



A STORY OF UNITS



Mathematics Curriculum



Grade 3 • MODULE 5

Fractions as Numbers on the Number Line

Homework

Video tutorials: <http://embarc.online>

Version 3



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GRADE 3 • MODULE 5

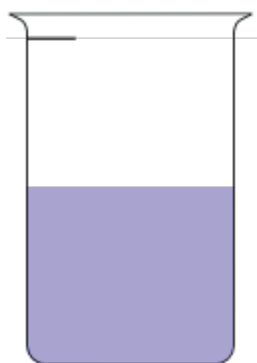
Fractions as Numbers on the Number Line

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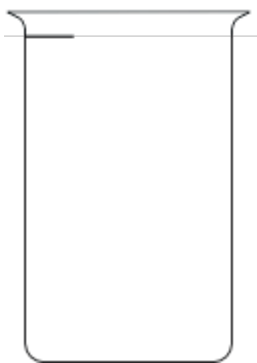
Name _____

Date _____

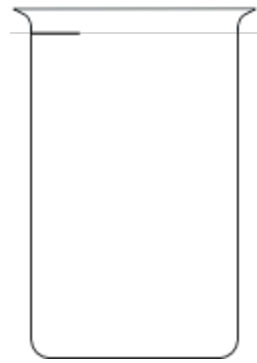
1. A beaker is considered full when the liquid reaches the fill line shown near the top. Estimate the amount of water in the beaker by shading the drawing as indicated. The first one is done for you.



1 half



1 fifth

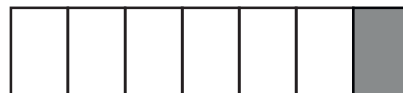


1 sixth

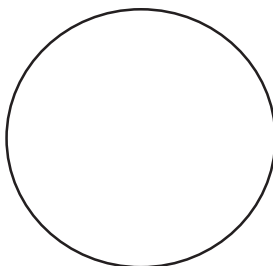
2. Danielle cut her candy bar into equal pieces as shown in the rectangles below. In the blanks below, name the fraction of candy bar represented by the shaded part.



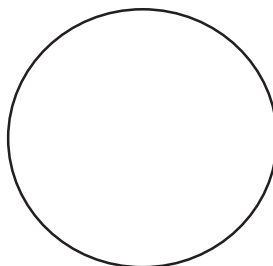




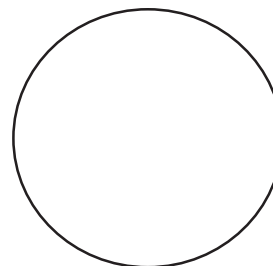
3. Each circle represents 1 whole pie. Estimate to show how you would cut the pie into fractional units as indicated below.



halves

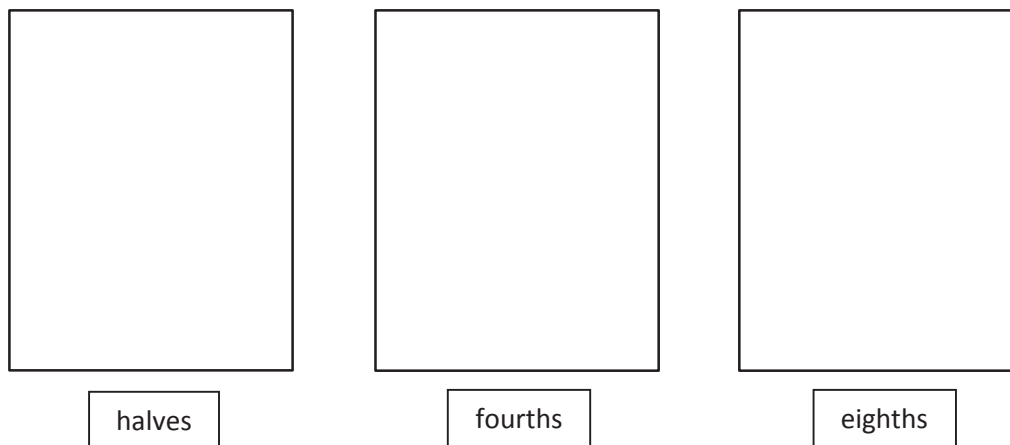


thirds

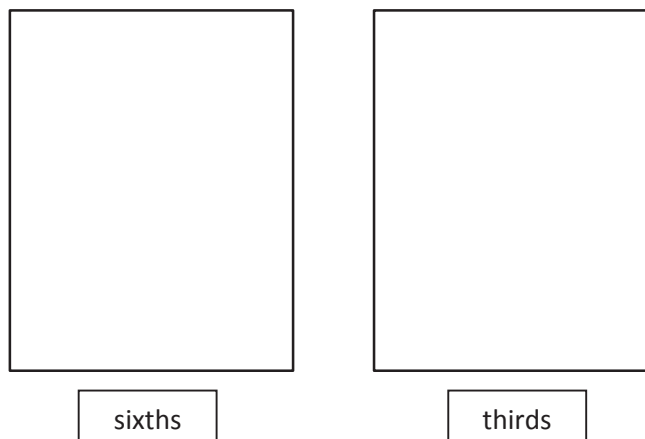


sixths

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.



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.

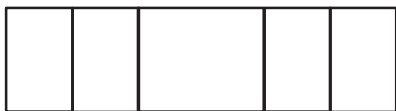


6. Yuri has a rope 12 meters long. He cuts it into pieces that are each 2 meters long. What fraction of the rope is one piece? Draw a picture. (You might fold a strip of paper to help you model the problem.)
7. Dawn bought 12 grams of chocolate. She ate half of the chocolate. How many grams of chocolate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



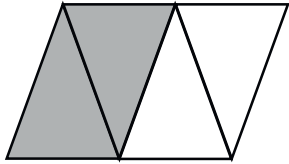
- d. There are _____ equal parts in all. _____ are shaded.

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 _____

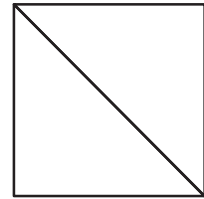
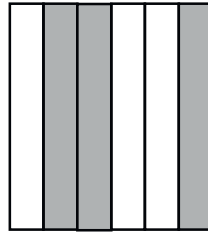
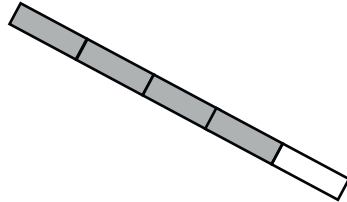
Date _____

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.

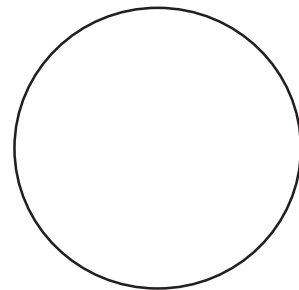


Fourths

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?

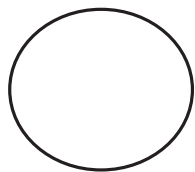
Each month receives _____.

