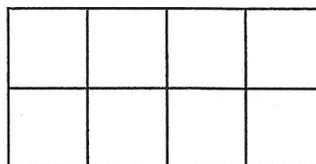
1. Which fraction is equal to 2?

- A. $\frac{4}{2}$
- B. $\frac{4}{4}$
- C. $\frac{4}{6}$
- D. $\frac{4}{8}$

2. Seth wrote a fraction that has the numerator being 3 times as many as the denominator. The sum of the numerator and denominator is 4. What fraction did Seth write?

- A. $\frac{1}{3}$
- B. $\frac{2}{2}$
- C. $\frac{3}{1}$
- D. $\frac{4}{1}$

3. What fraction is shown by the picture below?



- A. $\frac{1}{8}$
- B. $\frac{7}{8}$
- C. $\frac{8}{8}$
- D. $\frac{8}{1}$

4. Which fraction is the greatest?

- A. $\frac{2}{1}$
- B. $\frac{6}{2}$
- C. $\frac{3}{3}$
- D. $\frac{8}{4}$

5. How can you tell if a fraction is equal to 1?
- A. The numerator is greater than the denominator.
 - B. The denominator is greater than the numerator.
 - C. The number representing the denominator is 1.
 - D. The numerator is equal to the denominator.
6. Which whole number is equal to $\frac{7}{1}$?
- A. 8
 - B. 7
 - C. 6
 - D. 1
7. Which fraction is equal to 4?
- A. $\frac{8}{2}$
 - B. $\frac{12}{4}$
 - C. $\frac{12}{6}$
 - D. $\frac{24}{8}$
8. A fraction is equal to a whole number. The denominator is 1. Which sentence is true?
- A. The numerator must be a whole number.
 - B. The numerator cannot be a whole number.
 - C. The numerator cannot be equal to the denominator.
 - D. The numerator must be equal to the denominator.

9. Natalie has been asked to represent $\frac{6}{1}$ using a model and on a number line.

A. Describe what $\frac{6}{1}$ would look like using circles.

B. Draw point B at $\frac{6}{1}$ on a number line.

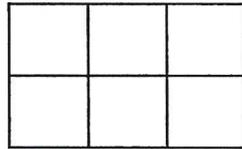
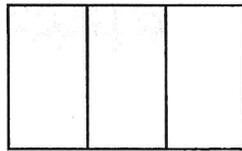
Equivalent Fractions



Getting the Idea

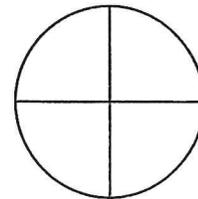
Fractions can have different numerators and denominators and have the same value. These fractions name the same parts of a whole and are called **equivalent fractions**.

For example, the picture below shows the equivalent fractions $\frac{2}{3}$ and $\frac{4}{6}$.



Example 1

Write two equivalent fractions that name the shaded parts of the circle.



Strategy Look at the shaded parts of the circle in two ways.

Step 1

Count the number of equal parts and the number of shaded parts.

There are 4 equal parts. There are 2 shaded parts.

So, $\frac{2}{4}$ of the circle is shaded.

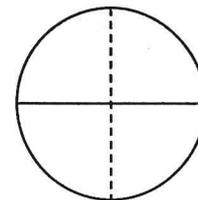
Step 2

Look at the shaded parts another way.

The two shaded parts are half of the circle.

One half of the circle is shaded.

So, $\frac{1}{2}$ of the circle is shaded.



Solution The fractions $\frac{1}{2}$ and $\frac{2}{4}$ are equivalent fractions that name the shaded parts of the circle.

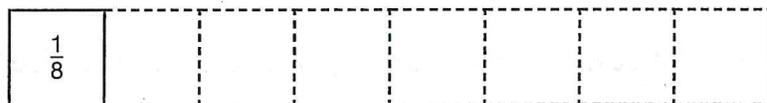
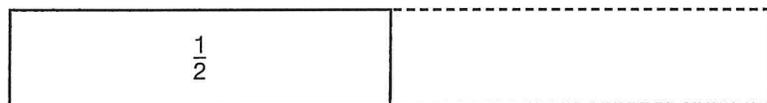
Example 2

Are $\frac{1}{2}$ and $\frac{4}{8}$ equivalent fractions?

Strategy Use fraction strips.

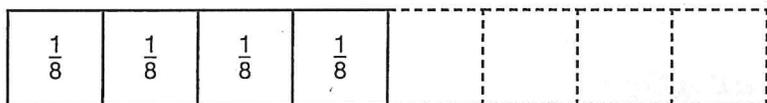
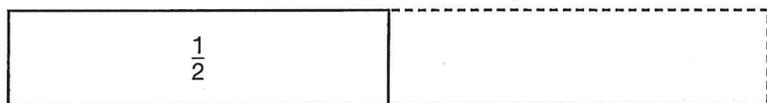
Step 1

Use the fraction strips for $\frac{1}{2}$ and $\frac{1}{8}$.



Step 2

Put together four $\frac{1}{8}$ strips to equal the length of the $\frac{1}{2}$ strip.



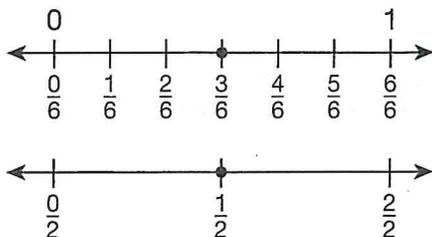
They are the same length, so the fractions are equivalent.

$$\frac{1}{2} = \frac{4}{8}$$

Solution Yes, $\frac{1}{2}$ and $\frac{4}{8}$ are equivalent fractions.

