

Learning Recovery

Grade 3 Summer Packet

Grade 3 Mission 5 Lessons 1-29 (29 lessons)

Fractions as Numbers

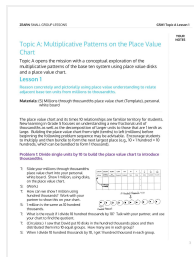
Students should complete one of the two sections below for each Mission:



Section One

Complete with all digital lessons

- Student Notes
- Exit Tickets



Section Two

If internet access is not available,
complete paper-based work

- Problem Sets
- Homework

Mission 5: Fractions as Numbers

Section One: Student Notes and Exit Tickets

To complete with all digital lessons

Are you ready to
➔EARN?

Mission 5

Fractions as Numbers

Name: _____

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Fourth Edition

Lesson 1 G:3 M:5	Fraction Folds
	ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐ Class: _____

You will need scissors and a centimeter ruler for this lesson.

EXTRA WORKSPACE

- 1 Use scissors to cut out these shapes.



EXTRA WORKSPACE



Lesson 1
G:3 M:5

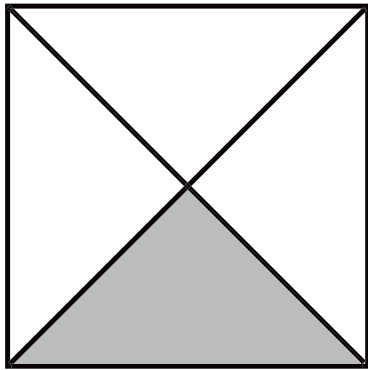
EXIT TICKET

Name: _____ Date: _____

Complete: ☐

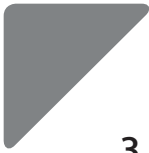
Class: _____

1. Name the fraction that is shaded: _____



2. Estimate to partition the rectangle into thirds.



- 
3. A plumber has 12 feet of pipe. He cuts it into pieces that are each 3 feet in length. What fraction of the pipe would one piece represent? (Use your strip from the lesson to help you.)

SHOW YOUR WORK



Lesson 2

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

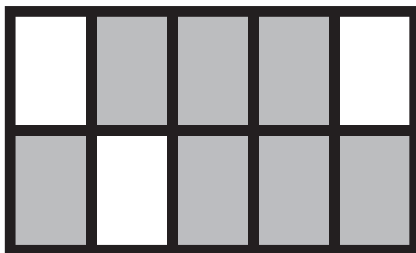
Complete: ☐

Class: _____

1. Circle the model that correctly shows 1 third shaded.




2.



There are _____ equal parts in all. _____ are shaded.



- 
3. Michael bakes a piece of garlic bread for dinner. He shares it equally with his 3 sisters. Show how Michael and his 3 sisters can each get an equal share of the garlic bread.

SHOW YOUR WORK



Lesson 3 G:3 M:5	Down to the Unit
	ZEARN STUDENT NOTES

Name: _____ Date: _____

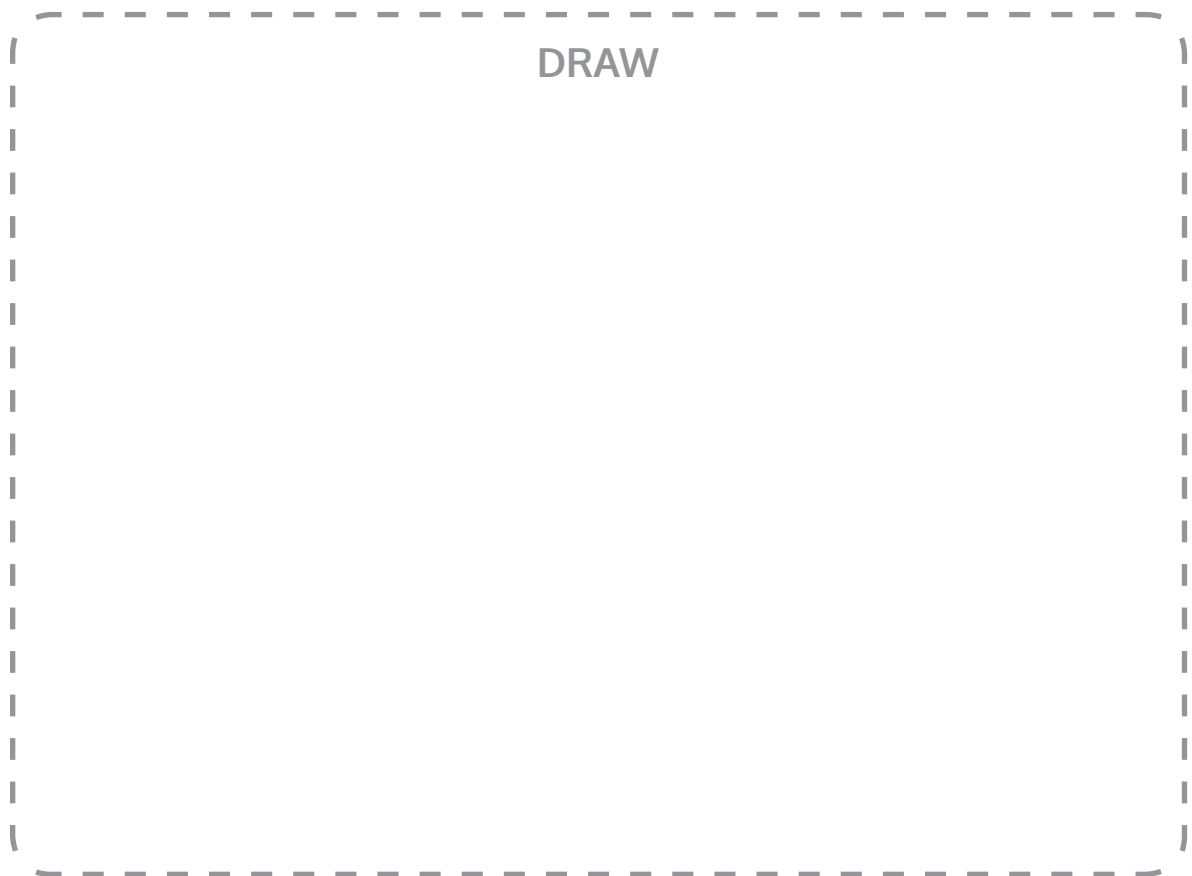
Complete: ☐

Class: _____

1 Use scissors to cut out the rectangle and the circle on the last page.

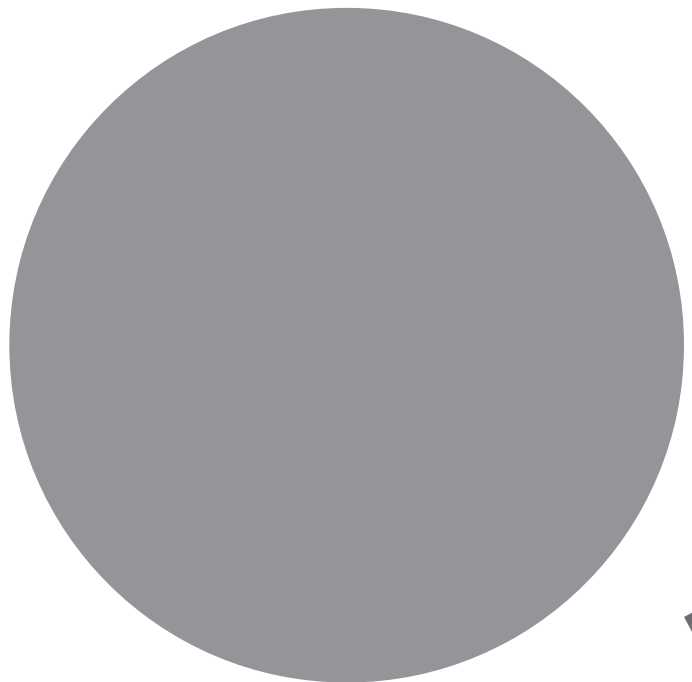
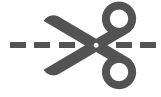
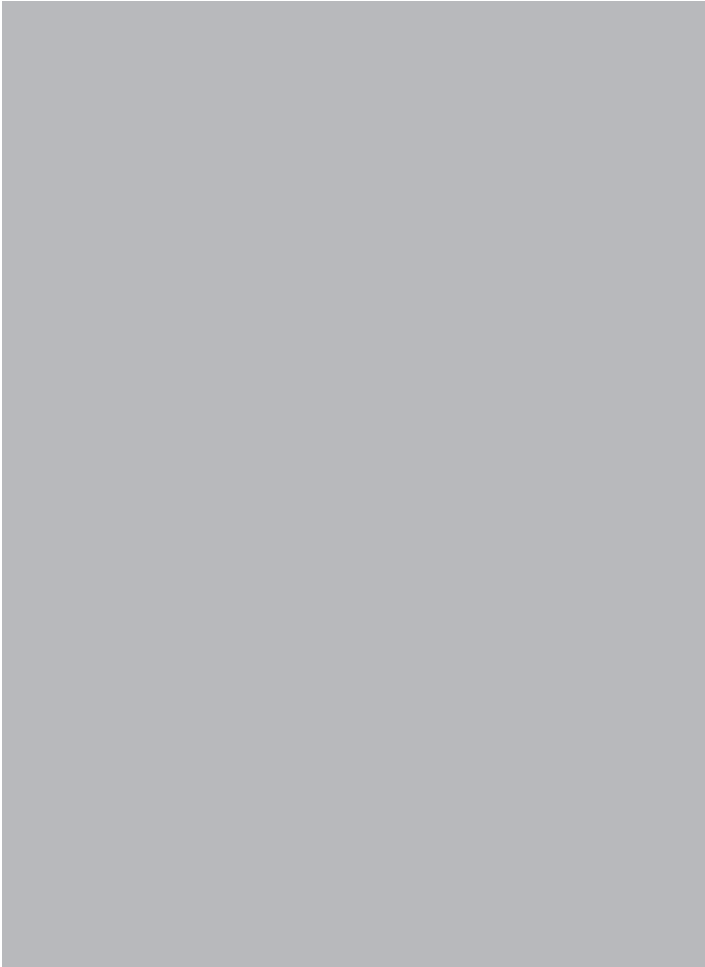
2 Draw a line segment and split it into 4 equal parts. Then, trace over 3 of the parts with your pencil.

DRAW



EXTRA WORKSPACE

- 1 Use scissors to cut out the rectangle and the circle.



Lesson 3

G:3 M:5

EXIT TICKET

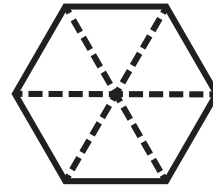
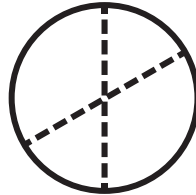
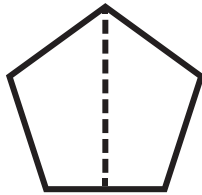
Name: _____ Date: _____


Complete: ☐

Class: _____

1.  _____ sevenths are shaded.

2. Circle the shapes that are divided into equal parts.



- 
3. Steven wants to equally share his pizza with his 3 sisters. What fraction of the pizza does he and each sister receive?

SHOW YOUR WORK

He and each sister receive _____.



Lesson 4
G:3 M:5

EXIT TICKET

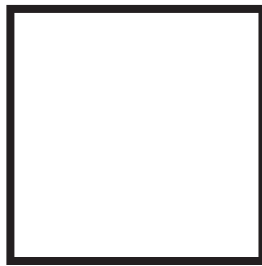
Name: _____ Date: _____

Complete: ☐

Class: _____

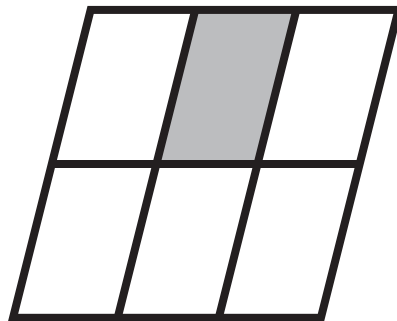
1. Each shape is 1 whole. Estimate to equally partition the shape and shade to show the given fraction.

a. 1 fourth



b. 1 fifth

2. The shape represents 1 whole. Write the fraction for the shaded part.



The shaded part is

_____.



Lesson 5 G:3 M:5	You Know: Unit!
	ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐ Class: _____

- 1 Draw a rectangle. Partition it into 8 equal parts. Shade 1 part.

What fraction is shaded? Express your answer in two ways: unit form and numerically.

DRAW

The shaded fraction is

=

Unit Form

Numerical Form



EXTRA WORKSPACE



Lesson 5

G:3 M:5


EXIT TICKET

Name: _____ Date: _____

Complete: ☐

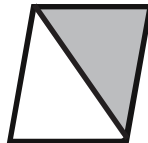
Class: _____

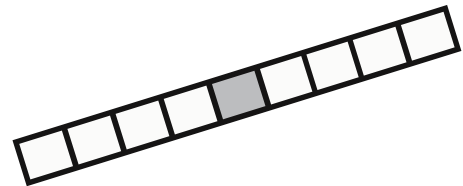
1. Fill in the chart.

	Total Number of Equal Parts	Total Number of Equal Parts Shaded	Unit Form	Fraction
				


2. Each image below is 1 whole. Write the fraction that is shaded.









- 
3. Draw two identical rectangles. Partition one into 5 equal parts. Partition the other rectangle into 8 equal parts. Label the unit fractions and shade 1 equal part in each rectangle. Use your rectangles to explain why $\frac{1}{5}$ is bigger than $\frac{1}{8}$.

SHOW YOUR WORK



Lesson 6 G:3 M:5	Copy That
	ZEARN STUDENT NOTES

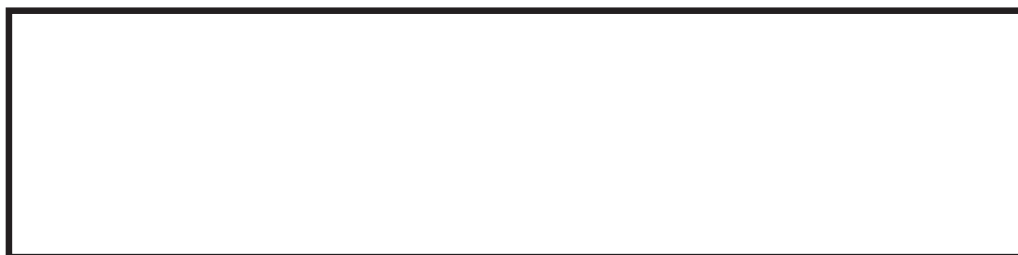
Name: _____ Date: _____

Complete: ☐

Class: _____

- Partition the shape into eighths. Label each unit fraction.
 Then, shade 5 units and write the shaded fraction.

SHOW YOUR WORK



The shaded fraction is

_____ = _____
Unit Form *Numerical Form*



EXTRA WORKSPACE



Lesson 6

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

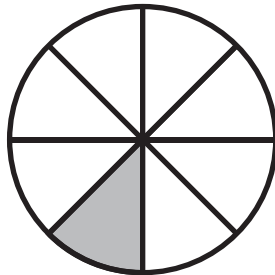
Complete: ☐

Class: _____

- Complete the number sentence. Estimate to partition the strip equally. Write the unit fraction inside each unit. Shade the answer.

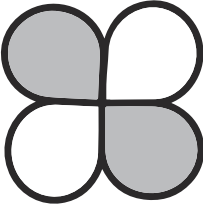
2 fifths =

2.



- What fraction of the circle is shaded?
- What fraction of the circle is not shaded?

- Complete the chart

	Total Number of Equal Parts	Total Number of Shaded Equal Parts	Unit Fraction	Fraction Shaded
				



Lesson 7
G:3 M:5

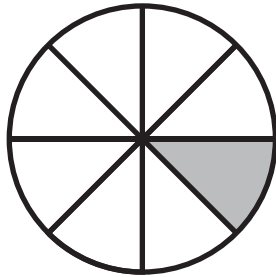
EXIT TICKET

Name: _____ Date: _____

Complete: ☐

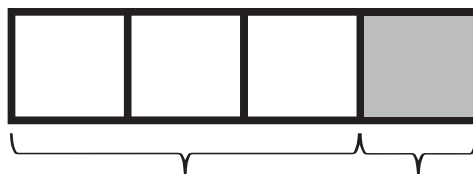
Class: _____


1. Write the fraction that is not shaded.



2. There are _____ sixths in 1 whole.

3. The fraction strip is 1 whole. Write fractions to label the shaded and unshaded parts.



- 
4. Justin mows part of his lawn. Then, his lawnmower runs out of gas. He has not mowed $\frac{9}{10}$ of the lawn.

What part of his lawn is mowed?

SHOW YOUR WORK



Lesson 8
G:3 M:5

Fraction Bonding

ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐

Class: _____

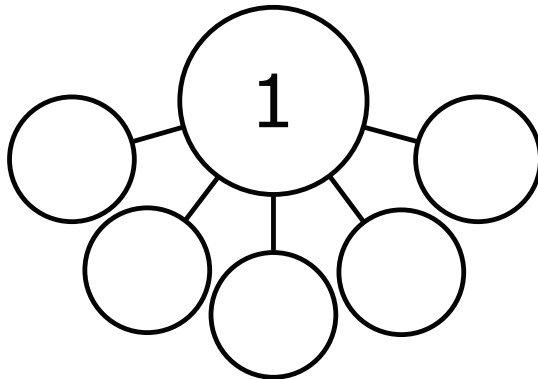
1

Use Number Bond A to decompose 1 into 5 unit fractions.

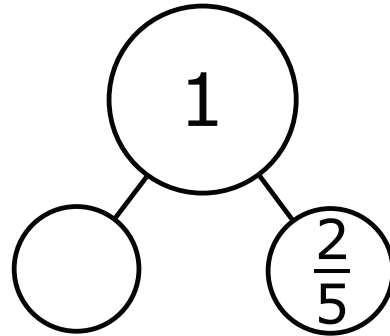
Then, complete the missing part of Number Bond B to finish decomposing 1 into two parts.

SHOW YOUR WORK

A



B



2

Draw shapes that have shaded and unshaded parts to match each number bond in problem 1.



EXTRA WORKSPACE



Lesson 8

G:3 M:5

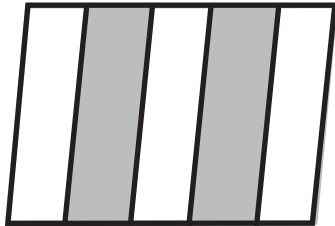
EXIT TICKET

Name: _____ Date: _____

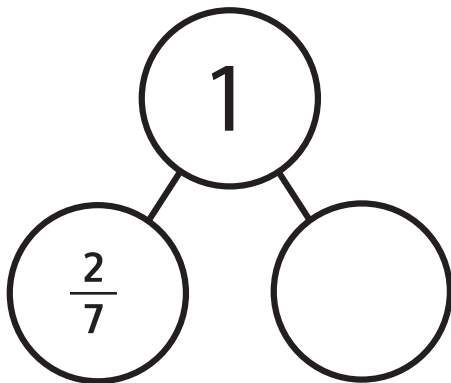
Complete: ☐

Class: _____

1. Draw a number bond that shows the shaded and the unshaded parts of the shape below. Then, show each part decomposed into unit fractions.



2. Complete the number bond. Draw a shape that has shaded and unshaded parts that match the completed number bond.



Lesson 9
G:3 M:5

One, and Then Some

ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐

Class: _____

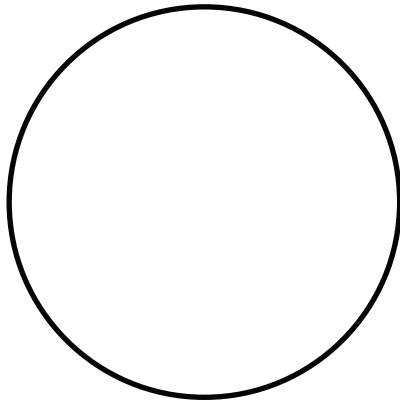
1

Mr. Sawicki brought 2 oranges for lunch today.

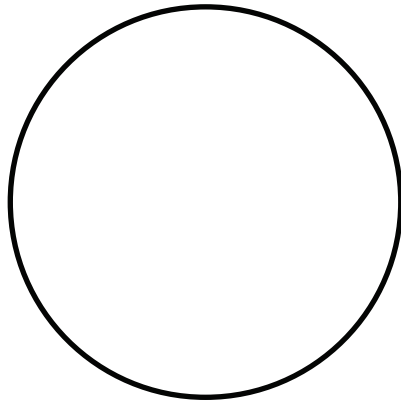
He cut each orange into 4 equal pieces. Partition each orange into 4 equal pieces.

SHOW YOUR WORK

1 orange



1 orange

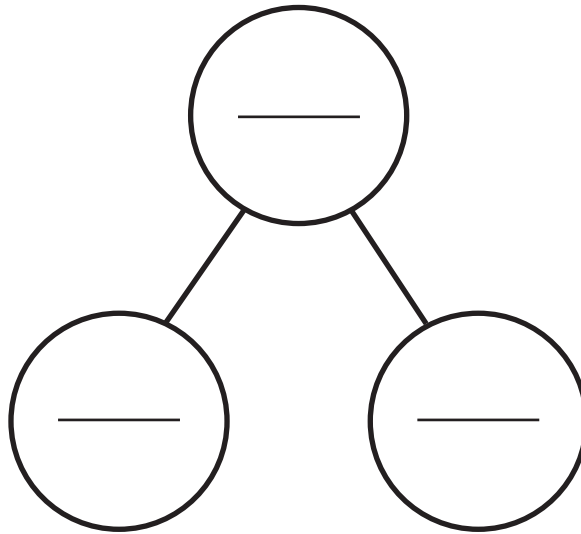




2

Draw a number bond representing the orange pieces Mr. Sawicki ate.

YOUR NUMBER BOND



EXTRA WORKSPACE



Lesson 9

G:3 M:5

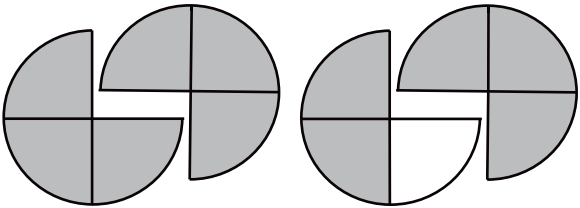
EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Each shape represents 1 whole. Fill in the chart.

	Unit Fraction	Total Number of Units Shaded	Fraction Shaded
			

2. Estimate to draw and shade units on the fraction strips. Solve.

a. 4 thirds =

b. _____ = $\frac{10}{4}$



Lesson 10 G:3 M:5	Share and Compare
	ZEARN STUDENT NOTES

Name: _____ Date: _____
Complete: ☐ Class: _____

- 1** Eric and one of his classmates equally share a jar of clay in art class on Monday.

How much clay does each person get?

DRAW	ANSWER SENTENCE
-------------	--

- 2** Lily sat at a different table in art class, and shared a jar of clay with three other classmates.

How much clay does each student at Lily's table get?

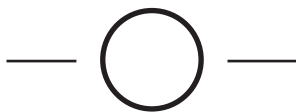
DRAW	ANSWER SENTENCE
-------------	--



3

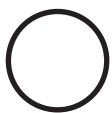
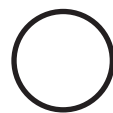
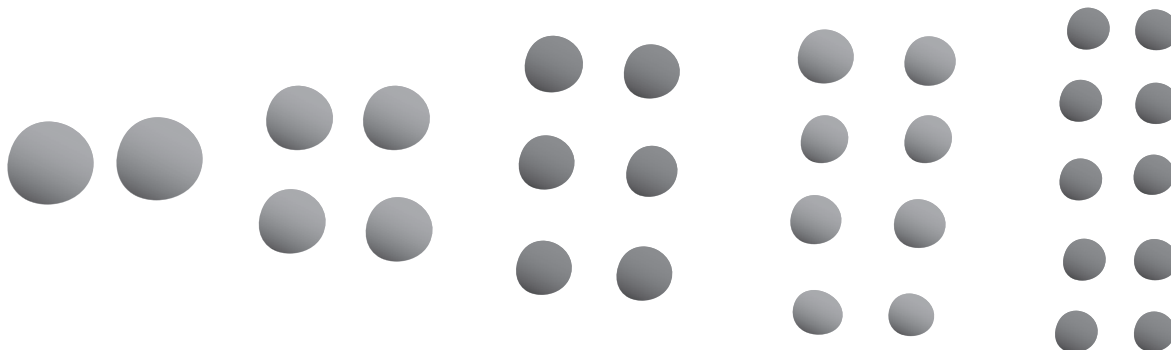
Who got more clay, Lily or Eric? Explain using fractions.

SOLVE



4

What happens to the size of each piece of clay as more students share it? Complete the comparison statements.

 $\frac{1}{2}$  $\frac{1}{4}$  $\frac{1}{6}$  $\frac{1}{8}$  $\frac{1}{10}$ 

Lesson 10

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Each fraction strip is 1 whole. All the fraction strips are equal in length. Shade 1 fractional unit in each strip. Then, circle the largest fraction and draw a star to the right of the smallest fraction.



2. Use $>$, $<$, or $=$ to compare.

a. 1 eighth  1 tenth

b. 1 whole  5 fifths

c. $\frac{1}{7}$  $\frac{1}{6}$



Lesson 11 G:3 M:5	One to Watch
	ZEARN STUDENT NOTES

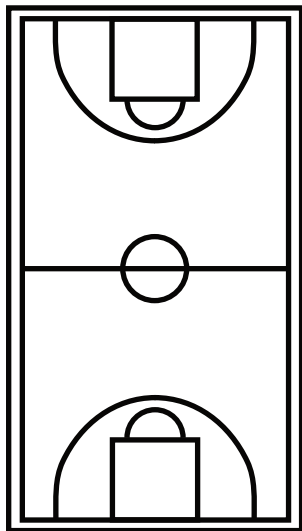
Name: _____ Date: _____

Complete: ☐

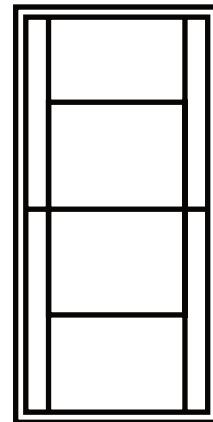
Class: _____

- 1 Daniella ran $\frac{1}{2}$ the length of the basketball court. Manny ran $\frac{1}{2}$ the length of the tennis court.

Manny says they both ran the same distance because they both ran 1 half. Is Manny correct? Why or why not?



Basketball court



Tennis court



EXTRA WORKSPACE



Lesson 11
G:3 M:5

EXIT TICKET

Name: _____ Date: _____

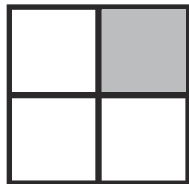
Complete: ☐

Class: _____

1. Fill in the blank with a fraction to make the statement true.
Draw a matching model.



$\frac{1}{7}$ is less than _____



$\frac{1}{4}$ is greater than _____



- 
2. Tatiana ate $\frac{1}{2}$ of a small carrot. Louis ate $\frac{1}{4}$ of a large carrot.

Who ate more? Use words and pictures to explain your answer.

SHOW YOUR WORK



Lesson 12
G:3 M:5

EXIT TICKET

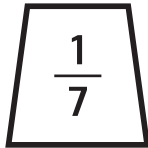
Name: _____ Date: _____

Complete: ☐

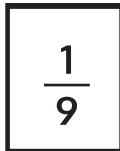
Class: _____

1. Each shape represents the unit fraction. Draw a picture representing a possible whole.

a.