Name _____

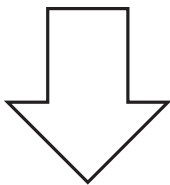
Date _____

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

1. 1 half



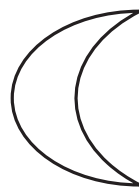
A



B

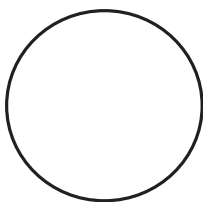


C



D

2. 1 fourth



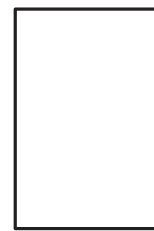
A



B

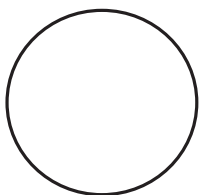


C



D

3. 1 third



A



B



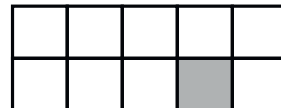
C



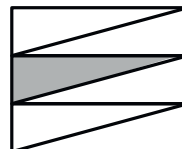
D

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

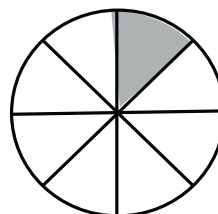
1 fifth



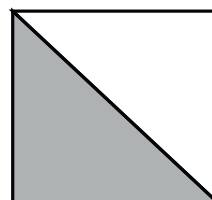
1 twelfth



1 third



1 fourth



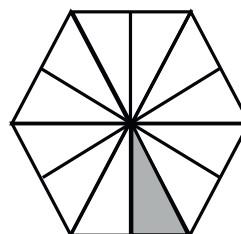
1 half



1 eighth



1 tenth



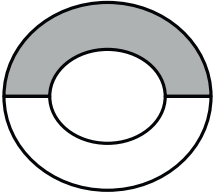
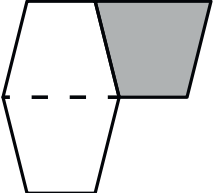
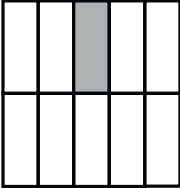
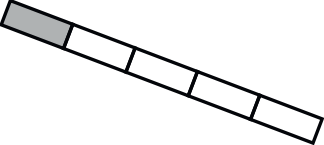
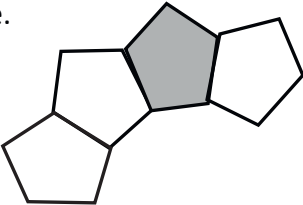
1 sixth



Name _____

Date _____

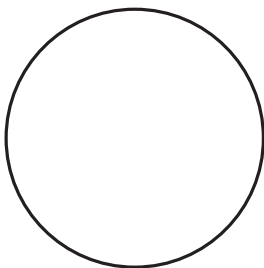
1. Fill in the chart. Each image is one whole.

| | 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 =

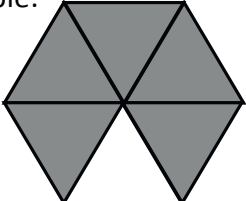
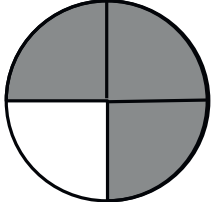
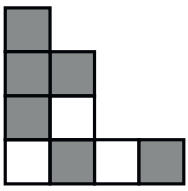
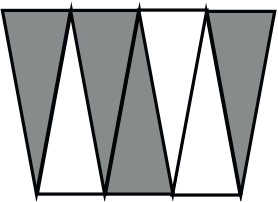
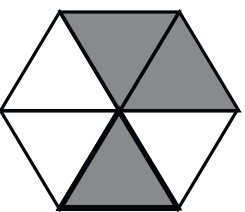
| |
|--|
| |
|--|

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.

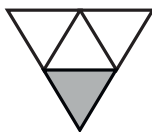
| | Total Number of Equal Parts | Total Number of Shaded Equal Parts | Unit Fraction | Fraction Shaded |
|---|--------------------------------|--|---------------|--------------------|
| Sample:  | 6 | 5 | $\frac{1}{6}$ | $\frac{5}{6}$ |
| a.  | | | | |
| b.  | | | | |
| c.  | | | | |
| d.  | | | | |

Name _____

Date _____

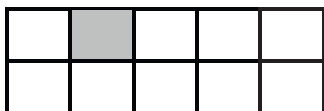
Whisper the fraction of the shape that is shaded. Then, match the shape to the amount that is not shaded.

1.



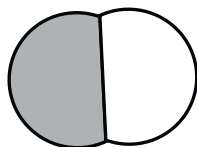
▪ 9 tenths

2.



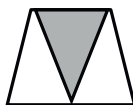
▪ 4 fifths

3.



▪ 10 elevenths

4.



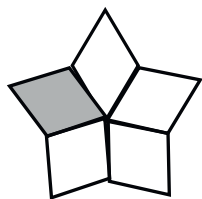
▪ 5 sixths

5.



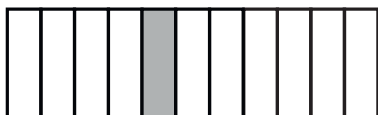
▪ 1 half

6.



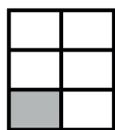
▪ 2 thirds

7.



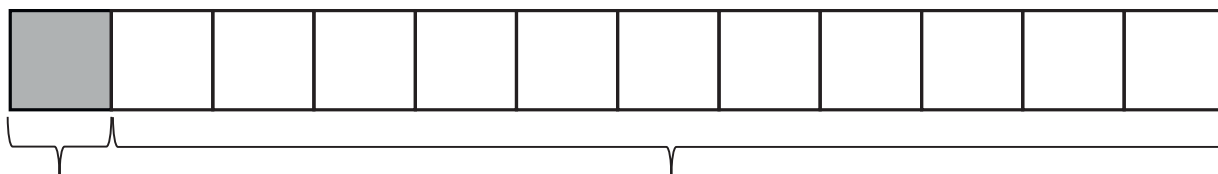
▪ 3 fourths

8.



▪ 6 sevenths

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



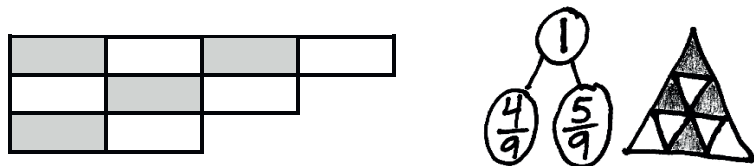
10. Carlia finished $\frac{1}{4}$ of her homework on Saturday. What fraction of her homework has she not finished? Draw and explain.
11. Jerome cooks 8 cups of oatmeal for his family. They eat $\frac{7}{8}$ of the oatmeal. What fraction of the oatmeal is uneaten? Draw and explain.

Name _____

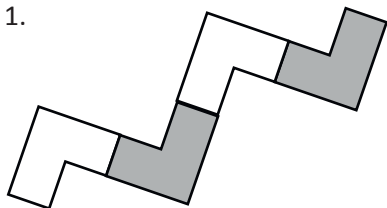
Date _____

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.

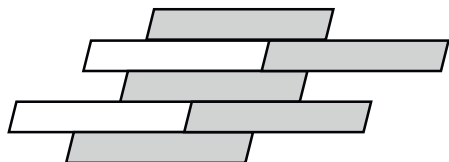
Sample:



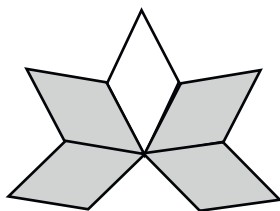
1.



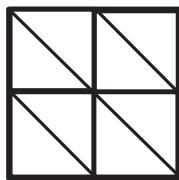
2.