You can use a number line to find equivalent fractions.

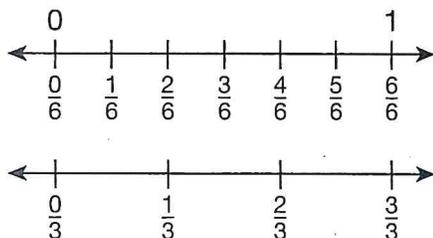
The fractions $\frac{1}{2}$ and $\frac{3}{6}$ are at the same point on the number lines.



So, $\frac{1}{2} = \frac{3}{6}$.

Example 3

Rachael drew the number lines below.



Which fraction is equivalent to $\frac{2}{6}$?

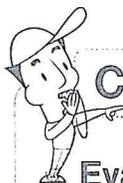
Strategy Find the fraction at the same point on the number line as $\frac{2}{6}$.

Find $\frac{2}{6}$ on the number line.

$\frac{1}{3}$ is at the same point as $\frac{2}{6}$.

So, $\frac{1}{3} = \frac{2}{6}$.

Solution $\frac{1}{3}$ is equivalent to $\frac{2}{6}$.



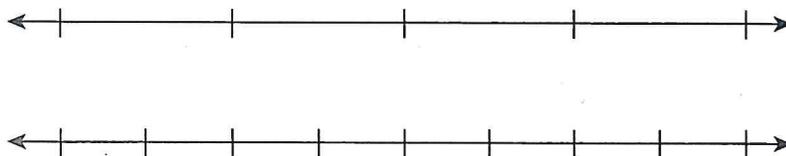
Coached Example

Evan thinks that $\frac{2}{4}$ and $\frac{4}{8}$ are equivalent fractions.

Is Evan correct?

Draw number lines showing fourths and eighths.

Label the fourths. Then label the eighths.



Are $\frac{2}{4}$ and $\frac{4}{8}$ at the same point on the number line? _____

Evan is _____.

$\frac{2}{4}$ and $\frac{4}{8}$ _____ equivalent fractions.



Lesson Practice • Part 1

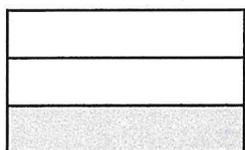
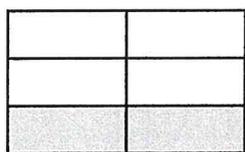
Choose the correct answer.

1. Which fraction is equivalent to $\frac{1}{4}$?



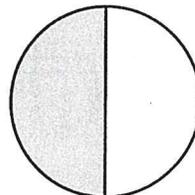
- A. $\frac{1}{8}$
- B. $\frac{2}{8}$
- C. $\frac{4}{8}$
- D. $\frac{6}{8}$

2. Which fraction is equivalent to $\frac{2}{6}$?

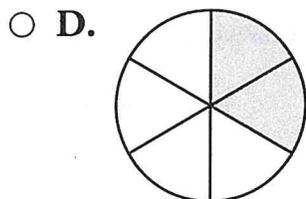
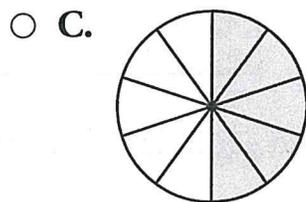
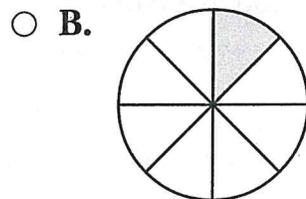
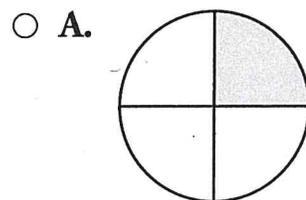


- A. $\frac{1}{9}$
- B. $\frac{1}{4}$
- C. $\frac{1}{3}$
- D. $\frac{1}{2}$

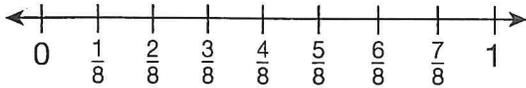
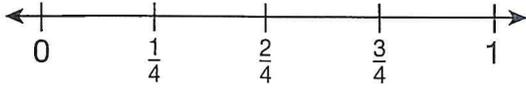
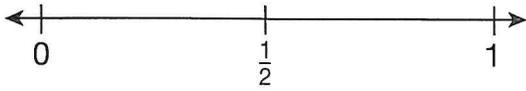
3. Look at the circle below.



Which also shows $\frac{1}{2}$ of the circle shaded?