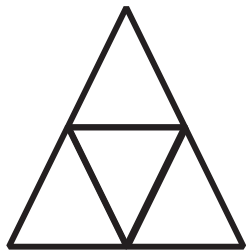
b.



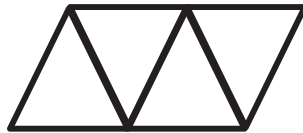
2. Aileen and Jack used the same triangle representing the unit fraction $\frac{1}{4}$ to create 1 whole.

Who did it correctly? Explain your answer.

SHOW YOUR WORK



Aileen's
Drawing



Jack's
Drawing



Lesson 13

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

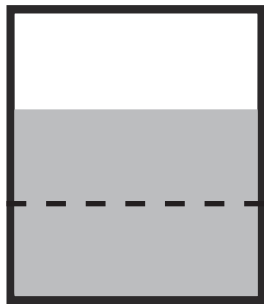
Complete: ☐

Class: _____

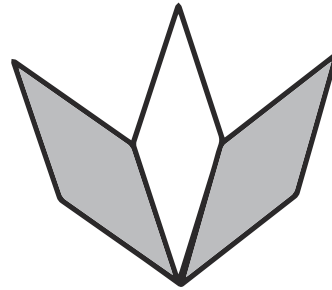
1. Ms. Silverstein asked the class to draw a model showing $\frac{2}{3}$ shaded. Karol and Deb drew the models below.

Whose model is correct? Explain how you know.

SHOW YOUR WORK



Karol's
Diagram



Deb's
Diagram

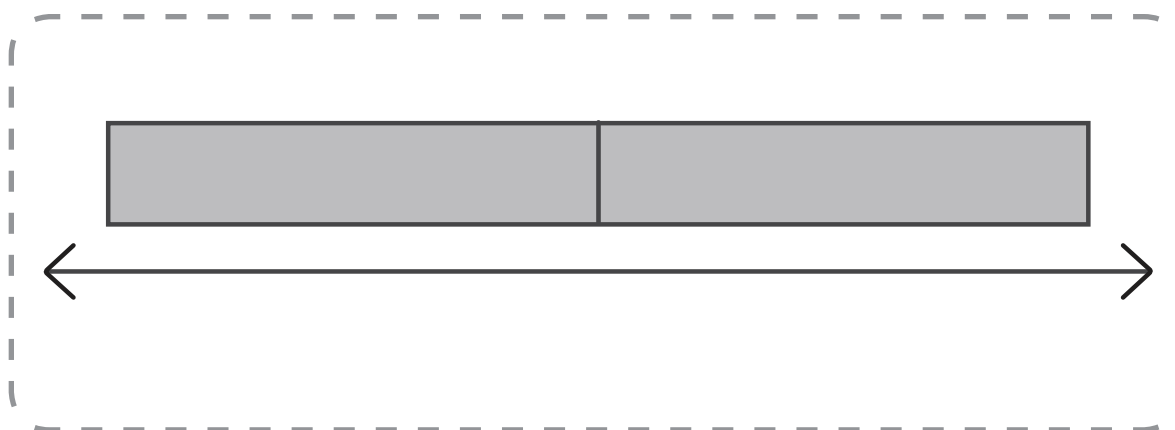


Lesson 14 G:3 M:5	Line It Up
	ZEARN STUDENT NOTES

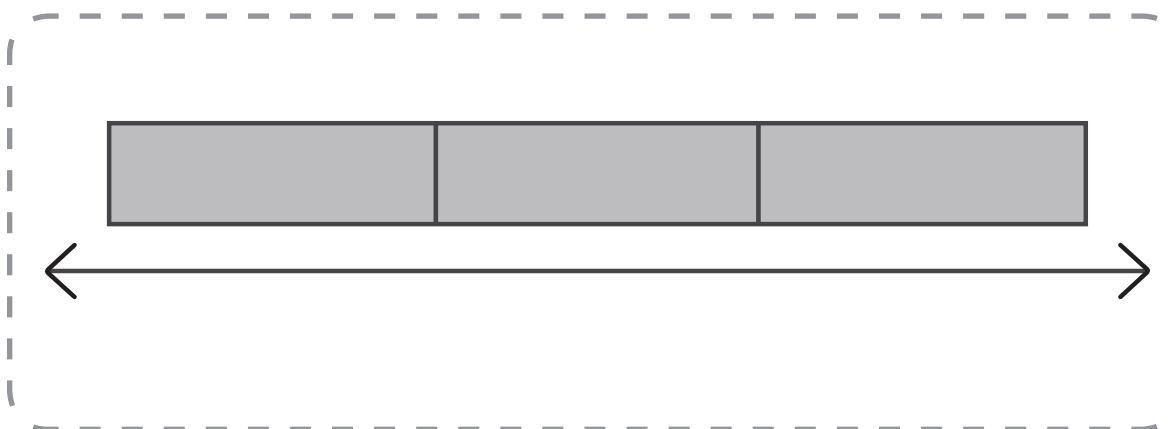
Name: _____ Date: _____

Complete: ☐ Class: _____

- 1** Mark and label the fraction strip to show halves.



- 2** Mark and label the fraction strip to show thirds.



EXTRA WORKSPACE



Lesson 14

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

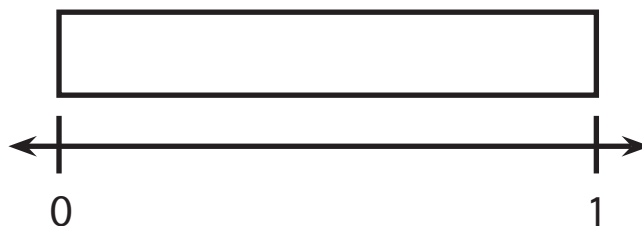
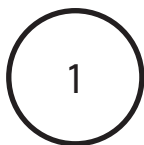
Complete: ☐


Class: _____

1. Draw a number bond for the fractional unit. Partition the fraction strip and draw and label the fractions on the number line. Be sure to label the fractions at 0 and 1.

SHOW YOUR WORK

Sixths



- 
2. Ms. Metcalf wants to share \$1 equally among 5 students. Draw a number bond and a number line to help explain your answer.

SHOW YOUR WORK

a. What fraction of a dollar will each student get?

b. How much money will each student get?



Lesson 15
G:3 M:5

Partition to Place

ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐

Class: _____

1

Label the endpoints in fifths. Partition the number line into fifths. Then, find and label 3 fifths.

SHOW YOUR WORK



2

Label the endpoints in fourths. Then, partition to find and label 3 fourths. Finally, make a number bond that represents your number line.

SHOW YOUR WORK



NUMBER BOND



Lesson 15

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Estimate to label the given fraction on the number line. Be sure to label the fractions at 0 and 1.

Write the fractions above the number line. Draw a number bond to match your number line.

SHOW YOUR WORK



NUMBER BOND

2. Partition the number line. Then, place each fraction on the number line: $\frac{3}{6}$, $\frac{1}{6}$, and $\frac{5}{6}$.

SHOW YOUR WORK



Lesson 16
G:3 M:5

More than a Whole

ZEARN STUDENT NOTES

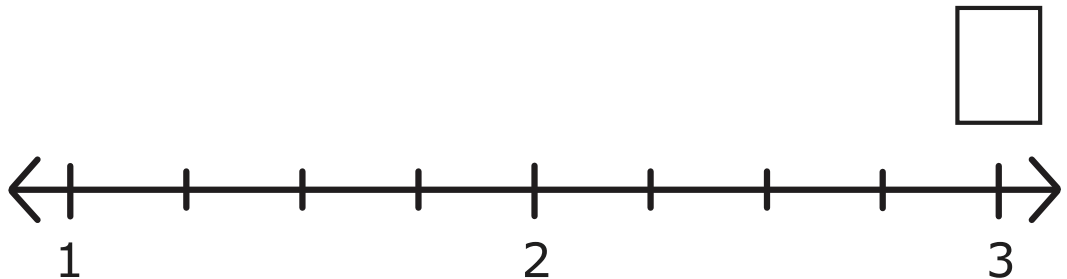
Name: _____ Date: _____

Complete: ☐

Class: _____

1 How many fourths are equivalent to 3 wholes?

SHOW YOUR WORK



2

Place and label the missing whole numbers. Then, partition the wholes into halves and label the fractions.



EXTRA WORKSPACE



Lesson 16

G:3 M:5

EXIT TICKET

Name: _____ Date: _____


Complete: ☐

Class: _____

1. Estimate to equally partition and label the fractions on the number line. Label the wholes as fractions and box them.

SHOW YOUR WORK



- 
2. Draw a number line with endpoints 0 and 2. Label the wholes. Estimate to partition each whole into sixths and label them. Box the fractions that are located at the same points as whole numbers.

SHOW YOUR WORK



Lesson 17
G:3 M:5

Fraction Excursion

ZEARN STUDENT NOTES

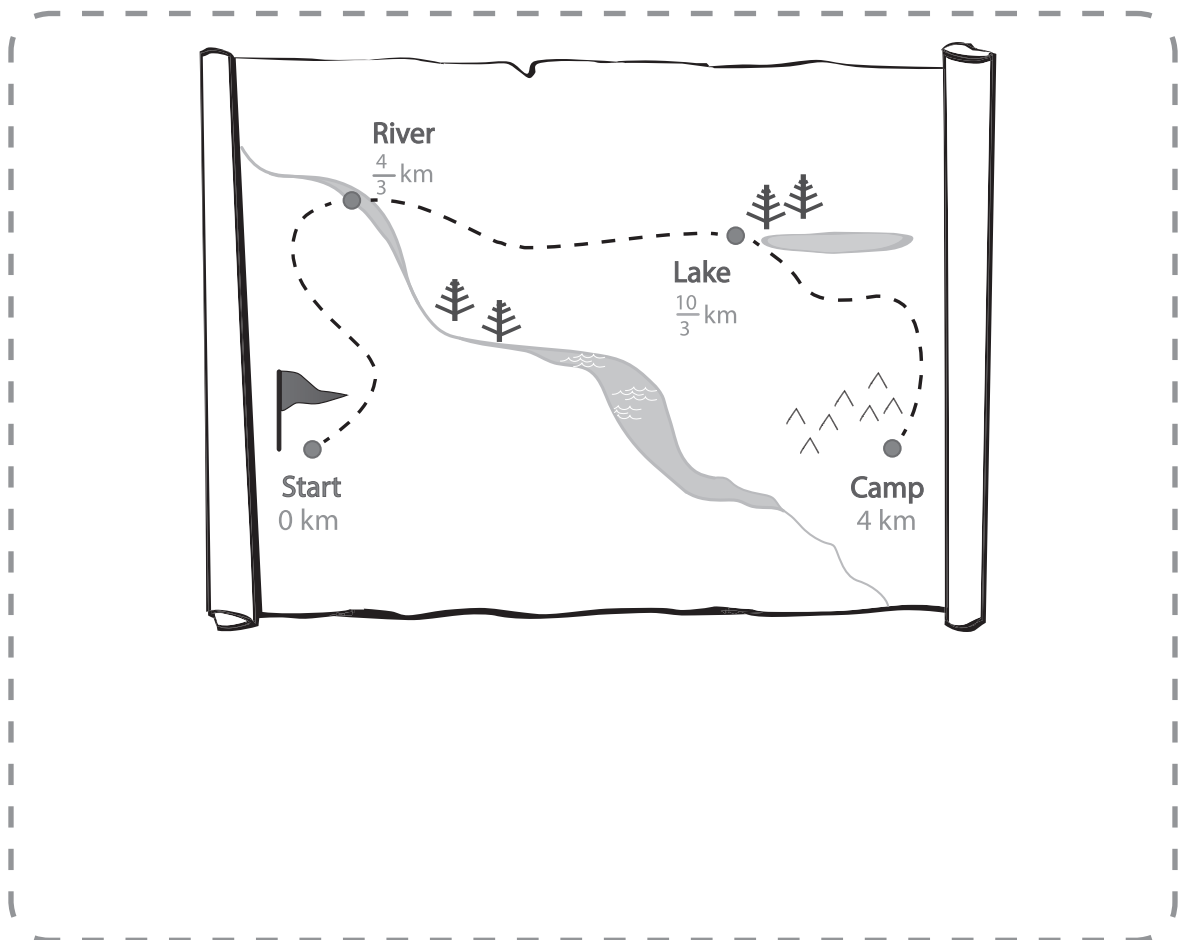
Name: _____ Date: _____

Complete: ☐

Class: _____

- 1** Wayne went on a 4 km hike on the rocky mountain trail. His map shows all of his stops.

Show all of Wayne's stops on a number line.



2

Wayne saw a bear at $\frac{7}{3}$ km. Between which two stops did he see the bear? Mark it on the number line.



EXTRA WORKSPACE



Lesson 17
G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Locate and label the following fractions on the number line.


SHOW YOUR WORK

$$\frac{7}{3}$$

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

$$\frac{4}{3}$$



- 
2. Katie bought 2 one-gallon bottles of juice for a party. Her guests drank $\frac{6}{4}$ gallons of juice.

What fraction of a gallon of juice is left over? Draw a number line to show and explain your answer.

SHOW YOUR WORK



Lesson 18
G:3 M:5

To the Left, To the Right

ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐

Class: _____

1

Partition the whole into sixths, and label 2 sixths and 3 sixths on the number line.



$\frac{2}{6}$ is to the LEFT / RIGHT of $\frac{3}{6}$ on the number line.

$$\frac{2}{6} \quad \bigcirc \quad \frac{3}{6}$$



EXTRA WORKSPACE



Lesson 18
G:3 M:5

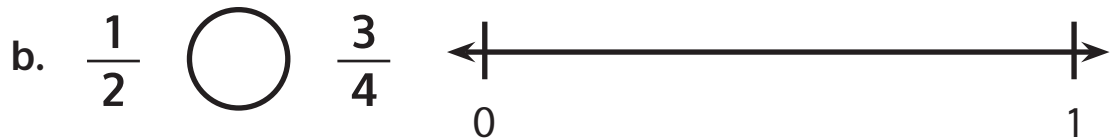
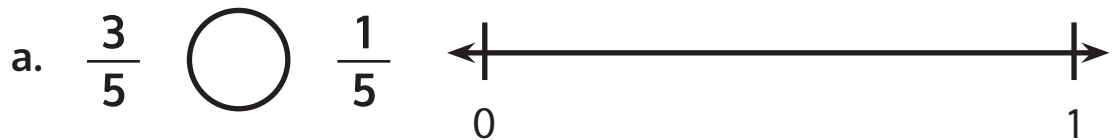
EXIT TICKET


Name: _____ Date: _____

Complete: ☐

Class: _____

1. Place the two fractions on the number line. Circle the fraction with the distance closest to 0. Then, compare using $>$, $<$, or $=$.



- 
2. Mr. Brady draws a fraction on the board. Ken says it's $\frac{2}{3}$, and Dan said it's $\frac{3}{2}$. Do both of these fractions mean the same thing? If not, which fraction is larger? Draw a number line to model $\frac{2}{3}$ and $\frac{3}{2}$. Use words, pictures, and numbers to explain your comparison.

SHOW YOUR WORK



Lesson 19
G:3 M:5

On Line Comparison

ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐

Class: _____

1

Label the number line using fourths and complete the comparison statement.

SHOW YOUR WORK



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



EXTRA WORKSPACE



Lesson 19

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Divide the number line into the given fractional unit. Then, place the fractions. Write each whole as a fraction.

fourths $\frac{2}{4}$ $\frac{10}{4}$ $\frac{7}{4}$




2. Use the number line above to compare the following fractions using $>$, $<$, or $=$.

a. $\frac{3}{4}$  $\frac{5}{4}$

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

c. 3  $\frac{6}{4}$



- 
3. Use the number line from problem 1. Which is larger: 2 wholes or $\frac{9}{4}$? Use words, pictures, and numbers to explain your answer.

SHOW YOUR WORK



Lesson 20 G:3 M:5	Same Size
	ZEARN STUDENT NOTES

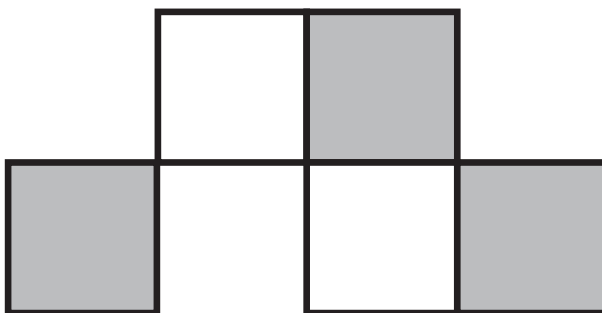
Name: _____ Date: _____

Complete: ☐ Class: _____

1

Find what fraction of the figure is shaded.

Then, draw a different representation of the same fractional amount.



_____ of the figure is shaded.

DRAW



EXTRA WORKSPACE



Lesson 20

G:3 M:5

EXIT TICKET

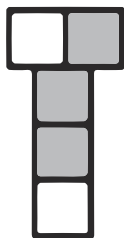
Name: _____ Date: _____

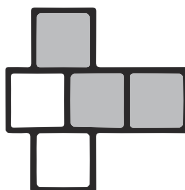
Complete: ☐

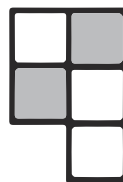
Class: _____

1. Label what fraction of the figure is shaded. Then, circle the fractions that are equal.

SHOW YOUR WORK





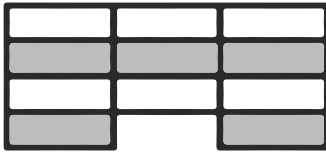




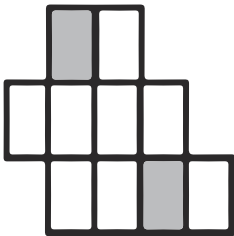
2. Label the shaded fraction. Draw 2 different representations of the same fractional amount.

SHOW YOUR WORK

a.



b.




Lesson 21 G:3 M:5	Same Point
	ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐

Class: _____

- 1 Show equivalent fractions on the number line, using halves and fourths.



=



EXTRA WORKSPACE



Lesson 21
G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Claire went home after school and told her mother that 1 whole is the same as $\frac{2}{2}$ and $\frac{6}{6}$. Her mother asked why, but Claire couldn't explain. Use a number line and words to help Claire show and explain why $1 = \frac{2}{2} = \frac{6}{6}$.

SHOW YOUR WORK



Lesson 22 G:3 M:5	Equally Same
	ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐

Class: _____

1

Are $\frac{1}{3}$ and $\frac{3}{9}$ equivalent?

Draw a number line to prove your answer.

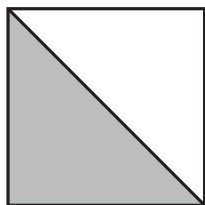
YOUR NUMBER LINE

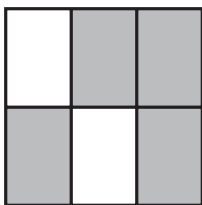


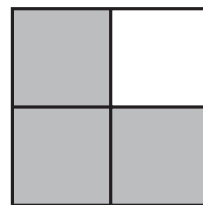
2

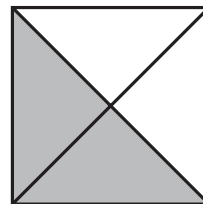
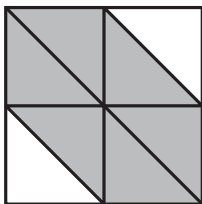
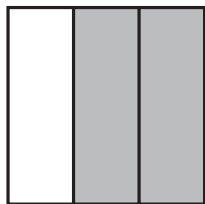
In the blanks, write the fraction of each whole that is shaded.

Then, draw lines to match equivalent fractions.









Lesson 22
G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Draw and label two models that show equivalent fractions.

SHOW YOUR WORK

2. Draw a number line that proves your thinking about Problem 1.

SHOW YOUR WORK



Lesson 23

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Henry and Maddie were in a pie-eating contest. The pies were cut either into thirds or sixths. Henry picked up a pie cut into sixths and ate $\frac{4}{6}$ of it in 1 minute. Maddie picked up a pie cut into thirds.

What fraction of her pie does Maddie have to eat in 1 minute to tie with Henry? Draw a number line and use words to explain your answer.

SHOW YOUR WORK



EXTRA WORKSPACE



Lesson 24

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐


Class: _____

1. Complete the number bond as indicated by the fractional unit. Partition the number line into the given fractional unit and label the fractions. Rename 0 and 1 as fractions of the given unit.

SHOW YOUR WORK

Fourths



- 
2. How many copies of $\frac{1}{4}$ does it take to make 1 whole? What's the fraction for 1 whole in this case? Use the number line or the number bond in Problem 1 to help you explain.

SHOW YOUR WORK



Lesson 25
G:3 M:5

Wonderful Ones

ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐

Class: _____

- 1** Partition each number line the same way as the model beside it. Then, label the whole number fractions.



EXTRA WORKSPACE



Lesson 25

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Label the model as a fraction inside the box.

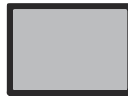
SHOW YOUR WORK



= 1 whole



$\frac{1}{1}$



2. Partition the wholes into thirds. Rename the fraction for 3 wholes. Use the number line and words to explain your answer. Then, label the whole number fractions.

SHOW YOUR WORK





Lesson 26
G:3 M:5

See the Whole

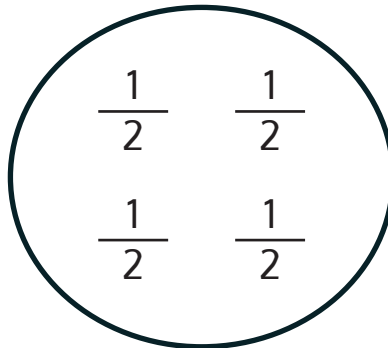
ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐

Class: _____

- 1** Add fourths to complete the number bond.



EXTRA WORKSPACE



Lesson 26
G:3 M:5

EXIT TICKET

Name: _____ Date: _____


Complete: ☐

Class: _____

1. Irene has 2 yards of fabric.
 - a. Draw a number line to represent the total length of Irene's fabric.
 - b. Irene cuts her fabric into pieces of $\frac{1}{5}$ yard in length. Partition the number line to show her cuts.

SHOW YOUR WORK



- 
- c. How many $\frac{1}{5}$ yard pieces does she cut altogether? Use number bonds with copies of wholes to help you explain.

SHOW YOUR WORK



Lesson 27
G:3 M:5

Even Stevens

ZEARN STUDENT NOTES

Name: _____ Date: _____

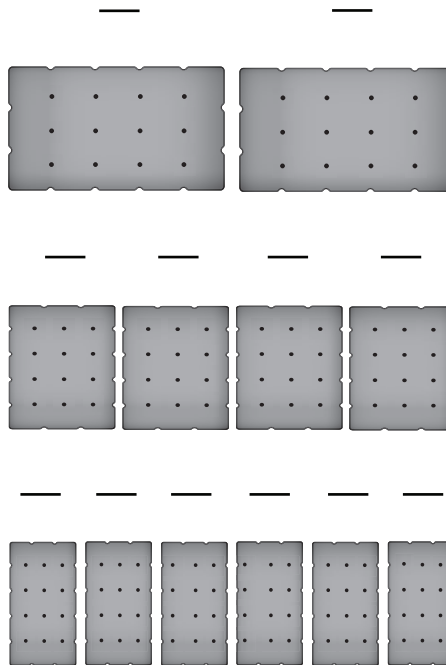
Complete: ☐

Class: _____

1

Six friends have these three graham crackers, which were each split into a different number of pieces.

How can the six friends share the graham crackers equally, without breaking any of the pieces?



Each friend will get _____ of a graham cracker.

EXTRA WORKSPACE



Lesson 27
G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Solve.


2 thirds is equal to ____ twelfths.

$$\frac{2}{3} = \frac{\quad}{12}$$

2. Draw and label two models that show fractions equivalent to those in Problem 1.

SHOW YOUR WORK



- 
3. Use words to explain why the two fractions in Problem 1 are equal.

SHOW YOUR WORK



Lesson 28

G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Shade the models to compare the fractions.

2 eighths



2 thirds



Which is larger, 2 thirds or 2 eighths? Why? Use words to explain.

SHOW YOUR WORK



- 
2. Draw a model for each fraction. Circle the smaller fraction.

SHOW YOUR WORK

3 sevenths

3 fourths



Lesson 29 G:3 M:5	Size 'Em Up
	ZEARN STUDENT NOTES

Name: _____ Date: _____

Complete: ☐ Class: _____

- 1 April and Nora bought matching scrapbooks. April decorated $\frac{5}{9}$ of the pages in her book. Nora decorated $\frac{5}{6}$ of the pages in her book.

Who has decorated more pages of her scrapbook?

<p style="text-align: center;">DRAW</p>	<p style="text-align: center;">SOLVE</p>
---	--



2

Carlos walks $\frac{3}{4}$ mile to school. Jonah walks $\frac{3}{6}$ mile to school.

Who has a longer walk to school?

DRAW

SOLVE



Lesson 29
G:3 M:5

EXIT TICKET

Name: _____ Date: _____

Complete: ☐

Class: _____

1. Complete the number sentence by writing $>$, $<$, or $=$.

$$\frac{3}{5} \quad \underline{\hspace{1cm}} \quad \frac{3}{9}$$

2. Draw 2 number lines with endpoints 0 and 1 to show each fraction in Problem 1. Use the number lines to explain how you know your comparison in Problem 1 is correct.

SHOW YOUR WORK

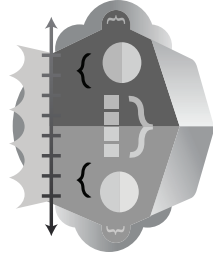




EXTRA WORKSPACE



ZEARN



Congratulations!
You completed

Grade 3 Mission 5

Fractions as Numbers

.....
Name

.....
Date



Mission 5: Fractions as Numbers

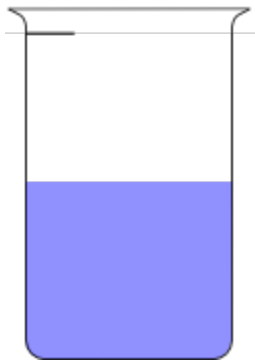
Section Two: Problem Sets and Homework

To complete if internet access is not available

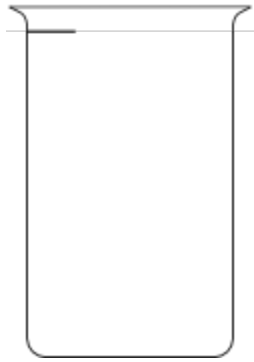
Name _____

Date _____

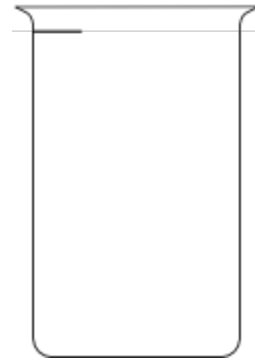
1. A beaker is considered full when the liquid reaches the fill line shown near the top. Estimate the amount of water in the beaker by shading the drawing as indicated. The first one is done for you.



