Grade 3 Math
Module 5
Lessons 14-30

School: _____

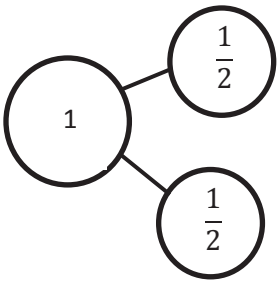
Teacher: _____

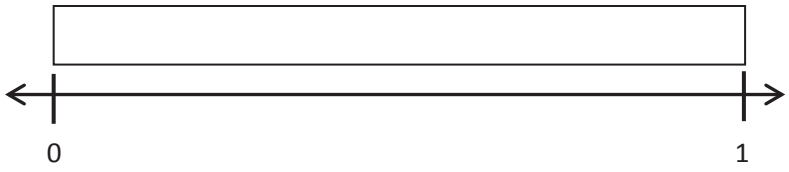
Student: _____

Name _____ Date _____

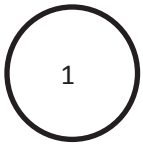
1. Draw a number bond for each fractional unit. Partition the fraction strip to show the unit fractions of the number bond. Use the fraction strip to help you label the fractions on the number line. Be sure to label the fractions at 0 and 1.

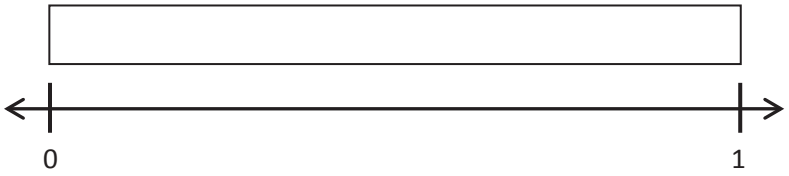
a. Halves



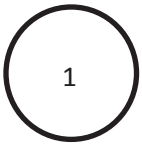


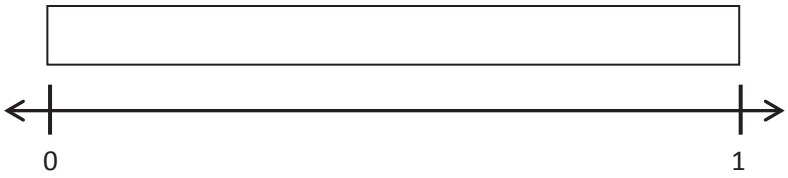
b. Thirds



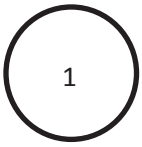


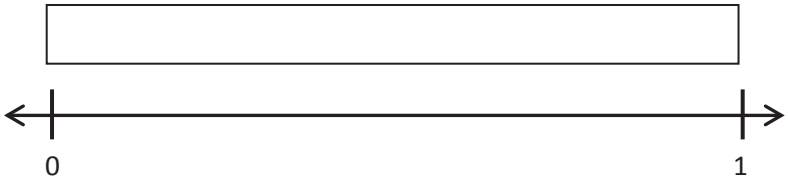
c. Fourths





d. Fifths





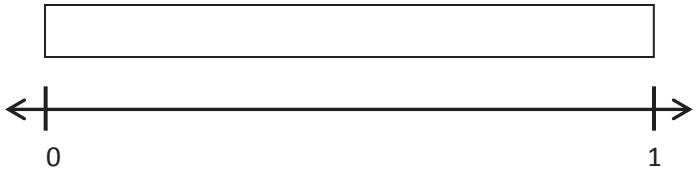
2. Trevor needs to let his puppy outside every quarter (1 fourth) hour to potty train him. Draw and label a number line from 0 hours to 1 hour to show every 1 fourth hour. Include 0 fourths and 4 fourths hour. Label 0 hours and 1 hour, too.

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. 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.

Sixths 1



Draw number bonds and a number line to help explain Problem 2.

2. Ms. Metcalf wants to share $1 equally between 5 students.

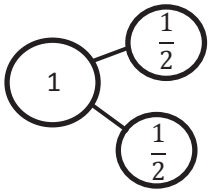
   a. What fraction of a dollar will each student get?

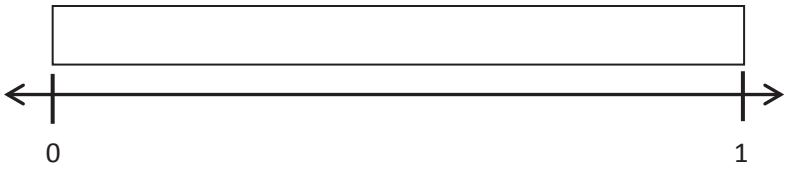
   b. How much money will each student get?

Name _____ Date _____

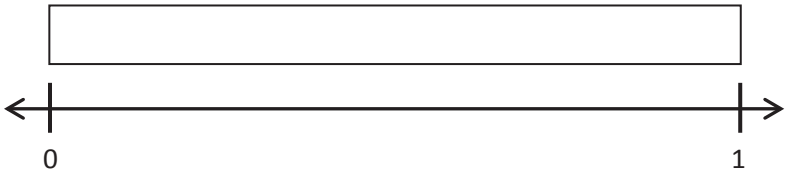
1. Draw a number bond for each fractional unit. Partition the fraction strip to show the unit fractions of the number bond. Use the fraction strip to help you label the fractions on the number line. Be sure to label the fractions at 0 and 1.

a. Halves

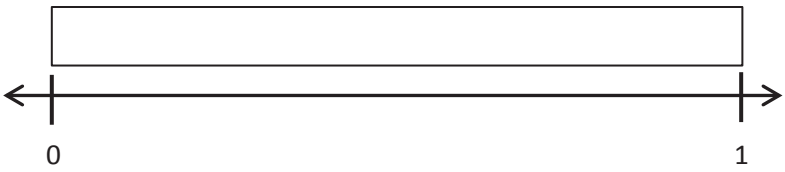




b. Eighths



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.

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

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

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

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

e. $\frac{3}{10}$

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 _____

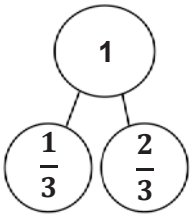
1. Estimate to label the given fraction on the number line. Be sure to label the fractions at 0 and 1. Write the fractions above the number line. Draw a number bond to match your number line.

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

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.

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



b. $\frac{3}{6}$

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

d. $\frac{7}{10}$

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

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.

A # Correct _____

Multiply or divide.

1	2 x 9 =		23	___ x 9 = 90	
2	3 x 9 =		24	___ x 9 = 18	
3	4 x 9 =		25	___ x 9 = 27	
4	5 x 9 =		26	90 ÷ 9 =	
5	1 x 9 =		27	45 ÷ 9 =	
6	18 ÷ 9 =		28	9 ÷ 9 =	
7	27 ÷ 9 =		29	18 ÷ 9 =	
8	45 ÷ 9 =		30	27 ÷ 9 =	
9	9 ÷ 9 =		31	___ x 9 = 54	
10	36 ÷ 9 =		32	___ x 9 = 63	
11	6 x 9 =		33	___ x 9 = 81	
12	7 x 9 =		34	___ x 9 = 72	
13	8 x 9 =		35	63 ÷ 9 =	
14	9 x 9 =		36	81 ÷ 9 =	
15	10 x 9 =		37	54 ÷ 9 =	
16	72 ÷ 9 =		38	72 ÷ 9 =	
17	63 ÷ 9 =		39	11 x 9 =	
18	81 ÷ 9 =		40	99 ÷ 9 =	
19	54 ÷ 9 =		41	12 x 9 =	
20	90 ÷ 9 =		42	108 ÷ 9 =	
21	___ x 9 = 45		43	14 x 9 =	
22	___ x 9 = 9		44	126 ÷ 9 =	

B Improvement _____ # Correct _____

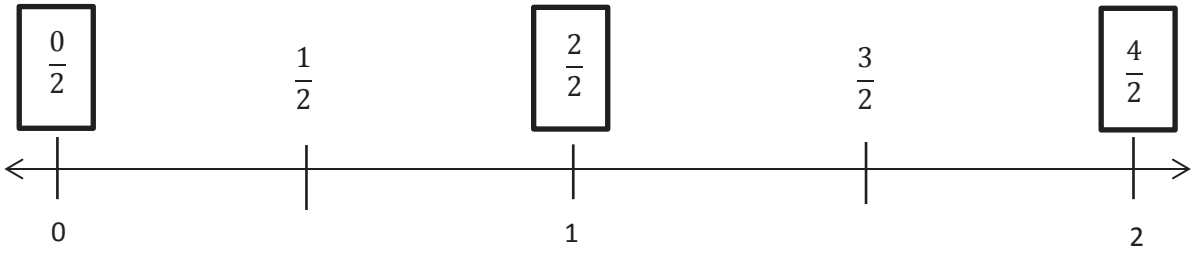
Multiply or divide.

1	1 x 9 =		23	__ x 9 = 18	
2	2 x 9 =		24	__ x 9 = 90	
3	3 x 9 =		25	__ x 9 = 27	
4	4 x 9 =		26	18 ÷ 9 =	
5	5 x 9 =		27	9 ÷ 9 =	
6	27 ÷ 9 =		28	90 ÷ 9 =	
7	18 ÷ 9 =		29	45 ÷ 9 =	
8	36 ÷ 9 =		30	27 ÷ 9 =	
9	9 ÷ 9 =		31	__ x 9 = 27	
10	45 ÷ 9 =		32	__ x 9 = 36	
11	10 x 9 =		33	__ x 9 = 81	
12	6 x 9 =		34	__ x 9 = 63	
13	7 x 9 =		35	72 ÷ 9 =	
14	8 x 9 =		36	81 ÷ 9 =	
15	9 x 9 =		37	54 ÷ 9 =	
16	63 ÷ 9 =		38	63 ÷ 9 =	
17	54 ÷ 9 =		39	11 x 9 =	
18	72 ÷ 9 =		40	99 ÷ 9 =	
19	90 ÷ 9 =		41	12 x 9 =	
20	81 ÷ 9 =		42	108 ÷ 9 =	
21	__ x 9 = 9		43	13 x 9 =	
22	__ x 9 = 45		44	117 ÷ 9 =	

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.

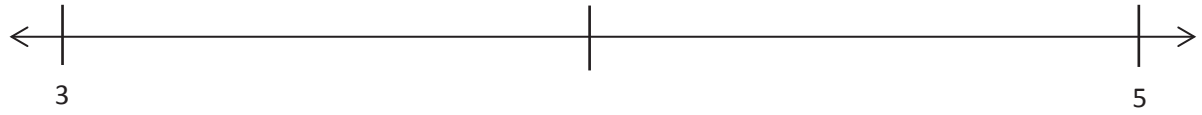
a. halves



b. thirds

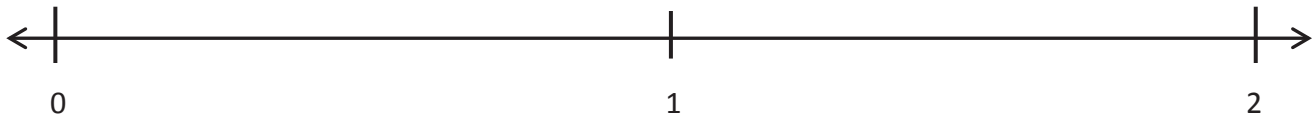
c. halves

d. fourths



e. thirds

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 _____

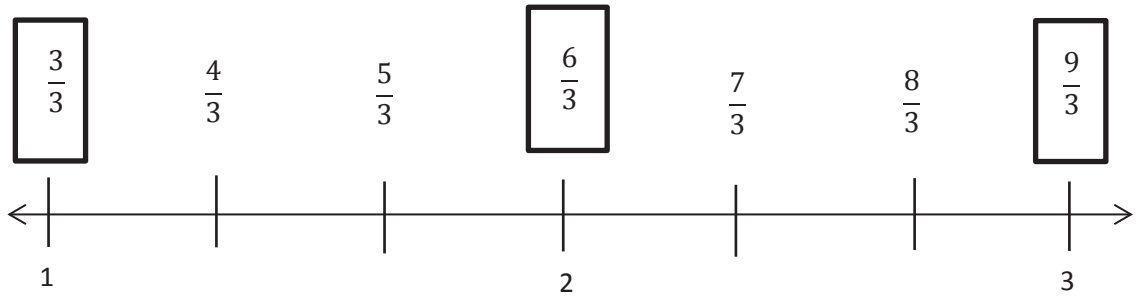
1. Estimate to equally partition and label the fractions on the number line. Label the wholes as fractions and box them.

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.

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.

a. thirds



b. eighths

c. fourths

d. halves

e. fifths

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.

A # Correct _____

Divide.

1	3 ÷ 3 =		23	24 ÷ 3 =	
2	4 ÷ 4 =		24	16 ÷ 2 =	
3	5 ÷ 5 =		25	30 ÷ 10 =	
4	19 ÷ 19 =		26	30 ÷ 3 =	
5	0 ÷ 1 =		27	27 ÷ 3 =	
6	0 ÷ 2 =		28	18 ÷ 2 =	
7	0 ÷ 3 =		29	40 ÷ 10 =	
8	0 ÷ 19 =		30	40 ÷ 4 =	
9	6 ÷ 3 =		31	20 ÷ 4 =	
10	9 ÷ 3 =		32	20 ÷ 5 =	
11	12 ÷ 3 =		33	24 ÷ 4 =	
12	15 ÷ 3 =		34	30 ÷ 5 =	
13	4 ÷ 2 =		35	28 ÷ 4 =	
14	6 ÷ 2 =		36	40 ÷ 5 =	
15	8 ÷ 2 =		37	32 ÷ 4 =	
16	10 ÷ 2 =		38	45 ÷ 5 =	
17	18 ÷ 3 =		39	44 ÷ 4 =	
18	12 ÷ 2 =		40	36 ÷ 4 =	
19	21 ÷ 3 =		41	48 ÷ 6 =	
20	14 ÷ 2 =		42	63 ÷ 7 =	
21	20 ÷ 10 =		43	64 ÷ 8 =	
22	20 ÷ 2 =		44	72 ÷ 9 =	

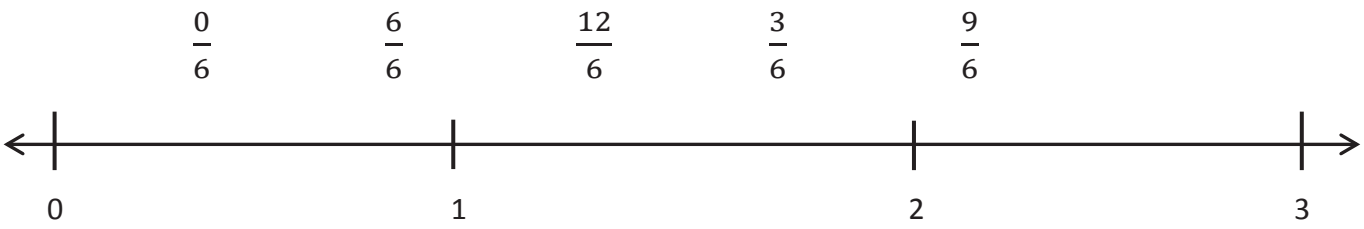
B Improvement _____ # Correct _____

Divide.