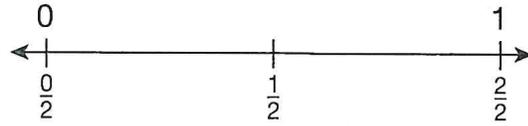


4. Which fraction is equivalent to $\frac{3}{4}$?



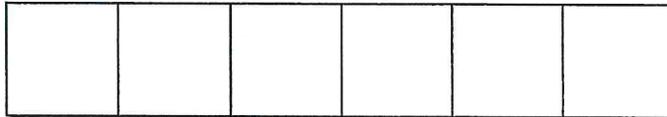
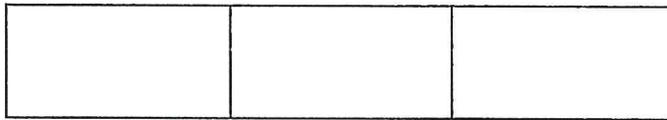
- A. $\frac{2}{8}$
- B. $\frac{3}{8}$
- C. $\frac{1}{2}$
- D. $\frac{6}{8}$

5. Which two fractions are equivalent?



- A. $\frac{2}{2}$ and $\frac{3}{3}$
- B. $\frac{2}{2}$ and $\frac{2}{3}$
- C. $\frac{1}{2}$ and $\frac{2}{3}$
- D. $\frac{1}{2}$ and $\frac{1}{3}$

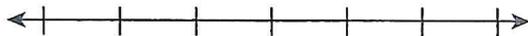
6. Look at the models below.



A. Write two equivalent fractions for the models.

_____ and _____

B. Show the two equivalent fractions on the number lines below.

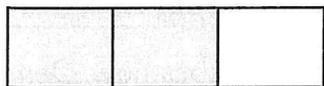




Lesson Practice • Part 2

Choose the correct answer.

1. Look at the rectangle below.



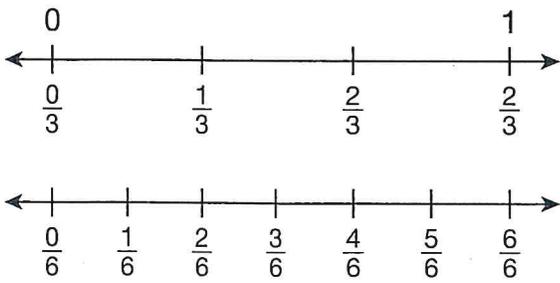
Which also shows $\frac{2}{3}$ of the rectangle shaded?

- A.
- B.
- C.
- D.

2. Which shows a fraction that is **not** equivalent to any of the others?

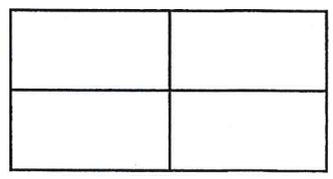
- A.
- B.
- C.
- D.

3. Which fraction is equivalent to $\frac{1}{3}$?



- A. $\frac{1}{6}$
- B. $\frac{2}{6}$
- C. $\frac{3}{6}$
- D. $\frac{4}{6}$

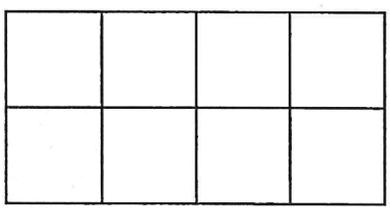
4. Denise drew this model to represent $\frac{3}{4}$.



Which describes how Denise can draw a rectangle that shows an equivalent fraction?

- A. Draw a rectangle exactly the same below the existing rectangle.
- B. Add 2 more sections and shade both of them.
- C. Add 2 more sections and shade 1 of them.
- D. Draw a rectangle with the same number of parts and shade 1 section.

5. Look at the models below.



- A. Write an equivalent fraction for the model. The denominator must be less than the denominator represented in the model.

- B. Draw the equivalent fraction on a number line and label it point C.

Compare Fractions



Getting the Idea

You can use models and number lines to help you compare fractions.

Use these symbols when comparing fractions.

$>$ means **is greater than**.

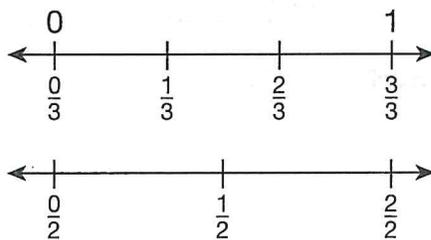
$<$ means **is less than**.

$=$ means **is equal to**.

You can compare fractions that have the same numerator or the same denominator.

When you compare, it is important that the wholes are the same size.

For example, $\frac{1}{3}$ is less than $\frac{1}{2}$ as is shown on the number lines below.



However, $\frac{1}{3}$ of a watermelon is a greater amount than $\frac{1}{2}$ of an orange, because a watermelon is larger than an orange.

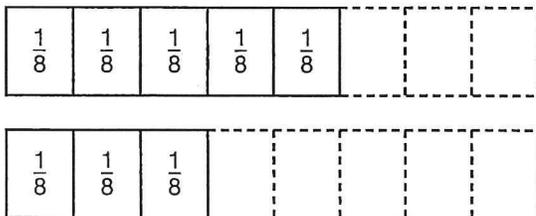
Example 1

Which symbol makes this sentence true? Write $>$, $<$, or $=$.

$$\frac{5}{8} \bigcirc \frac{3}{8}$$

Strategy Use fraction strips to compare $\frac{5}{8}$ and $\frac{3}{8}$.

Show $\frac{5}{8}$ and $\frac{3}{8}$ with fraction strips.



Compare the fractions.

$\frac{5}{8}$ has 5 parts. $\frac{3}{8}$ has 3 parts.

5 parts is more than 3 parts.

So, $\frac{5}{8}$ is greater than $\frac{3}{8}$.