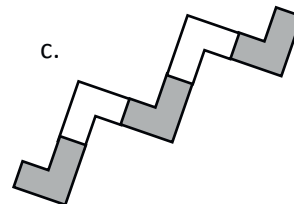
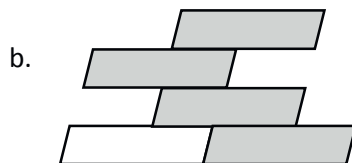
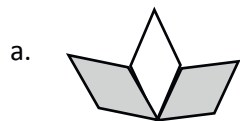
3.



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.

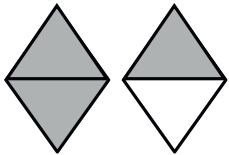
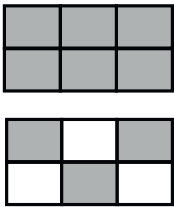
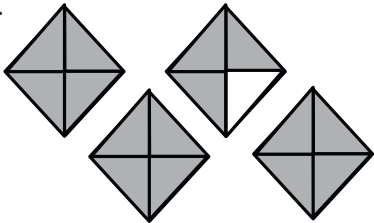

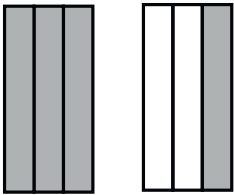
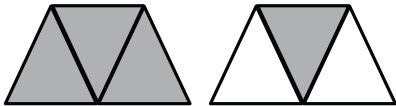


6. Johnny made a square peanut butter and jelly sandwich. He ate $\frac{1}{3}$ of it and left the rest on his plate. Draw a picture of Johnny's sandwich. Shade the part he left on his plate, and then draw a number bond that matches what you drew. What fraction of his sandwich did Johnny leave on his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




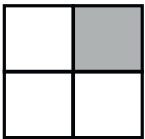
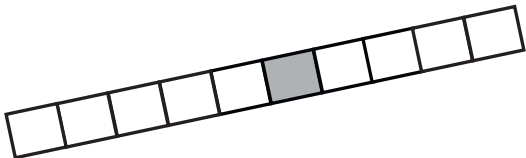
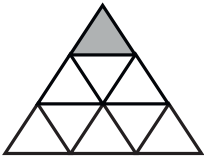
h. 6 fifths is less than 3 thirds
 greater than

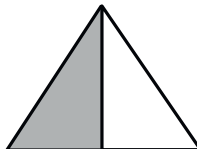
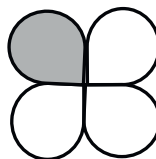
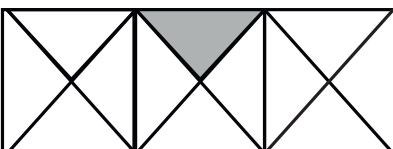
3. After his football game, Malik drinks $\frac{1}{2}$ liter of water and $\frac{1}{3}$ liter of juice. Did Malik drink more water or juice? Draw and estimate to partition. Explain your answer.
4. Use $>$, $<$, or $=$ to compare.
- | | | |
|-------------------|----------------------|----------------|
| a. 1 fourth | <input type="text"/> | 1 eighth |
| b. 1 seventh | <input type="text"/> | 1 fifth |
| c. 1 eighth | <input type="text"/> | $\frac{1}{8}$ |
| d. 1 twelfth | <input type="text"/> | $\frac{1}{10}$ |
| e. $\frac{1}{15}$ | <input type="text"/> | 1 thirteenth |
| f. 3 thirds | <input type="text"/> | 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 _____

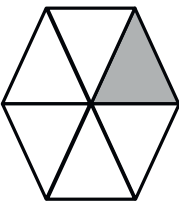
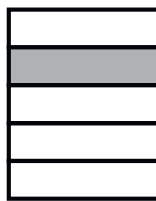
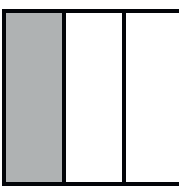
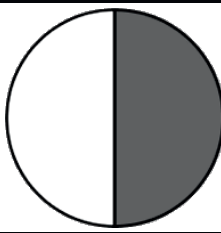
Date _____

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.

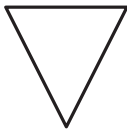
1. $\frac{1}{2}$



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



3. 1 third

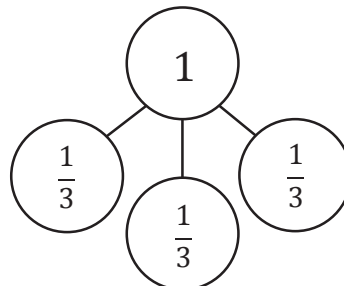
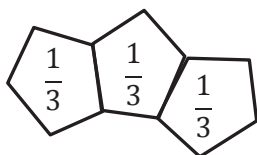
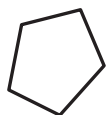


4. 1 fourth



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. $\frac{1}{5}$

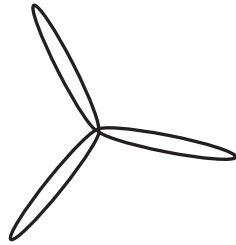


8. $\frac{1}{7}$



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

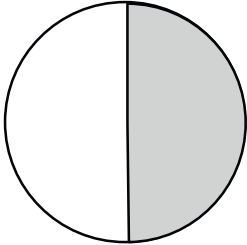
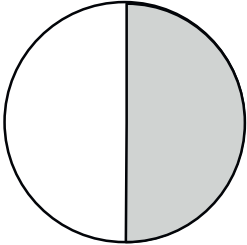
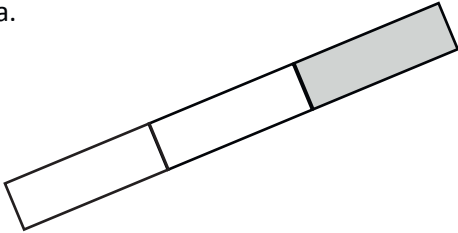
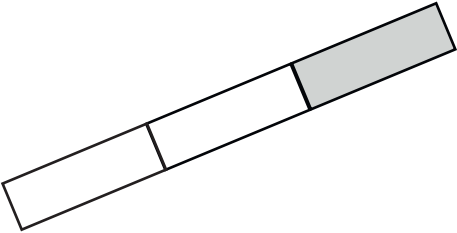
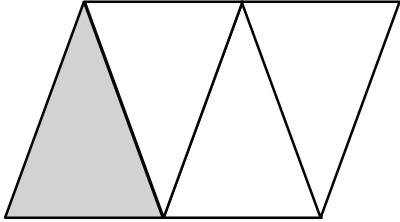
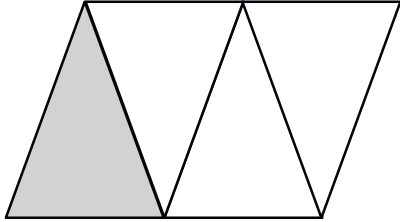
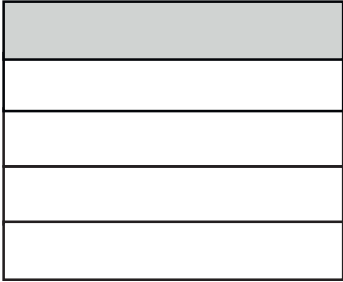
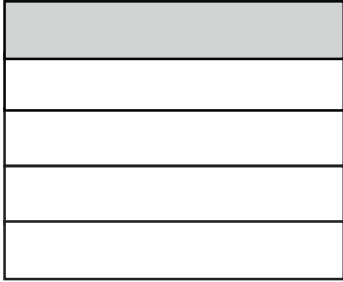


Yong's
Shape



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). |
|---|--|
| 1. a.  | b.  |
| 2. a.  | b.  |
| 3. a.  | b.  |
| 4. a.  | b.  |

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.