1 half

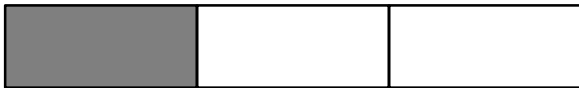


1 fourth

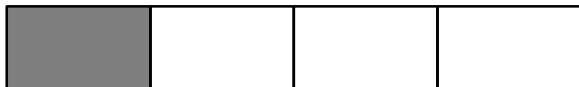


1 third

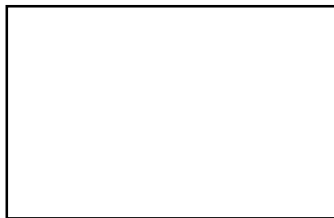
2. Juanita cut her string cheese into equal pieces as shown in the rectangles below. In the blanks below, name the fraction of the string cheese represented by the shaded part.



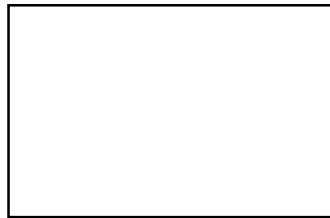




3. a. In the space below, draw a small rectangle. Estimate to split it into 2 equal parts. How many lines did you draw to make 2 equal parts? What is the name of each fractional unit?
- b. Draw another small rectangle. Estimate to split it into 3 equal parts. How many lines did you draw to make 3 equal parts? What is the name of each fractional unit?
- c. Draw another small rectangle. Estimate to split it into 4 equal parts. How many lines did you draw to make 4 equal parts? What is the name of each fractional unit?
4. Each rectangle represents 1 sheet of paper.
- a. Estimate to show how you would cut the paper into fractional units as indicated below.



sevenths

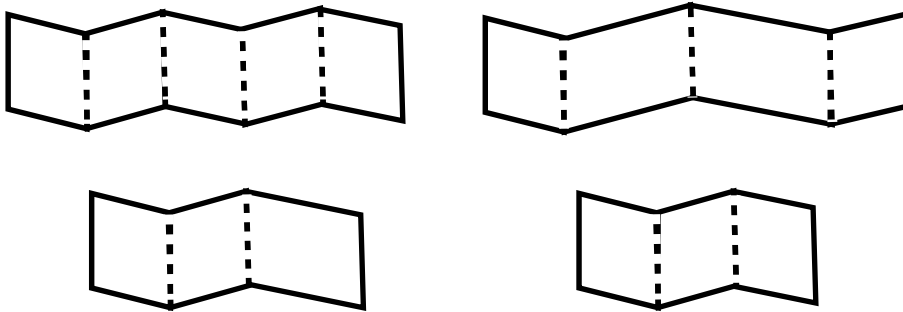


ninths

- b. What do you notice? How many lines do you think you would draw to make a rectangle with 20 equal parts?
5. Rochelle has a strip of wood 12 inches long. She cuts it into pieces that are each 6 inches in length. What fraction of the wood is one piece? Use your strip from the lesson to help you. Draw a picture to show the piece of wood and how Rochelle cut it.

Name _____ Date _____

1. Circle the strips that are folded to make equal parts.



2.



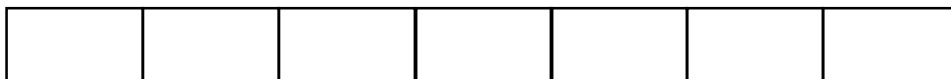
- a. There are _____ equal parts in all. _____ are shaded.



- b. There are _____ equal parts in all. _____ are shaded.



- c. There are _____ equal parts in all. _____ are shaded.



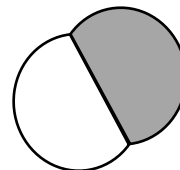
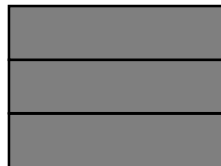
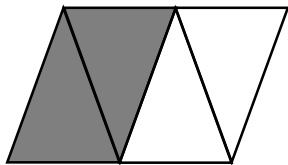
- d. There are _____ equal parts in all. _____ are shaded.

3. Noah, Pedro, and Sharon share a whole candy bar fairly. Which of your fraction strips shows how they each get an equal part? Draw the candy bar below. Then, label Sharon's fraction of the candy bar.

4. To make a garage for his toy truck, Zeno bends a rectangular piece of cardboard in half. He then bends each half in half again. Which of your fraction strips best matches this story?
- a. What fraction of the original cardboard is each part? Draw and label the matching fraction strip below.
- b. Zeno bends a different piece of cardboard in thirds. He then bends each third in half again. Which of your fraction strips best matches this story? Draw and label the matching fraction strip in the space below.

Name _____ Date _____

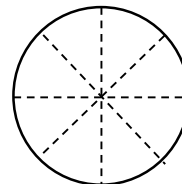
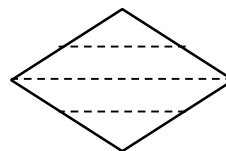
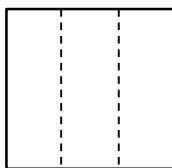
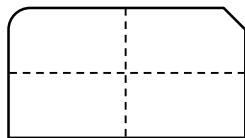
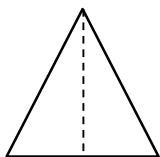
1. Each shape is a whole divided into equal parts. Name the fractional unit, and then count and tell how many of those units are shaded. The first one is done for you.



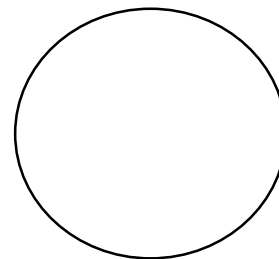
Fourths

2 fourths are shaded.

2. Circle the shapes that are divided into equal parts. Write a sentence telling what *equal parts* means.



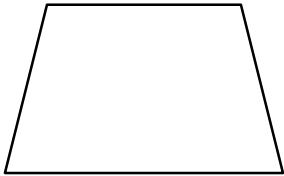
3. Each shape is 1 whole. Estimate to divide each into 4 equal parts. Name the fractional unit below.



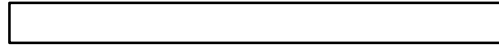
Fractional unit: _____

4. Each shape is 1 whole. Divide and shade to show the given fraction.

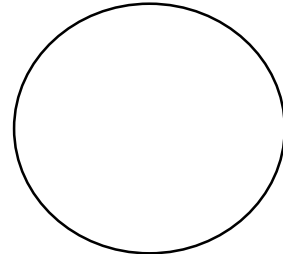
1 half



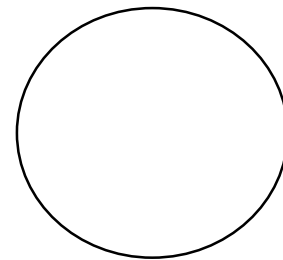
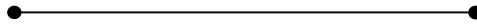
1 sixth



1 third



5. Each shape is 1 whole. Estimate to divide each into equal parts (do not draw fourths). Divide each whole using a different fractional unit. Write the name of the fractional unit on the line below the shape.



6. Charlotte wants to equally share a candy bar with 4 friends. Draw Charlotte's candy bar. Show how she can divide her candy bar so everyone gets an equal share. What fraction of the candy bar does each person receive?

Each person receives _____.

Name _____

Date _____

1. Draw a picture of the yellow strip at 3 (or 4) different stations. Shade and label 1 fractional unit of each.

2. Draw a picture of the brown bar at 3 (or 4) different stations. Shade and label 1 fractional unit of each.

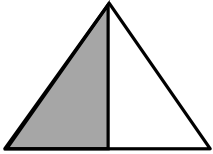

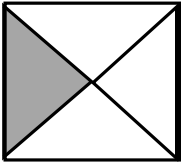
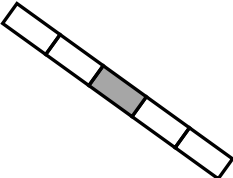
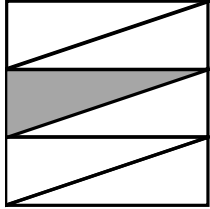
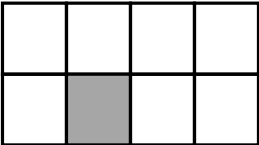
3. Draw a picture of the square at 3 (or 4) different stations. Shade and label 1 fractional unit of each.

4. Draw a picture of the clay at 3 (or 4) different stations. Shade and label 1 fractional unit of each.
5. Draw a picture of the water at 3 (or 4) different stations. Shade and label 1 fractional unit of each.
6. Extension: Draw a picture of the yarn at 3 (or 4) different stations.

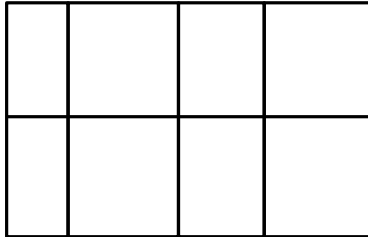
Name _____

Date _____

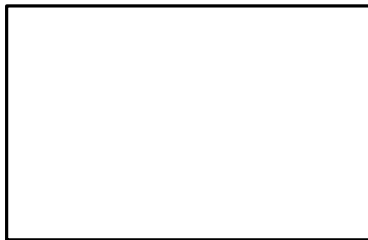
1. Fill in the chart. Each image is one whole.

	Total Number of Equal Parts	Total Number of Equal Parts Shaded	Unit Form	Fraction Form
a. 				
b. 				
c. 				
d. 				
e. 				
f. 				

2. Andre's mom baked his 2 favorite cakes for his birthday party. The cakes were the exact same size. Andre cut his first cake into 8 pieces for him and his 7 friends. The picture below shows how he cut it. Did Andre cut the cake into eighths? Explain your answer.



3. Two of Andre's friends came late to his party. They decide they will all share the second cake. Show how Andre can slice the second cake so that he and his nine friends can each get an equal amount with none leftover. What fraction of the second cake will they each receive?



4. Andre thinks it's strange that $\frac{1}{10}$ of the cake would be less than $\frac{1}{8}$ of the cake since ten is bigger than eight. To explain to Andre, draw 2 identical rectangles to represent the cakes. Show 1 tenth shaded on one and 1 eighth shaded on the other. Label the unit fractions and explain to him which slice is bigger.

Name _____

Date _____

1. Complete the number sentence. Estimate to partition each strip equally, write the unit fraction inside each unit, and shade the answer.

Sample:

$$2 \text{ thirds} = \frac{2}{3}$$



- a. 3 fourths =

- b. 3 sevenths =

- c. 4 fifths =

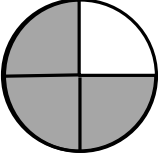
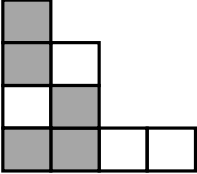
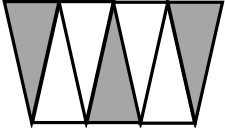
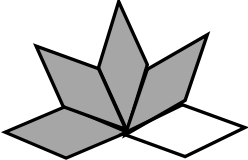
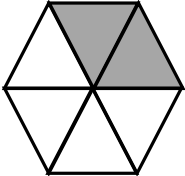
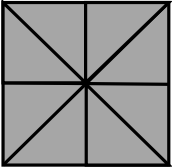
- d. 2 sixths =

2. Mr. Stevens bought 8 liters of soda for a party. His guests drank 1 liter.

- a. What fraction of the soda did his guests drink?

- b. What fraction of the soda was left?

3. Fill in the chart.

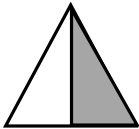
	Total Number of Equal Parts	Total Number of Shaded Equal Parts	Unit Fraction	Fraction Shaded
Sample: 	4	3	$\frac{1}{4}$	$\frac{3}{4}$
a. 				
b. 				
c. 				
d. 				
e. 				

Name _____

Date _____

Whisper the fraction of the shape that is shaded. Then, match the shape to the amount that is not shaded.

1.



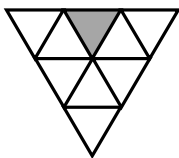
- 2 thirds

2.



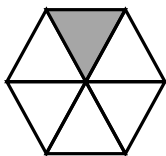
- 6 sevenths

3.



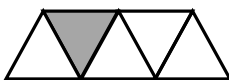
- 4 fifths

4.



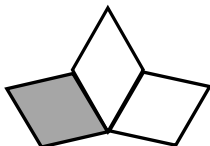
- 8 ninths

5.



- 1 half

6.



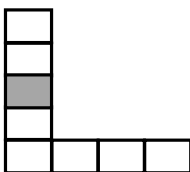
- 5 sixths

7.



- 7 eighths

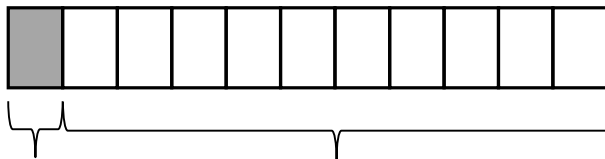
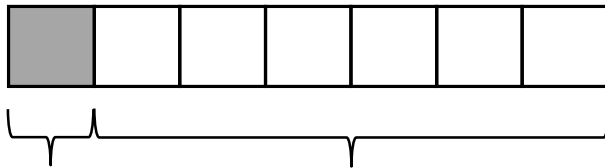
8.



- 3 fourths

9. a. How many eighths are in 1 whole? _____
- b. How many ninths are in 1 whole? _____
- c. How many twelfths are in 1 whole? _____

10. Each strip represents 1 whole. Write a fraction to label the shaded and unshaded parts.

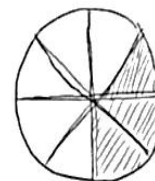
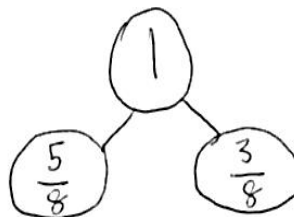


11. Avanti read $\frac{1}{6}$ of her book. What fraction of the book has she not read yet?

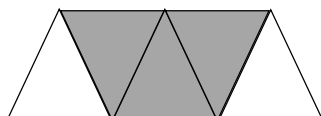
Name _____ Date _____

Show a number bond representing what is shaded and unshaded in each of the figures. Draw a different visual model that would be represented by the same number bond.

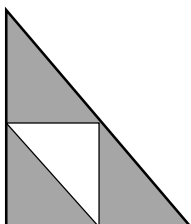
Sample:



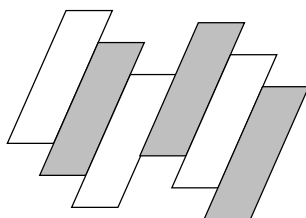
1.



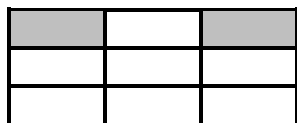
2.



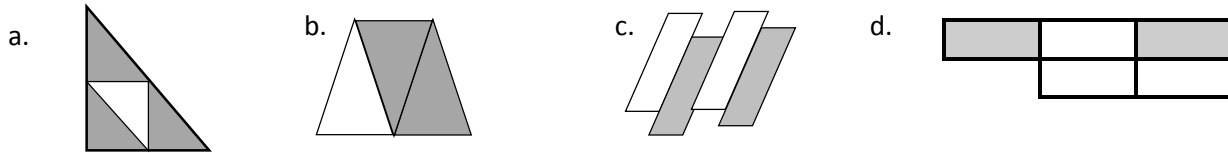
3.



4.



5. Draw a number bond with 2 parts showing the shaded and unshaded fractions of each figure. Decompose both parts of the number bond into unit fractions.



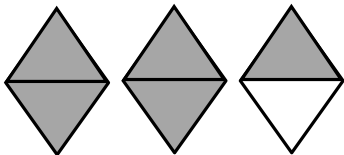
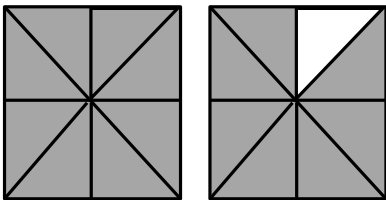
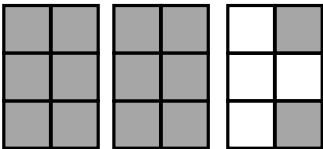
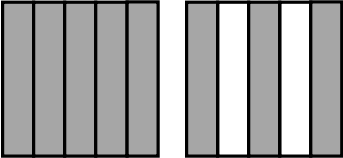
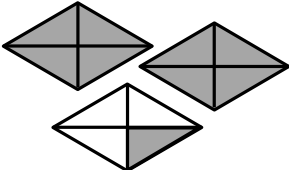
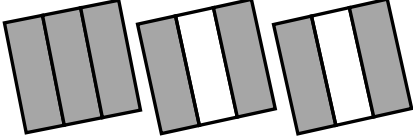
6. The chef put $\frac{1}{4}$ of the ground beef on the grill to make one hamburger and put the rest in the refrigerator. Draw a 2-part number bond showing the fraction of the ground beef on the grill and the fraction in the refrigerator. Draw a visual model of all the ground beef. Shade what is in the refrigerator.

- a. What fraction of the ground beef was in the refrigerator?
- b. How many more hamburgers can the chef make if he makes them all the same size as the first one?
- c. Show the refrigerated ground beef broken into unit fractions on your number bond above.

Name _____

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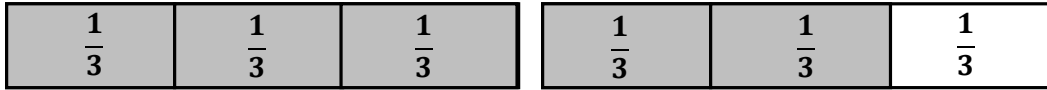
1. Each figure represents 1 whole. Fill in the chart.

	Unit Fraction	Total Number of Units Shaded	Fraction Shaded
a. Sample: 	$\frac{1}{2}$	5	$\frac{5}{2}$
b. 			
c. 			
d. 			
e. 			
f. 			

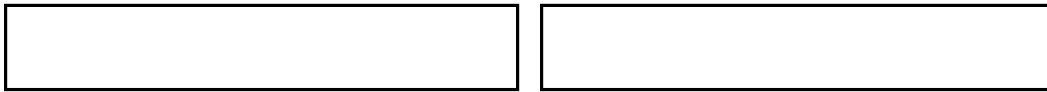
2. Estimate to draw and shade units on the fraction strips. Solve.

Sample:

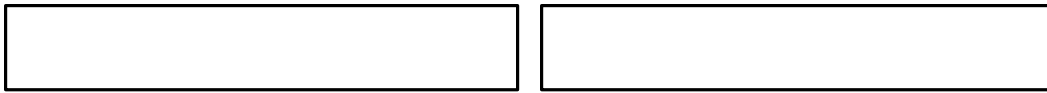
$$5 \text{ thirds} = \frac{5}{3}$$



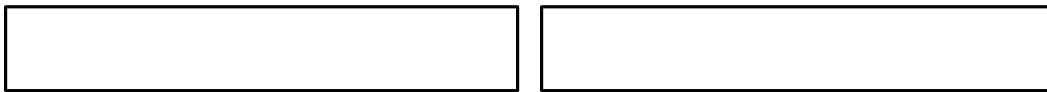
- a. 8 sixths =



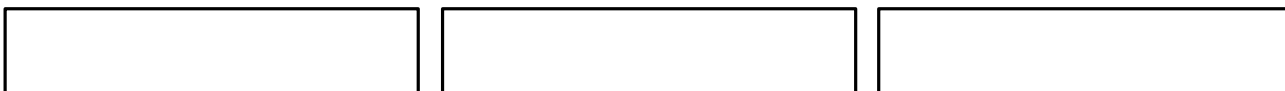
- b. 7 fourths =



- c. _____ = $\frac{6}{5}$



- d. _____ = $\frac{5}{2}$



3. Mrs. Jawlik baked 2 pans of brownies. Draw the pans and estimate to partition each pan into 8 equal pieces.

- a. Mrs. Jawlik's children gobbled up 10 pieces. Shade the amount that was eaten.

- b. Write a fraction to show how many pans of brownies her children ate.

Name _____

Date _____

1. Each fraction strip is 1 whole. All the fraction strips are equal in length. Color 1 fractional unit in each strip. Then, answer the questions below.

 $\frac{1}{2}$

 $\frac{1}{4}$

 $\frac{1}{8}$

 $\frac{1}{3}$

 $\frac{1}{6}$


2. Circle *less than* or *greater than*. Whisper the complete sentence.

a. $\frac{1}{2}$ is less than $\frac{1}{4}$
greater than

b. $\frac{1}{6}$ is less than $\frac{1}{2}$
greater than

c. $\frac{1}{3}$ is less than $\frac{1}{2}$
greater than

d. $\frac{1}{3}$ is less than $\frac{1}{6}$
greater than

e. $\frac{1}{8}$ is less than $\frac{1}{6}$
greater than

f. $\frac{1}{8}$ is less than $\frac{1}{4}$
greater than

g. $\frac{1}{2}$ is less than $\frac{1}{8}$
greater than

h. 9 eighths is less than 2 halves
greater than

3. Lily needs $\frac{1}{3}$ cup of oil and $\frac{1}{4}$ cup of water to make muffins. Will Lily use more oil or more water? Explain your answer using pictures, numbers, and words.

4. Use $>$, $<$, or $=$ to compare.

a. 1 third 1 fifth

b. 1 seventh 1 fourth

c. 1 sixth $\frac{1}{6}$

d. 1 tenth $\frac{1}{12}$

e. $\frac{1}{16}$ 1 eleventh

f. 1 whole 2 halves

Extension:

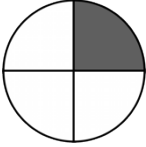
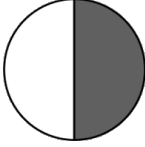
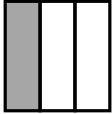

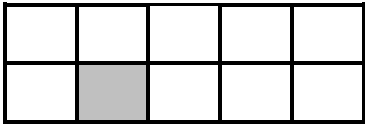
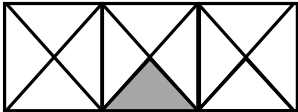
g. $\frac{1}{8}$ 1 eighth $\frac{1}{6}$ $\frac{1}{3}$ 2 halves 1 whole

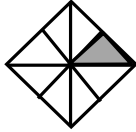

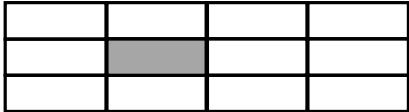
5. Your friend Eric says that $\frac{1}{6}$ is greater than $\frac{1}{5}$ because 6 is greater than 5. Is Eric correct? Use words and pictures to explain what happens to the size of a unit fraction when the number of parts gets larger.

Name _____

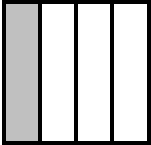
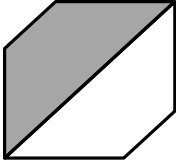
Date _____

Label the unit fraction. In each blank, draw and label the same whole with a shaded unit fraction that makes the sentence true. There is more than 1 correct way to make the sentence true.

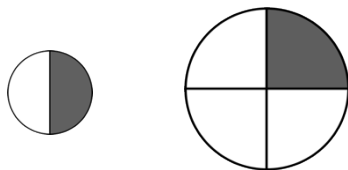
<p>Sample:</p> $\frac{1}{4}$ 	<p>is less than</p>	$\frac{1}{2}$ 
<p>1.</p> 	<p>is greater than</p>	
<p>2.</p> 	<p>is less than</p>	
<p>3.</p> 	<p>is greater than</p>	
<p>4.</p> 	<p>is less than</p>	

5.	is greater than	
6.	is less than	
7.	is greater than	

8. Fill in the blank with a fraction to make the statement true, and draw a matching model.

			
$\frac{1}{4}$ is less than <input type="text"/>		$\frac{1}{2}$ is greater than <input type="text"/>	

9. Robert ate $\frac{1}{2}$ of a small pizza. Elizabeth ate $\frac{1}{4}$ of a large pizza. Elizabeth says, “My piece was larger than yours, so that means $\frac{1}{4} > \frac{1}{2}$.” Is Elizabeth correct? Explain your answer.

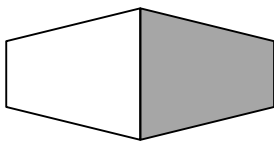


10. Manny and Daniel each ate $\frac{1}{2}$ of his candy, as shown below. Manny said he ate more candy than Daniel because his half is longer. Is he right? Explain your answer.

Manny’s Candy Bar



Daniel’s Candy Bar

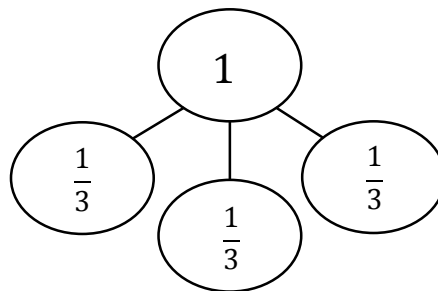
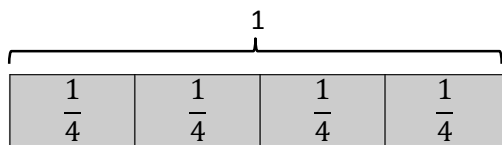
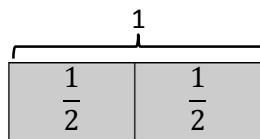
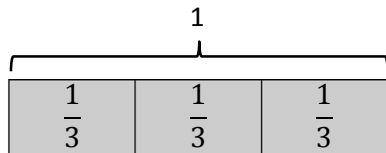


Name _____

Date _____

For each of the following:

- Draw a picture of the designated unit fraction copied to make at least two different wholes.
- Label the unit fractions.
- Label the whole as 1.
- Draw at least one number bond that matches a drawing.