Solution $\frac{5}{8} > \frac{3}{8}$

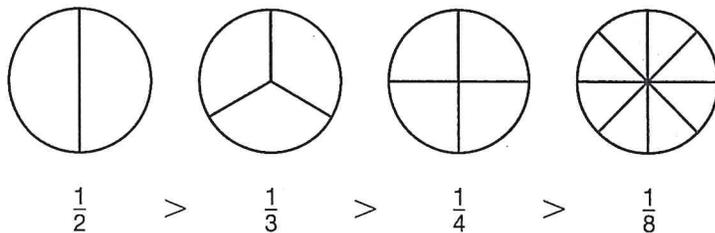
When you compare fractions with the same denominators, the fraction with the greater numerator is the greater fraction.

In Example 1, 5 is greater than 3, so $\frac{5}{8}$ is greater than $\frac{3}{8}$.

When you compare fractions with the same numerators, the fraction with the lesser denominator is the greater fraction.

For example, all the fractions shown below have 1 as their numerator.

As the number of equal parts (the denominator) increases, the size of each part decreases.



Example 2

Which symbol makes this sentence true? Write $>$, $<$, or $=$.

$$\frac{2}{3} \bigcirc \frac{2}{8}$$

Strategy Compare the denominators.

Step 1

The numerators are the same.

Step 2

Compare the denominators.

$$3 < 8$$

The lesser denominator is the greater fraction.

$\frac{2}{3}$ is the greater fraction.

Step 3

Choose the correct symbol.

$>$ means is greater than.

Solution $\frac{2}{3} \bigcirc \frac{2}{8}$

Example 3

Ted read $\frac{2}{4}$ of his book. Lisa read $\frac{2}{3}$ of the same book. Who read the greater amount of the book?

Strategy Compare the denominators.

Step 1

Both of the numerators are 2.

Step 2

Compare the denominators.

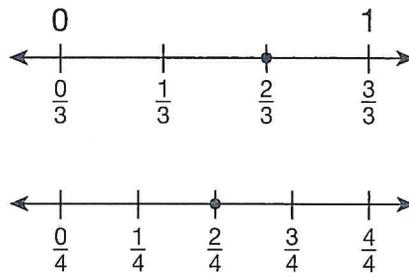
$$4 > 3$$

The fraction with the lesser denominator is the greater fraction.

$$\frac{2}{3} > \frac{2}{4}$$

Solution Lisa read more of the book.

Here are the fractions from Example 3 on number lines.



The fraction farther to the right is the greater fraction.

The fraction farther to the left is the lesser fraction.

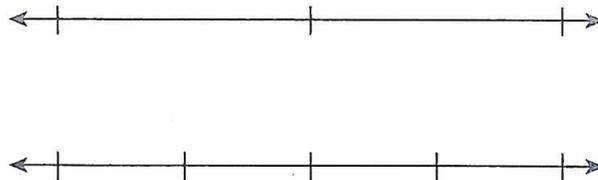


Coached Example

Callie drew a circle. Callie shaded $\frac{1}{2}$ of the circle. Will shaded $\frac{1}{4}$ of the circle. Who shaded more of the circle?

Draw number lines divided into halves and fourths.

Draw points at $\frac{1}{2}$ and $\frac{1}{4}$ on the number lines.



Compare the fractions.

The fraction farther to the right is the _____ fraction.

So, _____ > _____.

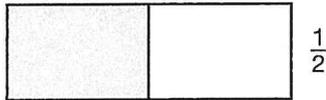
_____ shaded more of the circle than _____.



Lesson Practice • Part 1

Choose the correct answer.

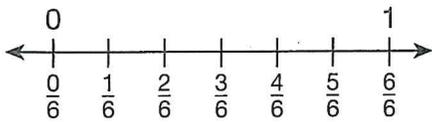
1. Look at the two fractions below.



Which sentence is true?

- A. $\frac{1}{3} = \frac{1}{2}$
 B. $\frac{1}{3} > \frac{1}{2}$
 C. $\frac{1}{2} < \frac{1}{3}$
 D. $\frac{1}{2} > \frac{1}{3}$
2. Which symbol belongs in the \bigcirc to make the sentence true?

$$\frac{4}{6} \bigcirc \frac{2}{6}$$

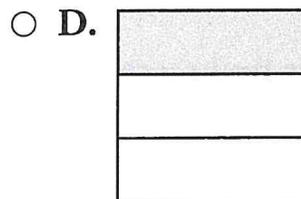
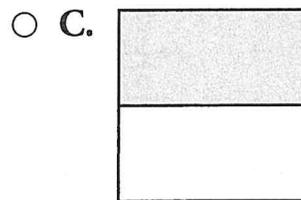
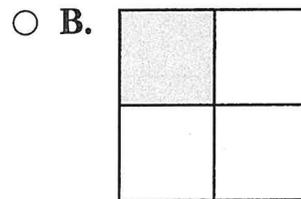
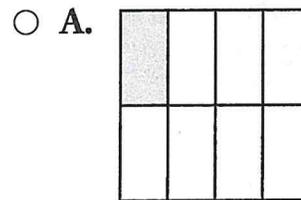


- A. $>$
 B. $<$
 C. $=$
 D. $+$

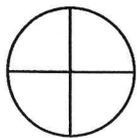
3. Which is the least fraction?

- A. $\frac{1}{8}$
 B. $\frac{2}{8}$
 C. $\frac{3}{8}$
 D. $\frac{4}{8}$

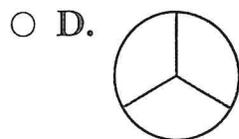
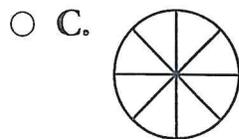
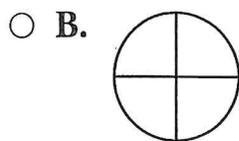
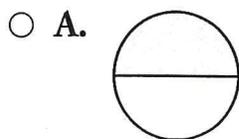
4. Which is the greatest fraction?