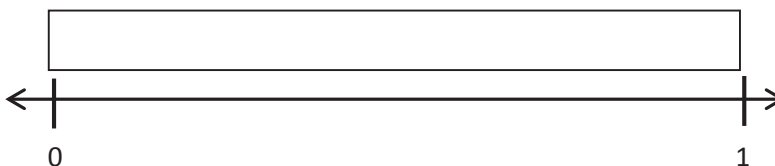
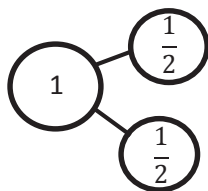
String A 

Name _____

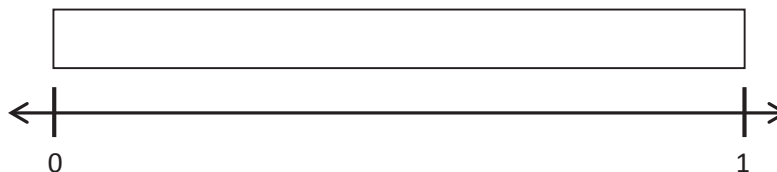
Date _____

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.

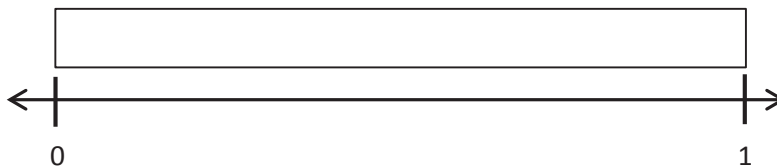
a. Halves



b. Eighths



c. Fifths

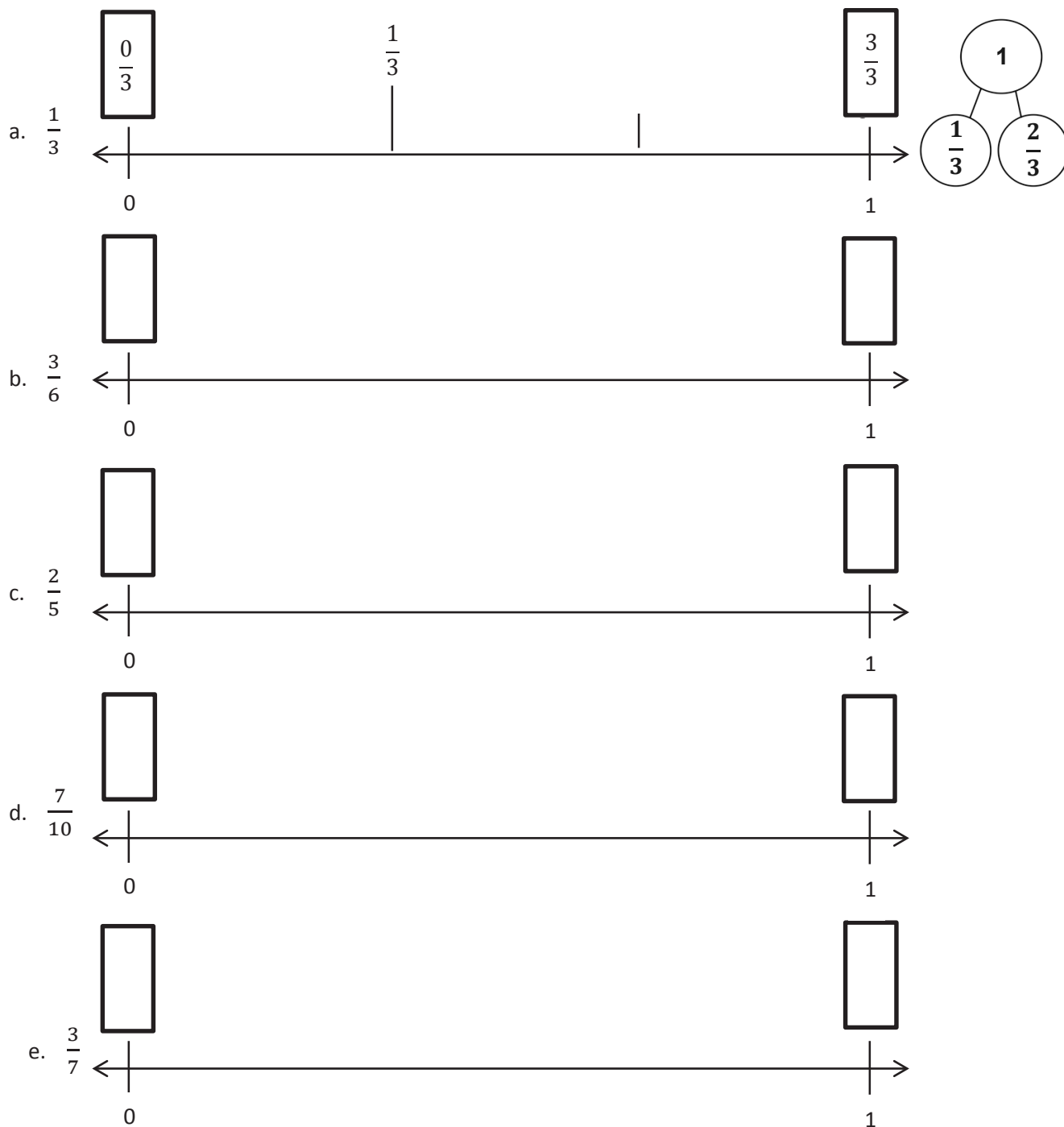


2. Carter needs to wrap 7 presents. He lays the ribbon out flat and says, “If I make 6 equally spaced cuts, I’ll have just enough pieces. I can use 1 piece for each package, and I won’t have any pieces left over.” Does he have enough pieces to wrap all the presents?
3. Mrs. Rivera is planting flowers 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.

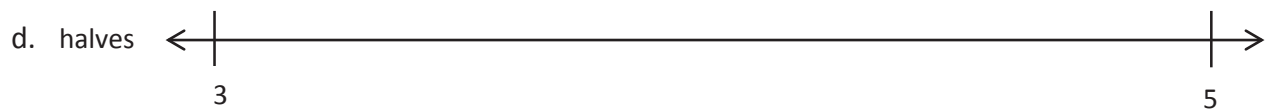
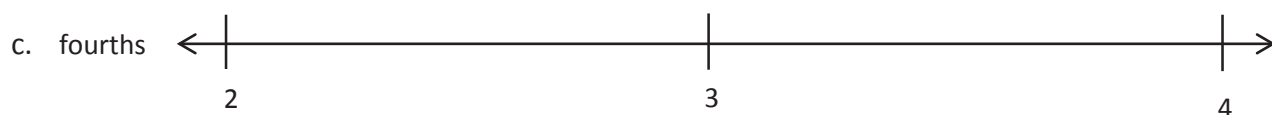
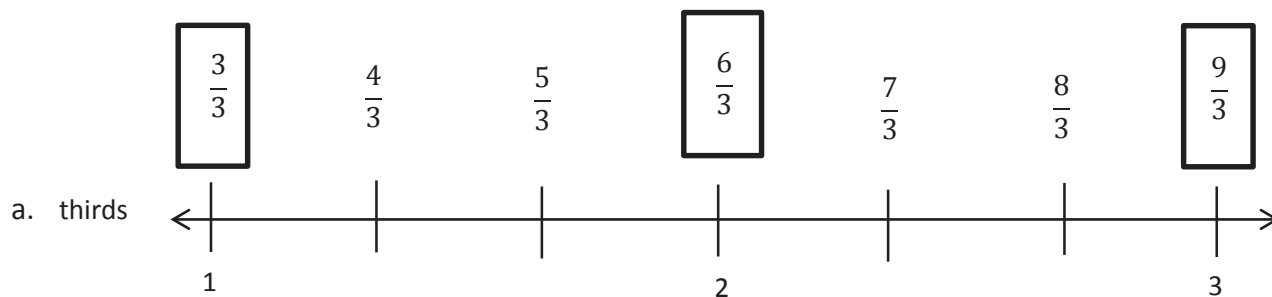
- a. Use the strip to measure and label your number line with eighths.