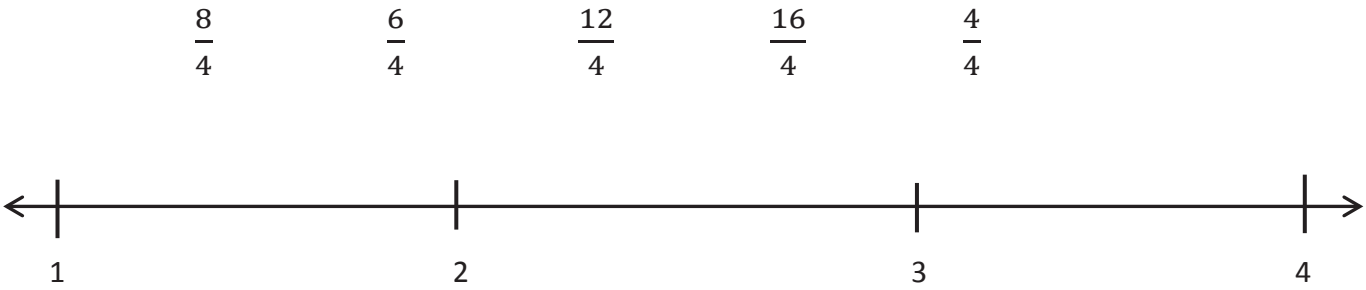
1	2 ÷ 2 =		23	16 ÷ 2 =	
2	3 ÷ 3 =		24	24 ÷ 3 =	
3	4 ÷ 4 =		25	30 ÷ 3 =	
4	17 ÷ 17 =		26	30 ÷ 10 =	
5	0 ÷ 2 =		27	18 ÷ 2 =	
6	0 ÷ 3 =		28	27 ÷ 3 =	
7	0 ÷ 4 =		29	40 ÷ 4 =	
8	0 ÷ 17 =		30	40 ÷ 10 =	
9	4 ÷ 2 =		31	20 ÷ 5 =	
10	6 ÷ 2 =		32	20 ÷ 4 =	
11	8 ÷ 2 =		33	30 ÷ 5 =	
12	10 ÷ 2 =		34	24 ÷ 4 =	
13	6 ÷ 3 =		35	40 ÷ 5 =	
14	9 ÷ 3 =		36	28 ÷ 4 =	
15	12 ÷ 3 =		37	45 ÷ 5 =	
16	15 ÷ 3 =		38	32 ÷ 4 =	
17	12 ÷ 2 =		39	55 ÷ 5 =	
18	18 ÷ 3 =		40	36 ÷ 4 =	
19	14 ÷ 2 =		41	54 ÷ 6 =	
20	21 ÷ 3 =		42	56 ÷ 7 =	
21	20 ÷ 2 =		43	72 ÷ 8 =	
22	20 ÷ 10 =		44	63 ÷ 9 =	

Name _____ Date _____

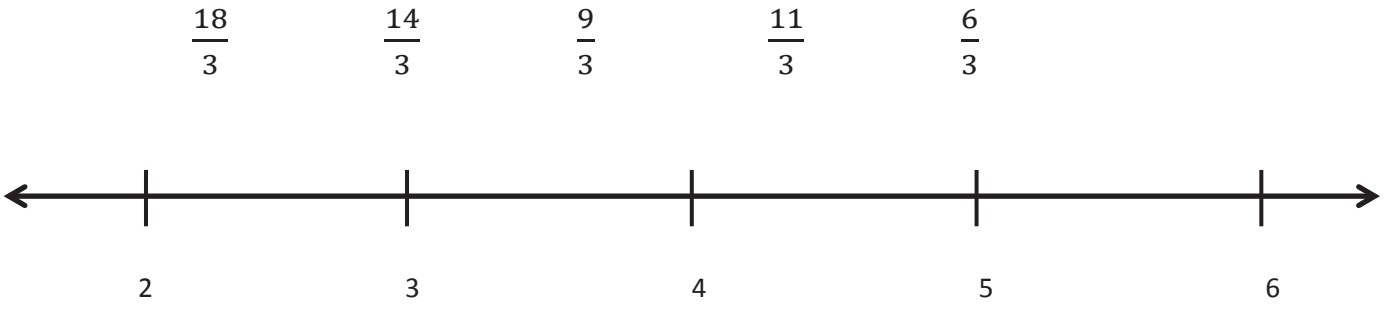
1. Locate and label the following fractions on the number line.



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



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



4. 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 _____

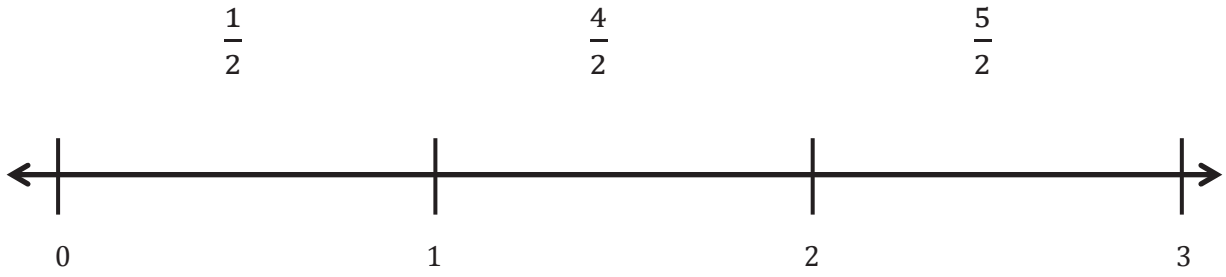
1. Locate and label the following fractions on the number line.

$\frac{7}{3}$ $\frac{2}{3}$ $\frac{4}{3}$

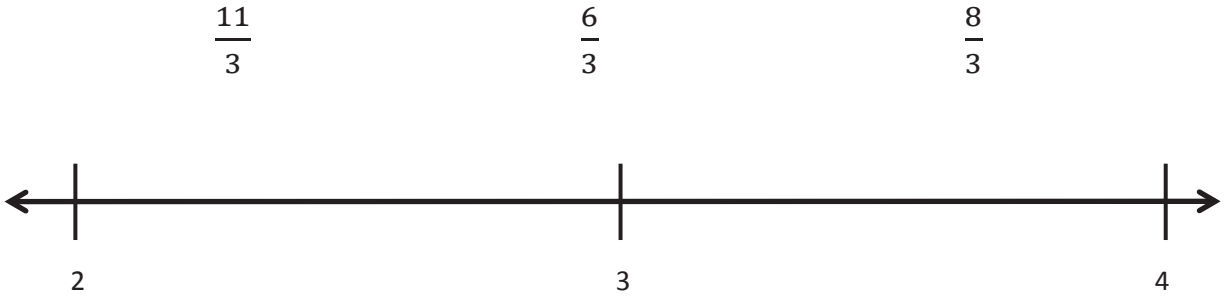
2. Katie bought 2 one-gallon bottles of juice for a party. Her guests drank $\frac{6}{4}$ gallons of juice. What fraction of juice didn't they drink? Draw a number line to show and explain your answer.

Name _____ Date _____

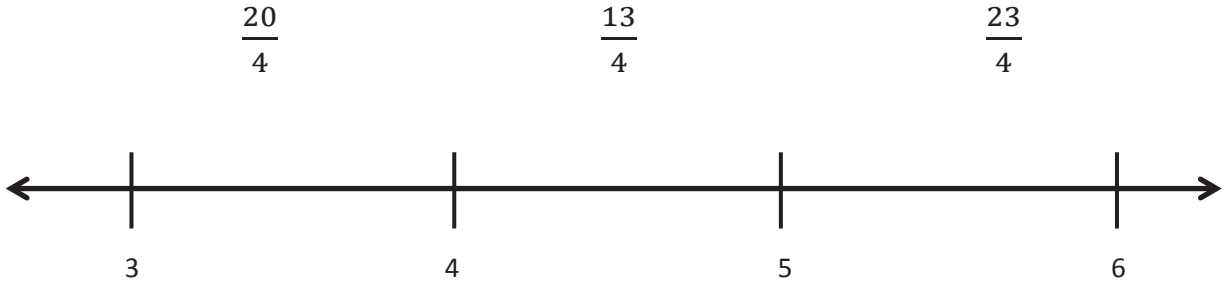
1. Locate and label the following fractions on the number line.



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

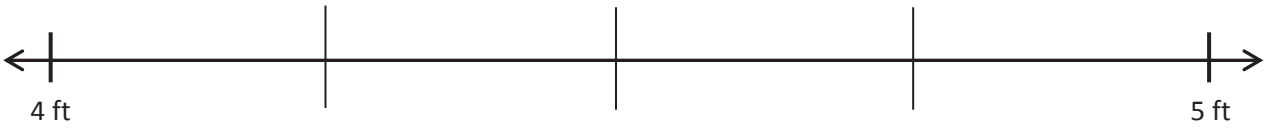


3. Locate and label the following fractions on the number line.



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.

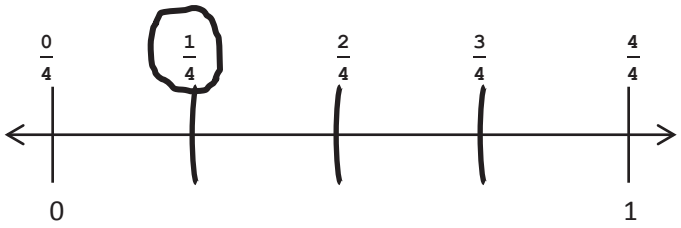
5. Ali wants to buy a piano. The piano measures $\frac{19}{4}$ feet long. She has a space 5 feet long for the piano in her house. Does she have enough room? Draw a number line to show and explain your answer.



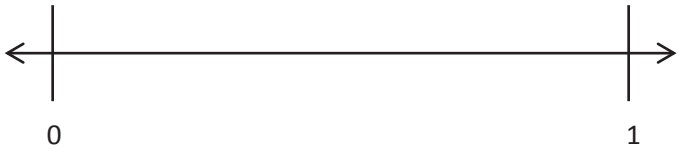
Name _____ Date _____

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

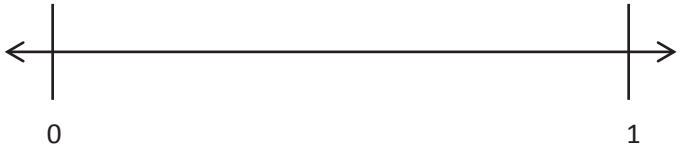
1. $\frac{1}{4}$ < $\frac{3}{4}$



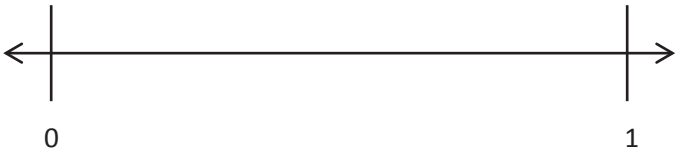
2. $\frac{2}{6}$ ◯ $\frac{3}{6}$



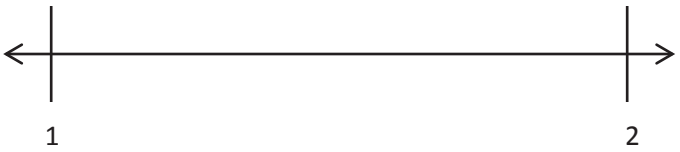
3. $\frac{1}{2}$ ◯ $\frac{1}{4}$



4. $\frac{2}{3}$ ◯ $\frac{2}{6}$



5. $\frac{11}{8}$ ◯ $\frac{7}{4}$



6. JoAnn and Lupe live straight down the street from their school. JoAnn walks $\frac{5}{6}$ mile and Lupe walks $\frac{7}{8}$ mile 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.

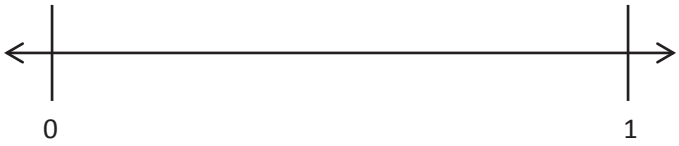
8. Brandon makes homemade spaghetti. He measures 3 noodles. One measures $\frac{7}{8}$ feet, the second is $\frac{7}{4}$ feet, and the third is $\frac{4}{2}$ feet long. Draw a number line to model the length of each piece of spaghetti. Write a number sentence using <, >, or = to compare the pieces. Explain using pictures, numbers, and words.

Name _____ Date _____

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

1. $\frac{3}{5}$ ◯ $\frac{1}{5}$

2. $\frac{1}{2}$ ◯ $\frac{3}{4}$

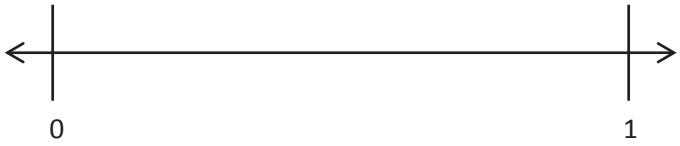


3. Mr. Brady draws a fraction on the board. Ken says it's $\frac{2}{3}$, and Dan said it's $\frac{3}{2}$. Do both of these fractions mean the same thing? If not, which fraction is larger? Draw a number line to model $\frac{2}{3}$ and $\frac{3}{2}$. Use words, pictures, and numbers to explain your comparison.