5. The circle below is $\frac{1}{4}$ shaded.

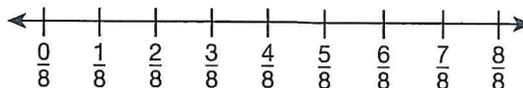
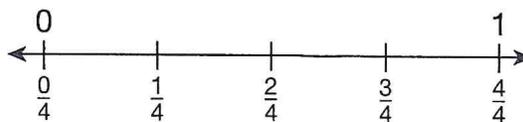


Which circle has less than $\frac{1}{4}$ shaded?



6. Which symbol belongs in the \bigcirc to make the sentence true?

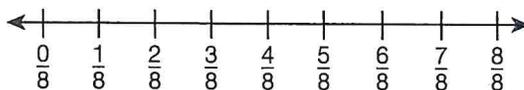
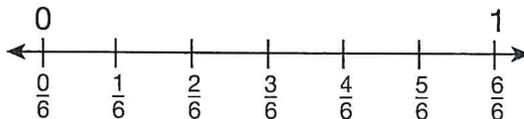
$$\frac{3}{4} \bigcirc \frac{3}{8}$$



- A. $>$
 B. $<$
 C. $=$
 D. $+$

7. Brenda has read $\frac{5}{6}$ of a book. Sylvia has read $\frac{5}{8}$ of the same book.

A. Circle $\frac{5}{6}$ and $\frac{5}{8}$ on the number lines below.



B. Who has read more of the book? Explain your answer.



Lesson Practice • Part 2

Choose the correct answer.

1. Which fraction is less than $\frac{1}{4}$?

- A. $\frac{1}{3}$
 B. $\frac{1}{2}$
 C. $\frac{2}{4}$
 D. $\frac{1}{6}$

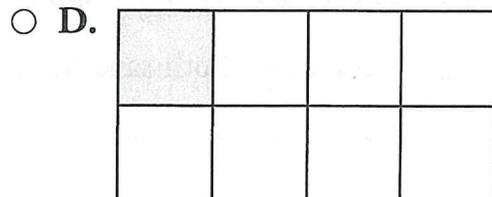
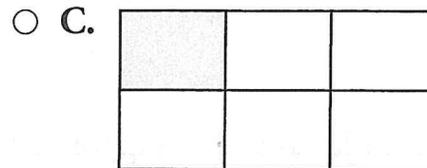
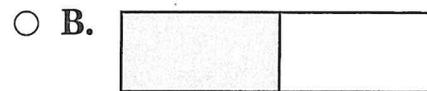
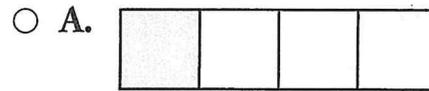
2. John watched $\frac{1}{2}$ of a movie. Maria watched $\frac{1}{2}$ of a different movie. Which sentence is true?

- A. John watched for a longer period of time than Maria.
 B. Maria watched for a longer period of time than John.
 C. They watched for the same amount of time.
 D. There is not enough information to know who watched longer.

3. Which sentence is true?

- A. $\frac{3}{6} > \frac{2}{6}$
 B. $\frac{2}{6} = \frac{3}{6}$
 C. $\frac{2}{6} > \frac{3}{6}$
 D. $\frac{3}{6} < \frac{2}{6}$

4. Which shows a fraction greater than $\frac{1}{3}$?



5. Choose the number that makes this sentence true.

$$\frac{2}{6} > \frac{2}{\square}$$

- A. 8
 B. 6
 C. 4
 D. 3

6. Which symbol belongs in the \bigcirc to make the sentence true?

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

- A. $>$
 B. $<$
 C. $=$
 D. $+$

7. April read $\frac{2}{3}$ of a book. Kan read $\frac{2}{3}$ of the same copy of the book.

Which sentence is true?

- A. April read a greater number of pages than Kan.
 B. Kan read a greater number of pages than April.
 C. They read the same number of pages.
 D. There is not enough information to know who read more pages.

8. Three friends are saving for vacation. They each want to save an equal amount of money. Ana saved $\frac{1}{3}$, Beth saved $\frac{1}{6}$, and Carla saved $\frac{3}{6}$.

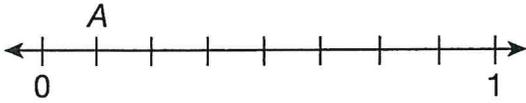
A. Did Ana or Beth save more money? Explain your answer.