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

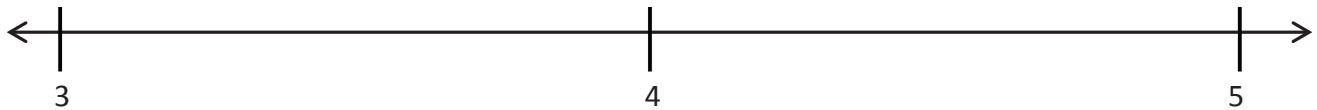
Name _____

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.

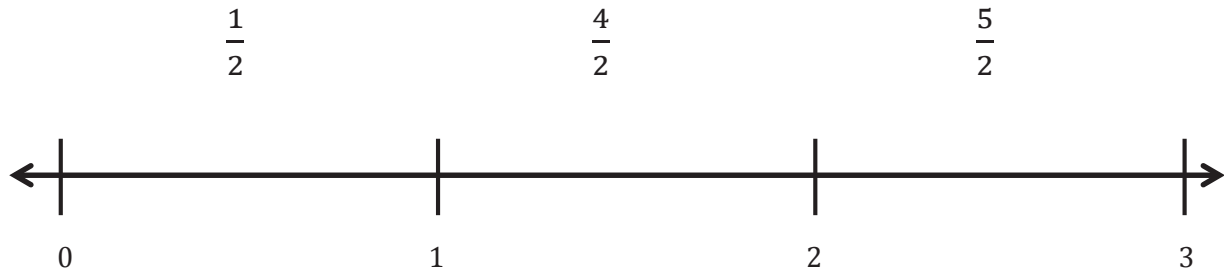


4. Draw a number line with endpoints 0 and 3. Label the wholes. Partition each whole into fifths. Label all the fractions from 0 to 3. Box the fractions that are located at the same points as whole numbers. Use a separate paper if you need more space.

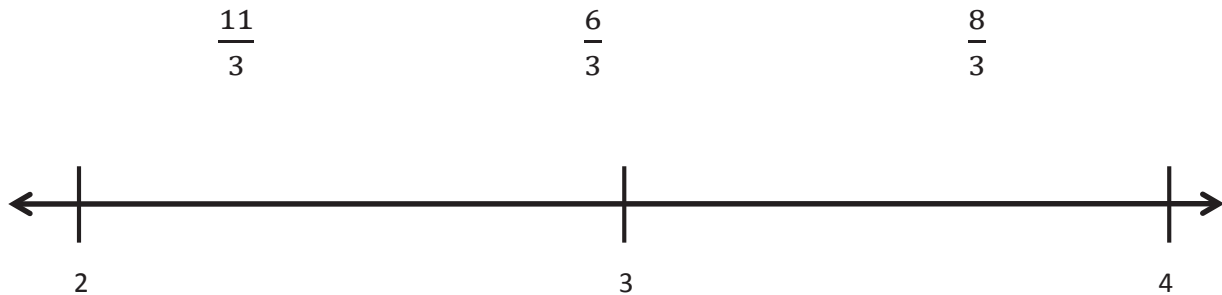
Name _____

Date _____

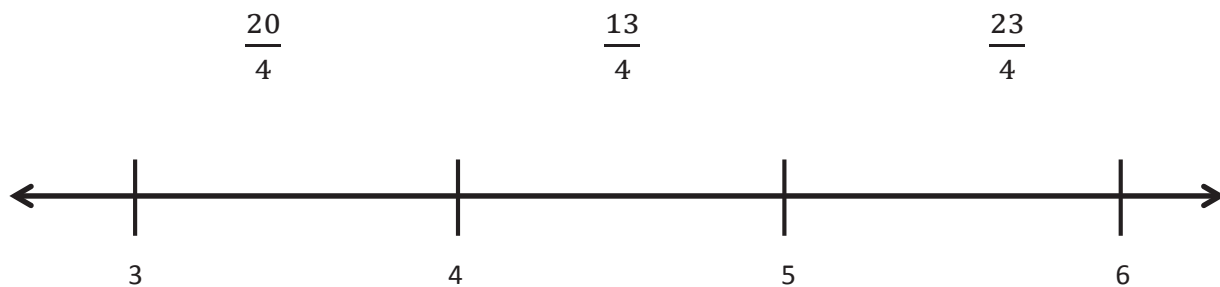
1. Locate and label the following fractions on the number line.



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



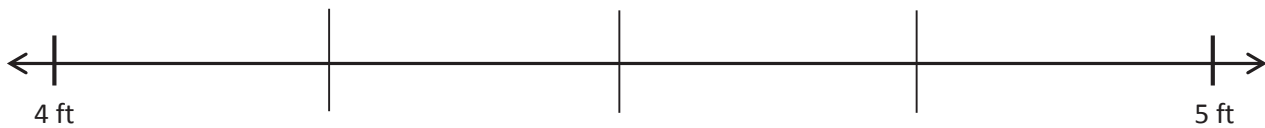
3. Locate and label the following fractions on the number line.



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.



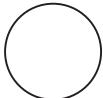
5. Ali wants to buy a piano. The piano measures $\frac{19}{4}$ feet long. She has a space 5 feet long for the piano in her house. Does she have enough room? Draw a number line to show, and explain your answer.



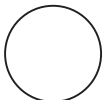
Name _____

Date _____

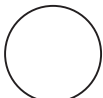
Place the two fractions on the number line. Circle the fraction with the distance closest to 0. Then, compare using $>$, $<$, or $=$.