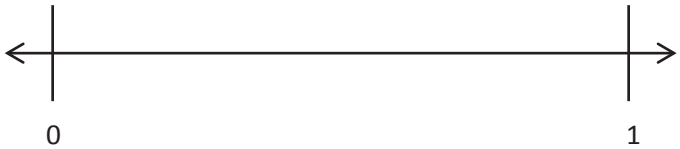
Name _____ Date _____

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

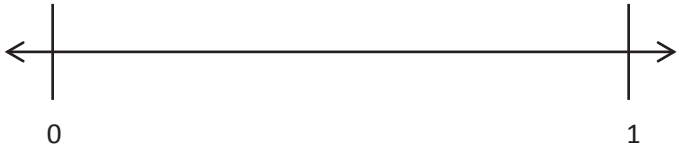
1. $\frac{1}{3}$ ◯ $\frac{2}{3}$



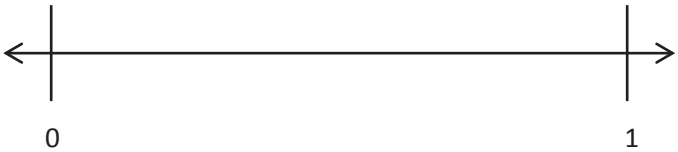
2. $\frac{4}{6}$ ◯ $\frac{1}{6}$



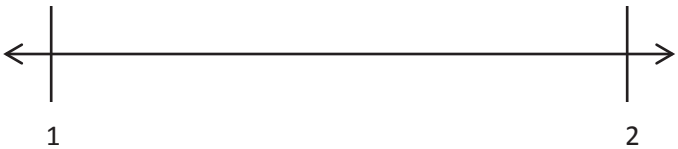
3. $\frac{1}{4}$ ◯ $\frac{1}{8}$



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 $\frac{4}{6}$ yard long, and Jay's string is $\frac{5}{7}$ yard 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 $\frac{9}{10}$ meter, and Judy jumped $\frac{10}{9}$ meter. 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.

A # Correct _____

Write each fraction as a whole number.

1	$\frac{2}{1}=$		23	$\frac{6}{3}=$	
2	$\frac{2}{2}=$		24	$\frac{3}{3}=$	
3	$\frac{4}{2}=$		25	$\frac{3}{1}=$	
4	$\frac{6}{2}=$		26	$\frac{9}{3}=$	
5	$\frac{10}{2}=$		27	$\frac{16}{4}=$	
6	$\frac{8}{2}=$		28	$\frac{20}{4}=$	
7	$\frac{5}{1}=$		29	$\frac{12}{3}=$	
8	$\frac{5}{5}=$		30	$\frac{15}{3}=$	
9	$\frac{10}{5}=$		31	$\frac{70}{10}=$	
10	$\frac{15}{5}=$		32	$\frac{12}{2}=$	
11	$\frac{25}{5}=$		33	$\frac{14}{2}=$	
12	$\frac{20}{5}=$		34	$\frac{90}{10}=$	
13	$\frac{10}{10}=$		35	$\frac{30}{5}=$	
14	$\frac{50}{10}=$		36	$\frac{35}{5}=$	
15	$\frac{30}{10}=$		37	$\frac{60}{10}=$	
16	$\frac{10}{1}=$		38	$\frac{18}{2}=$	
17	$\frac{20}{10}=$		39	$\frac{40}{5}=$	
18	$\frac{40}{10}=$		40	$\frac{80}{10}=$	
19	$\frac{8}{4}=$		41	$\frac{16}{2}=$	
20	$\frac{4}{4}=$		42	$\frac{45}{5}=$	
21	$\frac{4}{1}=$		43	$\frac{27}{3}=$	
22	$\frac{12}{4}=$		44	$\frac{32}{4}=$	

B Improvement _____ # Correct _____

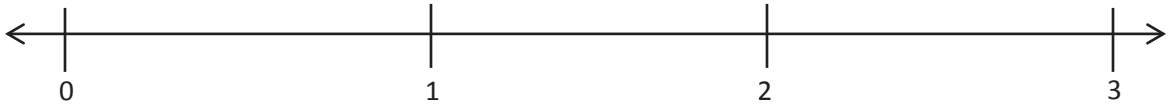
Write each fraction as a whole number.

1	$\frac{5}{1}=$		23	$\frac{8}{4}=$	
2	$\frac{5}{5}=$		24	$\frac{4}{4}=$	
3	$\frac{10}{5}=$		25	$\frac{4}{1}=$	
4	$\frac{15}{5}=$		26	$\frac{12}{4}=$	
5	$\frac{25}{5}=$		27	$\frac{12}{3}=$	
6	$\frac{20}{5}=$		28	$\frac{15}{3}=$	
7	$\frac{2}{1}=$		29	$\frac{16}{4}=$	
8	$\frac{2}{2}=$		30	$\frac{20}{4}=$	
9	$\frac{4}{2}=$		31	$\frac{90}{10}=$	
10	$\frac{6}{2}=$		32	$\frac{30}{5}=$	
11	$\frac{10}{2}=$		33	$\frac{35}{5}=$	
12	$\frac{8}{2}=$		34	$\frac{70}{10}=$	
13	$\frac{10}{1}=$		35	$\frac{12}{2}=$	
14	$\frac{10}{10}=$		36	$\frac{14}{2}=$	
15	$\frac{50}{10}=$		37	$\frac{80}{10}=$	
16	$\frac{30}{10}=$		38	$\frac{45}{5}=$	
17	$\frac{20}{10}=$		39	$\frac{16}{2}=$	
18	$\frac{40}{10}=$		40	$\frac{60}{10}=$	
19	$\frac{6}{3}=$		41	$\frac{18}{2}=$	
20	$\frac{3}{3}=$		42	$\frac{40}{5}=$	
21	$\frac{3}{1}=$		43	$\frac{36}{4}=$	
22	$\frac{9}{3}=$		44	$\frac{24}{3}=$	

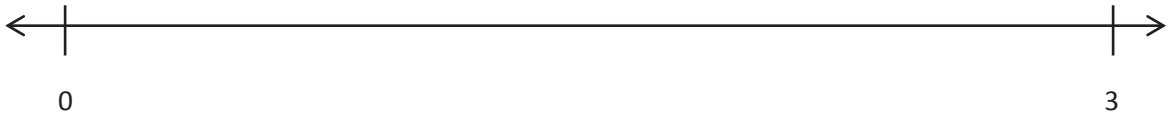
Name _____ Date _____

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 =.

$\frac{6}{4}$ ◯ $\frac{9}{4}$ $\quad$ $\frac{3}{2}$ ◯ $\frac{5}{2}$ $\quad$ $\frac{19}{8}$ ◯ $\frac{16}{8}$

$\frac{16}{8}$ ◯ $\frac{3}{2}$ $\quad$ $\frac{9}{4}$ ◯ $\frac{19}{8}$ $\quad$ $\frac{4}{2}$ ◯ $\frac{16}{8}$

$\frac{6}{4}$ ◯ $\frac{16}{8}$ $\quad$ $\frac{5}{2}$ ◯ $\frac{9}{4}$ $\quad$ $\frac{24}{8}$ ◯ $\frac{11}{4}$

3. Choose a *greater than* comparison you made in Problem 2. Use pictures, numbers, and words to explain how you made that comparison.

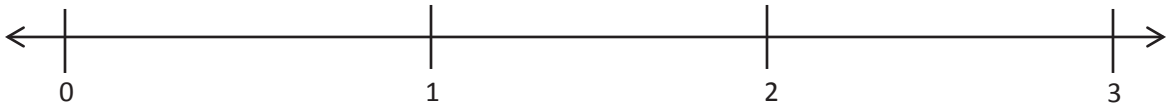
4. Choose a *less than* comparison you made in Problem 2. Use pictures, numbers, and words to explain a different way of thinking about the comparison than what you wrote in Problem 3.

5. Choose an *equal to* comparison you made in Problem 2. Use pictures, numbers, and words to explain two ways that you can prove your comparison is true.

Name _____ Date _____

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 =.

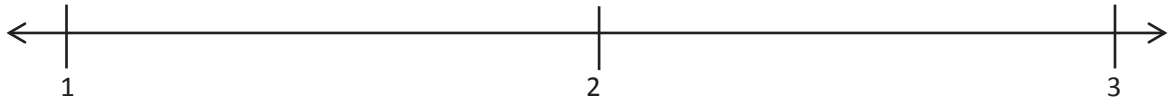
$\frac{3}{4}$ ◯ $\frac{5}{4}$ $\frac{7}{4}$ ◯ $\frac{4}{4}$ 3 ◯ $\frac{6}{4}$

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.

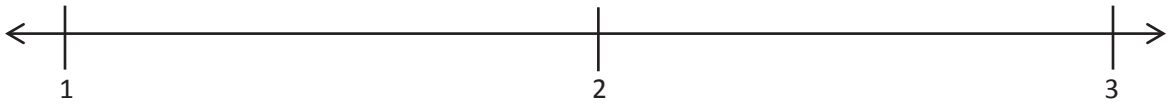
Name _____ Date _____

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

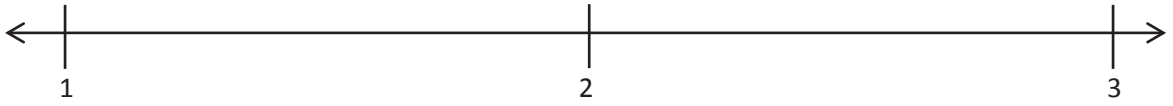
a. thirds $\frac{6}{3}$ $\frac{5}{3}$ $\frac{8}{3}$



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 =.

$\frac{17}{6}$ ◯ $\frac{15}{6}$	$\frac{7}{3}$ ◯ $\frac{9}{3}$	$\frac{11}{5}$ ◯ $\frac{8}{5}$
$\frac{4}{3}$ ◯ $\frac{8}{6}$	$\frac{13}{6}$ ◯ $\frac{8}{3}$	$\frac{11}{6}$ ◯ $\frac{5}{3}$
$\frac{10}{6}$ ◯ $\frac{3}{3}$	$\frac{6}{3}$ ◯ $\frac{12}{6}$	$\frac{15}{5}$ ◯ $\frac{5}{3}$

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* _____.

Multiply.

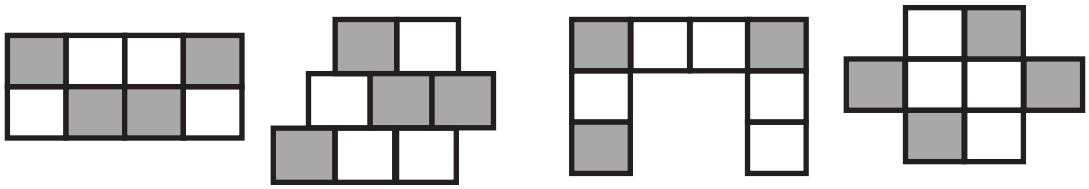
7 x 1 = _____	7 x 2 = _____	7 x 3 = _____	7 x 4 = _____
7 x 5 = _____	7 x 1 = _____	7 x 2 = _____	7 x 1 = _____
7 x 3 = _____	7 x 1 = _____	7 x 4 = _____	7 x 1 = _____
7 x 5 = _____	7 x 1 = _____	7 x 2 = _____	7 x 3 = _____
7 x 2 = _____	7 x 4 = _____	7 x 2 = _____	7 x 5 = _____
7 x 2 = _____	7 x 1 = _____	7 x 2 = _____	7 x 3 = _____
7 x 1 = _____	7 x 3 = _____	7 x 2 = _____	7 x 3 = _____
7 x 4 = _____	7 x 3 = _____	7 x 5 = _____	7 x 3 = _____
7 x 4 = _____	7 x 1 = _____	7 x 4 = _____	7 x 2 = _____
7 x 4 = _____	7 x 3 = _____	7 x 4 = _____	7 x 5 = _____
7 x 4 = _____	7 x 5 = _____	7 x 1 = _____	7 x 5 = _____
7 x 2 = _____	7 x 5 = _____	7 x 3 = _____	7 x 5 = _____
7 x 4 = _____	7 x 2 = _____	7 x 4 = _____	7 x 3 = _____
7 x 5 = _____	7 x 3 = _____	7 x 2 = _____	7 x 4 = _____
7 x 3 = _____	7 x 5 = _____	7 x 2 = _____	7 x 4 = _____

multiply by 7 (1–5)

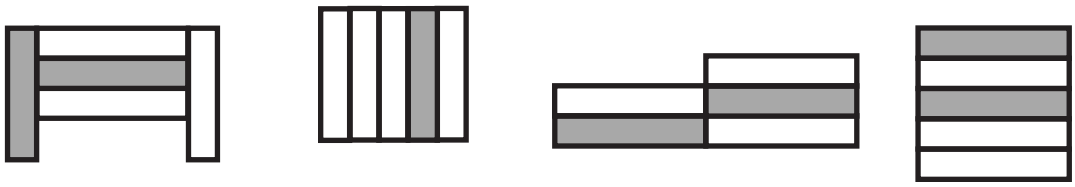
Name _____ Date _____

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

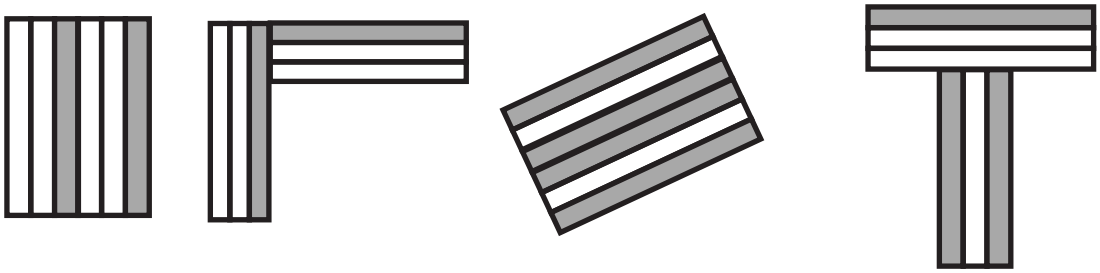
a.



b.



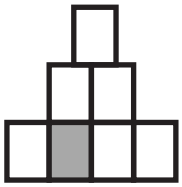
c.



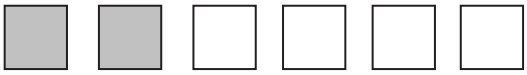
2. Label the shaded fraction. Draw 2 different representations of the same fractional amount.

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.

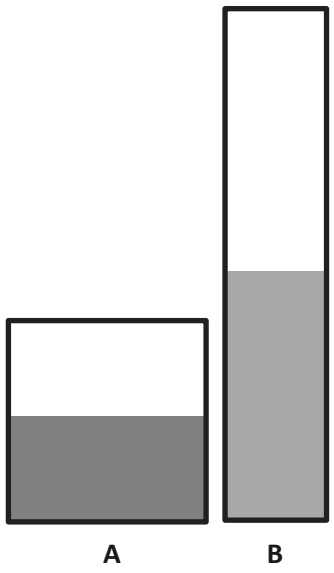


a. What shapes does she have now?

b. How many of each shape does she have?