B. Did Beth or Carla save more money? Explain your answer.

C. Did Ana or Carla save more money? Explain your answer.

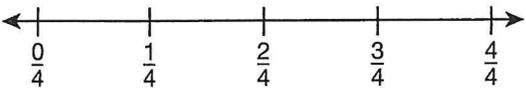
Domain 3: Cumulative Assessment for Lessons 19–22

1. Where is point *A* located on the number line?



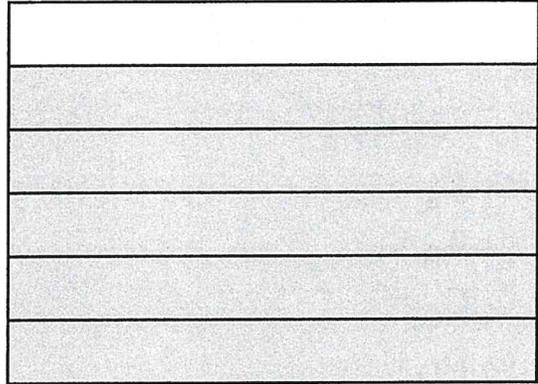
- A. $\frac{1}{8}$
- B. $\frac{3}{8}$
- C. $\frac{5}{8}$
- D. $\frac{7}{8}$

2. Which two fractions are equivalent?



- A. $\frac{1}{3}$ and $\frac{1}{4}$
- B. $\frac{1}{3}$ and $\frac{2}{4}$
- C. $\frac{2}{3}$ and $\frac{3}{4}$
- D. $\frac{3}{3}$ and $\frac{4}{4}$

3. What fraction of the rectangle is shaded?

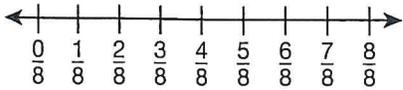
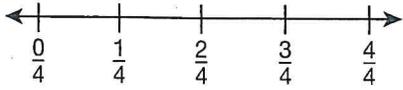


- A. $\frac{3}{6}$
- B. $\frac{4}{6}$
- C. $\frac{5}{6}$
- D. $\frac{6}{6}$

4. Which is the same as $\frac{8}{8}$?

- A. 1
- B. $\frac{1}{8}$
- C. $\frac{8}{1}$
- D. 8

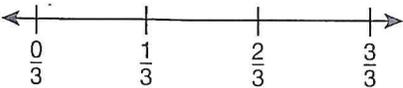
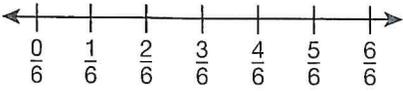
5. Which symbol belongs in the \bigcirc to make the sentence true?



$$\frac{1}{8} \bigcirc \frac{1}{4}$$

- A. $>$
 B. $<$
 C. $=$
 D. $+$

6. Which fraction is equivalent to $\frac{4}{6}$?



- A. $\frac{2}{3}$
 B. $\frac{1}{3}$
 C. $\frac{1}{4}$
 D. $\frac{1}{6}$

7. Which symbol belongs in the \bigcirc to make the sentence true?

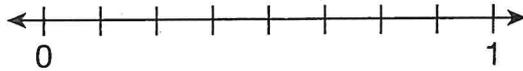
$$\frac{3}{4} \bigcirc \frac{1}{4}$$

- A. $>$
 B. $<$
 C. $=$
 D. $+$

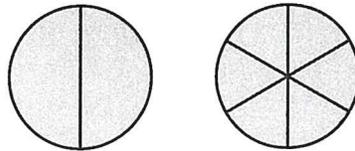
8. Which is another way to represent the number 6?

- A. $\frac{1}{6}$
 B. $\frac{6}{6}$
 C. $\frac{6}{1}$
 D. $\frac{9}{1}$

9. Draw point C at $\frac{5}{8}$ on the number line below.



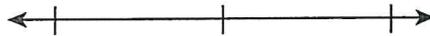
10. Sergio made a drawing of two circles to show two fractions.



- A. Write two equivalent fractions for Sergio's models.

_____ and _____

- B. Show the two equivalent fractions on the number lines below.





Domain 4

Measurement and Data

- | | |
|---|--|
| Lesson 23 Time
MGSE3.MD.1 | Lesson 29 Compare Perimeter
and Area
MGSE3.MD.8 |
| Lesson 24 Mass
MGSE3.MD.2 | Lesson 30 Picture Graphs
MGSE3.MD.3 |
| Lesson 25 Capacity
MGSE3.MD.2 | Lesson 31 Bar Graphs
MGSE3.MD.3 |
| Lesson 26 Perimeter
MGSE3.MD.8 | Lesson 32 Measure Lengths
MGSE3.MD.4 |
| Lesson 27 Understand Area
MGSE3.MD.5a, MGSE3.MD.5b,
MGSE3.MD.6 | Lesson 33 Line Plots
MGSE3.MD.4 |
| Lesson 28 Area of Rectangles
MGSE3.MD.7a, MGSE3.MD.7b,
MGSE3.MD.7c | |

Domain 4: Cumulative Assessment for Lessons 23–33

Time



Getting the Idea

A clock is used to tell and measure time.

On an analog clock, the short hand points to the **hour**.

The long hand points to the **minute**.

The minute hand moves to the next number every 5 minutes.

The hour hand moves to the next number every 60 minutes or 1 hour.

Example 1

The clock shows the time that Aiden's bus picks him up for school.



At what time does Aiden's bus pick him up?

Strategy Look at the hands of the clock.

Step 1 Look at the short hand to tell the hour.

The hand is between 8 and 9, so it is after 8 o'clock.

Step 2 Look at the long hand to tell the minutes.

The minute hand is between 2 and 3.

Skip count the minutes by 5s from 8:00 to 8:10.

Then count the minutes by 1s from 8:10 to the minute hand.

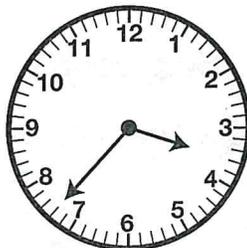
It is 12 minutes past the hour.

Solution Aiden's bus picks him up at 8:12.

The time on the clock can be read as eight twelve or twelve minutes past eight.