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

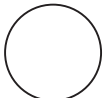


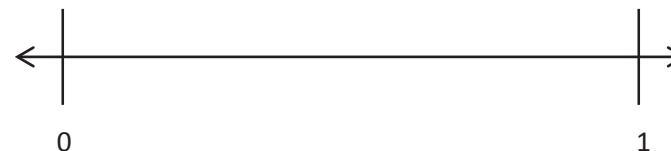
2. $\frac{4}{6}$  $\frac{1}{6}$

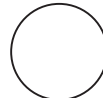


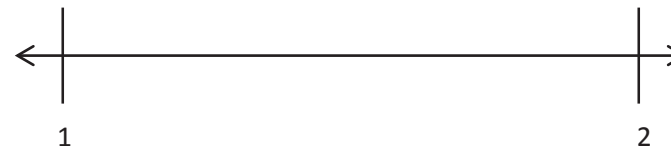
3. $\frac{1}{4}$  $\frac{1}{8}$



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 _____

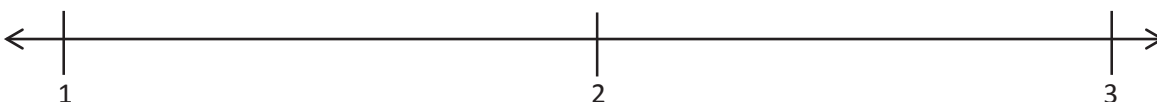
Date _____

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

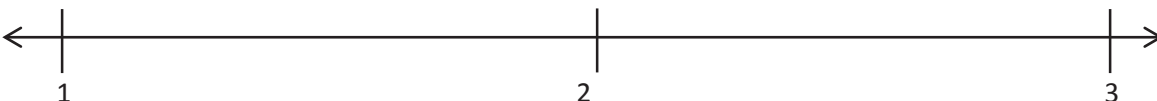
- a. thirds $\frac{6}{3}$ $\frac{5}{3}$ $\frac{8}{3}$



- 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* _____.

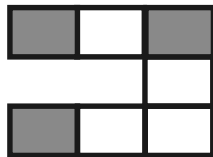
5. Use fractions from the number lines in Problem 1. Complete the sentence. Use words, pictures, or numbers to explain how you made that comparison.

_____ is *equal to* _____.

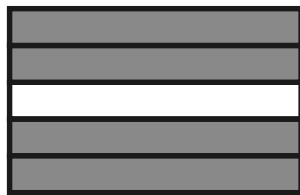
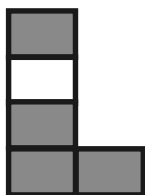
Name _____

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 _____

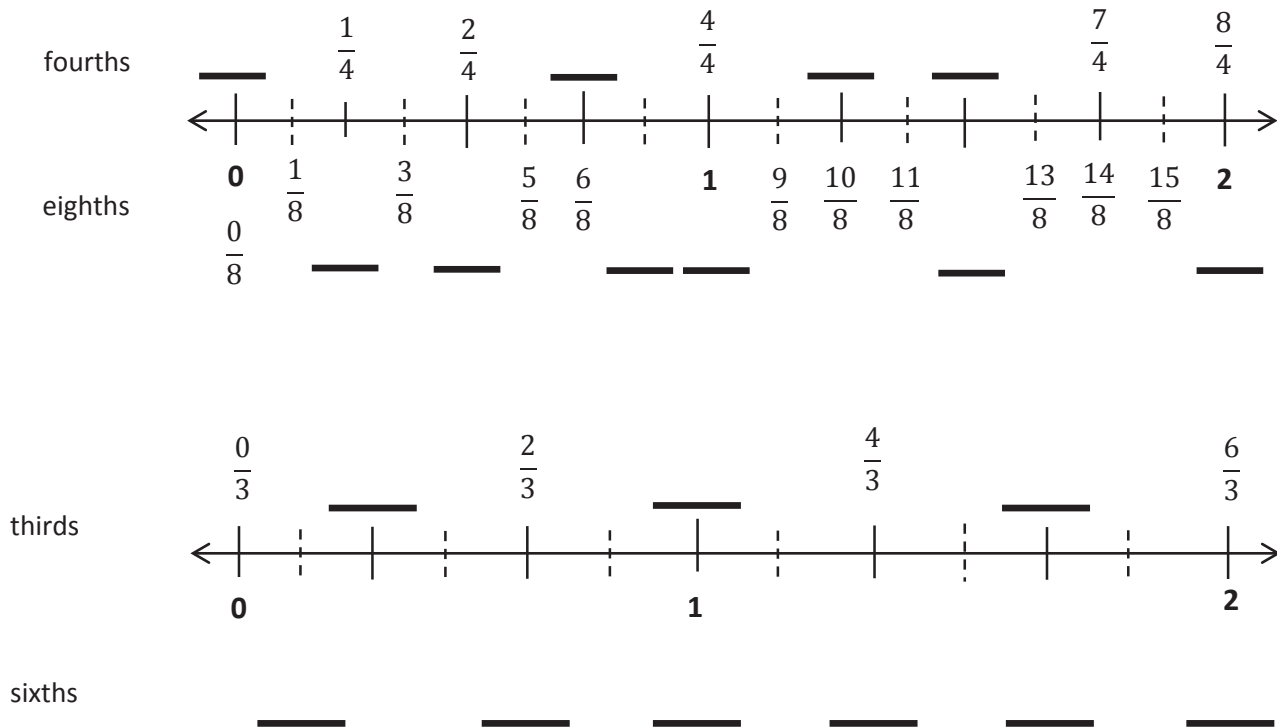
Becky



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.

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

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

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

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

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

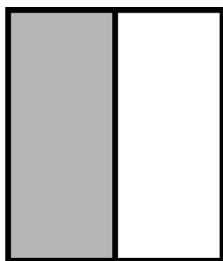
$$2 = \frac{8}{4} = \frac{\quad}{8}$$

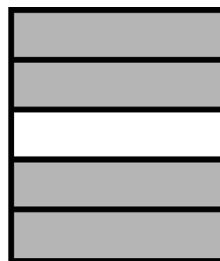
4. Mr. Fairfax ordered 3 large pizzas for a class party. Group A ate $\frac{6}{6}$ of the first pizza, and Group B ate $\frac{8}{6}$ of the remaining pizza. During the party, the class discussed which group ate more pizza.
- a. Did Group A or B eat more pizza? Use words and pictures to explain your answer 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.

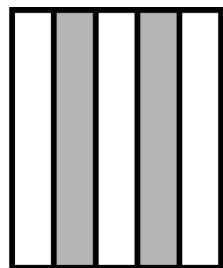
Name _____

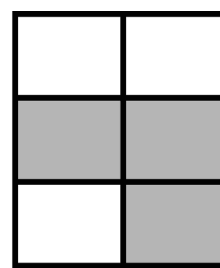
Date _____

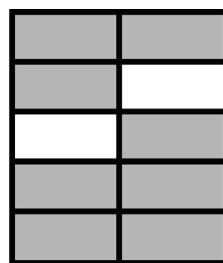
1. Write the shaded fraction of each figure on the blank. Then, draw a line to match the equivalent fractions.

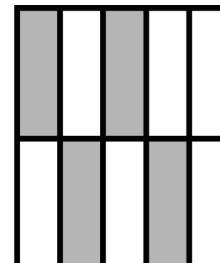


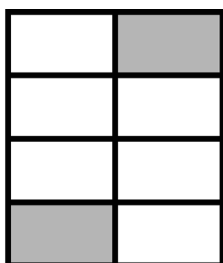


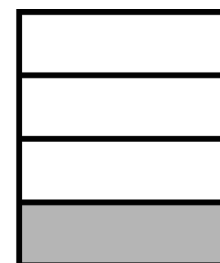




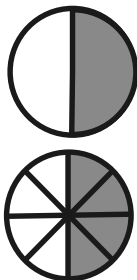








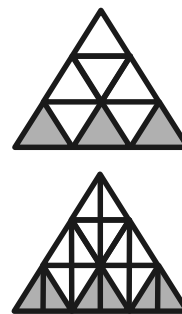
2. Complete the fractions to make true statements.