1. Yellow strip

2. Brown strip

3. Orange square

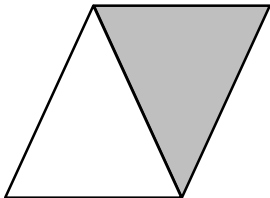
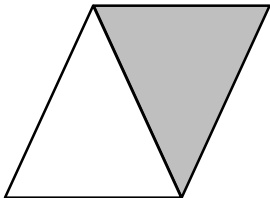
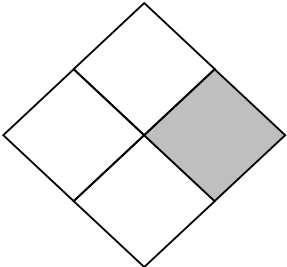
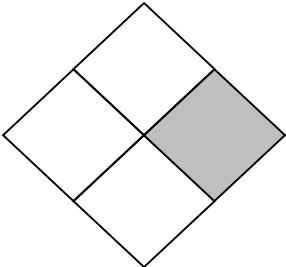
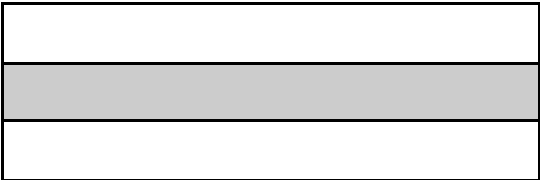
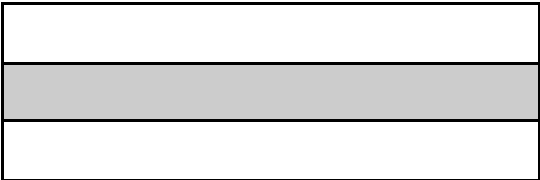


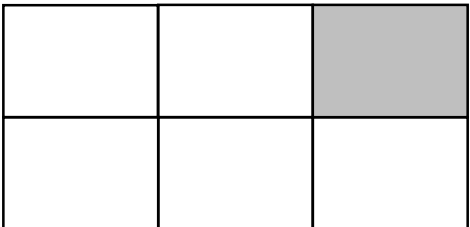
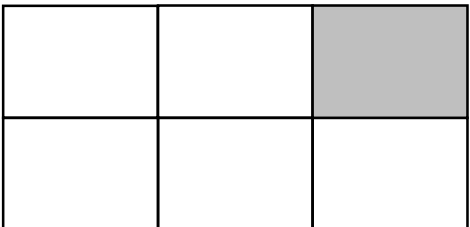
4. Yarn

5. Water

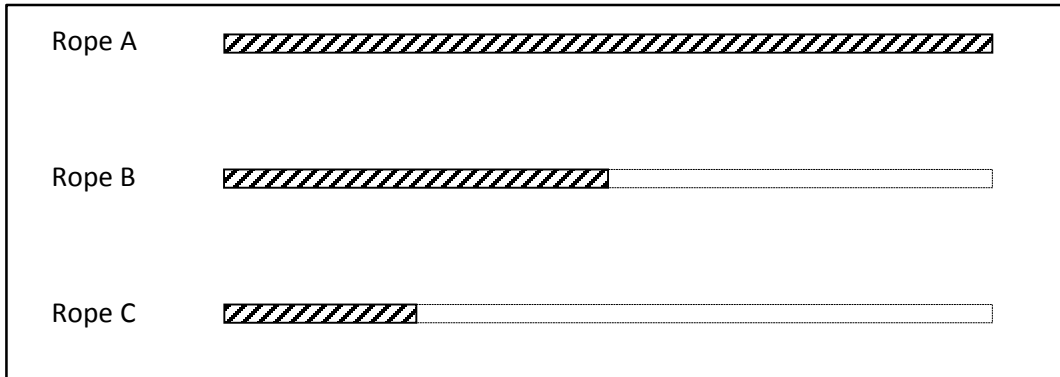
6. Clay

Name _____

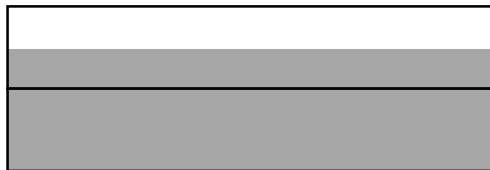
Date _____

The shape represents 1 whole. Write a unit fraction to describe the shaded part.	The shaded part represents 1 whole. Divide 1 whole to show the same unit fraction you wrote in Part (a).
1. a. 	b. 
2. a. 	b. 
3. a. 	b. 
4. a. 	b. 
5. a. 	b. 

6. Use the diagram below to complete the following statements.



- Rope _____ is $\frac{1}{2}$ the length of Rope B.
 - Rope _____ is $\frac{1}{2}$ the length of Rope A.
 - Rope C is $\frac{1}{4}$ the length of Rope _____.
 - If Rope B measures 1 m long, then Rope A is _____ m long, and Rope C is _____ m long.
 - If Rope A measures 1 m long, Rope B is _____ m long, and Rope C is _____ m long.
7. Ms. Fan drew the figure below on the board. She asked the class to name the shaded fraction. Charlie answered $\frac{3}{4}$. Janice answered $\frac{3}{2}$. Jenna thinks they're both right. With whom do you agree? Explain your thinking.

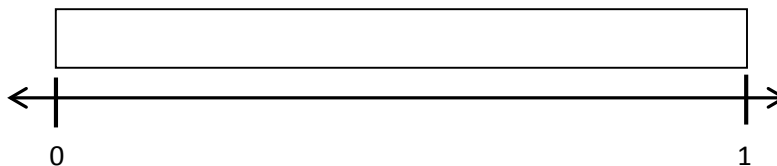
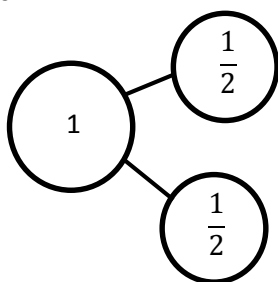


Name _____

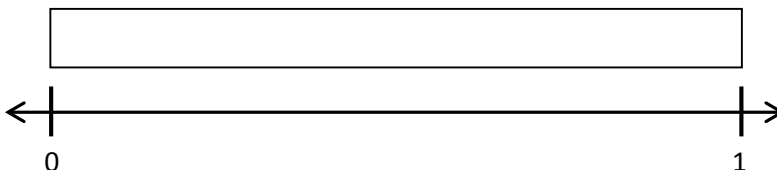
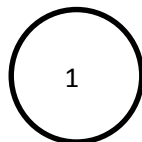
Date _____

1. Draw a number bond for each fractional unit. Partition the fraction strip to show the unit fractions of the number bond. Use the fraction strip to help you label the fractions on the number line. Be sure to label the fractions at 0 and 1.

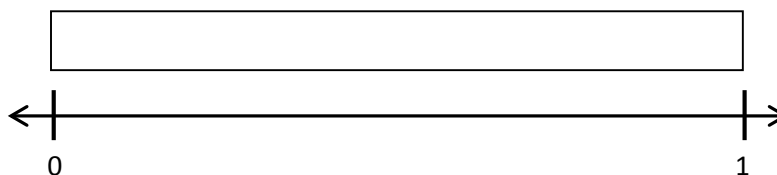
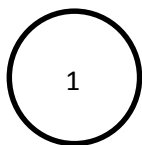
a. Halves



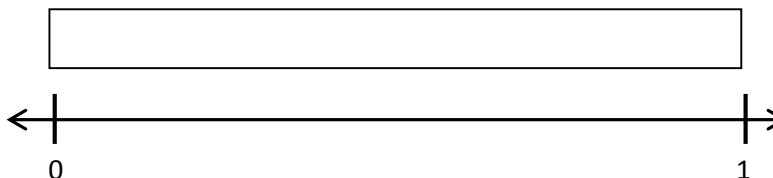
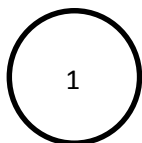
b. Thirds



c. Fourths



d. Fifths

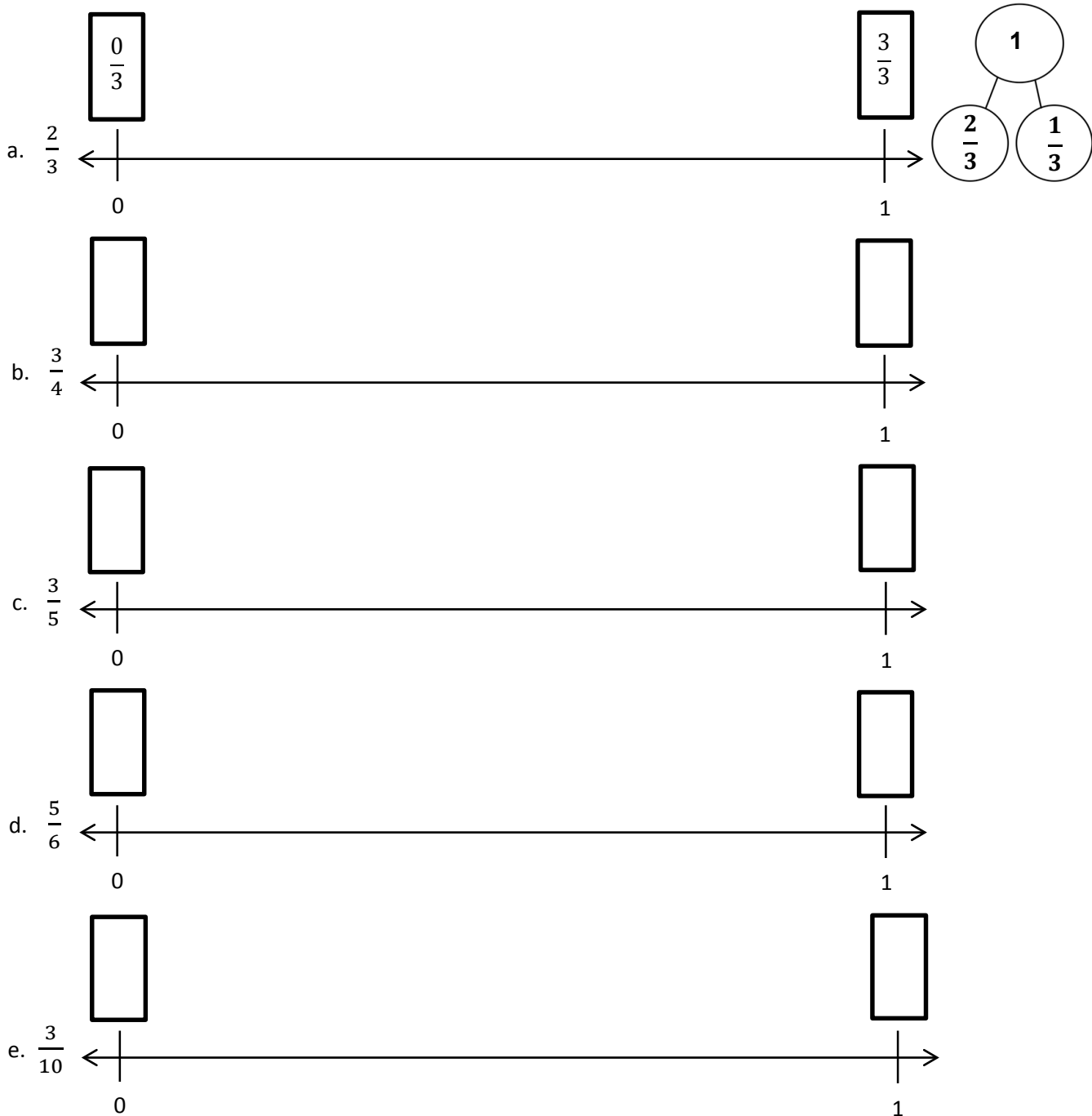


2. Trevor needs to let his puppy outside every quarter (1 fourth) hour to potty train him. Draw and label a number line from 0 hours to 1 hour to show every 1 fourth hour. Include 0 fourths and 4 fourths hour. Label 0 hours and 1 hour, too.

3. A ribbon is 1 meter long. Mrs. Lee wants to sew a bead every $\frac{1}{5}$ meter. The first bead is at $\frac{1}{5}$ meter. The last bead is at 1 meter. Draw and label a number line from 0 meters to 1 meter to show where Mrs. Lee will sew beads. Label all the fractions, including 0 fifths and 5 fifths. Label 0 meters and 1 meter, too.

Name _____ Date _____

1. Estimate to label the given fractions on the number line. Be sure to label the fractions at 0 and 1. Write the fractions above the number line. Draw a number bond to match your number line.



2. Draw a number line. Use a fraction strip to locate 0 and 1. Fold the strip to make 8 equal parts. Use the strip to measure and label your number line with eighths.

Count up from 0 eighths to 8 eighths on your number line. Touch each number with your finger as you count.

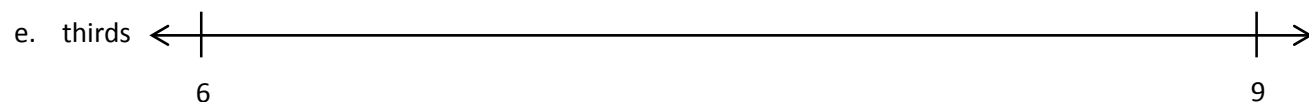
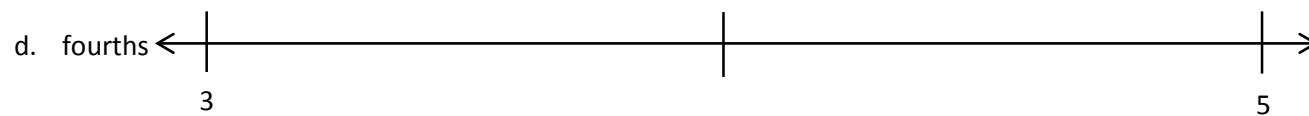
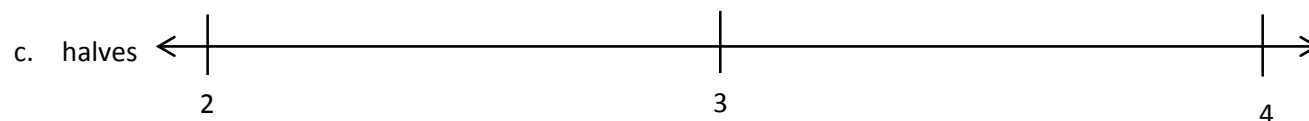
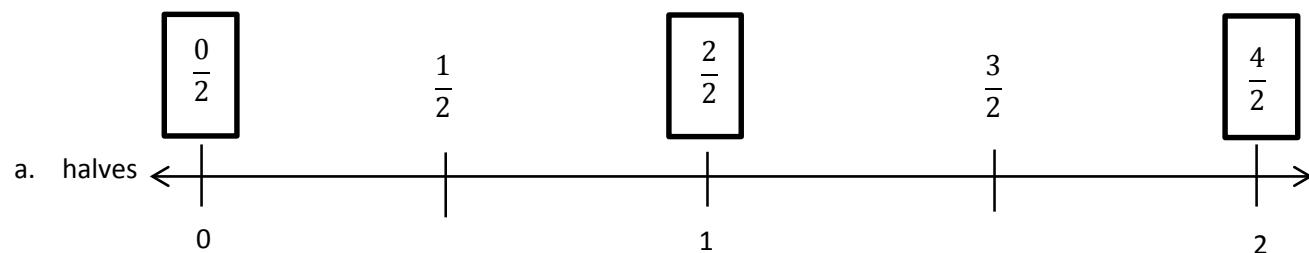
3. For his boat, James stretched out a rope with 5 equally spaced knots as shown.



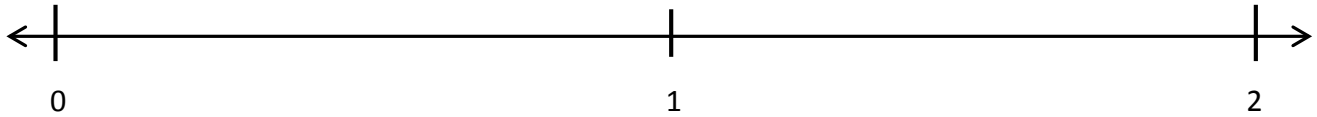
- a. Starting at the first knot and ending at the last knot, how many equal parts are formed by the 5 knots? Label each fraction at the knot.
- b. What fraction of the rope is labeled at the third knot?
- c. What if the rope had 6 equally spaced knots along the same length? What fraction of the rope would be measured by the first 2 knots?

Name _____ Date _____

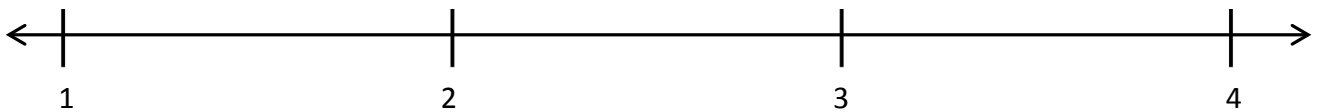
1. Estimate to equally partition and label the fractions on the number line. Label the wholes as fractions, and box them. The first one is done for you.



2. Partition each whole into fifths. Label each fraction. Count up as you go. Box the fractions that are located at the same points as whole numbers.



3. Partition each whole into thirds. Label each fraction. Count up as you go. Box the fractions that are located at the same points as whole numbers.



4. Draw a number line with endpoints 0 and 3. Label the wholes. Partition each whole into fourths. Label all the fractions from 0 to 3. Box the fractions that are located at the same points as whole numbers. Use a separate paper if you need more space.

Name _____

Date _____

1. Locate and label the following fractions on the number line.

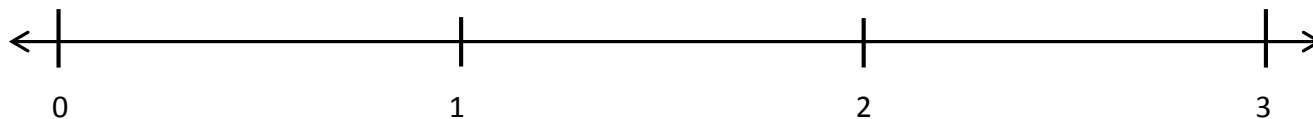
$$\frac{0}{6}$$

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

$$\frac{12}{6}$$

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

$$\frac{9}{6}$$



2. Locate and label the following fractions on the number line.

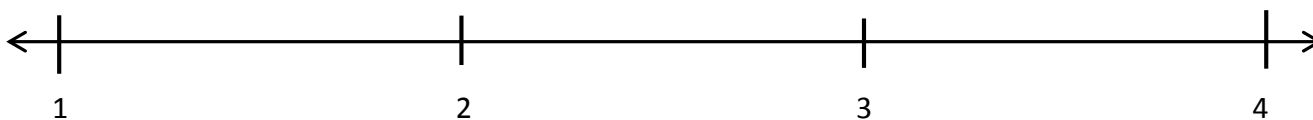
$$\frac{8}{4}$$

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

$$\frac{12}{4}$$

$$\frac{16}{4}$$

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



3. Locate and label the following fractions on the number line.

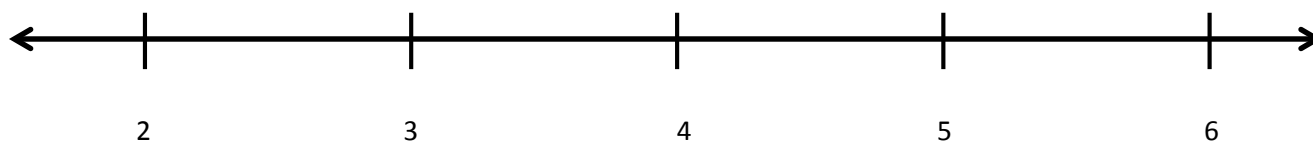
$$\frac{18}{3}$$

$$\frac{14}{3}$$

$$\frac{9}{3}$$

$$\frac{11}{3}$$

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



4. For a measurement project in math class, students measured the lengths of their pinky fingers. Alex's measured 2 inches long. Jerimiah's pinky finger was $\frac{7}{4}$ inches long. Whose finger is longer? Draw a number line to help prove your answer.
5. Marcy ran 4 kilometers after school. She stopped to tie her shoelace at $\frac{7}{5}$ kilometers. Then, she stopped to switch songs on her iPod at $\frac{12}{5}$ kilometers. Draw a number line showing Marcy's run. Include her starting and finishing points and the 2 places where she stopped.

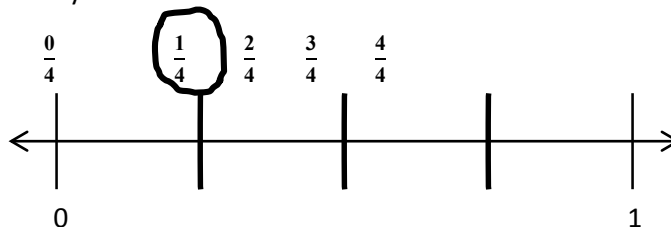
Name _____

Date _____

Place the two fractions on the number line. Circle the fraction with the distance closest to 0. Then, compare using $>$, $<$, or $=$. The first problem is done for you.

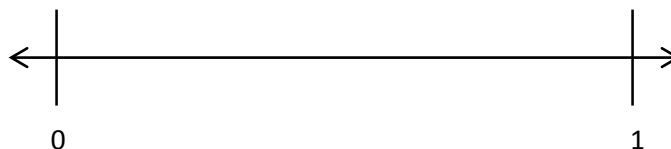
1.

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



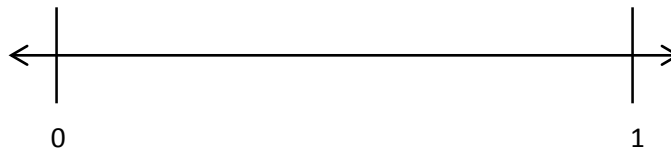
2.

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



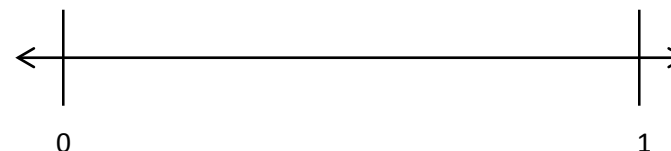
3.

$$\frac{1}{2} \bigcirc \frac{1}{4}$$



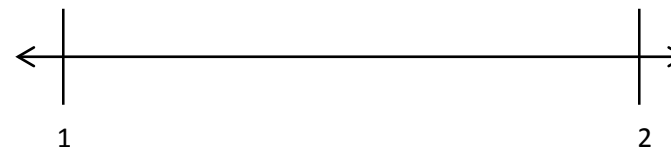
4.

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



5.

$$\frac{11}{8} \bigcirc \frac{7}{4}$$

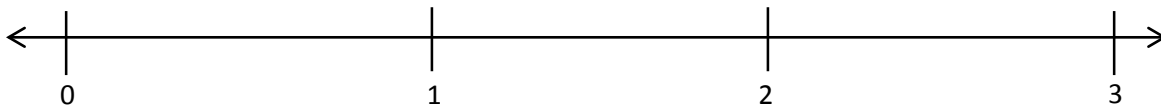


6. JoAnn and Lupe live straight down the street from their school. JoAnn walks $\frac{5}{6}$ miles and Lupe walks $\frac{7}{8}$ miles home from school every day. Draw a number line to model how far each girl walks. Who walks the least? Explain how you know using pictures, numbers, and words.
7. Cheryl cuts 2 pieces of thread. The blue thread is $\frac{5}{4}$ meters long. The red thread is $\frac{4}{5}$ meters long. Draw a number line to model the length of each piece of thread. Which piece of thread is shorter? Explain how you know using pictures, numbers, and words.
8. Brandon makes homemade spaghetti. He measures 3 noodles. One measures $\frac{7}{8}$ feet, the second is $\frac{7}{4}$ feet, and the third is $\frac{4}{2}$ feet long. Draw a number line to model the length of each piece of spaghetti. Write a number sentence using $<$, $>$, or $=$ to compare the pieces. Explain using pictures, numbers, and words.

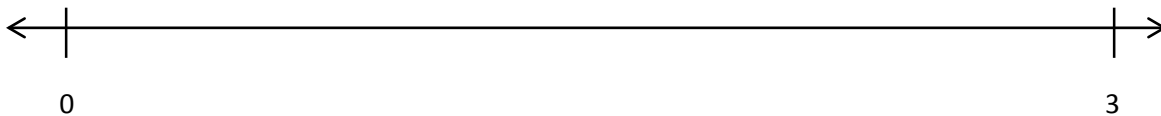
Name _____ Date _____

1. Divide each number line into the given fractional unit. Then, place the fractions. Write each whole as a fraction.

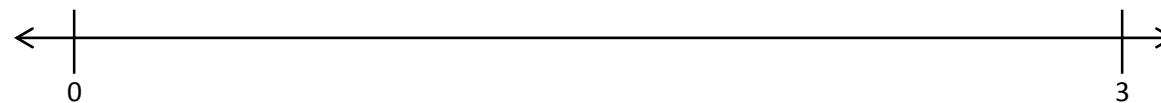
a. halves $\frac{3}{2}$ $\frac{5}{2}$ $\frac{4}{2}$



b. fourths $\frac{9}{4}$ $\frac{11}{4}$ $\frac{6}{4}$



c. eighths $\frac{24}{8}$ $\frac{19}{8}$ $\frac{16}{8}$



2. Use the number lines above to compare the following fractions using $>$, $<$, or $=$.

$$\frac{6}{4} \bigcirc \frac{9}{4}$$

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

$$\frac{19}{8} \bigcirc \frac{16}{8}$$

$$\frac{16}{8} \bigcirc \frac{3}{2}$$

$$\frac{9}{4} \bigcirc \frac{19}{8}$$

$$\frac{4}{2} \bigcirc \frac{16}{8}$$

$$\frac{6}{4} \bigcirc \frac{16}{8}$$

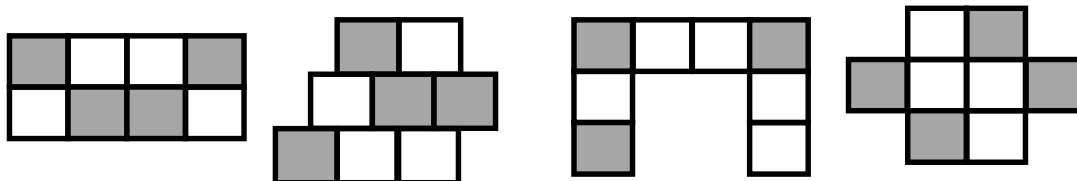
$$\frac{5}{2} \bigcirc \frac{9}{4}$$

$$\frac{24}{8} \bigcirc \frac{11}{4}$$

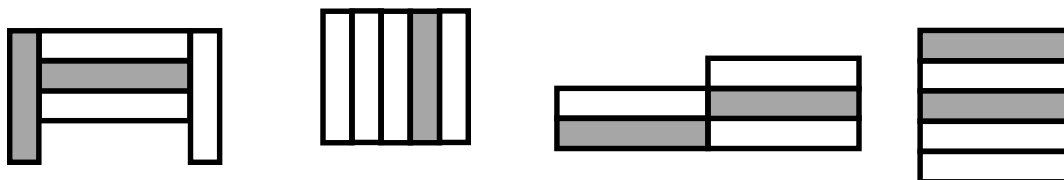
Name _____ Date _____

1. Label what fraction of each shape is shaded. Then, circle the fractions that are equal.

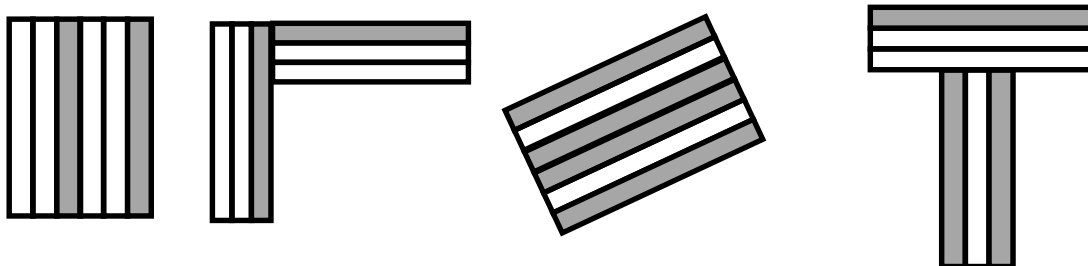
a.



b.

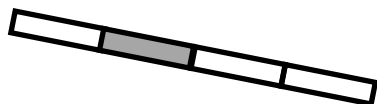


c.

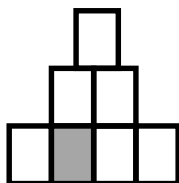


2. Label the shaded fraction. Draw 2 different representations of the same fractional amount.

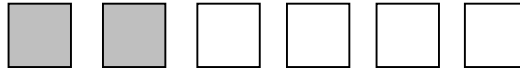
a.



b.

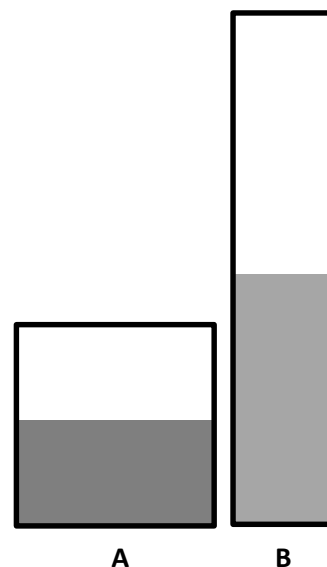


3. Ann has 6 small square pieces of paper. 2 squares are grey. Ann cuts the 2 grey squares in half with a diagonal line from one corner to the other.