Example 2

The clock shows the time that Margie got home from school today.



At what time did Margie get home from school?

Strategy Look at the hands of the clock.

Step 1

Look at the hour hand.

It is between 3 and 4, so it is after 3 o'clock.

Step 2

Look at the minute hand.

When the minute hand points to the 7, it is 35 minutes past the hour.

The minute hand points to the second mark after 7.

Count forward 2 minutes from 35.

It is 37 minutes past the hour.

Solution Margie got home at 3:37 today.

The time on the clock is read as three thirty-seven or thirty-seven minutes past three or twenty-three minutes to four.

Midnight is 12:00 A.M. Noon is 12:00 P.M.

The hours between midnight and noon are called A.M.

The hours between noon and midnight are called P.M.

Elapsed time is the amount of time from the start to the finish of an event.

For example, you started a quiz at 10:04 A.M. and finished the quiz at 10:15 A.M.

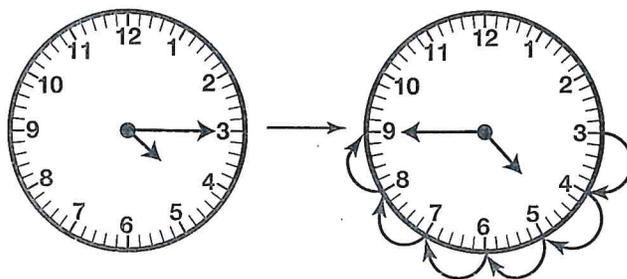
The elapsed time is 11 minutes.

Example 3

Regina started writing in her journal at 4:15 P.M. She finished writing at 4:45 P.M. How much time was Regina writing in her journal?

Strategy Use an analog clock. Skip count.

Step 1 Show 4:15 on the clock. Then move the minute hand to 4:45.



Step 2 Skip count by 5s.

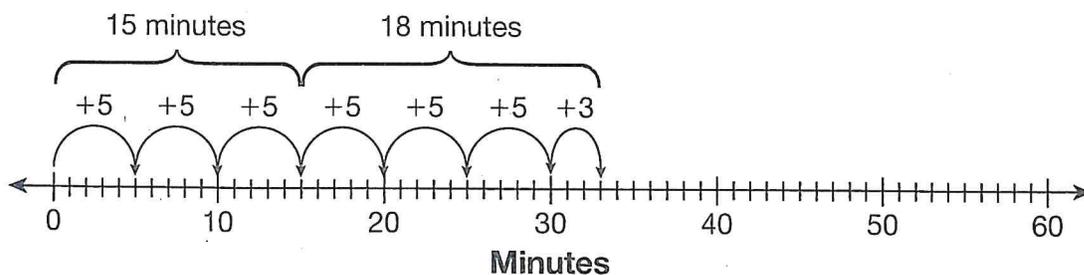
5, 10, 15, 20, 25, 30

So, 30 minutes, or $\frac{1}{2}$ hour, has passed.

Solution Regina was writing in her journal for 30 minutes, or $\frac{1}{2}$ hour.

You can use a number line to help you add or subtract to solve word problems involving time.

Last night, Rose weeded her garden for 15 minutes. Then she watered for 18 minutes. How much time did she tend to her garden? Show the problem on a number line.



$$15 \text{ minutes} + 18 \text{ minutes} = 33 \text{ minutes}$$

Rose tended to her garden for 33 minutes last night.

Example 4

Nia studied 45 minutes for her spelling test. Mike studied 15 minutes for the same test. How much longer did Nia study than Mike?

Strategy Use a number line.

Step 1

Make a number line from 0 to 60.

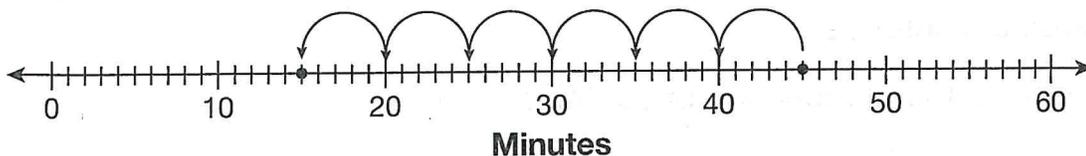
Draw a point at 45 minutes.

Draw another point at 15 minutes.



Step 2

Count back or subtract to find the difference in times.



$$45 \text{ minutes} - 15 \text{ minutes} = 30 \text{ minutes}$$

Solution Nia studied 30 minutes longer for the math test than Mike.



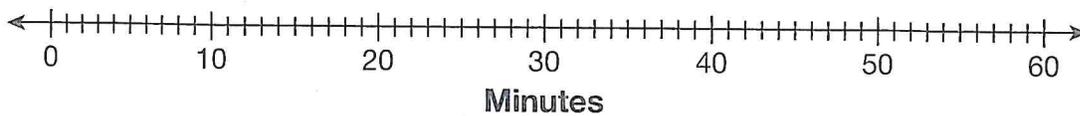
Coached Example

Alyssa got up at 7:10 A.M. She has to be ready by 7:55 A.M. for the bus. How much time does Alyssa have to get ready before the bus arrives?

Use a number line to find the time difference.

7:10 A.M. is _____ minutes after 7, so make a point at _____ minutes.

7:55 A.M. is _____ minutes after 7, so make another point at _____ minutes.



Find the time difference.

Count back on the number line or subtract.