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



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



$$\frac{3}{9} = \frac{4}{12}$$

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 _____

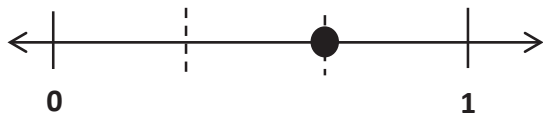


1. On the number line above, use a colored pencil to divide each whole into thirds and label each fraction above the line.
2. On the number line above, use a different colored pencil to divide each whole into sixths and label each fraction below the line.
3. Write the fractions that name the same place 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.



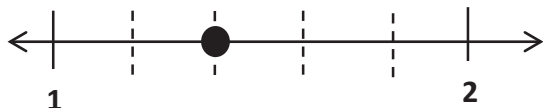
_____ = _____



_____ = _____



_____ = _____



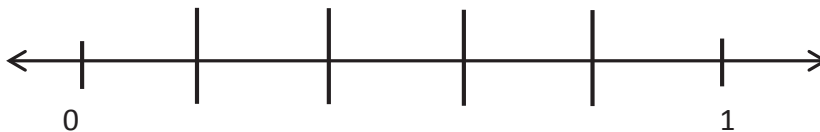
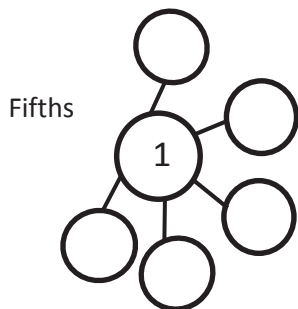
_____ = _____

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.

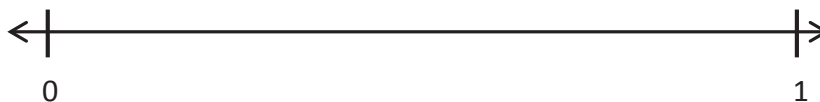
Name _____

Date _____

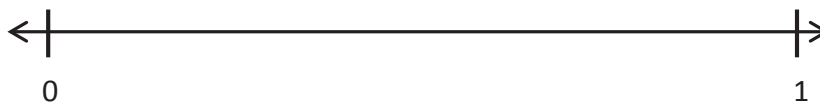
1. Complete the number bond as indicated by the fractional unit. Partition the number line into the given fractional unit, and label the fractions. Rename 0 and 1 as fractions of the given unit.



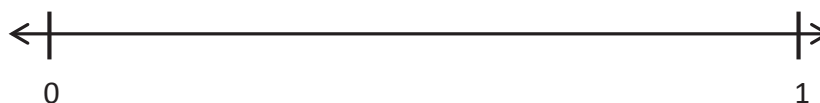
Sixths



Sevenths



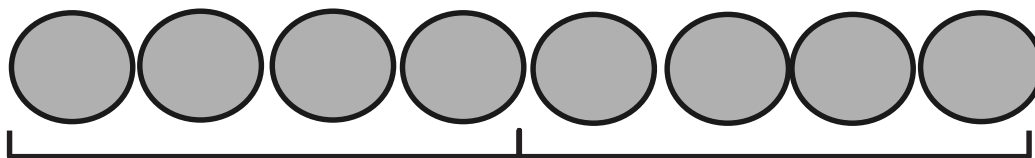
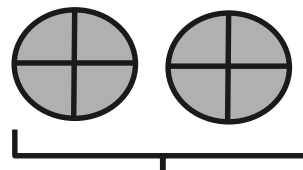
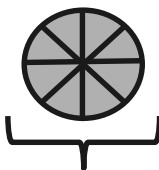
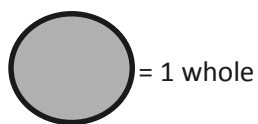
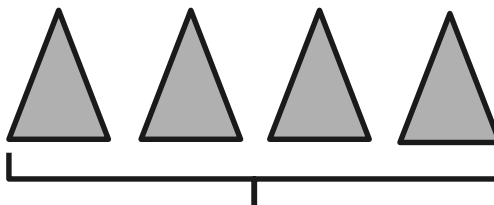
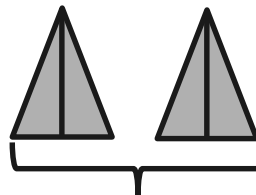
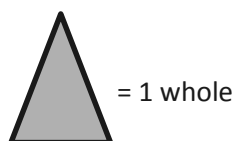
Eighths



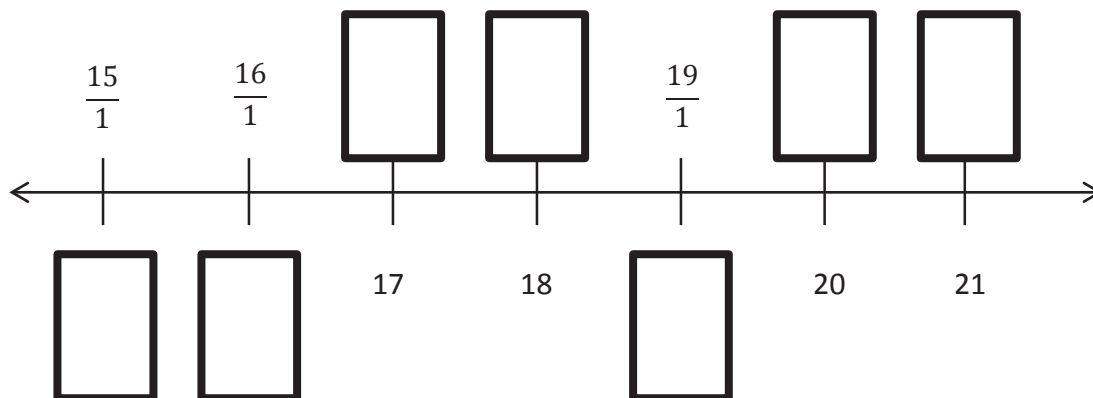
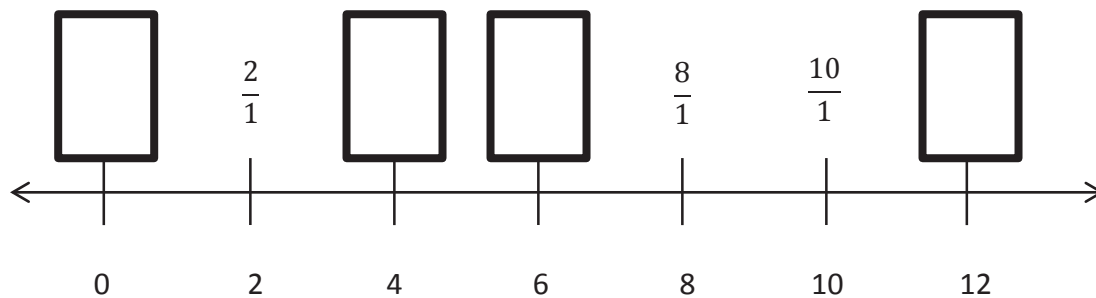
Name _____

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.

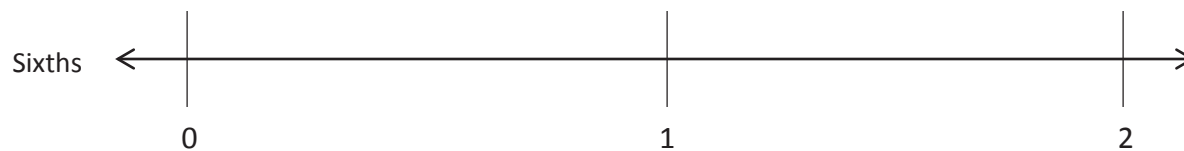
$$\frac{5}{1}$$

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

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.