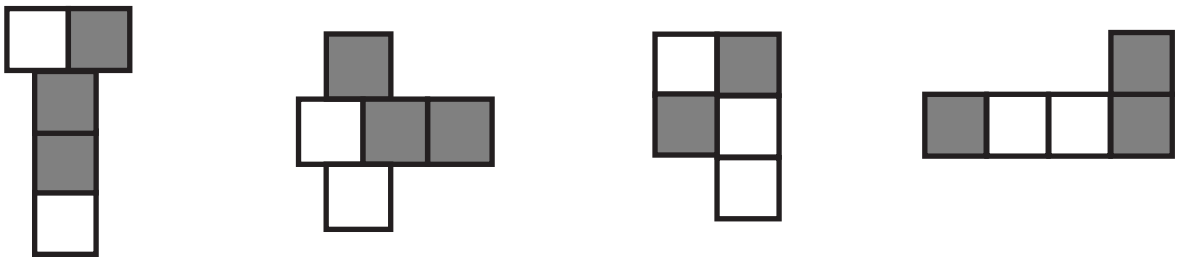
c. Use all the shapes with no overlaps. Draw at least 2 different ways Ann's set of shapes might look. What fraction of the figure is grey?

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.

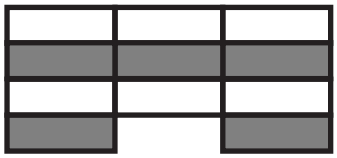


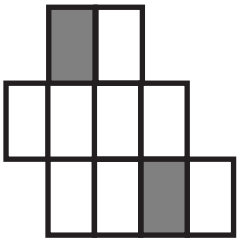
Name _____ Date _____

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



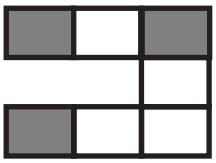
2. Label the shaded fraction. Draw 2 different representations of the same fractional amount.

a. 

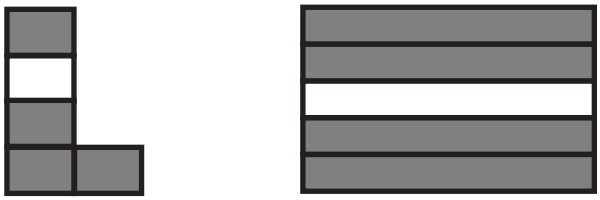
b. 

Name _____ Date _____

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



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



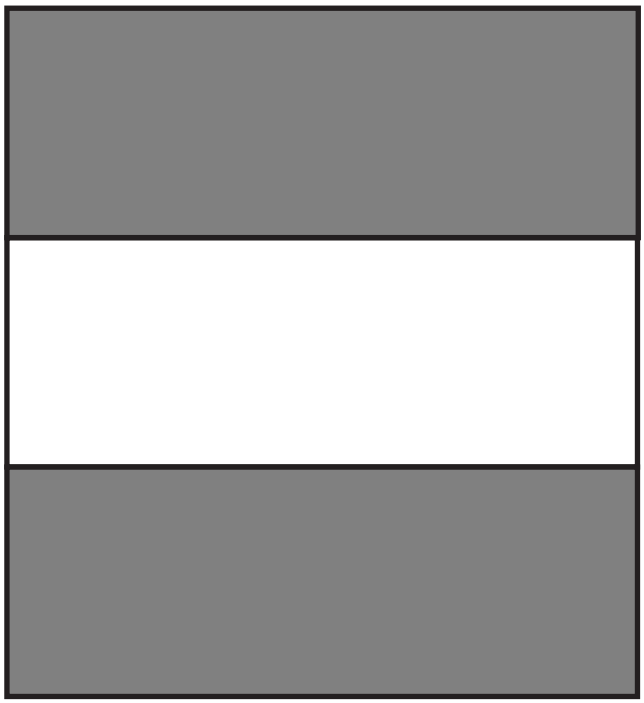
a. Are the shapes equivalent? Why or why not?

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 _____

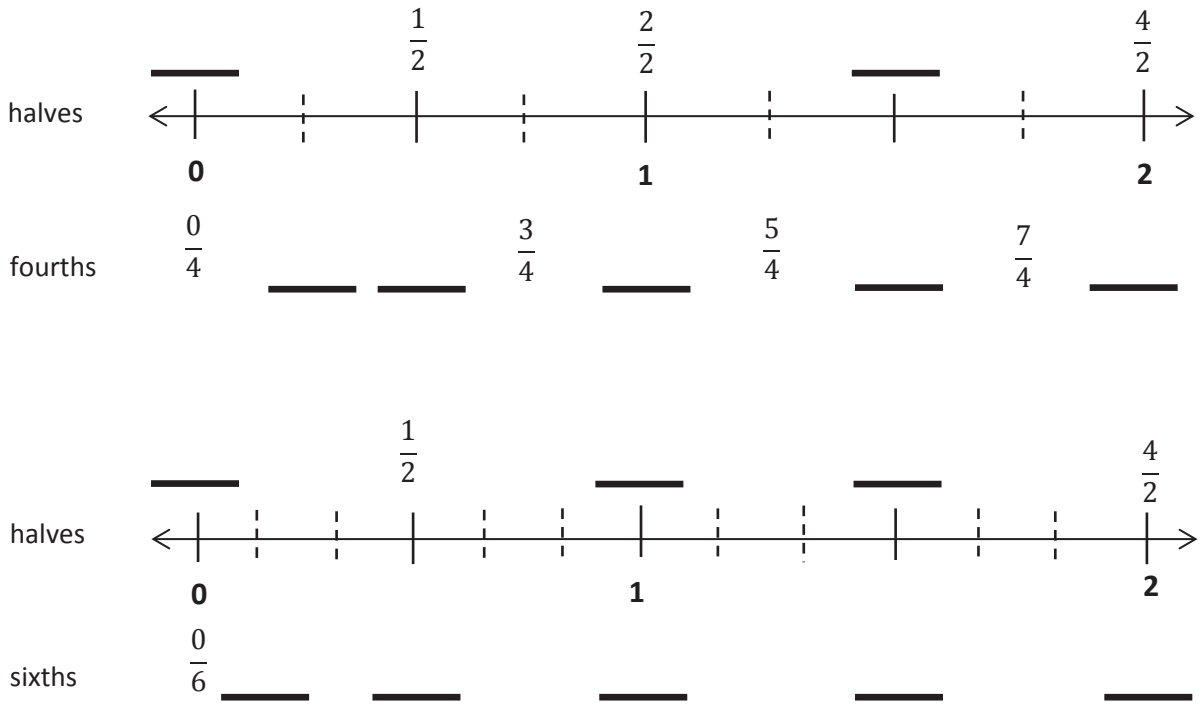
Becky ◯



thirds

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.

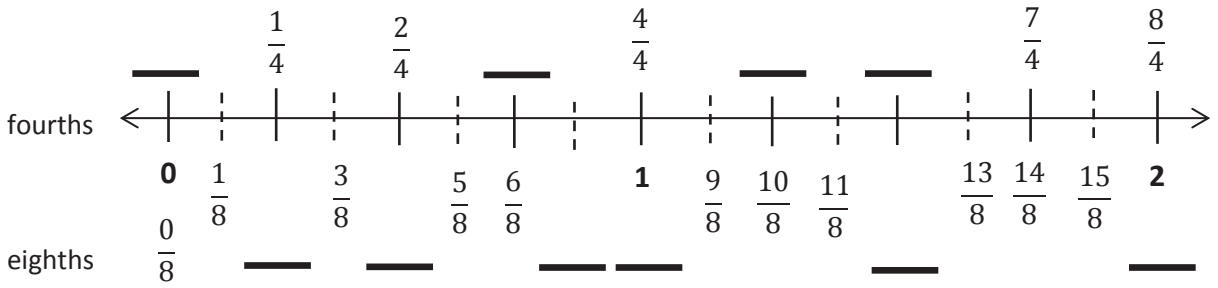
5. Jack and Jill's baby brother Rosco also had a gauge the same size and shape on the same hill. He told Jack and Jill that there had been $\frac{1}{2}$ inch of rain on Thursday. Is he right? Why or why not? Use words and a number line to explain your answer.

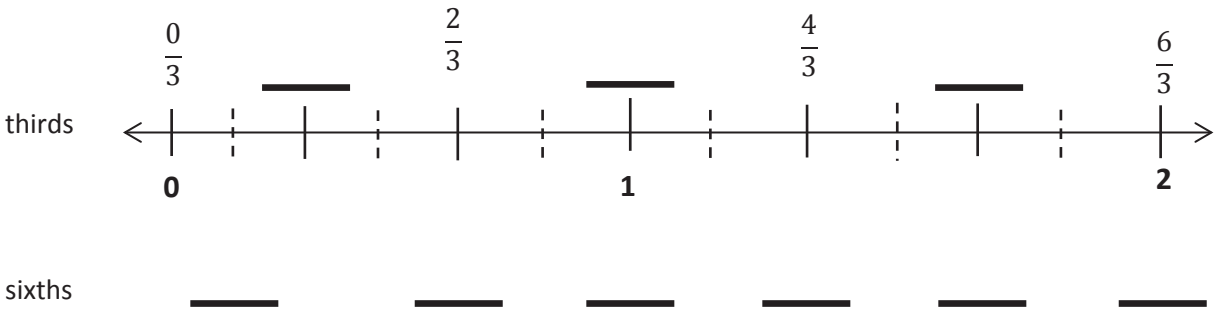
Name _____ Date _____

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

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.

$\frac{1}{4} = \frac{\quad}{8}$ $\frac{6}{4} = \frac{12}{\quad}$ $\frac{2}{3} = \frac{\quad}{6}$

$\frac{6}{3} = \frac{12}{\quad}$ $\frac{3}{3} = \frac{\quad}{6}$ $2 = \frac{8}{4} = \frac{\quad}{8}$

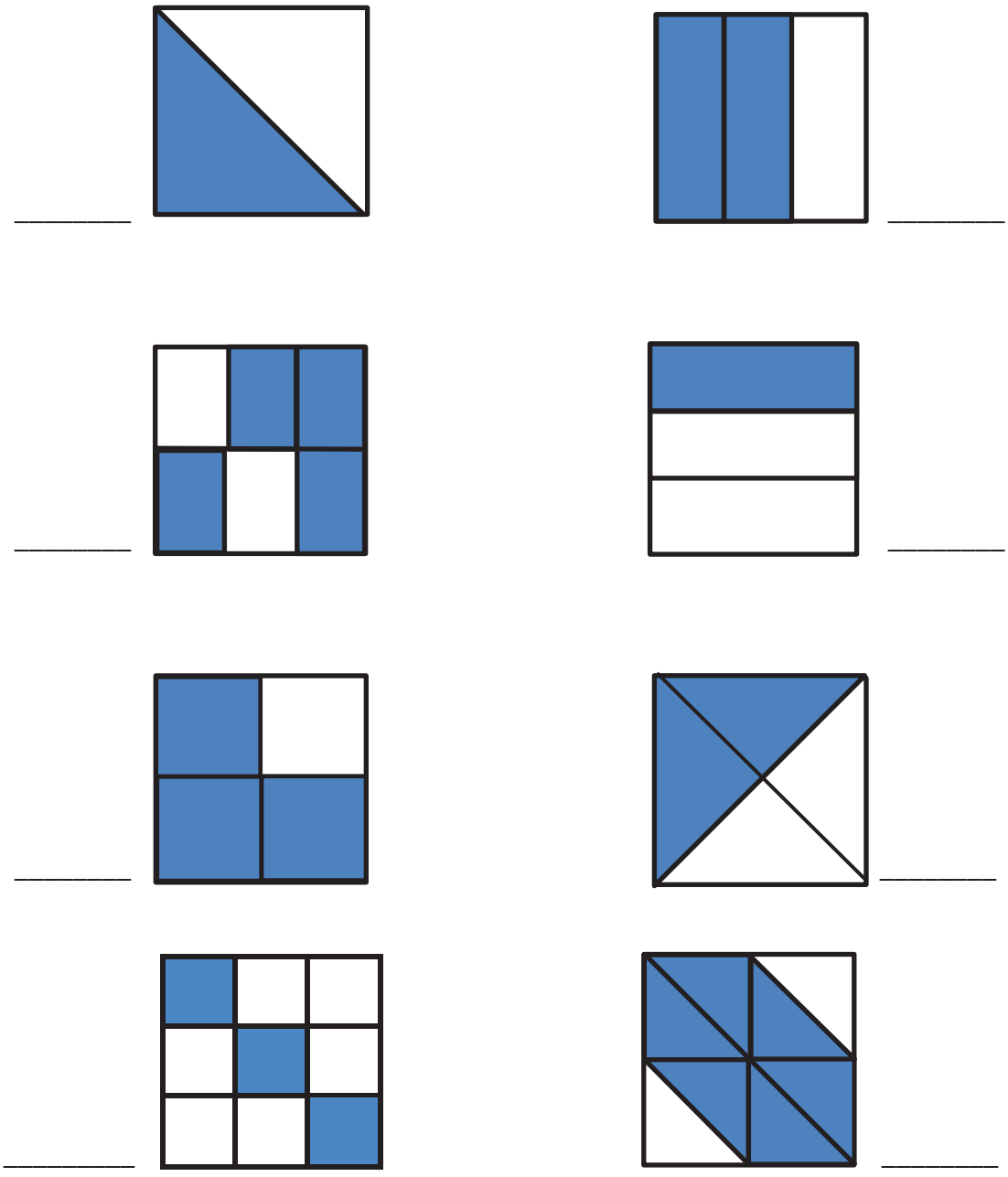
4. Mr. Fairfax ordered 3 large pizzas for a class party. Group A ate $\frac{6}{6}$ of the first pizza, and Group B ate $\frac{8}{6}$ of the remaining pizza. During the party, the class discussed which group ate more pizza.

   a. Did Group A or B eat more pizza? Use words and and pictures to explain your answer to the class.

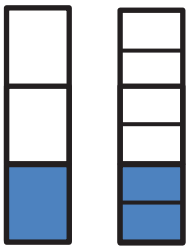
   b. Later, Group C ate all remaining slices of pizza. What fraction of the pizza did group C eat? Use words and pictures to explain your answer.