55 minutes – 10 minutes = _____ minutes

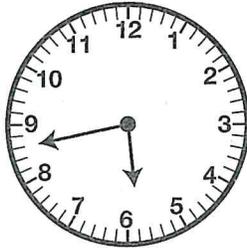
Alyssa has _____ minutes to get ready before the bus arrives.



Lesson Practice • Part 1

Choose the correct answer.

1. The clock shows the time that Quincy finished football practice.

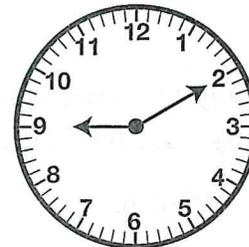


What time did Quincy finish football practice?

- A. 5:28 C. 6:43
 B. 5:43 D. 8:28
2. Willa's ballet class starts at 9:15. Which is **not** a way to read the time when ballet class starts?
- A. nine fifteen
 B. half past nine
 C. a quarter past nine
 D. fifteen minutes after nine
3. Glenn started studying at 12:23 P.M. He finished at 12:58 P.M. How long did Glenn study?
- A. 5 minutes
 B. 15 minutes
 C. 25 minutes
 D. 35 minutes

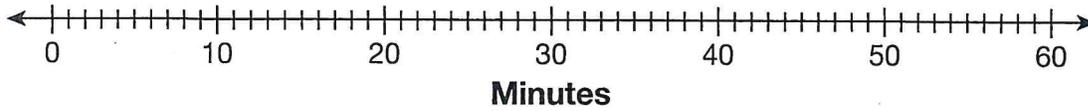
Use the clock below for questions 4 and 5.

The clock shows the time that Ed got on the subway for his trip to the dentist's office.



4. What time did Ed get on the subway?
- A. 8:10
 B. 8:01
 C. 9:10
 D. 9:30
5. Ed rode the subway for 25 minutes. Then he walked for 13 minutes to get to the office. How long was Ed's trip to the dentist?
- A. 38 minutes
 B. 28 minutes
 C. 25 minutes
 D. 12 minutes

Use the number line to help you solve questions 6 and 7.

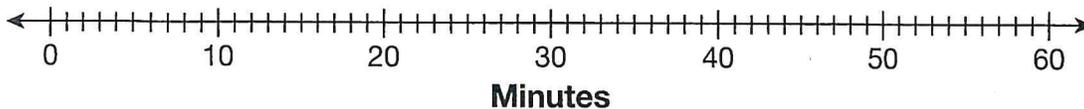


6. Before dinner, Alicia watched a show for 30 minutes. Then she played with her dog for 17 minutes. How much longer did Alicia watch the show than play with her dog?
- A. 13 minutes C. 23 minutes
 B. 18 minutes D. 47 minutes
7. For his daily exercise, Howie ran for 22 minutes. Then he walked for 5 minutes. How many minutes did he exercise in all?
- A. 11 minutes C. 17 minutes
 B. 15 minutes D. 27 minutes
8. The clock shows the time some students have afternoon gym class.



- A. What time do the students have gym class? Include A.M. or P.M.

- B. During gym class the students did sit-ups for 3 minutes. Then they danced for 42 minutes.



How long is gym class, in minutes?



Lesson Practice • Part 2

Choose the correct answer.

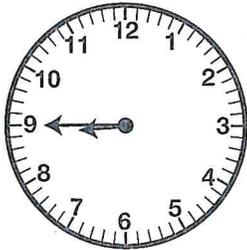
Use the clock below for questions 1 and 2.

The clock shows the time that Alicia awoke.



- What time did Alicia awake?
 - A. 6:10
 - B. 6:26
 - C. 6:34
 - D. 7:26
- Alicia had to leave for school 40 minutes after she awoke. At what time did Alicia have to leave for school?
 - A. 7:54
 - B. 7:14
 - C. 6:38
 - D. 5:54
- Jordyn made a phone call at 7:17. The phone call ended at 7:41. How long was the phone call?
 - A. 24 minutes
 - B. 34 minutes
 - C. 36 minutes
 - D. 46 minutes
- It takes Oscar 27 minutes to deliver newspapers on Saturday. It takes him 55 minutes to deliver newspapers on Sunday. How much longer does it take Oscar to deliver newspapers on Sunday?
 - A. 28 minutes
 - B. 38 minutes
 - C. 72 minutes
 - D. 82 minutes
- Brendan read a book for 35 minutes. Next, he spoke on the phone for 10 minutes. Then he read for another 25 minutes. How much time did Brendan spend reading or speaking on the phone?
 - A. 35 minutes
 - B. 50 minutes
 - C. 60 minutes
 - D. 70 minutes

6. Which is **not** a way to read the time shown on the clock?

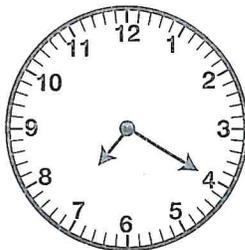


- A. quarter to nine
- B. forty-five minutes after eight
- C. eight forty-five
- D. quarter past eight

7. Jill wants to jog on the treadmill for 1 hour. She has been jogging for 37 minutes. How much more time does Jill need to achieve her goal?

- A. 23 minutes
- B. 33 minutes
- C. 63 minutes
- D. 97 minutes

8. The clock shows the time that Puppy Daycare opens.



- A. What time does Puppy Daycare open? Include A.M. or P.M.

- B. The first dog arrives 15 minutes after the opening time. The second dog arrives 10 minutes after the first. What time does the second dog arrive?