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

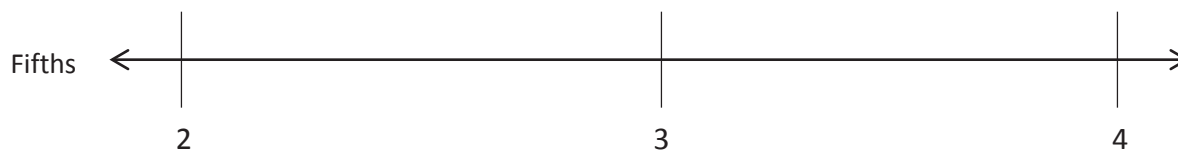
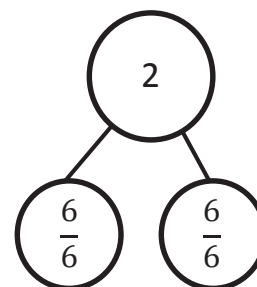
$1 = \underline{\hspace{1cm}} \text{ sixths}$

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

$0 = \frac{\square}{6}$

$1 = \frac{\square}{6}$

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



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

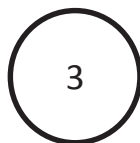
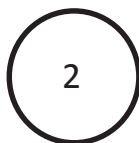
$3 = \underline{\hspace{1cm}} \text{ fifths}$

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

$2 = \frac{\square}{5}$

$3 = \frac{\square}{5}$

$4 = \frac{\square}{5}$



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?



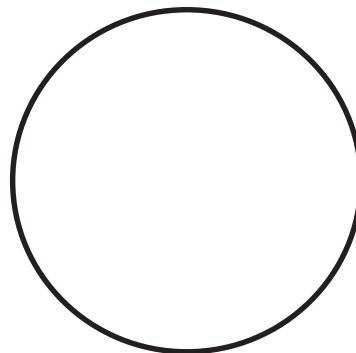
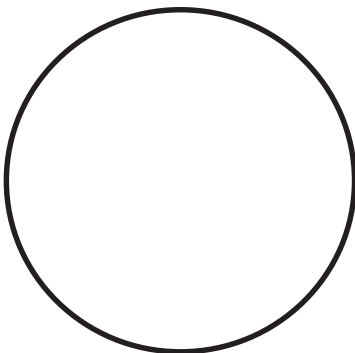
1 third is equal to _____ ninths.

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

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

| | | | | |
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2. 2 sevenths

| | | | | | | |
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|--|--|--|--|--|--|--|

 2 fourths

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3. 4 fifths

| | | | | |
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 4 ninths

| | | | | | | | | |
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| | | | | | | | | |
|--|--|--|--|--|--|--|--|--|

4. 5 sevenths

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 5 tenths

| | | | | | | | | | |
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5. 4 sixths

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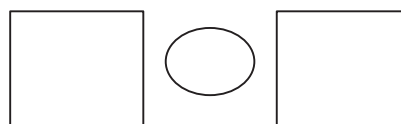
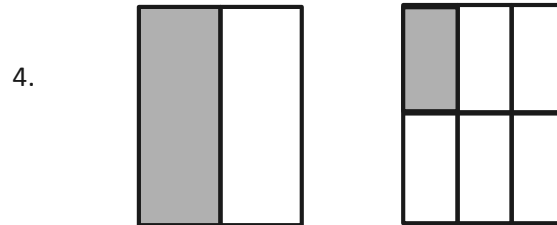
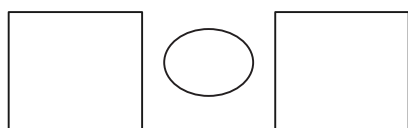
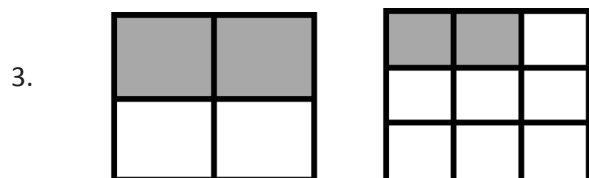
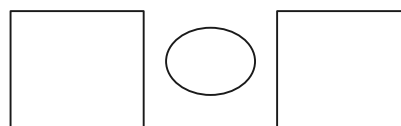
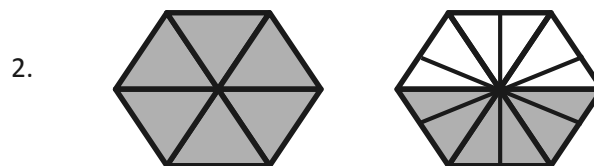
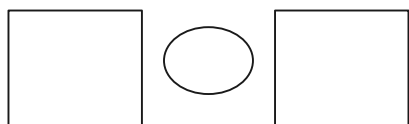
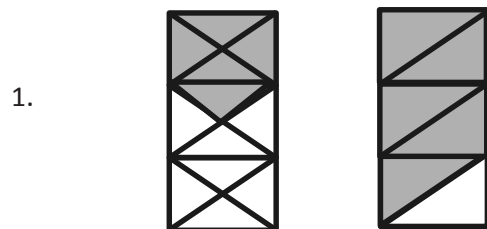
 4 fourths

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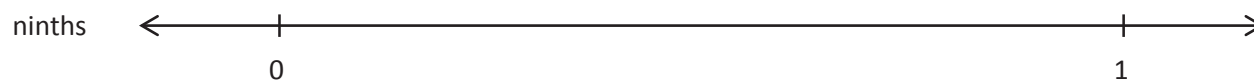
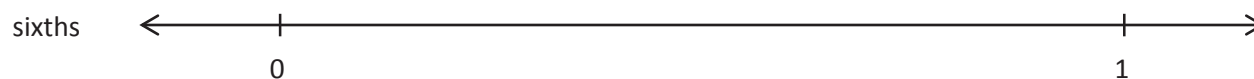
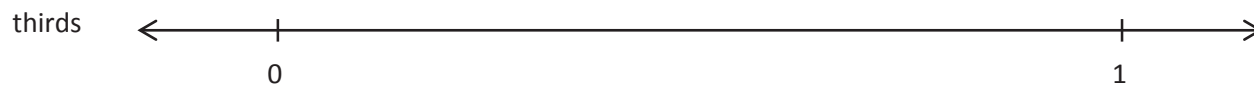
6. Saleem and Edwin use inch rulers to measure the lengths of their caterpillars. Saleem's caterpillar measures $\frac{3}{4}$ of an inch. Edwin's caterpillar measures $\frac{3}{8}$ of an inch. Whose caterpillar is longer? Draw a picture to support your answer.
7. Lily and Jasmine each bake the same-sized 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.

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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.

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Name _____

Date _____

Describe step by step the experience you had of partitioning a length into equal units by simply using a piece of notebook paper and a straight edge. Illustrate the process.

The image shows a large rectangular area with horizontal lines, resembling a piece of notebook paper. It is intended for a student to draw and describe the process of partitioning a length into equal units. The area is divided into three vertical sections by two vertical lines. The leftmost section is the narrowest, the middle section is the widest, and the rightmost section is the same width as the leftmost. There are three binder holes punched along the left edge of the paper, one in each of the three vertical sections. The paper is otherwise blank, with no text or markings.



Video tutorials: <http://embarc.online>



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