Name _____ Date _____

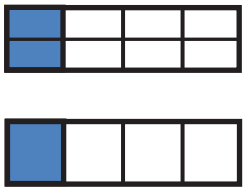
1. Write the shaded fraction of each figure in the blank. Then, draw a line to match the equivalent fractions.



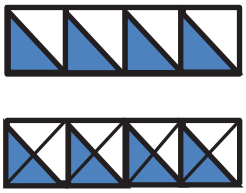
2. Write the missing parts of the fractions.



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



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



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

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.

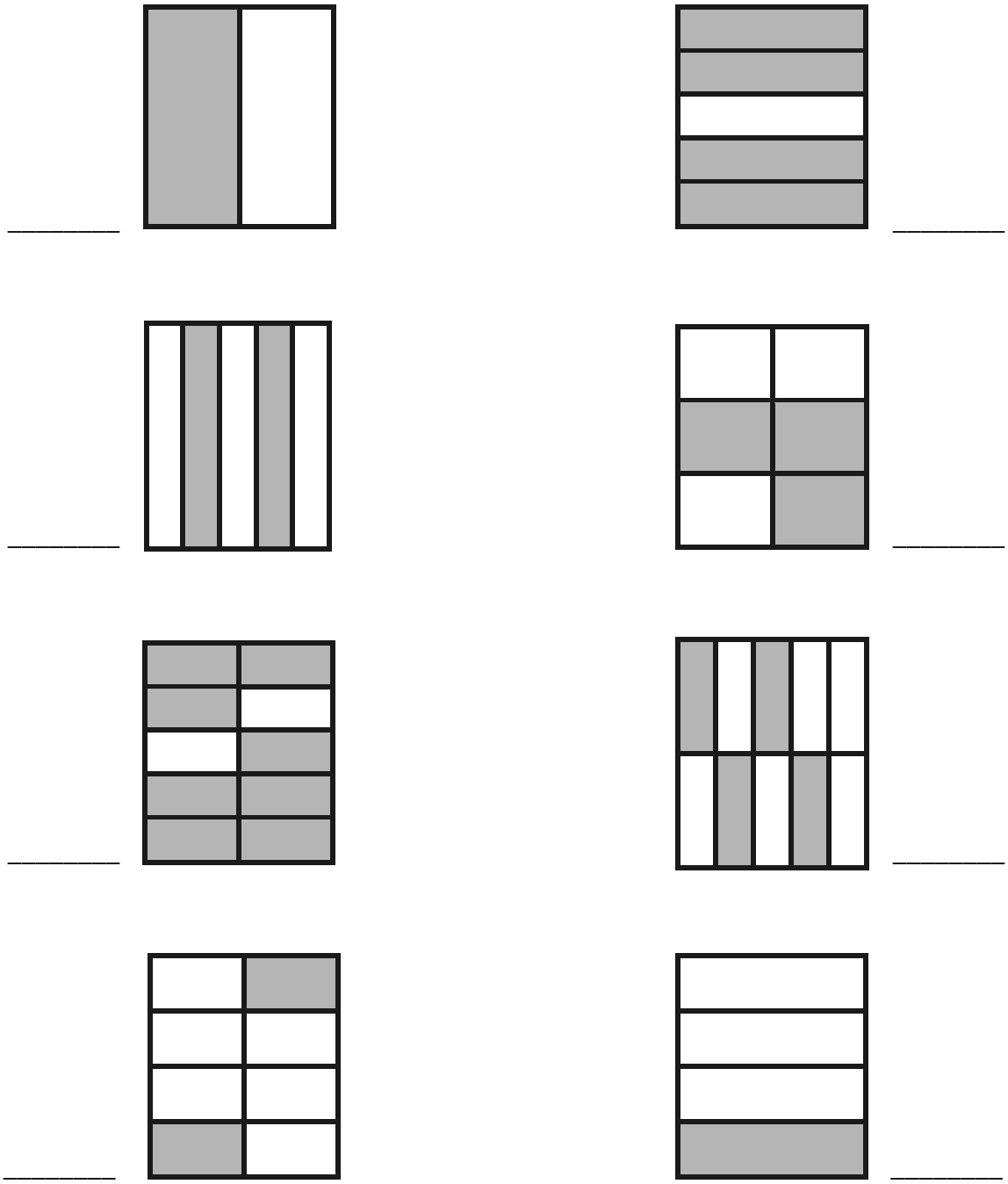
Name _____ Date _____

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

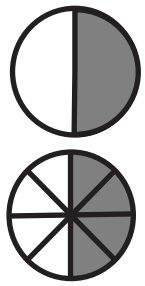
2. Draw a number line that proves your thinking about Problem 1.

Name _____ Date _____

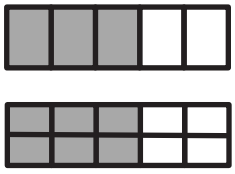
1. Write the shaded fraction of each figure in the blank. Then, draw a line to match the equivalent fractions.



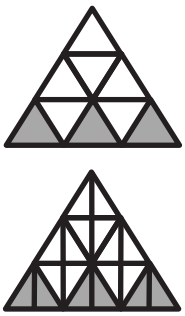
2. Complete the fractions to make true statements.



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



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



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

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.

A # Correct _____

Add.

1	0 + 6 =		23	7 + 6 =	
2	1 + 6 =		24	17 + 6 =	
3	2 + 6 =		25	27 + 6 =	
4	3 + 6 =		26	37 + 6 =	
5	4 + 6 =		27	47 + 6 =	
6	6 + 4 =		28	77 + 6 =	
7	6 + 3 =		29	8 + 6 =	
8	6 + 2 =		30	18 + 6 =	
9	6 + 1 =		31	28 + 6 =	
10	6 + 0 =		32	38 + 6 =	
11	15 + 6 =		33	48 + 6 =	
12	25 + 6 =		34	78 + 6 =	
13	35 + 6 =		35	9 + 6 =	
14	45 + 6 =		36	19 + 6 =	
15	55 + 6 =		37	29 + 6 =	
16	85 + 6 =		38	39 + 6 =	
17	6 + 6 =		39	89 + 6 =	
18	16 + 6 =		40	6 + 75 =	
19	26 + 6 =		41	6 + 56 =	
20	36 + 6 =		42	6 + 77 =	
21	46 + 6 =		43	6 + 88 =	
22	76 + 6 =		44	6 + 99 =	

B Improvement _____ # Correct _____

Add.

1	6 + 0 =		23	7 + 6 =	
2	6 + 1 =		24	17 + 6 =	
3	6 + 2 =		25	27 + 6 =	
4	6 + 3 =		26	37 + 6 =	
5	6 + 4 =		27	47 + 6 =	
6	4 + 6 =		28	67 + 6 =	
7	3 + 6 =		29	8 + 6 =	
8	2 + 6 =		30	18 + 6 =	
9	1 + 6 =		31	28 + 6 =	
10	0 + 6 =		32	38 + 6 =	
11	5 + 6 =		33	48 + 6 =	
12	15 + 6 =		34	88 + 6 =	
13	25 + 6 =		35	9 + 6 =	
14	35 + 6 =		36	19 + 6 =	
15	45 + 6 =		37	29 + 6 =	
16	75 + 6 =		38	39 + 6 =	
17	6 + 6 =		39	79 + 6 =	
18	16 + 6 =		40	6 + 55 =	
19	26 + 6 =		41	6 + 76 =	
20	36 + 6 =		42	6 + 57 =	
21	46 + 6 =		43	6 + 98 =	
22	86 + 6 =		44	6 + 89 =	

Name _____ Date _____

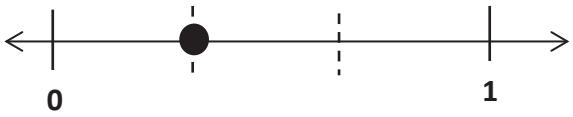
1. On the number line above, use a red colored pencil to divide each whole into fourths and label each fraction above the line. Use a fraction strip to help you estimate, if necessary.

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 that would include these fractions below and label it.

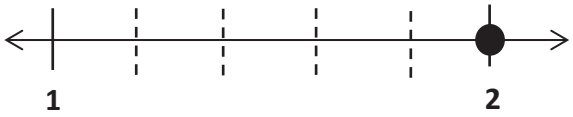
5. Write two different fractions for the dot on the number line. You may use halves, thirds, fourths, fifths, sixths, or eighths. Use fraction strips to help you, if necessary.



_____ = _____

_____ = _____

_____ = _____



_____ = _____

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 _____

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.

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.

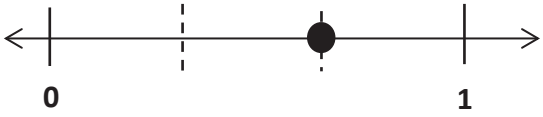
2. On the number line above, use a different colored pencil to divide each whole into sixths and label each fraction below the line.

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.

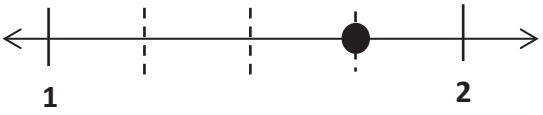
$$\frac{20}{6} = \frac{\quad}{3} \qquad \frac{12}{3} = \frac{\quad}{6}$$

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

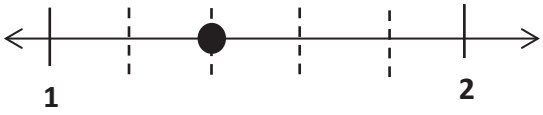


_____ = _____

_____ = _____



_____ = _____



_____ = _____

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.

A # Correct _____

Add.

1	0 + 7 =		23	6 + 7 =	
2	1 + 7 =		24	16 + 7 =	
3	2 + 7 =		25	26 + 7 =	
4	3 + 7 =		26	36 + 7 =	
5	7 + 3 =		27	46 + 7 =	
6	7 + 2 =		28	66 + 7 =	
7	7 + 1 =		29	7 + 7 =	
8	7 + 0 =		30	17 + 7 =	
9	4 + 7 =		31	27 + 7 =	
10	14 + 7 =		32	37 + 7 =	
11	24 + 7 =		33	87 + 7 =	
12	34 + 7 =		34	8 + 7 =	
13	44 + 7 =		35	18 + 7 =	
14	84 + 7 =		36	28 + 7 =	
15	64 + 7 =		37	38 + 7 =	
16	5 + 7 =		38	78 + 7 =	
17	15 + 7 =		39	9 + 7 =	
18	25 + 7 =		40	19 + 7 =	
19	35 + 7 =		41	29 + 7 =	
20	45 + 7 =		42	39 + 7 =	
21	75 + 7 =		43	49 + 7 =	
22	55 + 7 =		44	79 + 7 =	

B Improvement _____ # Correct _____

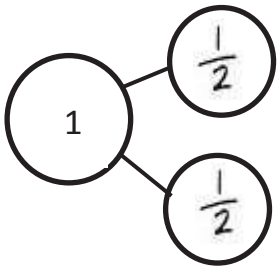
Add.

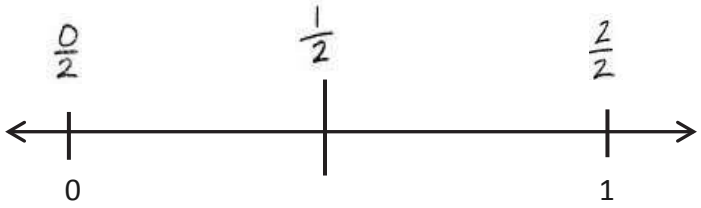
1	7 + 0 =		23	6 + 7 =	
2	7 + 1 =		24	16 + 7 =	
3	7 + 2 =		25	26 + 7 =	
4	7 + 3 =		26	36 + 7 =	
5	3 + 7 =		27	46 + 7 =	
6	2 + 7 =		28	76 + 7 =	
7	1 + 7 =		29	7 + 7 =	
8	0 + 7 =		30	17 + 7 =	
9	4 + 7 =		31	27 + 7 =	
10	14 + 7 =		32	37 + 7 =	
11	24 + 7 =		33	67 + 7 =	
12	34 + 7 =		34	8 + 7 =	
13	44 + 7 =		35	18 + 7 =	
14	74 + 7 =		36	28 + 7 =	
15	54 + 7 =		37	38 + 7 =	
16	5 + 7 =		38	88 + 7 =	
17	15 + 7 =		39	9 + 7 =	
18	25 + 7 =		40	19 + 7 =	
19	35 + 7 =		41	29 + 7 =	
20	45 + 7 =		42	39 + 7 =	
21	85 + 7 =		43	49 + 7 =	
22	65 + 7 =		44	89 + 7 =	

Name _____ Date _____

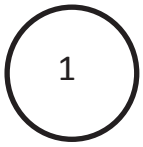
1. Complete the number bond as indicated by the fractional unit. Partition the number line into the given fractional unit and label the fractions. Rename 0 and 1 as fractions of the given unit. The first one is done for you.

Halves

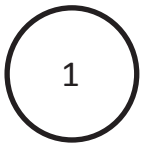




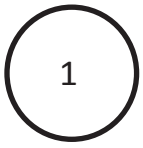
Thirds



Fourths



Fifths



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

$\frac{2}{2}$ = _____ = _____ = _____

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. 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.

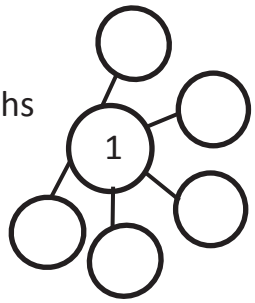
Fourths 1

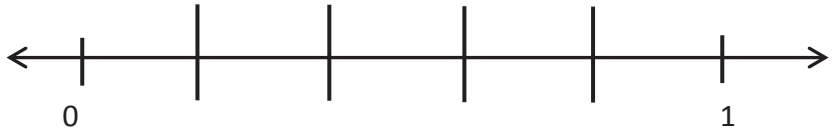
2. How many copies of $\frac{1}{4}$ does it take to make 1 whole? What's the fraction for 1 whole in this case? Use the number line or the number bond in Problem 1 to help you explain.

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.