- What shapes does she have now?
- How many of each shape does she have?
- Use all the shapes with no overlaps. Draw at least 2 different ways Ann's set of shapes might look. What fraction of the figure is grey?

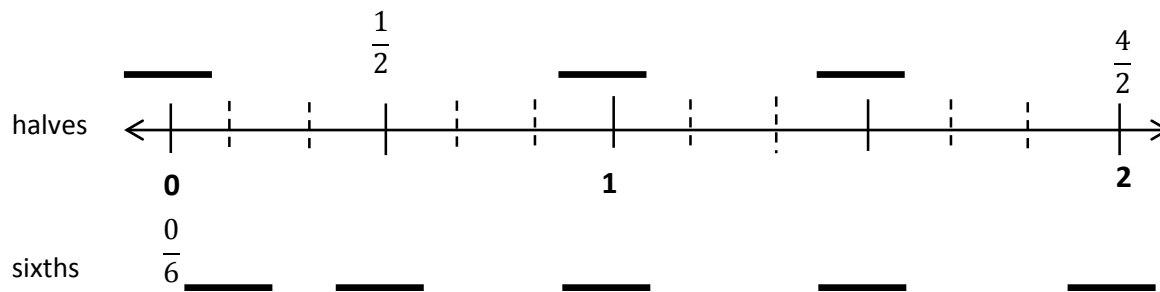
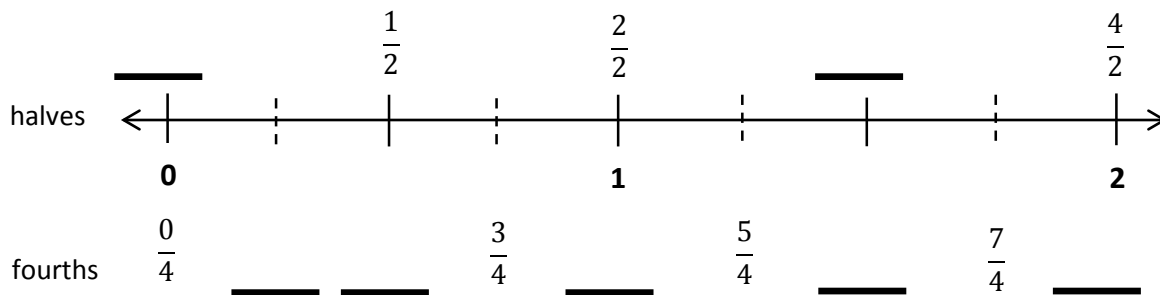
4. Laura has 2 different beakers that hold exactly 1 liter. She pours $\frac{1}{2}$ liter of blue liquid into Beaker A. She pours $\frac{1}{2}$ liter of orange liquid into Beaker B. Susan says the amounts are not equal. Cristina says they are. Explain who you think is correct and why.



Name _____

Date _____

1. Use the fractional units on the left to count up on the number line. Label the missing fractions on the blanks.



2. Use the number lines above to:
- Color fractions equal to 1 half blue.
 - Color fractions equal to 1 yellow.
 - Color fractions equal to 3 halves green.
 - Color fractions equal to 2 red.
3. Use the number lines above to make the number sentences true.

$$\frac{2}{4} = \frac{\quad}{6}$$

$$\frac{6}{6} = \frac{2}{\quad} = \frac{\quad}{\quad}$$

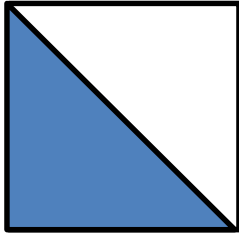
$$\frac{3}{2} = \frac{\quad}{6} = \frac{6}{\quad}$$

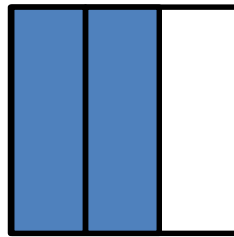
4. Jack and Jill use rain gauges the same size and shape to measure rain on the top of a hill. Jack uses a rain gauge marked in fourths of an inch. Jill's gauge measures rain in eighths of an inch. On Thursday, Jack's gauge measured $\frac{2}{4}$ inches of rain. They both had the same amount of water, so what was the reading on Jill's gauge Thursday? Draw a number line to help explain your thinking.
5. Jack and Jill's baby brother Rosco also had a gauge the same size and shape on the same hill. He told Jack and Jill that there had been $\frac{1}{2}$ inch of rain on Thursday. Is he right? Why or why not? Use words and a number line to explain your answer.

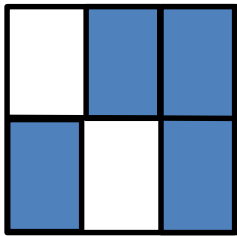
Name _____

Date _____

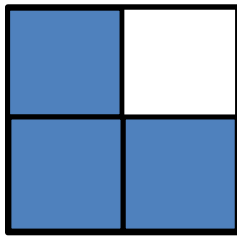
1. Write the shaded fraction of each figure on the blank. Then, draw a line to match the equivalent fractions.

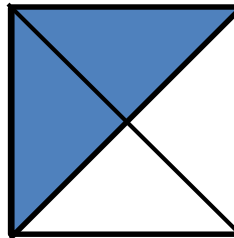


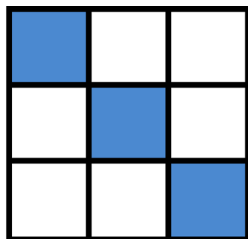


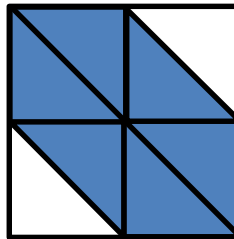




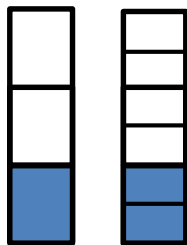








2. Write the missing parts of the fractions.



$$\frac{1}{3} = \frac{\quad}{6}$$



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



$$\frac{4}{8} = \frac{8}{\quad}$$

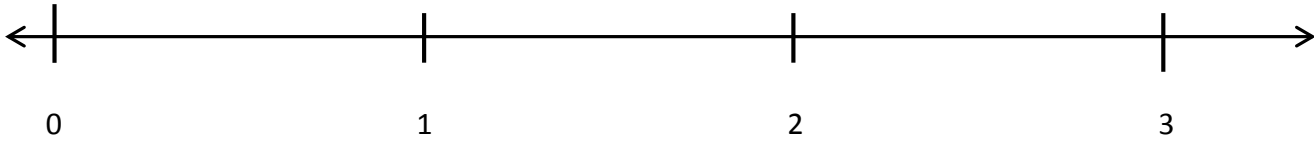
3. Why does it take 2 copies of $\frac{1}{8}$ to show the same amount as 1 copy of $\frac{1}{4}$? Explain your answer in words and pictures.

4. How many sixths does it take to make the same amount as $\frac{1}{3}$? Explain your answer in words and pictures.

5. Why does it take 10 copies of 1 sixth to make the same amount as 5 copies of 1 third? Explain your answer in words and pictures.

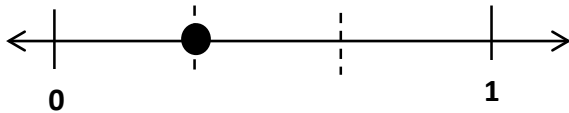
Name _____

Date _____

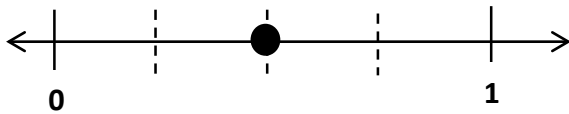


1. On the number line above, use a red colored pencil to divide each whole into fourths, and label each fraction above the line. Use a fraction strip to help you estimate, if necessary.
2. On the number line above, use a blue colored pencil to divide each whole into eighths, and label each fraction below the line. Refold your fraction strip from Problem 1 to help you estimate.
3. List the fractions that name the same place on the number line.
4. Using your number line to help, what red fraction and what blue fraction would be equal to $\frac{7}{2}$? Draw the part of the number line below that would include these fractions, and label it.

5. Write two different fractions for the dot on the number line. You may use halves, thirds, fourths, fifths, sixths, or eighths. Use fraction strips to help you, if necessary.



_____ = _____



_____ = _____



_____ = _____



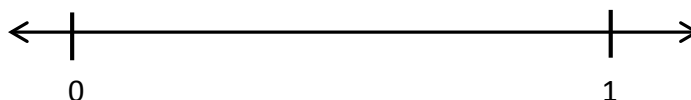
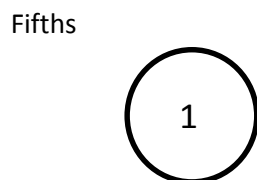
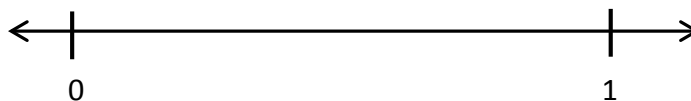
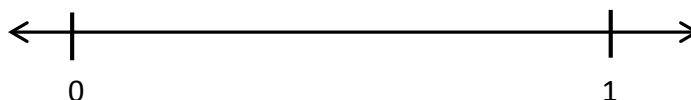
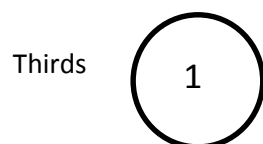
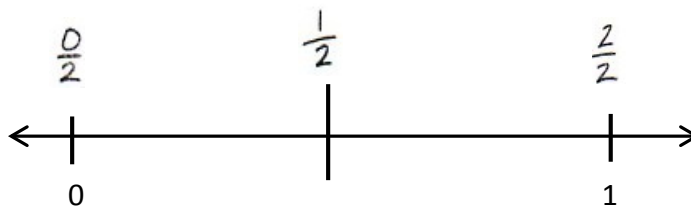
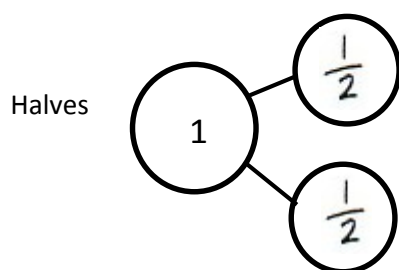
_____ = _____

6. Cameron and Terrance plan to run in the city race on Saturday. Cameron has decided that he will divide his race into 3 equal parts and will stop to rest after running 2 of them. Terrance divides his race into 6 equal parts and will stop and rest after running 2 of them. Will the boys rest at the same spot in the race? Why or why not? Draw a number line to explain your answer.

Name _____

Date _____

1. Complete the number bond as indicated by the fractional unit. Partition the number line into the given fractional unit, and label the fractions. Rename 0 and 1 as fractions of the given unit. The first one is done for you.



2. Circle all the fractions in Problem 1 that are equal to 1. Write them in a number sentence below.

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

3. What pattern do you notice in the fractions that are equivalent to 1?

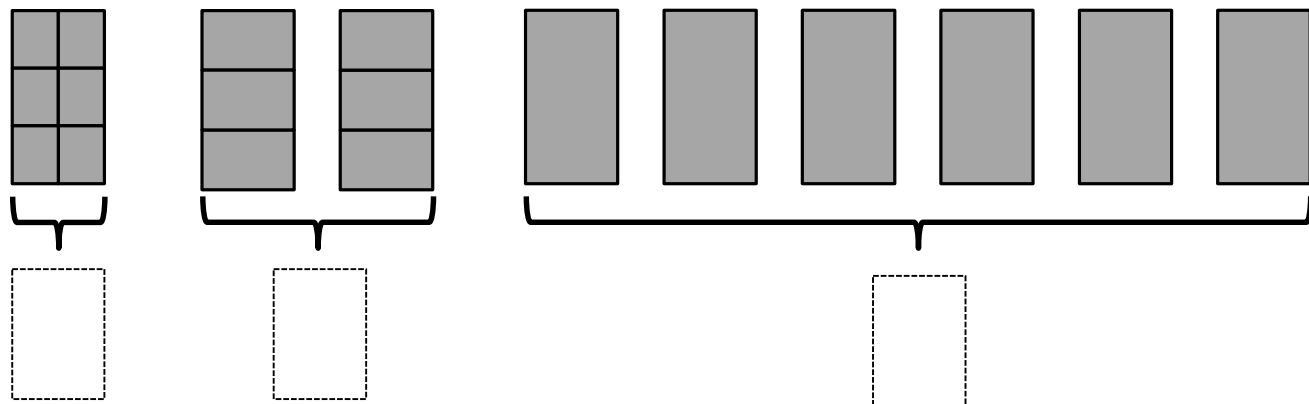
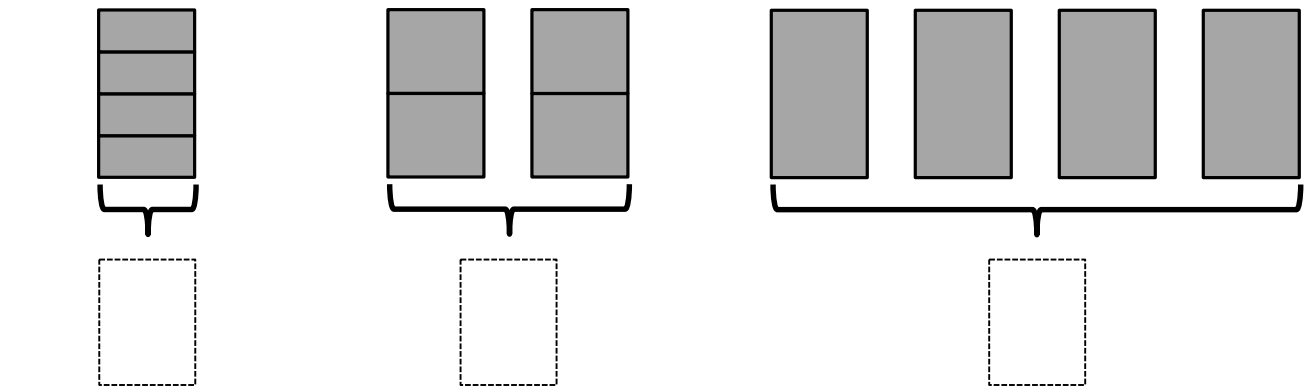
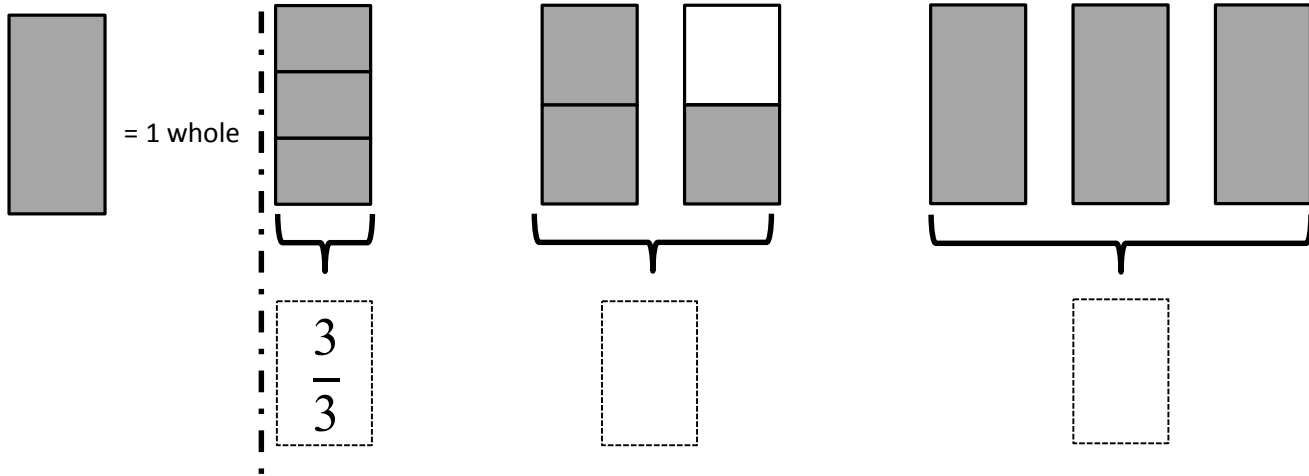
4. Taylor took his little brother to get pizza. Each boy ordered a small pizza. Taylor's pizza was cut in fourths, and his brother's was cut in thirds. After they had both eaten all of their pizza, Taylor's little brother said, "Hey that was no fair! You got more than me! You got 4 pieces, and I only got 3."

Should Taylor's little brother be mad? What could you say to explain the situation to him? Use words, pictures, or a number line.

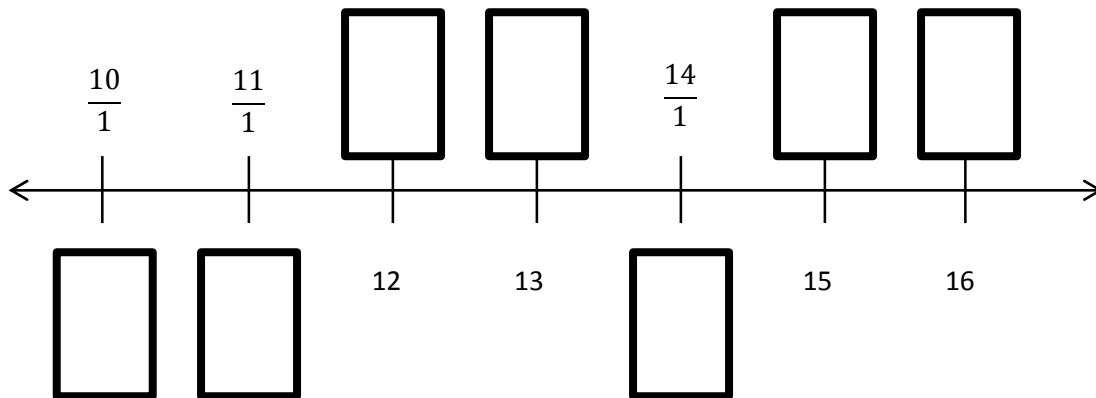
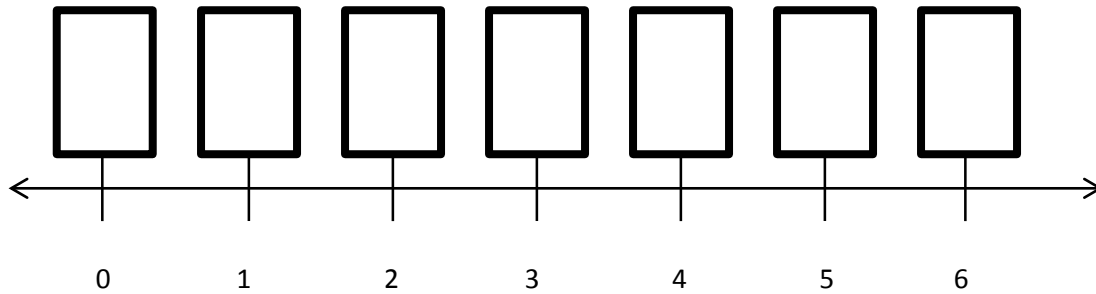
Name _____

Date _____

1. Label the following models as a fraction inside the dotted box. The first one has been done for you.



2. Fill in the missing whole numbers in the boxes below the number line. Rename the whole numbers as fractions in the boxes above the number line.



3. Explain the difference between these two fractions with words and pictures.

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

Name _____

Date _____

1. Partition the number line to show the fractional units. Then, draw number bonds using copies of 1 whole for the circled whole numbers.



$0 = \underline{\hspace{1cm}} \text{ halves}$

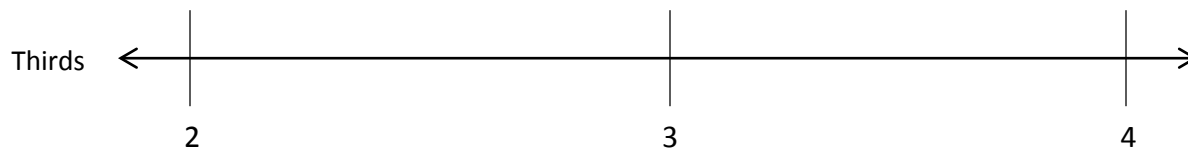
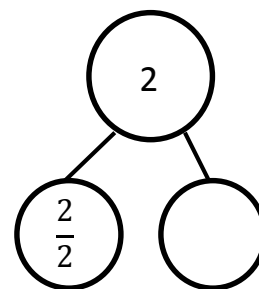
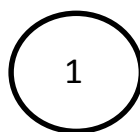
$1 = \underline{\hspace{1cm}} \text{ halves}$

$2 = \underline{\hspace{1cm}} \text{ halves}$

$0 = \frac{\square}{2}$

$1 = \frac{\square}{2}$

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



$2 = \underline{\hspace{1cm}} \text{ thirds}$

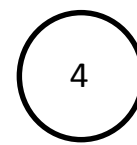
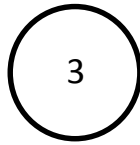
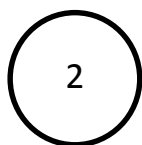
$3 = \underline{\hspace{1cm}} \text{ thirds}$

$4 = \underline{\hspace{1cm}} \text{ thirds}$

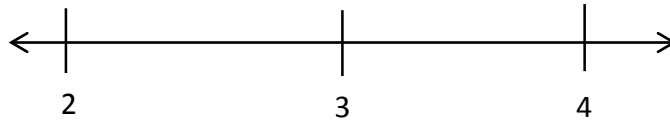
$2 = \frac{\square}{3}$

$3 = \frac{\square}{3}$

$4 = \frac{\square}{3}$



2. Write the fractions that name the whole numbers for each fractional unit. The first one has been done.



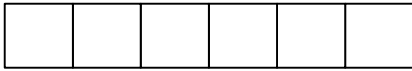
Halves	$\frac{4}{2}$	$\frac{6}{2}$	$\frac{8}{2}$
Thirds			
Fourths			
Sixths			

3. Sammy uses $\frac{1}{4}$ meter of wire each day to make things.
- Draw a number line to represent 1 meter of wire. Partition the number line to represent how much Sammy uses each day. How many days does the wire last?
 - How many days will 3 meters of wire last?
4. Cindy feeds her dog $\frac{1}{3}$ pound of food each day.
- Draw a number line to represent 1 pound of food. Partition the number line to represent how much food she uses each day.
 - Draw another number line to represent 4 pounds of food. After 3 days, how many pounds of food has she given her dog?
 - After 6 days, how many pounds of food has she given her dog?

Name _____

Date _____

1. Use the pictures to model equivalent fractions. Fill in the blanks, and answer the questions.



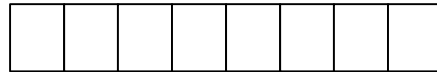
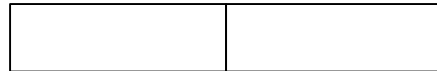
4 sixths is equal to _____ thirds.

$$\frac{4}{6} = \frac{\square}{3}$$

The whole stays the same.

What happened to the size of the equal parts when there were fewer equal parts?

What happened to the number of equal parts when the equal parts became larger?



1 half is equal to _____ eighths.

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

The whole stays the same.

What happened to the size of the equal parts when there were more equal parts?

What happened to the number of equal parts when the equal parts became smaller?

2. 6 friends want to share 3 chocolate bars that are all the same size, which are represented by the 3 rectangles below. When the bars are unwrapped, the friends notice that the first chocolate bar is cut into 2 equal parts, the second is cut into 4 equal parts, and the third is cut into 6 equal parts. How can the 6 friends share the chocolate bars equally without breaking any of the pieces?



3. When the whole is the same, why does it take 6 copies of $\frac{1}{8}$ to equal 3 copies of $\frac{1}{4}$? Draw a model to support your answer.
4. When the whole is the same, how many sixths does it take to equal $\frac{1}{3}$? Draw a model to support your answer.
5. You have a magic wand that doubles the number of equal parts but keeps the whole the same size. Use your magic wand. In the space below, draw to show what happens to a rectangle that is partitioned in fourths after you tap it with your wand. Use words and numbers to explain what happened.



Name _____

Date _____

Shade the models to compare the fractions. Circle the larger fraction for each problem.

1. 2 fifths

--	--	--	--	--

2 thirds

--	--	--

2. 2 tenths

--	--	--	--	--	--	--	--	--	--

2 eighths

--	--	--	--	--	--	--	--

3. 3 fourths

--	--	--	--

3 eighths

--	--	--	--	--	--	--	--

4. 4 eighths

--	--	--	--	--	--	--	--

4 sixths

--	--	--	--	--	--

5. 3 thirds

--	--	--

3 sixths

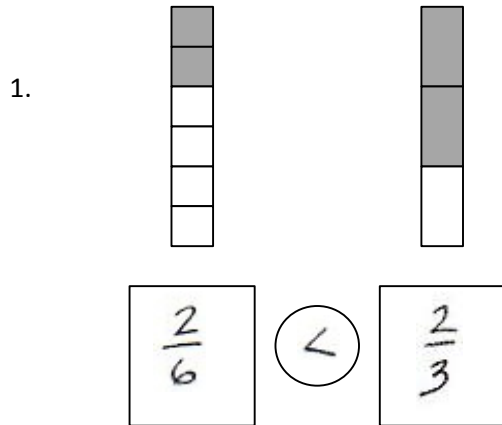
--	--	--	--	--	--

6. After softball, Leslie and Kelly each buy a half-liter bottle of water. Leslie drinks $\frac{3}{4}$ of her water. Kelly drinks $\frac{3}{5}$ of her water. Who drinks the least amount of water? Draw a picture to support your answer.
7. Becky and Malory get matching piggy banks. Becky fills $\frac{2}{3}$ of her piggy bank with pennies. Malory fills $\frac{2}{4}$ of her piggy bank with pennies. Whose piggy bank has more pennies? Draw a picture to support your answer.
8. Heidi lines up her dolls in order from shortest to tallest. Doll A is $\frac{2}{4}$ foot tall, Doll B is $\frac{2}{6}$ foot tall, and Doll C is $\frac{2}{3}$ foot tall. Compare the heights of the dolls to show how Heidi puts them in order. Draw a picture to support your answer.

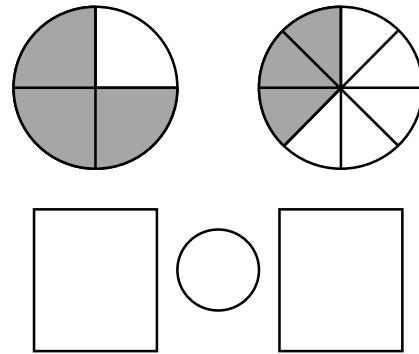
Name _____

Date _____

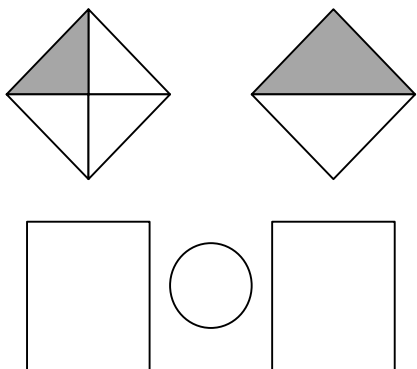
Label each shaded fraction. Use $>$, $<$, or $=$ to compare. The first one has been done for you.



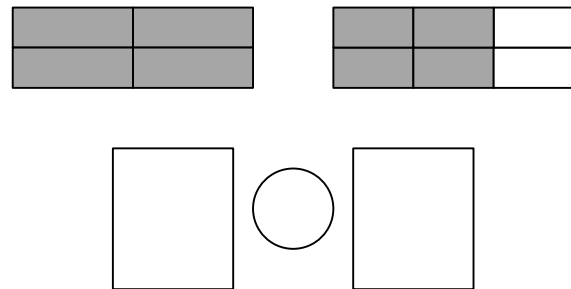
2.