Fifths





Sixths 1

Sevenths 1

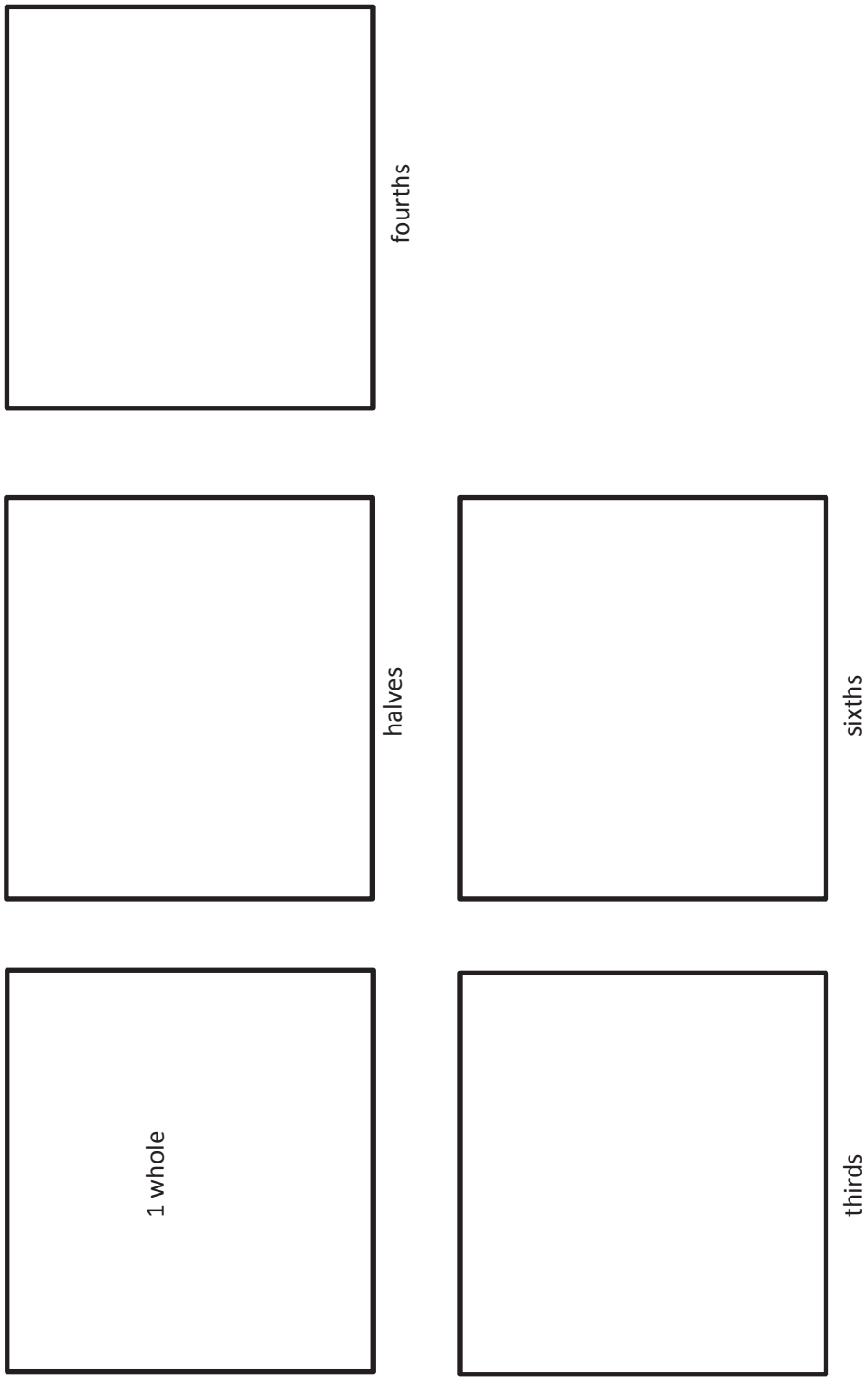
Eighths 1

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

$\frac{5}{5}$ = _____ = _____ = _____

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.



fraction pieces

A

Correct _____

Subtract.

1	16 - 6 =		23	23 - 6 =	
2	6 - 6 =		24	33 - 6 =	
3	26 - 6 =		25	63 - 6 =	
4	7 - 6 =		26	83 - 6 =	
5	17 - 6 =		27	14 - 6 =	
6	37 - 6 =		28	24 - 6 =	
7	8 - 6 =		29	34 - 6 =	
8	18 - 6 =		30	74 - 6 =	
9	48 - 6 =		31	54 - 6 =	
10	9 - 6 =		32	15 - 6 =	
11	19 - 6 =		33	25 - 6 =	
12	59 - 6 =		34	35 - 6 =	
13	10 - 6 =		35	85 - 6 =	
14	20 - 6 =		36	65 - 6 =	
15	70 - 6 =		37	90 - 6 =	
16	11 - 6 =		38	53 - 6 =	
17	21 - 6 =		39	42 - 6 =	
18	81 - 6 =		40	71 - 6 =	
19	12 - 6 =		41	74 - 6 =	
20	22 - 6 =		42	95 - 6 =	
21	82 - 6 =		43	51 - 6 =	
22	13 - 6 =		44	92 - 6 =	

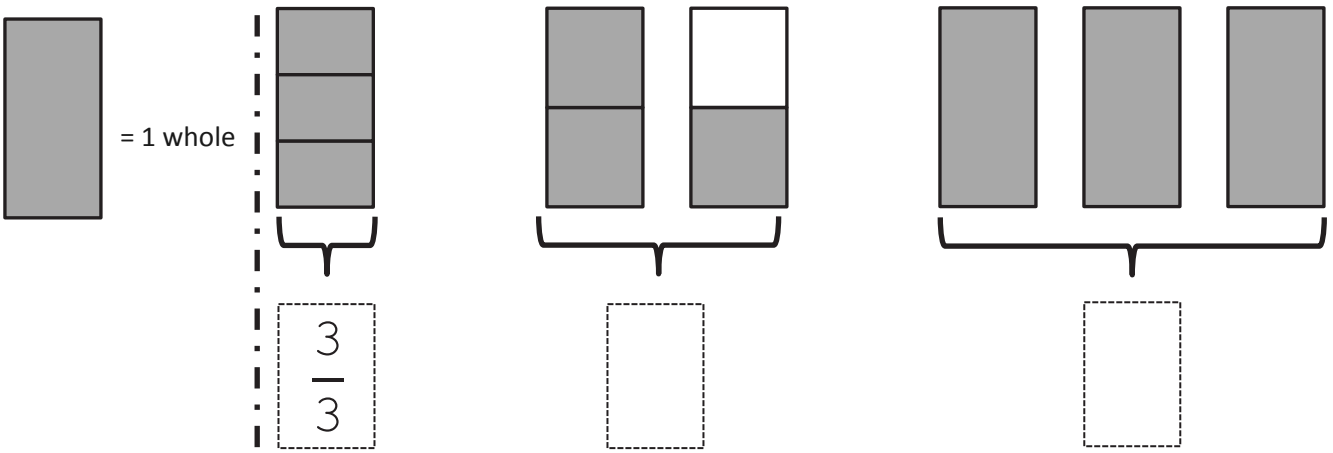
B Improvement _____ # Correct _____

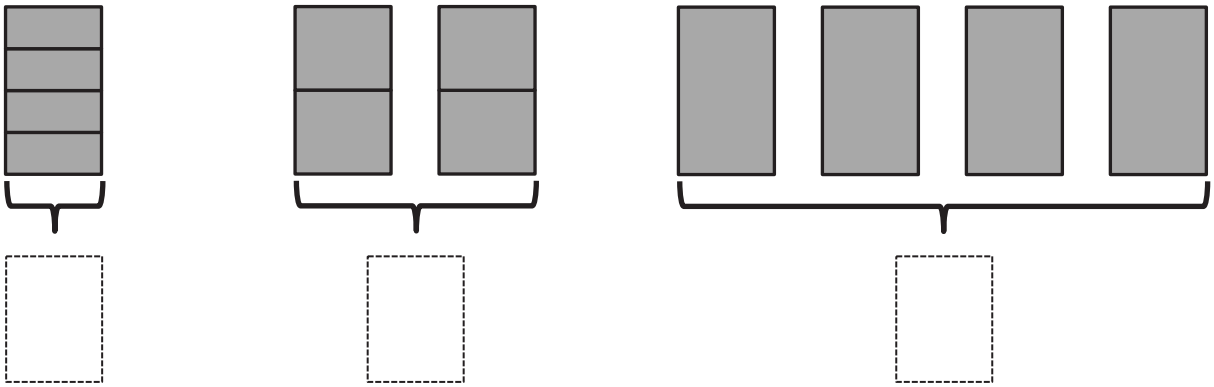
Subtract.

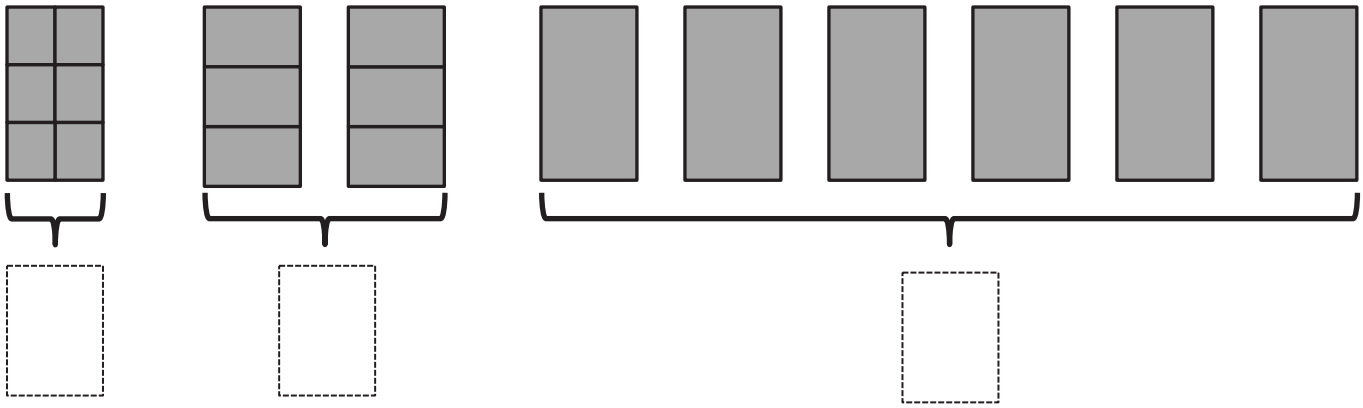
1	6 - 6 =		23	23 - 6 =	
2	16 - 6 =		24	33 - 6 =	
3	26 - 6 =		25	53 - 6 =	
4	7 - 6 =		26	73 - 6 =	
5	17 - 6 =		27	14 - 6 =	
6	67 - 6 =		28	24 - 6 =	
7	8 - 6 =		29	34 - 6 =	
8	18 - 6 =		30	64 - 6 =	
9	78 - 6 =		31	44 - 6 =	
10	9 - 6 =		32	15 - 6 =	
11	19 - 6 =		33	25 - 6 =	
12	89 - 6 =		34	35 - 6 =	
13	10 - 6 =		35	75 - 6 =	
14	20 - 6 =		36	55 - 6 =	
15	90 - 6 =		37	70 - 6 =	
16	11 - 6 =		38	63 - 6 =	
17	21 - 6 =		39	52 - 6 =	
18	41 - 6 =		40	81 - 6 =	
19	12 - 6 =		41	64 - 6 =	
20	22 - 6 =		42	85 - 6 =	
21	42 - 6 =		43	91 - 6 =	
22	13 - 6 =		44	52 - 6 =	

Name _____ Date _____

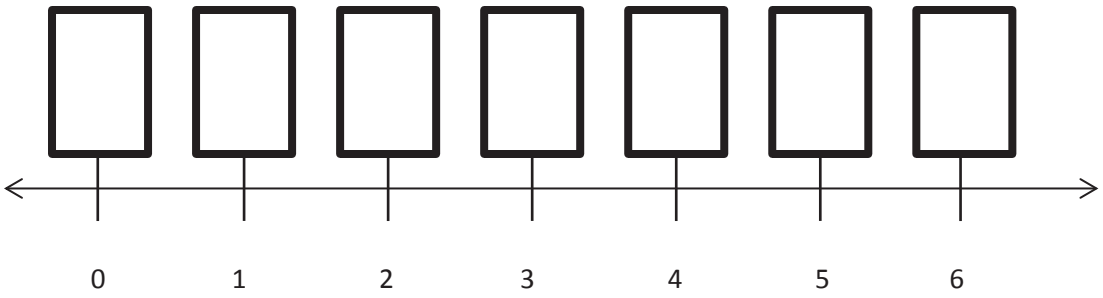
1. Label the following models as a fraction inside the dotted box. The first one has been done for you.

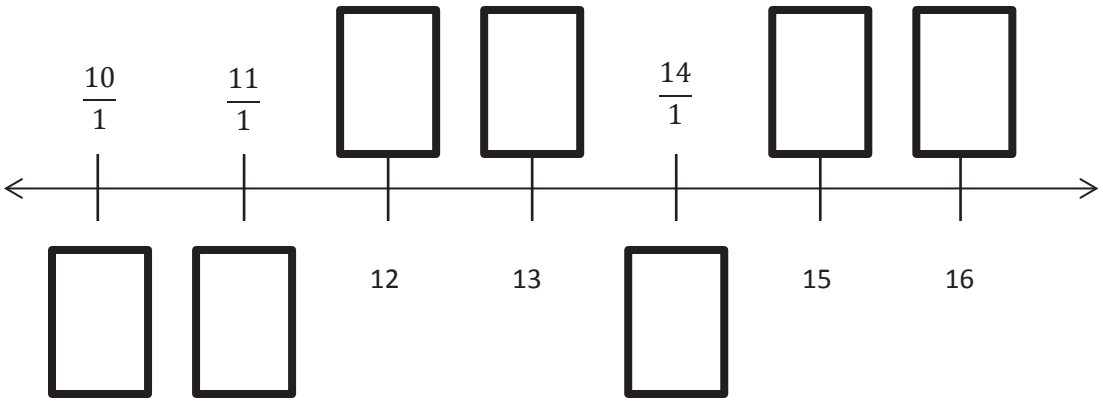






2. Fill in the missing whole numbers in the boxes below the number line. Rename the whole numbers as fractions in the boxes above the number line.