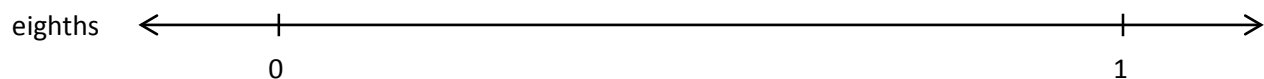
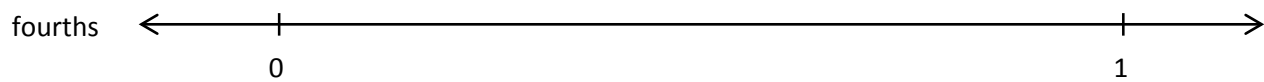
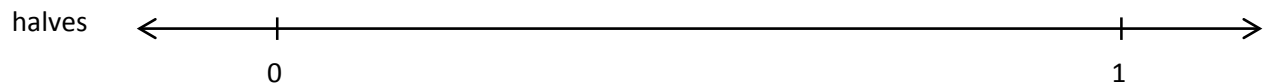
3.



4.



5. Partition each number line into the units labeled on the left. Then, use the number lines to compare the fractions.



a. $\frac{3}{8}$ $\frac{3}{4}$

b. $\frac{4}{4}$ $\frac{4}{8}$

c. $\frac{2}{4}$ $\frac{2}{8}$

Draw your own model to compare the following fractions.

6. $\frac{3}{10}$  $\frac{3}{5}$

7. $\frac{2}{6}$  $\frac{2}{8}$

8. John ran 2 thirds of a kilometer after school. Nicholas ran 2 fifths of a kilometer after school. Who ran the shorter distance? Use the model below to support your answer. Be sure to label 1 whole as 1 kilometer.

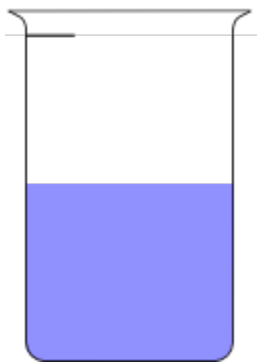
9. Erica ate 2 ninths of a licorice stick. Robbie ate 2 fifths of an identical licorice stick. Who ate more? Use the model below to support your answer.

Start of Homework section for Mission 5

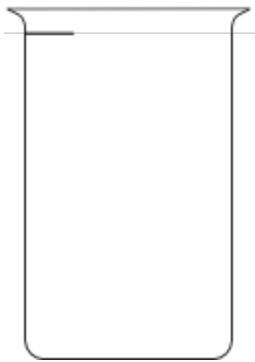
Name _____

Date _____

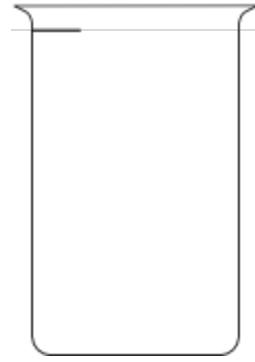
1. A beaker is considered full when the liquid reaches the fill line shown near the top. Estimate the amount of water in the beaker by shading the drawing as indicated. The first one is done for you.



1 half



1 fifth

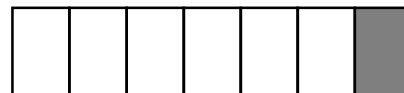


1 sixth

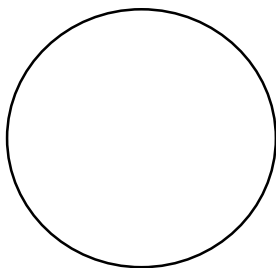
2. Danielle cut her candy bar into equal pieces as shown in the rectangles below. In the blanks below, name the fraction of candy bar represented by the shaded part.



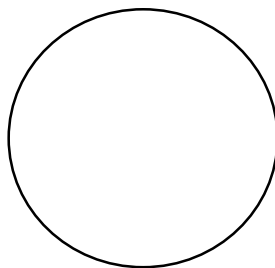




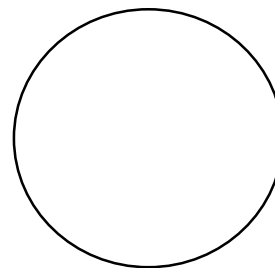
3. Each circle represents 1 whole pie. Estimate to show how you would cut the pie into fractional units as indicated below.



halves

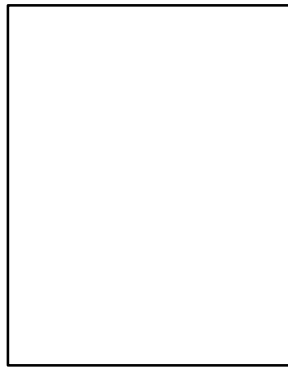


thirds



sixths

4. Each rectangle represents 1 sheet of paper. Estimate to draw lines to show how you would cut the paper into fractional units as indicated below.



halves



fourths



eighths

5. Each rectangle represents 1 sheet of paper. Estimate to draw lines to show how you would cut the paper into fractional units as indicated below.



sixths



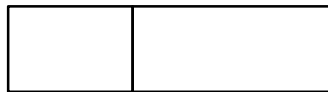
thirds

6. Yuri has a rope 12 meters long. He cuts it into pieces that are each 2 meters long. What fraction of the rope is one piece? Draw a picture. (You might fold a strip of paper to help you model the problem.)
7. Dawn bought 12 grams of chocolate. She ate half of the chocolate. How many grams of chocolate did she eat?

Name _____

Date _____

1. Circle the strips that are cut into equal parts.



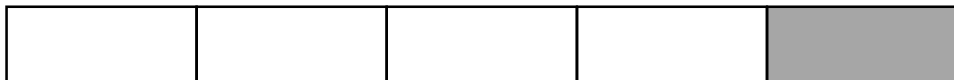
2.



a. There are _____ equal parts in all. _____ is shaded.



b. There are _____ equal parts in all. _____ is shaded.



c. There are _____ equal parts in all. _____ is shaded.



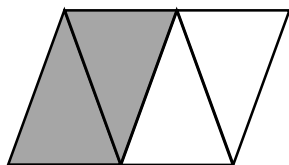
d. There are _____ equal parts in all. _____ are shaded.

3. Dylan plans to eat $\frac{1}{5}$ of his candy bar. His 4 friends want him to share the rest equally. Show how Dylan and his friends can each get an equal share of the candy bar.
4. Nasir baked a pie and cut it in fourths. He then cut each piece in half.
- What fraction of the original pie does each piece represent?
 - Nasir ate 1 piece of pie on Tuesday and 2 pieces on Wednesday. What fraction of the original pie was not eaten?

Name _____

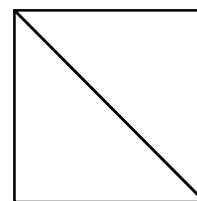
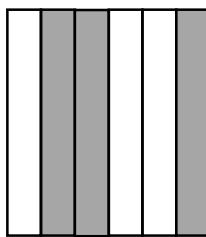
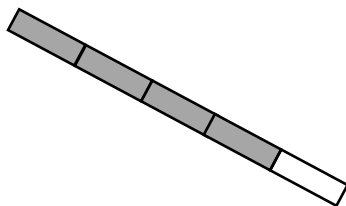
Date _____

1. Each shape is a whole divided into equal parts. Name the fractional unit, and then count and tell how many of those units are shaded. The first one is done for you.

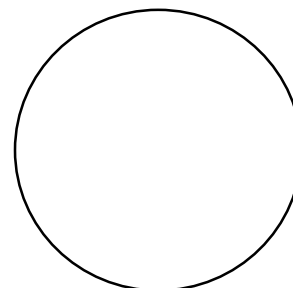


Fourths

2 fourths are shaded.



2. Each shape is 1 whole. Estimate to divide each into equal parts. Divide each whole using a different fractional unit. Write the name of the fractional unit on the line below the shape.



3. Anita uses 1 sheet of paper to make a calendar showing each month of the year. Draw Anita's calendar. Show how she can divide her calendar so that each month is given the same space. What fraction of the calendar does each month receive?

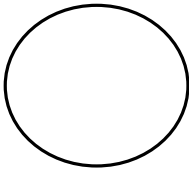
Each month receives _____.

Name _____

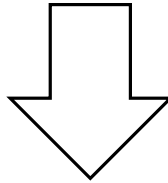
Date _____

Each shape is 1 whole. Estimate to equally partition the shape and shade to show the given fraction.

1. 1 half



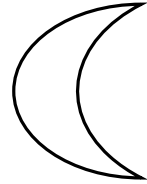
A



B

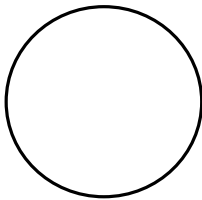


C



D

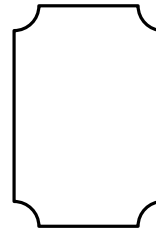
2. 1 fourth



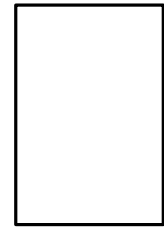
A



B

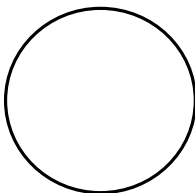


C



D

3. 1 third



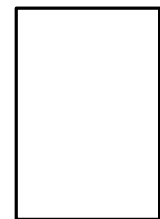
A



B



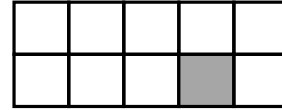
C



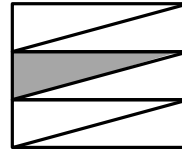
D

4. Each of the shapes represents 1 whole. Match each shape to its fraction.

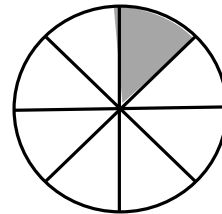
1 fifth



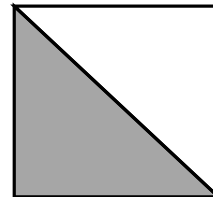
1 twelfth



1 third



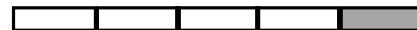
1 fourth



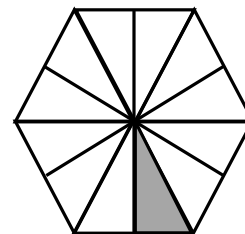
1 half



1 eighth



1 tenth



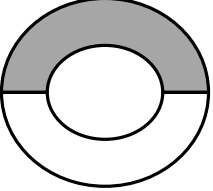
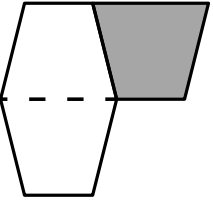
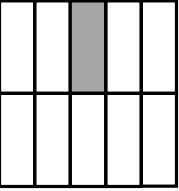
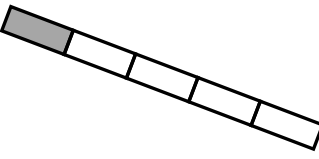
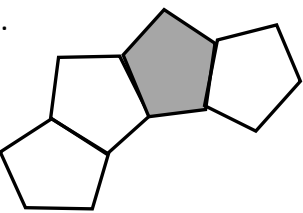
1 sixth



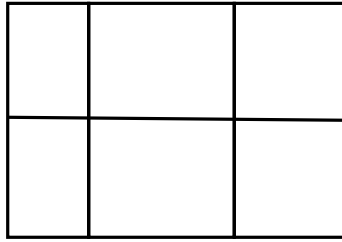
Name _____

Date _____

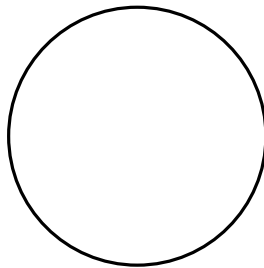
1. Fill in the chart. Each image is one whole.

	Total Number of Equal Parts	Total Number of Equal Parts Shaded	Unit Form	Fraction Form
a. 				
b. 				
c. 				
d. 				
e. 				

2. This figure is divided into 6 parts. Are they sixths? Explain your answer.



3. Terry and his 3 friends baked a pizza during his sleepover. They want to share the pizza equally. Show how Terry can slice the pizza so that he and his 3 friends can each get an equal amount with none left over.



4. Draw two identical rectangles. Shade 1 seventh of one rectangle and 1 tenth of the other. Label the unit fractions. Use your rectangles to explain why $\frac{1}{7}$ is greater than $\frac{1}{10}$.

Name _____

Date _____

1. Complete the number sentence. Estimate to partition each strip equally, write the unit fraction inside each unit, and shade the answer.

Sample:

$$3 \text{ fourths} = \frac{3}{4}$$



- a. 2 thirds =

--

- b. 5 sevenths =

--

- c. 3 fifths =

--

- d. 2 eighths =

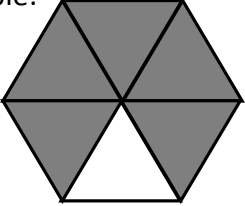
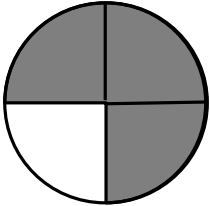
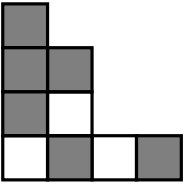
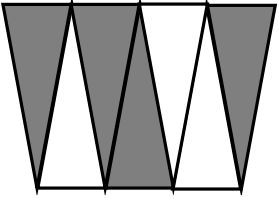
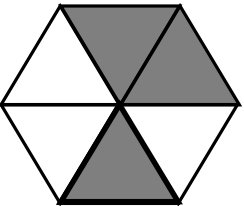
--

2. Mr. Abney bought 6 kilograms of rice. He cooked 1 kilogram of it for dinner.

- a. What fraction of the rice did he cook for dinner?

- b. What fraction of the rice was left?

3. Fill in the chart.

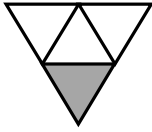
	Total Number of Equal Parts	Total Number of Shaded Equal Parts	Unit Fraction	Fraction Shaded
Sample: 	6	5	$\frac{1}{6}$	$\frac{5}{6}$
a. 				
b. 				
c. 				
d. 				

Name _____

Date _____

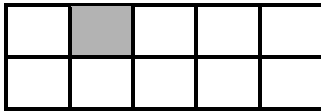
Whisper the fraction of the shape that is shaded. Then, match the shape to the amount that is not shaded.

1.



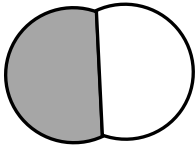
▪ 9 tenths

2.



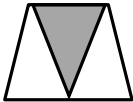
▪ 4 fifths

3.



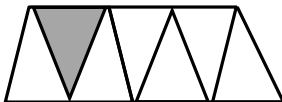
▪ 10 elevenths

4.



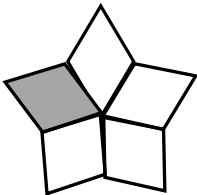
▪ 5 sixths

5.



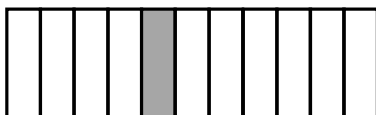
▪ 1 half

6.



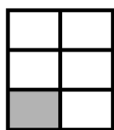
▪ 2 thirds

7.



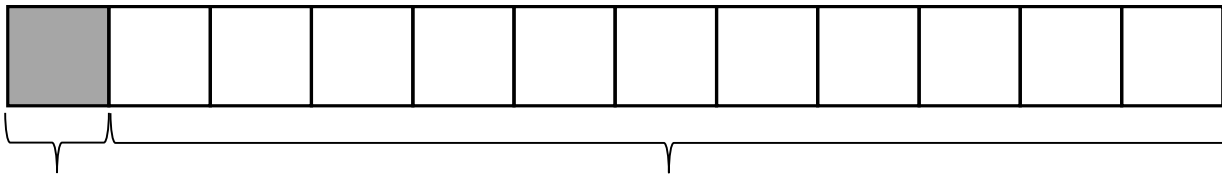
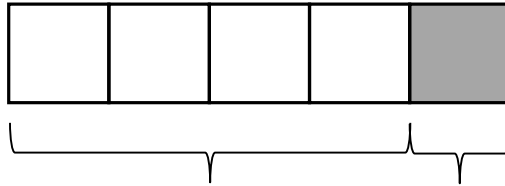
▪ 3 fourths

8.



▪ 6 sevenths

9. Each strip represents 1 whole. Write a fraction to label the shaded and unshaded parts.



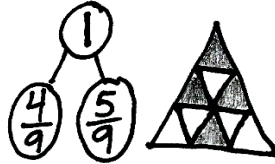
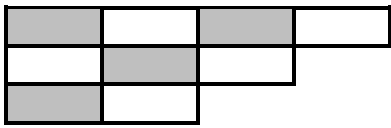
10. Carlia finished $\frac{1}{4}$ of her homework on Saturday. What fraction of her homework has she not finished? Draw and explain.
11. Jerome cooks 8 cups of oatmeal for his family. They eat $\frac{7}{8}$ of the oatmeal. What fraction of the oatmeal is uneaten? Draw and explain.

Name _____

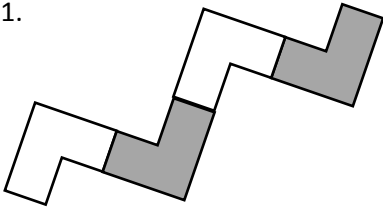
Date _____

Show a number bond representing what is shaded and unshaded in each of the figures. Draw a different visual model that would be represented by the same number bond.

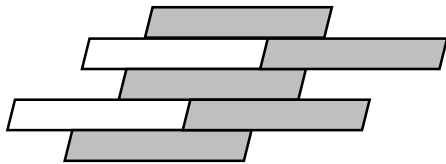
Sample:



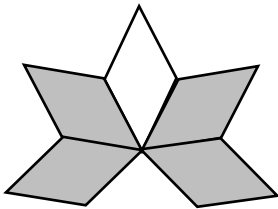
1.



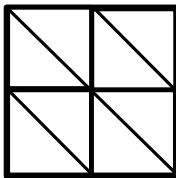
2.



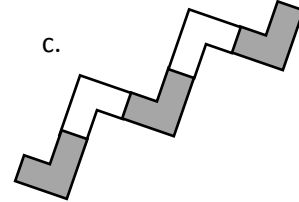
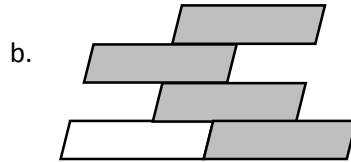
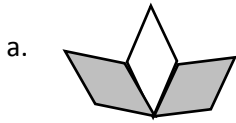
3.



4.



5. Draw a number bond with 2 parts showing the shaded and unshaded fractions of each figure. Decompose both parts of the number bond into unit fractions.

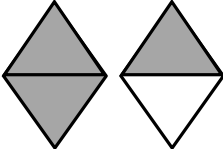
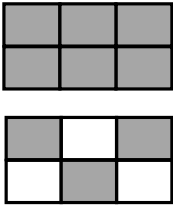
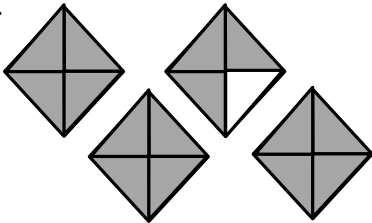

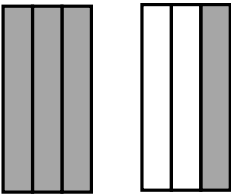
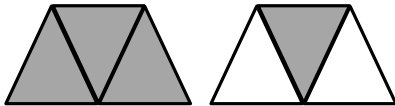


6. Johnny made a square peanut butter and jelly sandwich. He ate $\frac{1}{3}$ of it and left the rest on his plate. Draw a picture of Johnny's sandwich. Shade the part he left on his plate, and then draw a number bond that matches what you drew. What fraction of his sandwich did Johnny leave on his plate?

Name _____

Date _____

1. Each shape represents 1 whole. Fill in the chart.

	Unit Fraction	Total Number of Units Shaded	Fraction Shaded
a. Sample: 	$\frac{1}{2}$	3	$\frac{3}{2}$
b. 			
c. 			
d. 			
e. 			
f. 			

2. Estimate to draw and shade units on the fraction strips. Solve.

Sample:

$$7 \text{ fourths} = \frac{7}{4}$$



- a. 5 thirds =

- b. _____ = $\frac{9}{3}$

3. Reggie bought 2 candy bars. Draw the candy bars and estimate to partition each bar into 4 equal pieces.

- a. Reggie ate 5 pieces. Shade the amount he ate.
- b. Write a fraction to show how many candy bars Reggie ate.

Name _____

Date _____

1. Each fraction strip is 1 whole. All the fraction strips are equal in length. Color 1 fractional unit in each strip. Then, answer the questions below.

 $\frac{1}{2}$  $\frac{1}{3}$  $\frac{1}{5}$  $\frac{1}{4}$  $\frac{1}{9}$ 

2. Circle *less than* or *greater than*. Whisper the complete sentence.

a. $\frac{1}{2}$ is less than $\frac{1}{3}$
greater than

b. $\frac{1}{9}$ is less than $\frac{1}{2}$
greater than

c. $\frac{1}{4}$ is less than $\frac{1}{2}$
greater than

d. $\frac{1}{4}$ is less than $\frac{1}{9}$
greater than

e. $\frac{1}{5}$ is less than $\frac{1}{3}$
greater than

f. $\frac{1}{5}$ is less than $\frac{1}{4}$
greater than

g. $\frac{1}{2}$ is less than $\frac{1}{5}$
greater than

h. 6 fifths is less than 3 thirds
greater than

3. After his football game, Malik drinks $\frac{1}{2}$ liter of water and $\frac{1}{3}$ liter of juice. Did Malik drink more water or juice? Draw and estimate to partition. Explain your answer.

4. Use $>$, $<$, or $=$ to compare.

a. 1 fourth 1 eighth

b. 1 seventh 1 fifth

c. 1 eighth $\frac{1}{8}$

d. 1 twelfth $\frac{1}{10}$

e. $\frac{1}{15}$ 1 thirteenth

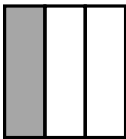
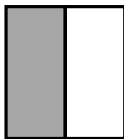
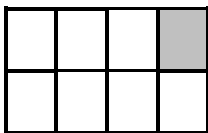
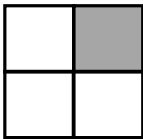
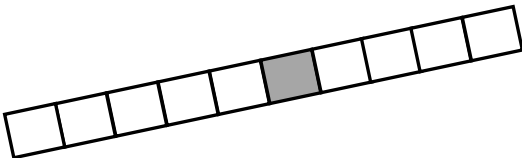
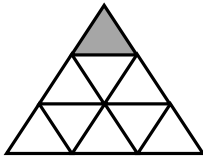
f. 3 thirds 1 whole

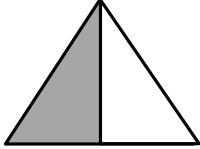
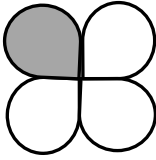
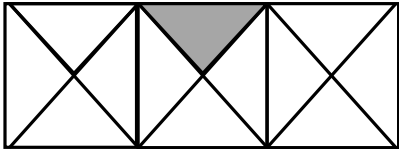
5. Write a word problem about comparing fractions for your friends to solve. Be sure to show the solution so that your friends can check their work.

Name _____

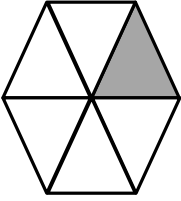
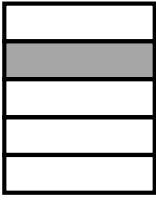
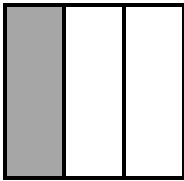
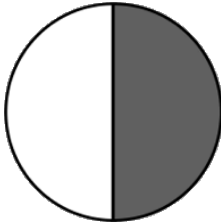
Date _____

Label the unit fraction. In each blank, draw and label the same whole with a shaded unit fraction that makes the sentence true. There is more than 1 correct way to make the sentence true.

Sample: $\frac{1}{3}$ 	is less than	$\frac{1}{2}$ 
1. 	is greater than	
2. 	is less than	
3. 	is greater than	
4. 	is less than	

5.	is greater than	
6.	is less than	
7.	is greater than	

8. Fill in the blank with a fraction to make the statement true. Draw a matching model.

			
$\frac{1}{6}$ is greater than <input type="text"/>		$\frac{1}{5}$ is less than <input type="text"/>	
			
$\frac{1}{3}$ is less than <input type="text"/>		$\frac{1}{2}$ is greater than <input type="text"/>	

9. Debbie ate $\frac{1}{8}$ of a large brownie. Julian ate $\frac{1}{2}$ of a small brownie. Julian says, “I ate more than you because $\frac{1}{2} > \frac{1}{8}$.”

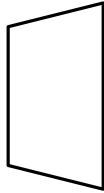
- a. Use pictures and words to explain Julian’s mistake.
- b. How could you change the problem so that Julian is correct? Use pictures and words to explain.

Name _____

Date _____

Each shape represents the given unit fraction. Estimate to draw a possible whole.

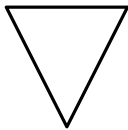
1. $\frac{1}{2}$



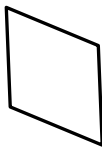
2. $\frac{1}{6}$



3. 1 third

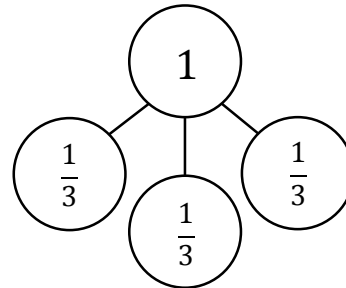
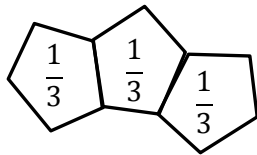
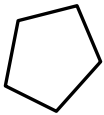


4. 1 fourth

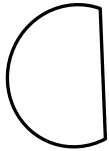


Each shape represents the given unit fraction. Estimate to draw a possible whole, label the unit fractions, and draw a number bond that matches the drawing. The first one is done for you.

5. $\frac{1}{3}$



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

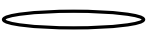


7. $\frac{1}{5}$

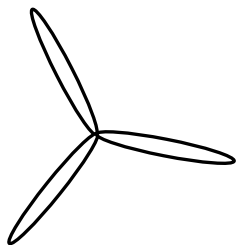


8. $\frac{1}{7}$



9. Evan and Yong used this shape , representing the unit fraction $\frac{1}{3}$, to draw 1 whole. Shania thinks both of them did it correctly. Do you agree with her? Explain your answer.