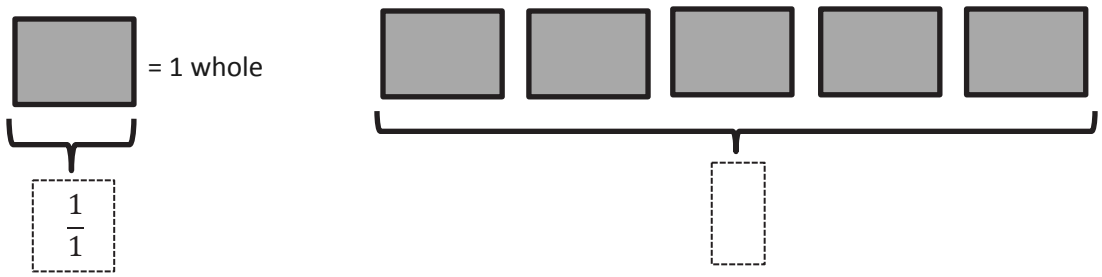


3. Explain the difference between these two fractions with words and pictures.

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

Name _____ Date _____

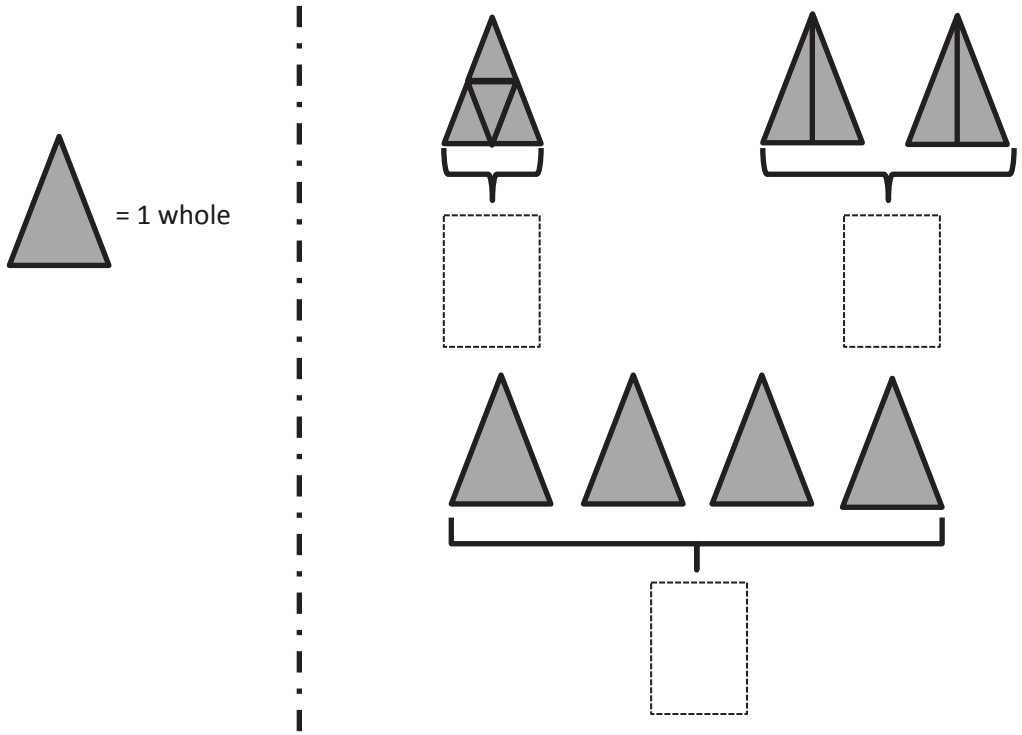
1. Label the model as a fraction inside the box.

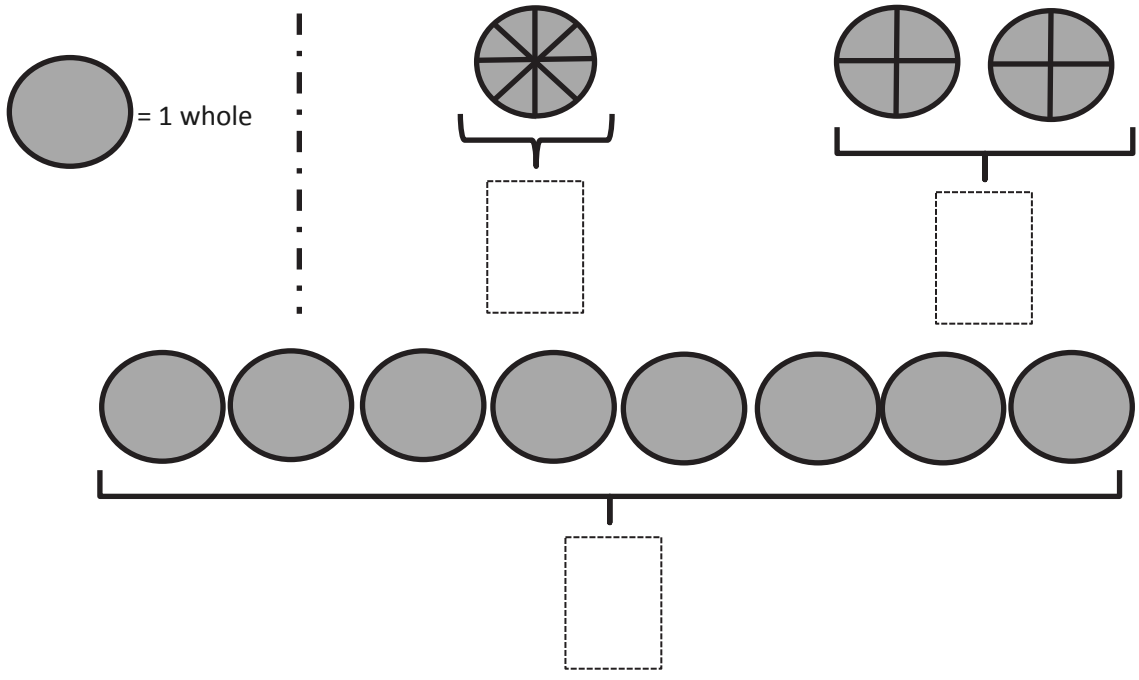


2. Partition the wholes into thirds. Rename the fraction for 3 wholes. Use the number line and words to explain your answer.

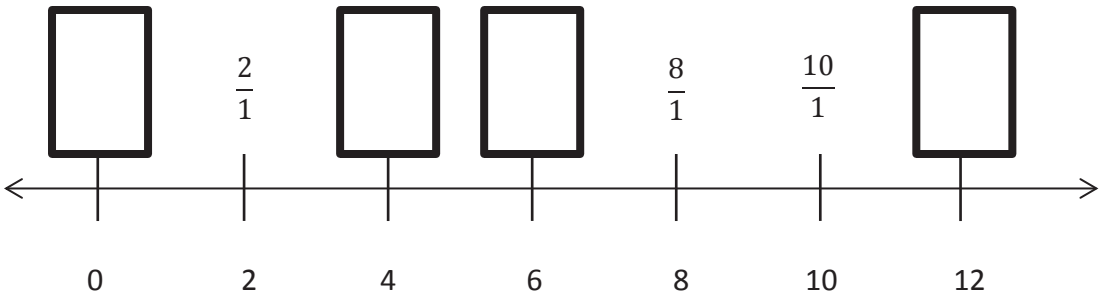
Name _____ Date _____

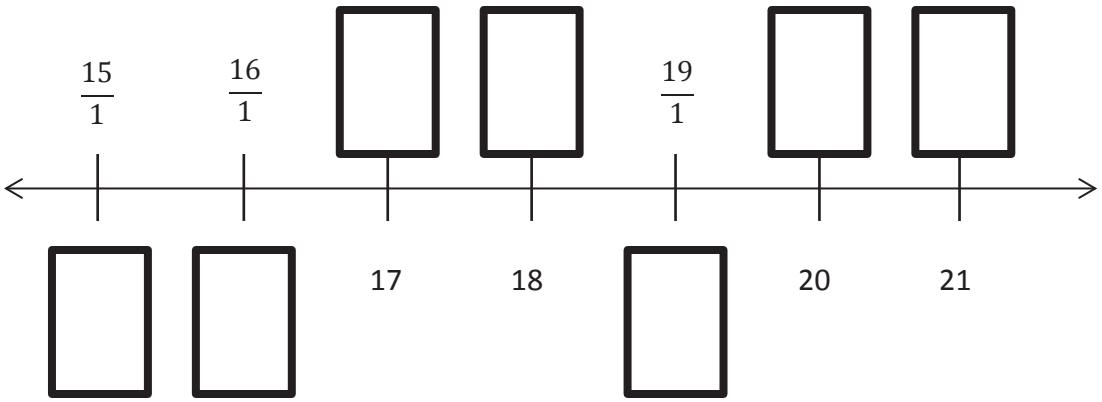
1. Label the following models as fractions inside the boxes.





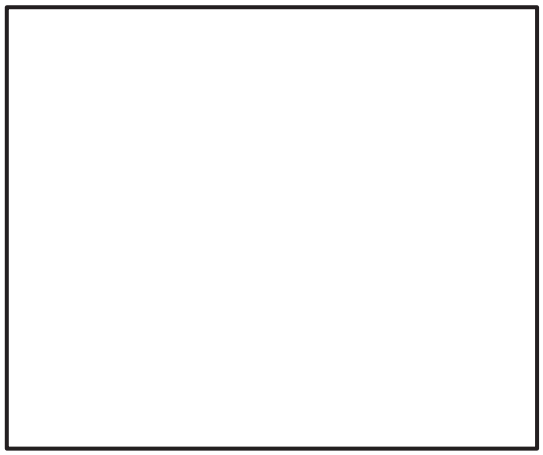
2. Fill in the missing whole numbers in the boxes below the number line. Rename the wholes as fractions in the boxes above the number line.

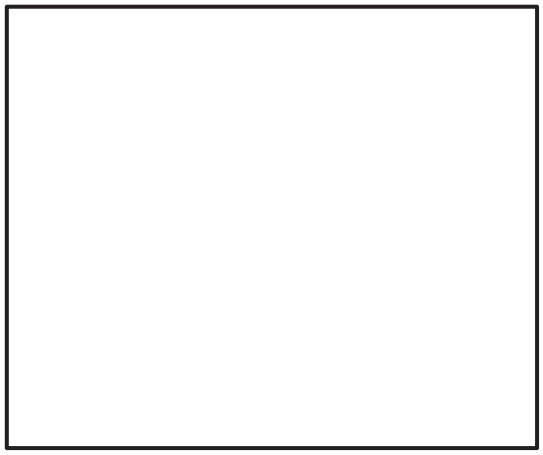


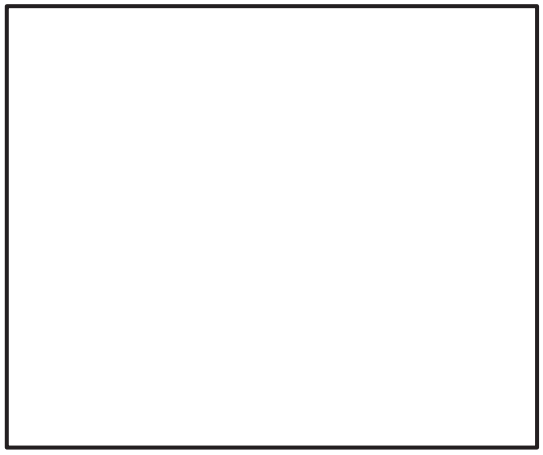


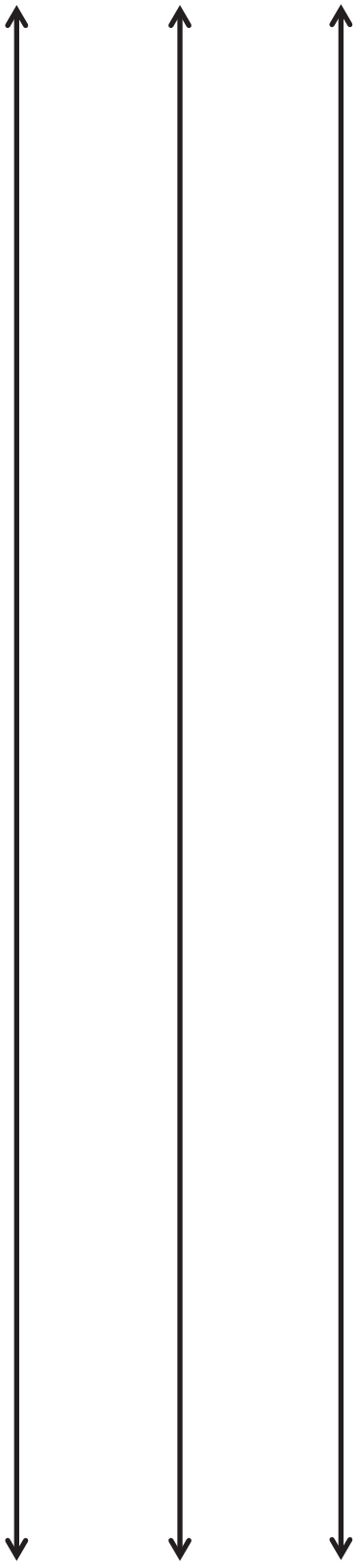
3. Explain the difference between these fractions with words and pictures.