Evan's
Shape

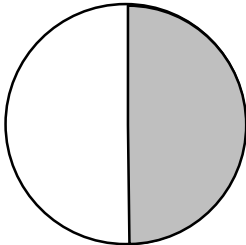
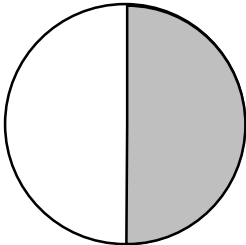
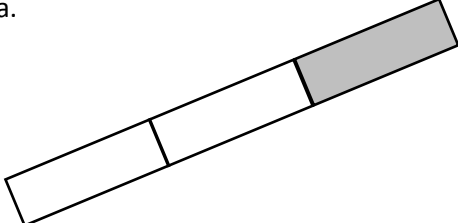
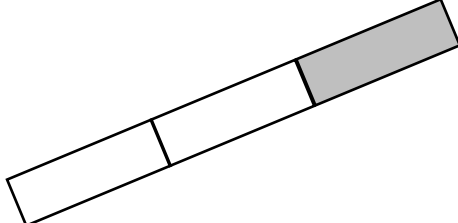
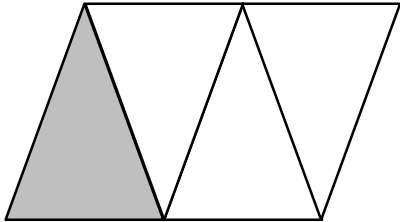
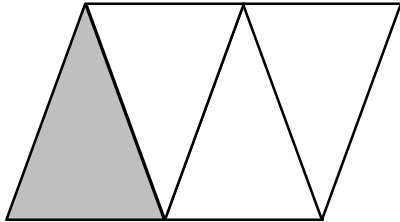
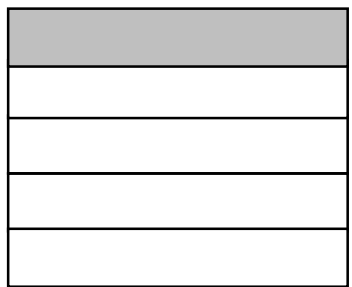
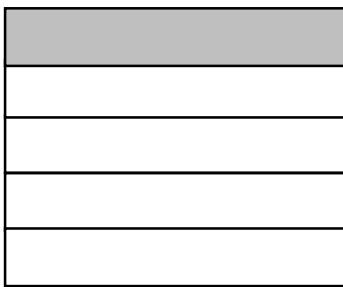


Yong's
Shape



Name _____

Date _____

The shape represents 1 whole. Write a fraction to describe the shaded part.	The shaded part represents 1 whole. Divide 1 whole to show the same unit fraction you wrote in Part (a).
<p>1. a.</p> 	<p>b.</p> 
<p>2. a.</p> 	<p>b.</p> 
<p>3. a.</p> 	<p>b.</p> 
<p>4. a.</p> 	<p>b.</p> 

5. Use the pictures below to complete the following statements.

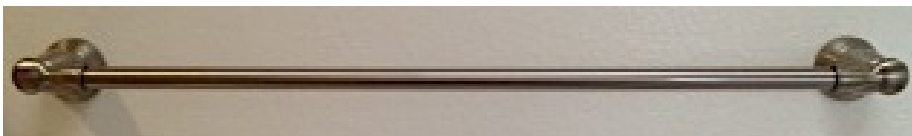
Towel Rack A



Towel Rack B



Towel Rack C



- a. Towel Rack _____ is about $\frac{1}{2}$ the length of Towel Rack C.
- b. Towel Rack _____ is about $\frac{1}{3}$ the length of Towel Rack C.
- c. If Towel Rack C measures 6 ft long, then Towel Rack B is about _____ ft long, and Towel Rack A is about _____ ft long.
- d. About how many copies of Towel Rack A equal the length of Towel Rack C? Draw number bonds to help you.
- e. About how many copies of Towel Rack B equal the length of Towel Rack C? Draw number bonds to help you.

6. Draw 3 strings—B, C, and D—by following the directions below. String A is already drawn for you.

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

Extension: String E is 5 times the length of String D.

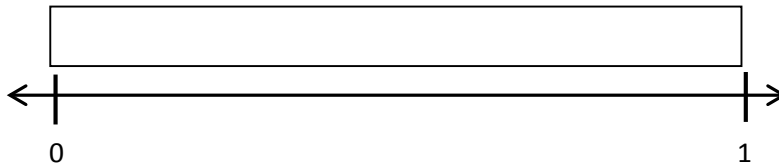
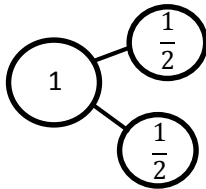
String A 

Name _____

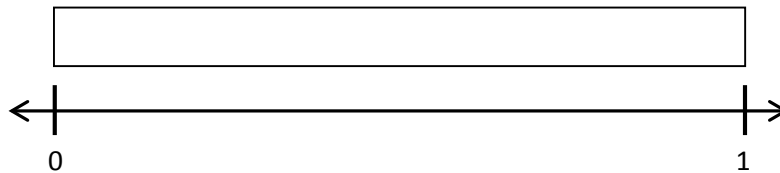
Date _____

1. Draw a number bond for each fractional unit. Partition the fraction strip to show the unit fractions of the number bond. Use the fraction strip to help you label the fractions on the number line. Be sure to label the fractions at 0 and 1.

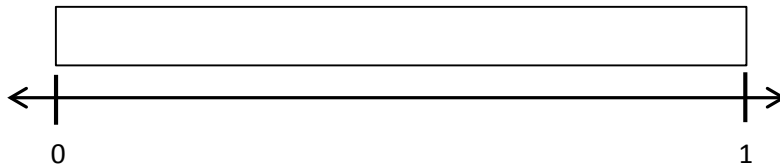
a. Halves



b. Eighths



c. Fifths

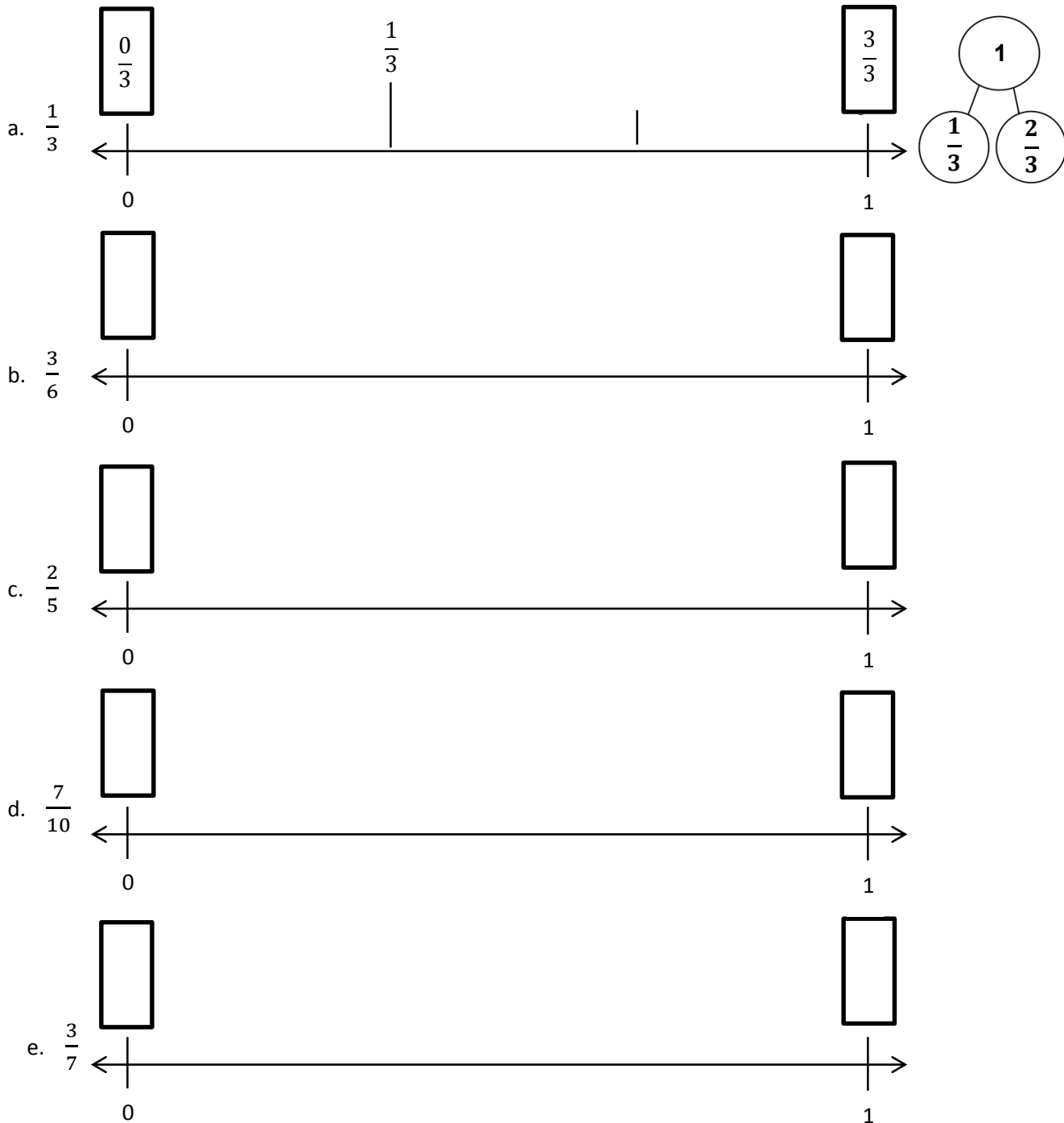


2. Carter needs to wrap 7 presents. He lays the ribbon out flat and says, "If I make 6 equally spaced cuts, I'll have just enough pieces. I can use 1 piece for each package, and I won't have any pieces left over." Does he have enough pieces to wrap all the presents?
3. Mrs. Rivera is planting flowers in her 1-meter long rectangular plant box. She divides the plant box into sections $\frac{1}{9}$ meter in length, and plants 1 seed in each section. Draw and label a fraction strip representing the plant box from 0 meters to 1 meter. Represent each section where Mrs. Rivera will plant a seed. Label all the fractions.
- a. How many seeds will she be able to plant in 1 plant box?
- b. How many seeds will she be able to plant in 4 plant boxes?
- c. Draw a number line below your fraction strip and mark all the fractions.

Name _____

Date _____

1. Estimate to label the given fractions on the number line. Be sure to label the fractions at 0 and 1. Write the fractions above the number line. Draw a number bond to match your number line. The first one is done for you.



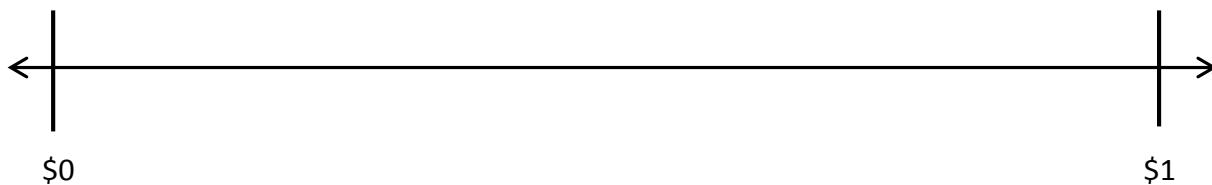
2. Henry has 5 dimes. Ben has 9 dimes. Tina has 2 dimes.
- a. Write the value of each person's money as a fraction of a dollar:

Henry:

Ben:

Tina:

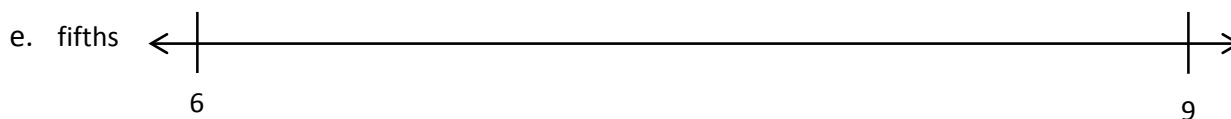
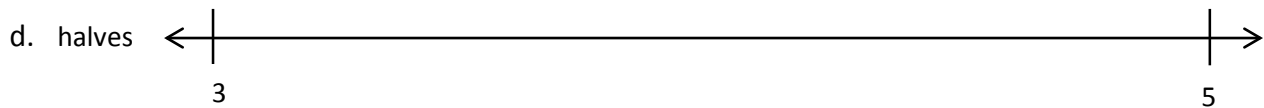
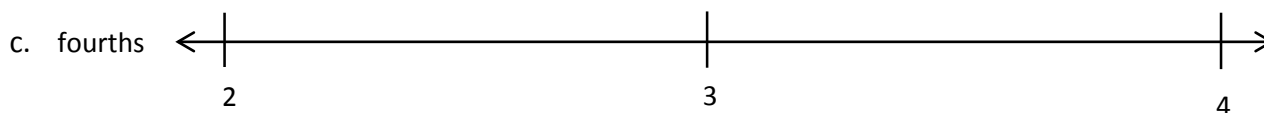
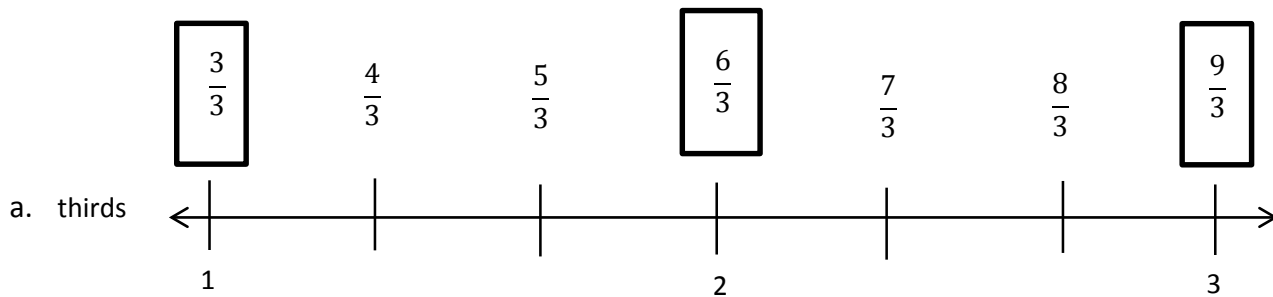
- b. Estimate to place each fraction on the number line.



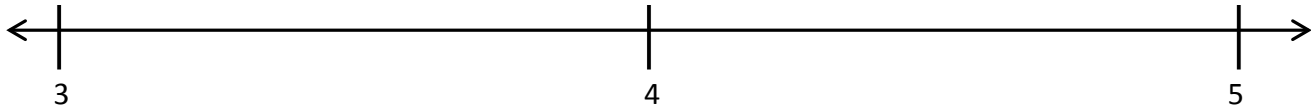
3. Draw a number line. Use a fraction strip to locate 0 and 1. Fold the strip to make 8 equal parts.
- a. Use the strip to measure and label your number line with eighths.
- b. Count up from 0 eighths to 8 eighths on your number line. Touch each number with your finger as you count.

Name _____ Date _____

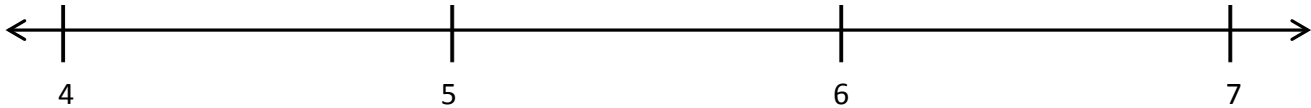
1. Estimate to equally partition and label the fractions on the number line. Label the wholes as fractions, and box them. The first one is done for you.



2. Partition each whole into sixths. Label each fraction. Count up as you go. Box the fractions that are located at the same points as whole numbers.



3. Partition each whole into halves. Label each fraction. Count up as you go. Box the fractions that are located at the same points as whole numbers.

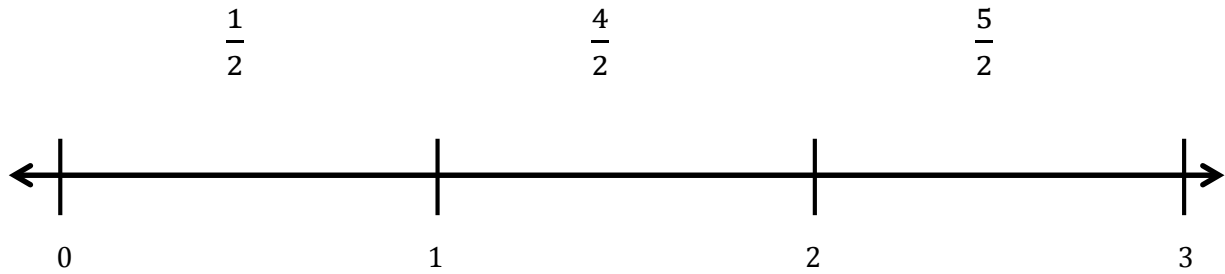


4. Draw a number line with endpoints 0 and 3. Label the wholes. Partition each whole into fifths. Label all the fractions from 0 to 3. Box the fractions that are located at the same points as whole numbers. Use a separate paper if you need more space.

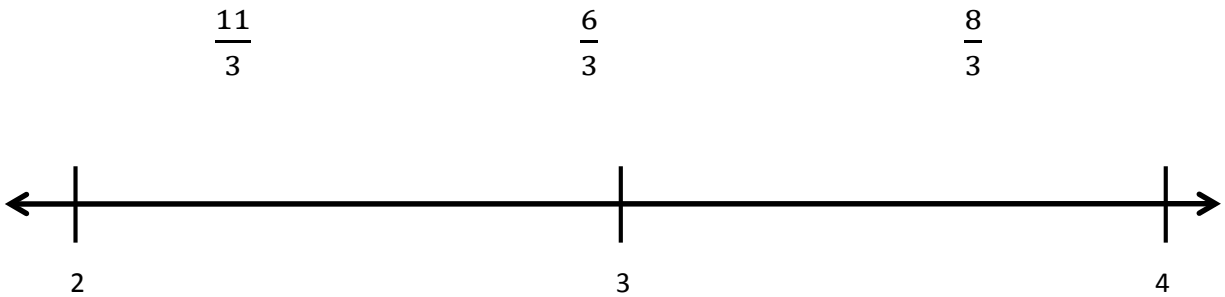
Name _____

Date _____

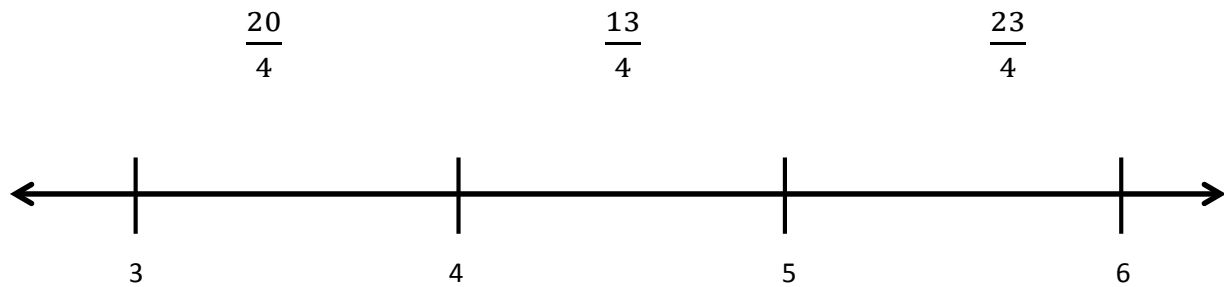
1. Locate and label the following fractions on the number line.



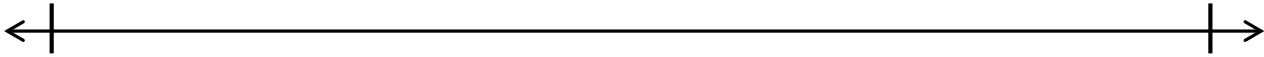
2. Locate and label the following fractions on the number line.



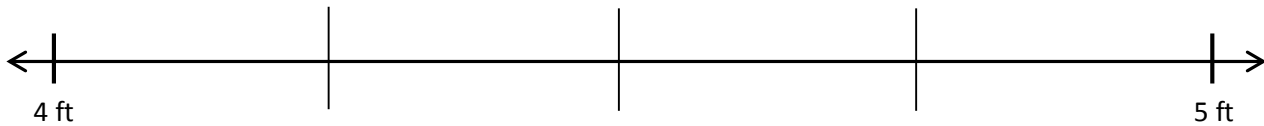
3. Locate and label the following fractions on the number line.



4. Wayne went on a 4-kilometer hike. He took a break at $\frac{4}{3}$ kilometers. He took a drink of water at $\frac{10}{3}$ kilometers. Show Wayne's hike on the number line. Include his starting and finishing place and the 2 points where he stopped.



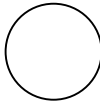
5. Ali wants to buy a piano. The piano measures $\frac{19}{4}$ feet long. She has a space 5 feet long for the piano in her house. Does she have enough room? Draw a number line to show, and explain your answer.

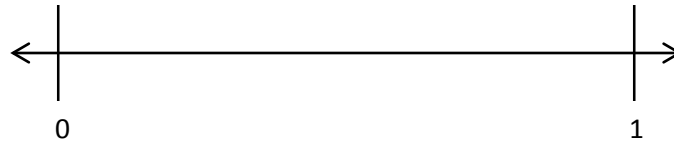


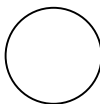
Name _____

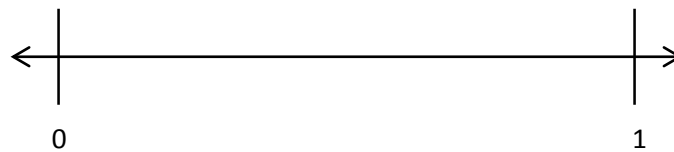
Date _____

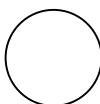
Place the two fractions on the number line. Circle the fraction with the distance closest to 0. Then, compare using $>$, $<$, or $=$.

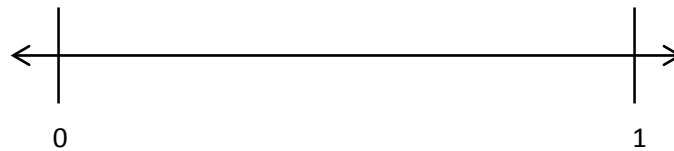
1. $\frac{1}{3}$  $\frac{2}{3}$

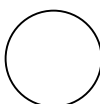


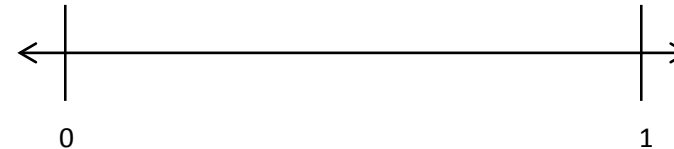
2. $\frac{4}{6}$  $\frac{1}{6}$




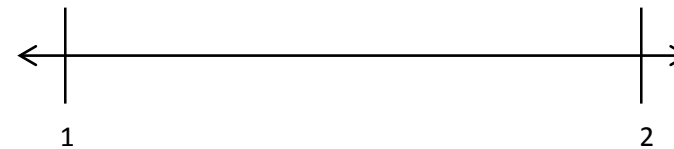
3. $\frac{1}{4}$  $\frac{1}{8}$



4. $\frac{4}{5}$  $\frac{4}{10}$



5. $\frac{8}{6}$  $\frac{5}{3}$



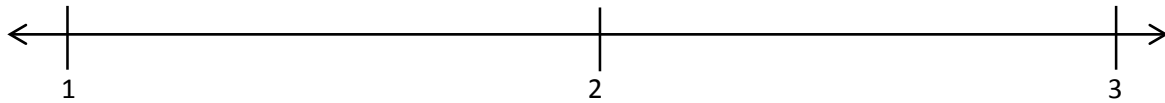
6. Liz and Jay each have a piece of string. Liz's string is $\frac{4}{6}$ yards long, and Jay's string is $\frac{5}{7}$ yards long. Whose string is longer? Draw a number line to model the length of both strings. Explain the comparison using pictures, numbers, and words.
7. In a long jump competition, Wendy jumped $\frac{9}{10}$ meters, and Judy jumped $\frac{10}{9}$ meters. Draw a number line to model the distance of each girl's long jump. Who jumped the shorter distance? Explain how you know using pictures, numbers, and words.
8. Nikki has 3 pieces of yarn. The first piece is $\frac{5}{6}$ feet long, the second piece is $\frac{5}{3}$ feet long, and the third piece is $\frac{3}{2}$ feet long. She wants to arrange them from the shortest to the longest. Draw a number line to model the length of each piece of yarn. Write a number sentence using $<$, $>$, or $=$ to compare the pieces. Explain using pictures, numbers, and words.

Name _____

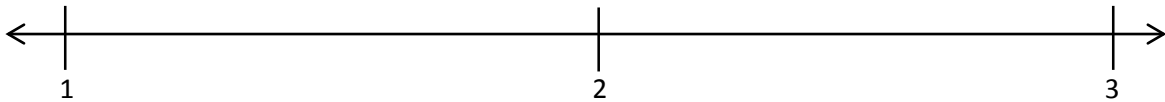
Date _____

1. Divide each number line into the given fractional unit. Then, place the fractions. Write each whole as a fraction.

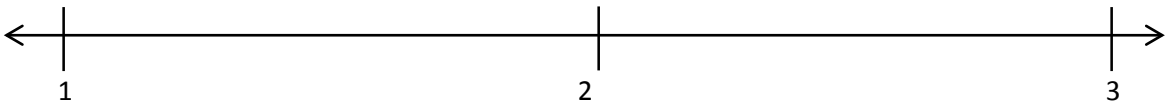
a. thirds $\frac{6}{3}$ $\frac{5}{3}$ $\frac{8}{3}$



b. sixths $\frac{10}{6}$ $\frac{18}{6}$ $\frac{15}{6}$



c. fifths $\frac{14}{5}$ $\frac{7}{5}$ $\frac{11}{5}$



2. Use the number lines above to compare the following fractions using $>$, $<$, or $=$.

$\frac{17}{6} \bigcirc \frac{15}{6}$

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

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

$\frac{4}{3} \bigcirc \frac{8}{6}$

$\frac{13}{6} \bigcirc \frac{8}{3}$

$\frac{11}{6} \bigcirc \frac{5}{3}$

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

$\frac{6}{3} \bigcirc \frac{12}{6}$

$\frac{15}{5} \bigcirc \frac{5}{3}$

3. Use fractions from the number lines in Problem 1. Complete the sentence. Use words, pictures, or numbers to explain how you made that comparison.

_____ is *greater than* _____.

4. Use fractions from the number lines in Problem 1. Complete the sentence. Use words, pictures, or numbers to explain how you made that comparison.

_____ is *less than* _____.

5. Use fractions from the number lines in Problem 1. Complete the sentence. Use words, pictures, or numbers to explain how you made that comparison.

_____ is *equal to* _____.

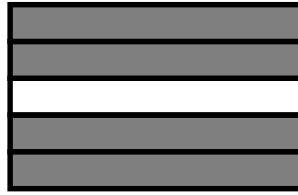
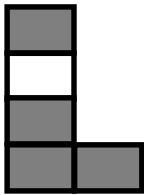
Name _____

Date _____

1. Label the shaded fraction. Draw 2 different representations of the same fractional amount.



2. These two shapes both show $\frac{4}{5}$.



- a. Are the shapes equivalent? Why or why not?
- b. Draw two different representations of $\frac{4}{5}$ that are equivalent.
3. Diana ran a quarter mile straight down the street. Becky ran a quarter mile on a track. Who ran more? Explain your thinking.

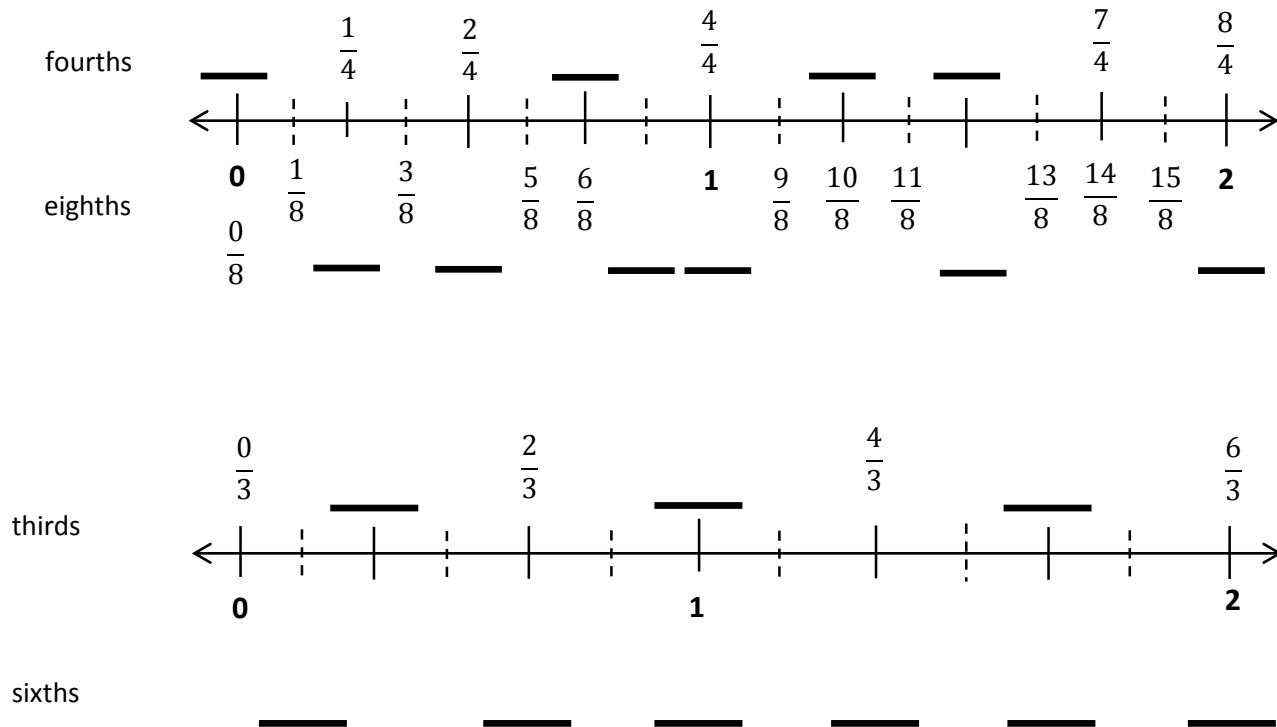
Diana _____

Becky



Name _____ Date _____

1. Use the fractional units on the left to count up on the number line. Label the missing fractions on the blanks.



2. Use the number lines above to:

- Color fractions equal to 1 purple.
- Color fractions equal to 2 fourths yellow.
- Color fractions equal to 2 blue.
- Color fractions equal to 5 thirds green.
- Write a pair of fractions that are equivalent.

_____ = _____

3. Use the number lines on the previous page to make the number sentences true.

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

$$\frac{6}{4} = \frac{12}{\quad}$$

$$\frac{2}{3} = \frac{\quad}{6}$$

$$\frac{6}{3} = \frac{12}{\quad}$$

$$\frac{3}{3} = \frac{\quad}{6}$$

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

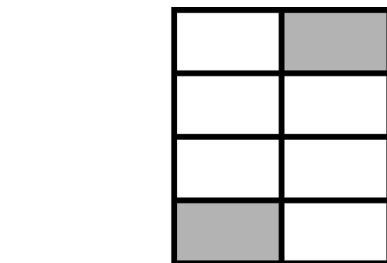
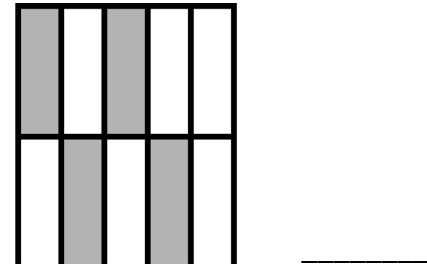
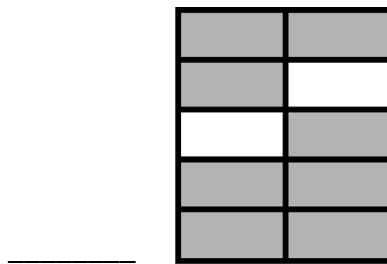
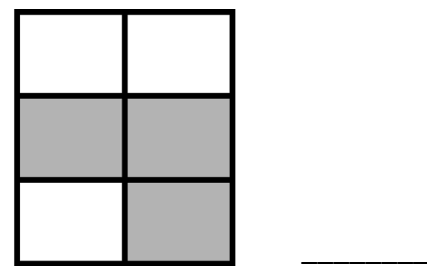
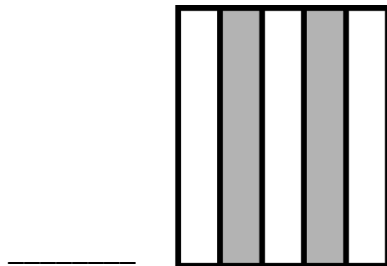
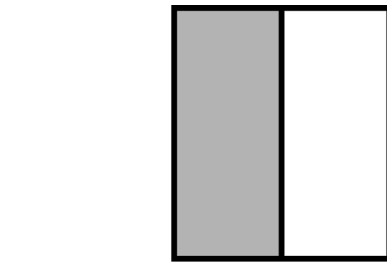
4. Mr. Fairfax ordered 3 large pizzas for a class party. Group A ate $\frac{6}{6}$ of the first pizza, and Group B ate $\frac{8}{6}$ of the remaining pizza. During the party, the class discussed which group ate more pizza.

- a. Did Group A or B eat more pizza? Use words and pictures to explain your answer to the class.
- b. Later, Group C ate all remaining slices of pizza. What fraction of the pizza did group C eat? Use words and pictures to explain your answer.

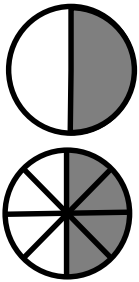
Name _____

Date _____

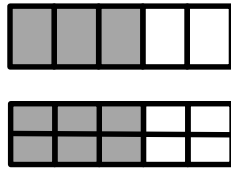
1. Write the shaded fraction of each figure on the blank. Then, draw a line to match the equivalent fractions.



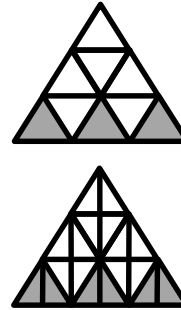
2. Complete the fractions to make true statements.



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



$$\frac{3}{5} = \frac{\quad}{10}$$

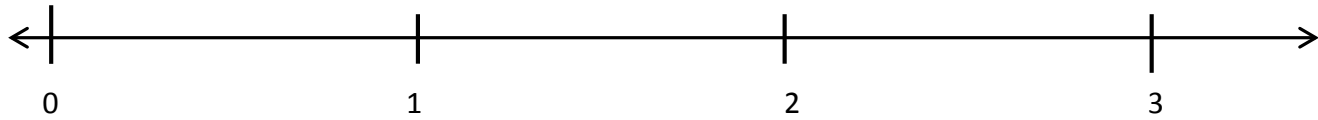


$$\frac{3}{9} = \frac{6}{\quad}$$

3. Why does it take 3 copies of $\frac{1}{6}$ to show the same amount as 1 copy of $\frac{1}{2}$? Explain your answer in words and pictures.
4. How many ninths does it take to make the same amount as $\frac{1}{3}$? Explain your answer in words and pictures.
5. A pie was cut into 8 equal slices. If Ruben ate $\frac{3}{4}$ of the pie, how many slices did he eat? Explain your answer using a number line and words.

Name _____

Date _____

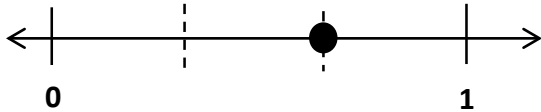


1. On the number line above, use a colored pencil to divide each whole into thirds and label each fraction above the line.
2. On the number line above, use a different colored pencil to divide each whole into sixths and label each fraction below the line.
3. Write the fractions that name the same place on the number line.
4. Using your number line to help, name the fraction equivalent to $\frac{20}{6}$. Name the fraction equivalent to $\frac{12}{3}$. Draw the part of the number line that would include these fractions below, and label it.

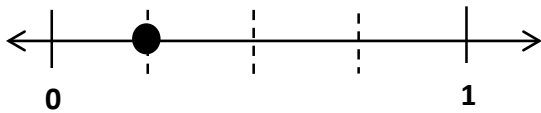
$$\frac{20}{6} = \frac{\quad}{3}$$

$$\frac{12}{3} = \frac{\quad}{6}$$

5. Write two different fraction names for the dot on the number line. You may use halves, thirds, fourths, fifths, sixths, eighths, or tenths.



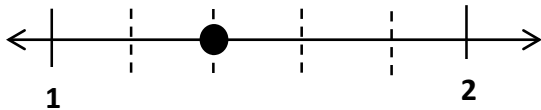
_____ = _____



_____ = _____



_____ = _____

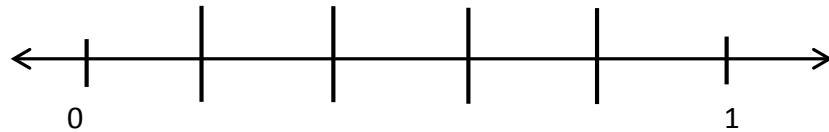
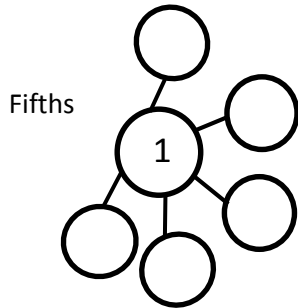


_____ = _____

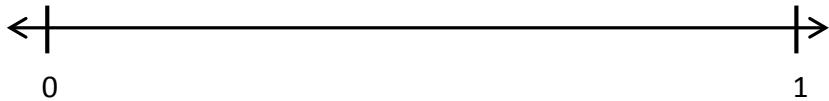
6. Danielle and Mandy each ordered a large pizza for dinner. Danielle's pizza was cut into sixths, and Mandy's pizza was cut into twelfths. Danielle ate 2 sixths of her pizza. If Mandy wants to eat the same amount of pizza as Danielle, how many slices of pizza will she have to eat? Write the answer as a fraction. Draw a number line to explain your answer.

Name _____ Date _____

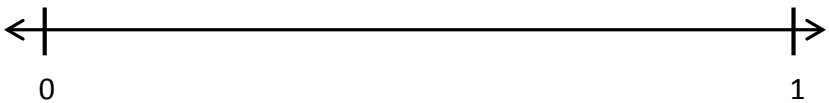
1. Complete the number bond as indicated by the fractional unit. Partition the number line into the given fractional unit, and label the fractions. Rename 0 and 1 as fractions of the given unit.



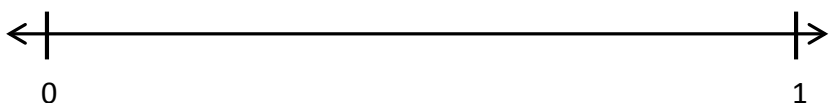
Sixths



Sevenths



Eighths



2. Circle all the fractions in Problem 1 that are equal to 1. Write them in a number sentence below.

$$\frac{5}{5} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

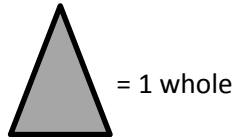
3. What pattern do you notice in the fractions that are equivalent to 1? Following this pattern, how would you represent ninths as 1 whole?

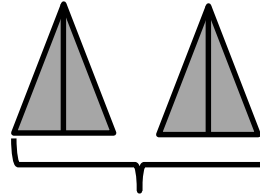
4. In Art class, Mr. Joselyn gave everyone a 1-foot stick to measure and cut. Vivian measured and cut her stick into 5 equal pieces. Scott measured and cut his into 7 equal pieces. Scott said to Vivian, "The total length of my stick is longer than yours because I have 7 pieces, and you only have 5." Is Scott correct? Use words, pictures, or a number line to help you explain.

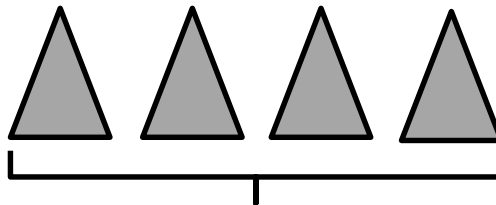
Name _____

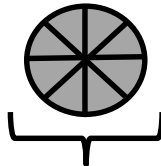
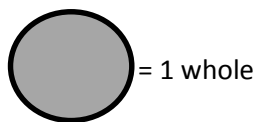
Date _____

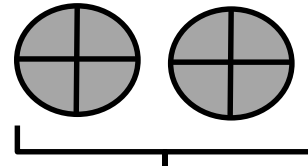
1. Label the following models as fractions inside the boxes.

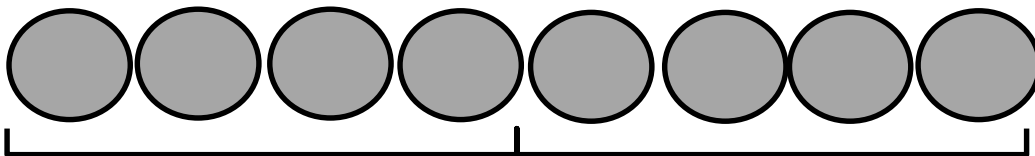




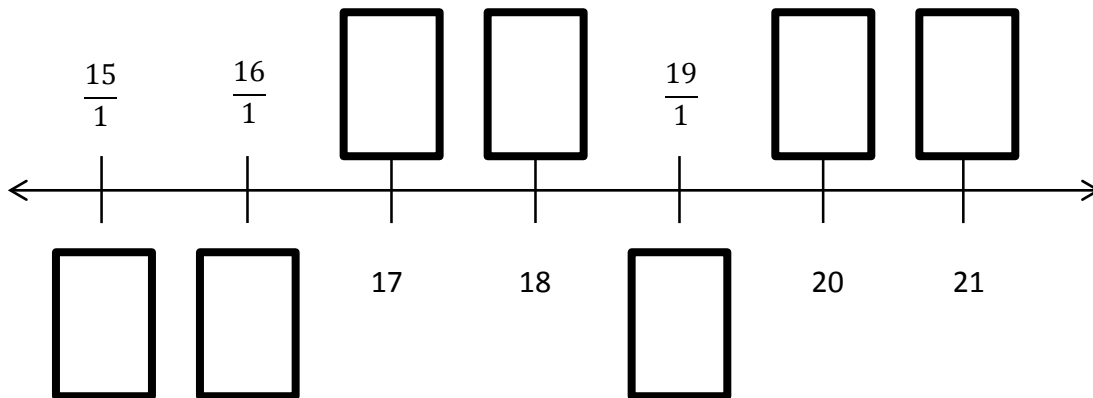
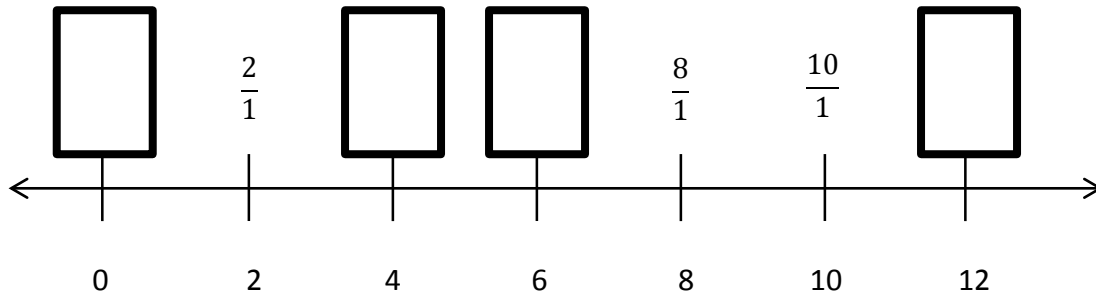








2. Fill in the missing whole numbers in the boxes below the number line. Rename the wholes as fractions in the boxes above the number line.



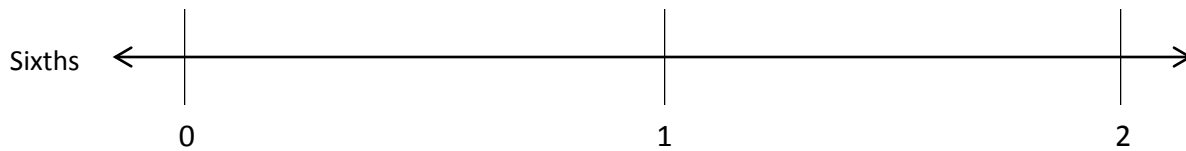
3. Explain the difference between these fractions with words and pictures.

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

Name _____

Date _____

1. Partition the number line to show the fractional units. Then, draw number bonds with copies of 1 whole for the circled whole numbers.



$0 = \underline{\hspace{1cm}} \text{ sixths}$

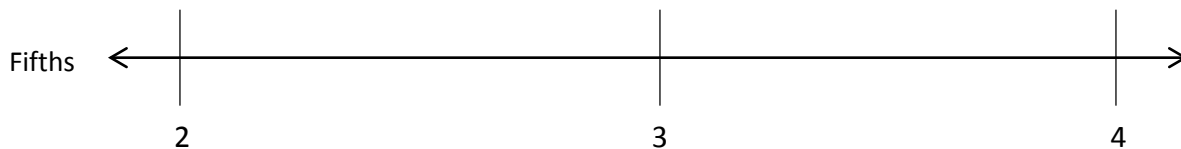
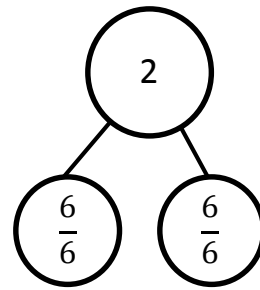
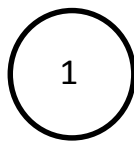
$1 = \underline{\hspace{1cm}} \text{ sixths}$

$2 = \underline{\hspace{1cm}} \text{ sixths}$

$0 = \frac{\boxed{\hspace{1cm}}}{6}$

$1 = \frac{\boxed{\hspace{1cm}}}{6}$

$2 = \frac{12}{6}$



$2 = \underline{\hspace{1cm}} \text{ fifths}$

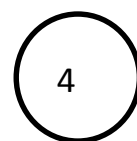
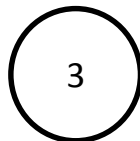
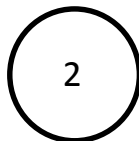
$3 = \underline{\hspace{1cm}} \text{ fifths}$

$4 = \underline{\hspace{1cm}} \text{ fifths}$

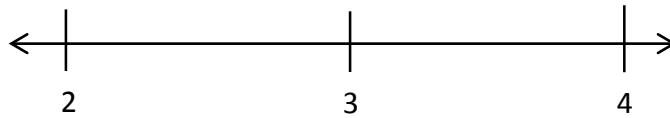
$2 = \frac{\boxed{\hspace{1cm}}}{5}$

$3 = \frac{\boxed{\hspace{1cm}}}{5}$

$4 = \frac{\boxed{\hspace{1cm}}}{5}$



2. Write the fractions that name the whole numbers for each fractional unit. The first one has been done for you.

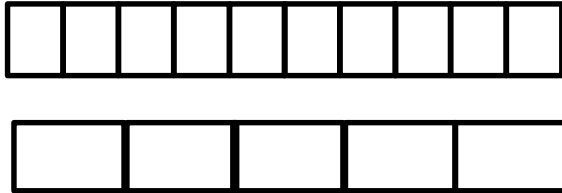


Thirds	$\frac{6}{3}$	$\frac{9}{3}$	$\frac{12}{3}$
Sevenths			
Eighths			
Tenths			

3. Rider dribbles the ball down $\frac{1}{3}$ of the basketball court on the first day of practice. Each day after that, he dribbles $\frac{1}{3}$ of the way more than he did the day before. Draw a number line to represent the court. Partition the number line to represent how far Rider dribbles on Day 1, Day 2, and Day 3 of practice. What fraction of the way does he dribble on Day 3?

Name _____ Date _____

1. Use the pictures to model equivalent fractions. Fill in the blanks, and answer the questions.

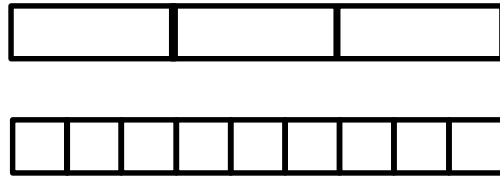


2 tenths is equal to _____ fifths.

$$\frac{2}{10} = \frac{\quad}{5}$$

The whole stays the same.

What happened to the size of the equal parts when there were fewer equal parts?



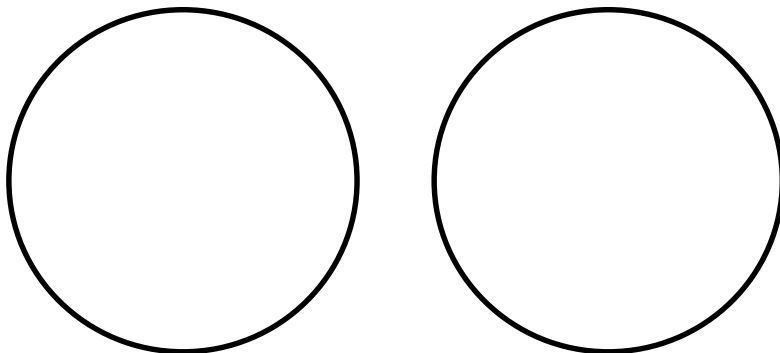
1 third is equal to _____ ninths.

$$\frac{1}{3} = \frac{\quad}{9}$$

The whole stays the same.

What happened to the size of the equal parts when there were more equal parts?

2. 8 students share 2 pizzas that are the same size, which are represented by the 2 circles below. They notice that the first pizza is cut into 4 equal slices, and the second is cut into 8 equal slices. How can the 8 students share the pizzas equally without cutting any of the pieces?



3. When the whole is the same, why does it take 4 copies of 1 tenth to equal 2 copies of 1 fifth? Draw a model to support your answer.
4. When the whole is the same, how many eighths does it take to equal 1 fourth? Draw a model to support your answer.
5. Mr. Pham cuts a cake into 8 equal slices. Then, he cuts every slice in half. How many of the smaller slices does he have? Use words and numbers to explain your answer.

Name _____ Date _____

Shade the models to compare the fractions. Circle the larger fraction for each problem.

1. 1 half

 1 fifth

2. 2 sevenths

 2 fourths

3. 4 fifths

 4 ninths

4. 5 sevenths

 5 tenths

5. 4 sixths

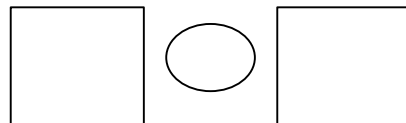
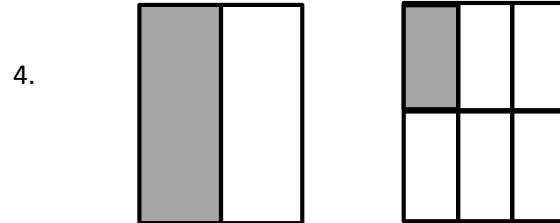
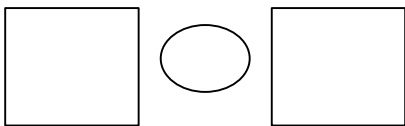
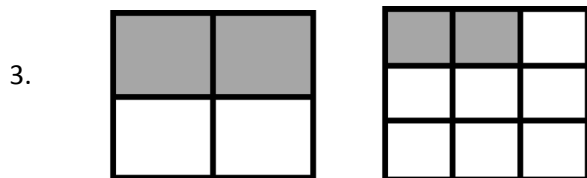
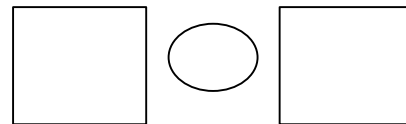
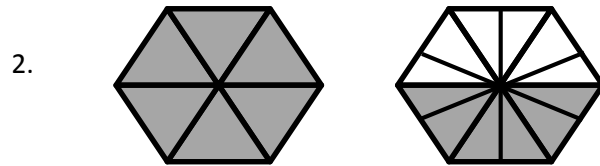
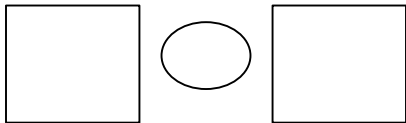
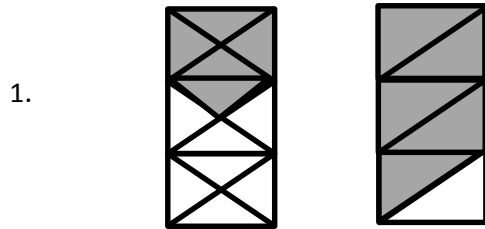
 4 fourths

6. Saleem and Edwin use inch rulers to measure the lengths of their caterpillars. Saleem's caterpillar measures $\frac{3}{4}$ of an inch. Edwin's caterpillar measures $\frac{3}{8}$ of an inch. Whose caterpillar is longer? Draw a picture to support your answer.
7. Lily and Jasmine each bake the same-sized chocolate cake. Lily puts $\frac{5}{10}$ of a cup of sugar into her cake. Jasmine puts $\frac{5}{6}$ of a cup of sugar into her cake. Who uses less sugar? Draw a picture to support your answer.

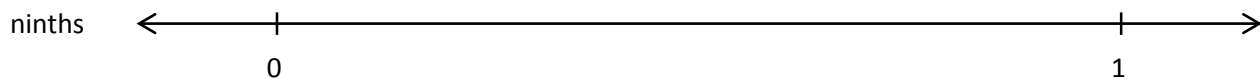
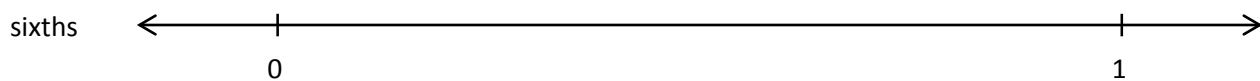
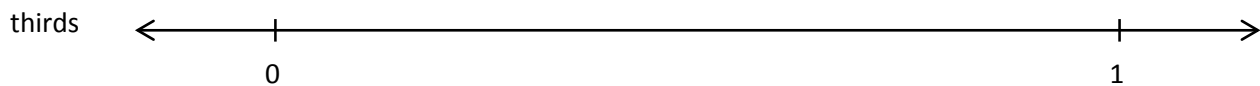
Name _____

Date _____

Label each shaded fraction. Use $>$, $<$, or $=$ to compare.




5. Partition each number line into the units labeled on the left. Then, use the number lines to compare the fractions.



a. $\frac{2}{6}$  $\frac{2}{3}$

b. $\frac{5}{9}$  $\frac{5}{6}$

c. $\frac{3}{3}$  $\frac{3}{9}$

Draw your own models to compare the following fractions.

6. $\frac{7}{10}$  $\frac{7}{8}$

7. $\frac{4}{6}$  $\frac{4}{9}$

8. For an art project, Michello used $\frac{3}{4}$ of a glue stick. Yamin used $\frac{3}{6}$ of an identical glue stick. Who used more of the glue stick? Use the model below to support your answer. Be sure to label 1 whole as 1 glue stick.

9. After gym class, Jahsir drank 2 eighths of a bottle of water. Jade drank 2 fifths of an identical bottle of water. Who drank less water? Use the model below to support your answer.