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

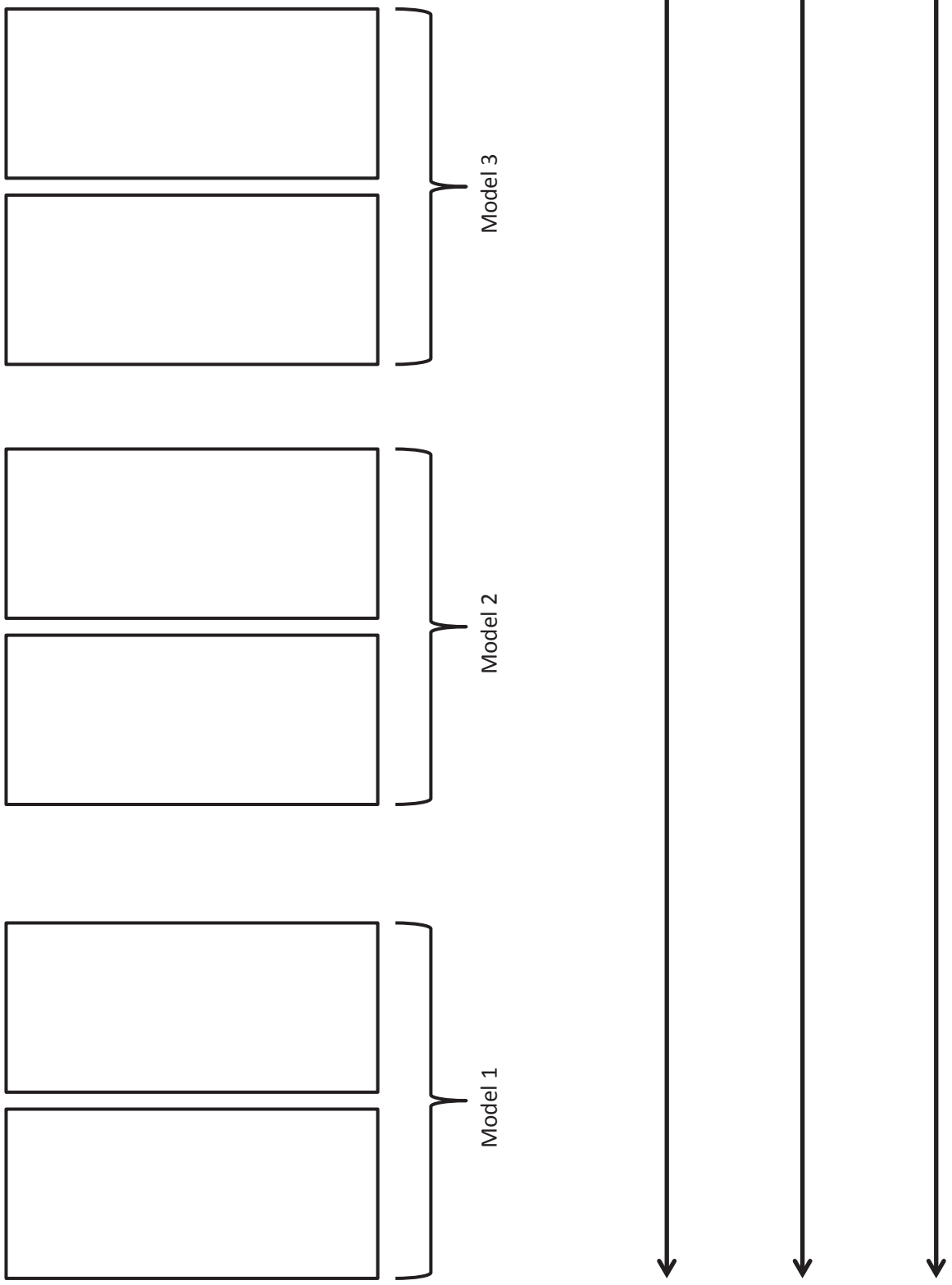








3 wholes



6 wholes

A # Correct _____

Add.

1	0 + 8 =		23	65 + 8 =	
2	1 + 8 =		24	6 + 8 =	
3	2 + 8 =		25	16 + 8 =	
4	8 + 2 =		26	26 + 8 =	
5	1 + 8 =		27	36 + 8 =	
6	0 + 8 =		28	86 + 8 =	
7	3 + 8 =		29	46 + 8 =	
8	13 + 8 =		30	7 + 8 =	
9	23 + 8 =		31	17 + 8 =	
10	33 + 8 =		32	27 + 8 =	
11	43 + 8 =		33	37 + 8 =	
12	83 + 8 =		34	77 + 8 =	
13	4 + 8 =		35	8 + 8 =	
14	14 + 8 =		36	18 + 8 =	
15	24 + 8 =		37	28 + 8 =	
16	34 + 8 =		38	38 + 8 =	
17	44 + 8 =		39	68 + 8 =	
18	74 + 8 =		40	9 + 8 =	
19	5 + 8 =		41	19 + 8 =	
20	15 + 8 =		42	29 + 8 =	
21	25 + 8 =		43	39 + 8 =	
22	35 + 8 =		44	89 + 8 =	

B Improvement _____ # Correct _____

Add.

1	8 + 0 =		23	55 + 8 =	
2	8 + 1 =		24	6 + 8 =	
3	8 + 2 =		25	16 + 8 =	
4	2 + 8 =		26	26 + 8 =	
5	1 + 8 =		27	36 + 8 =	
6	0 + 8 =		28	66 + 8 =	
7	3 + 8 =		29	56 + 8 =	
8	13 + 8 =		30	7 + 8 =	
9	23 + 8 =		31	17 + 8 =	
10	33 + 8 =		32	27 + 8 =	
11	43 + 8 =		33	37 + 8 =	
12	73 + 8 =		34	67 + 8 =	
13	4 + 8 =		35	8 + 8 =	
14	14 + 8 =		36	18 + 8 =	
15	24 + 8 =		37	28 + 8 =	
16	34 + 8 =		38	38 + 8 =	
17	44 + 8 =		39	78 + 8 =	
18	84 + 8 =		40	9 + 8 =	
19	5 + 8 =		41	19 + 8 =	
20	15 + 8 =		42	29 + 8 =	
21	25 + 8 =		43	39 + 8 =	
22	35 + 8 =		44	89 + 8 =	

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.

Halves

0 = _____ halves

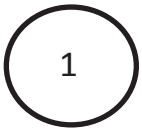
$0 = \frac{\square}{2}$

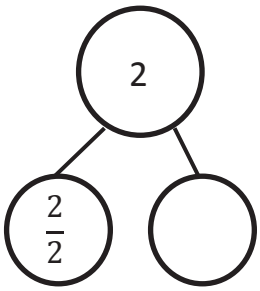
1 = _____ halves

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

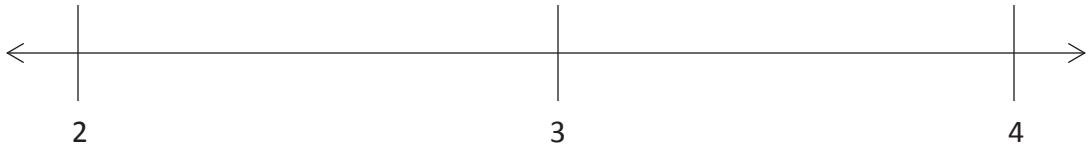
2 = _____ halves

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





Thirds



2 = _____ thirds

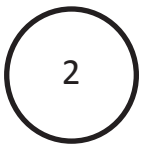
$2 = \frac{\square}{3}$

3 = _____ thirds

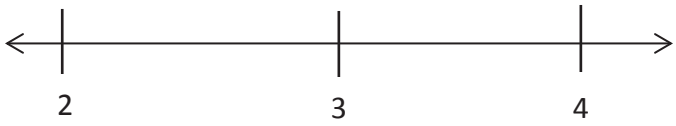
$3 = \frac{\square}{3}$

4 = _____ thirds

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



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.
   a. 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?

   b. How many days will 3 meters of wire last?

4. Cindy feeds her dog $\frac{1}{3}$ pound of food each day.
   a. Draw a number line to represent 1 pound of food. Partition the number line to represent how much food she uses each day.

   b. Draw another number line to represent 4 pounds of food. After 3 days, how many pounds of food has she given her dog?

   c. After 6 days, how many pounds of food has she given her dog?

Name _____ Date _____

Irene has 2 yards of fabric.

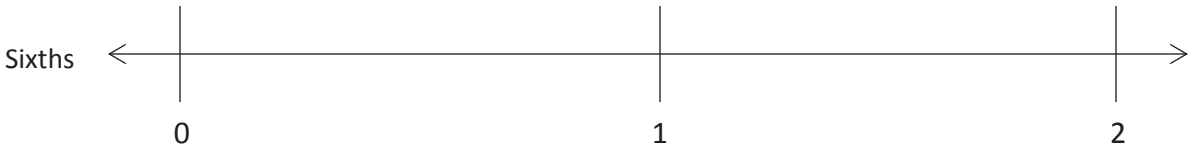
a. Draw a number line to represent the total length of Irene's fabric.

b. Irene cuts her fabric into pieces of $\frac{1}{5}$ yard in length. Partition the number line to show her cuts.

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

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 = _____ sixths

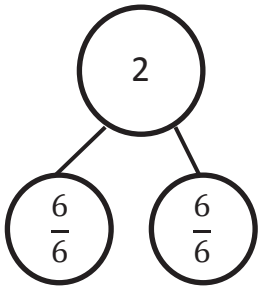
$0 = \frac{\square}{6}$

1 = _____ sixths

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

2 = _____ sixths

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



2 = _____ fifths

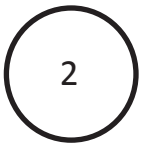
$2 = \frac{\square}{5}$

3 = _____ fifths

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

4 = _____ fifths

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



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?

A # Correct _____

Subtract.

1	17 - 7 =		23	24 - 7 =	
2	7 - 7 =		24	34 - 7 =	
3	27 - 7 =		25	64 - 7 =	
4	8 - 7 =		26	84 - 7 =	
5	18 - 7 =		27	15 - 7 =	
6	38 - 7 =		28	25 - 7 =	
7	9 - 7 =		29	35 - 7 =	
8	19 - 7 =		30	75 - 7 =	
9	49 - 7 =		31	55 - 7 =	
10	10 - 7 =		32	16 - 7 =	
11	20 - 7 =		33	26 - 7 =	
12	60 - 7 =		34	36 - 7 =	
13	11 - 7 =		35	86 - 7 =	
14	21 - 7 =		36	66 - 7 =	
15	71 - 7 =		37	90 - 7 =	
16	12 - 7 =		38	53 - 7 =	
17	22 - 7 =		39	42 - 7 =	
18	82 - 7 =		40	71 - 7 =	
19	13 - 7 =		41	74 - 7 =	
20	23 - 7 =		42	56 - 7 =	
21	83 - 7 =		43	95 - 7 =	
22	14 - 7 =		44	92 - 7 =	

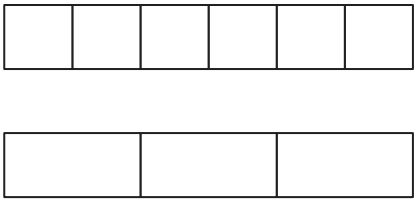
B Improvement _____ # Correct _____

Subtract.

1	7 - 7 =		23	24 - 7 =	
2	17 - 7 =		24	34 - 7 =	
3	27 - 7 =		25	54 - 7 =	
4	8 - 7 =		26	74 - 7 =	
5	18 - 7 =		27	15 - 7 =	
6	68 - 7 =		28	25 - 7 =	
7	9 - 7 =		29	35 - 7 =	
8	19 - 7 =		30	65 - 7 =	
9	79 - 7 =		31	45 - 7 =	
10	10 - 7 =		32	16 - 7 =	
11	20 - 7 =		33	26 - 7 =	
12	90 - 7 =		34	36 - 7 =	
13	11 - 7 =		35	76 - 7 =	
14	21 - 7 =		36	56 - 7 =	
15	91 - 7 =		37	70 - 7 =	
16	12 - 7 =		38	63 - 7 =	
17	22 - 7 =		39	52 - 7 =	
18	42 - 7 =		40	81 - 7 =	
19	13 - 7 =		41	74 - 7 =	
20	23 - 7 =		42	66 - 7 =	
21	43 - 7 =		43	85 - 7 =	
22	14 - 7 =		44	52 - 7 =	

Name _____ Date _____

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



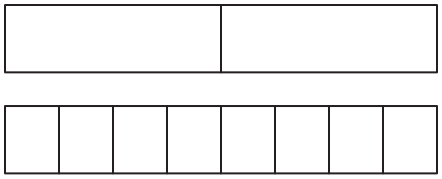
4 sixths is equal to _____ thirds.

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

The whole stays the same.

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

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



1 half is equal to _____ eighths.

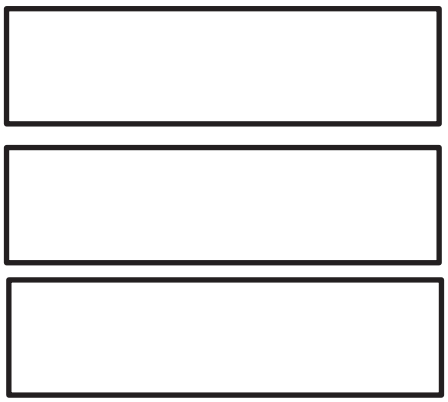
$$\frac{1}{2} = \frac{\square}{8}$$

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 1 eighth to equal 3 copies of 1 fourth? Draw a model to support your answer.

4. When the whole is the same, how many sixths does it take to equal 1 third? 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 _____

1. Solve.

2 thirds is equal to _____ twelfths.

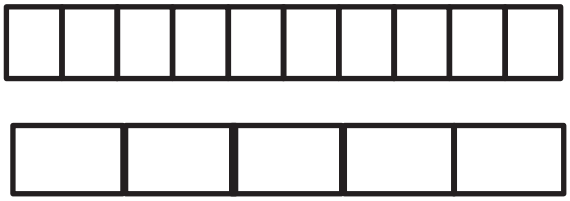
$$\frac{2}{3} = \frac{\quad}{12}$$

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

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

Name _____ Date _____

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

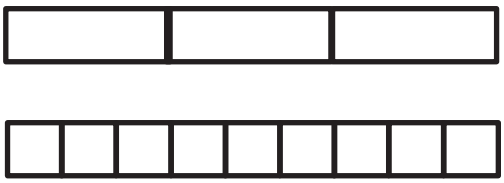


2 tenths is equal to _____ fifths.

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

The whole stays the same.

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



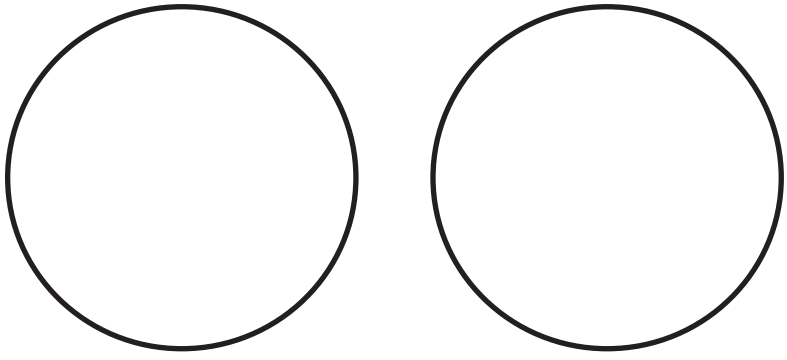
1 third is equal to _____ ninths.

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

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.

A # Correct _____

Subtract.

1	18 - 8 =		23	74 - 8 =	
2	8 - 8 =		24	15 - 8 =	
3	28 - 8 =		25	25 - 8 =	
4	9 - 8 =		26	35 - 8 =	
5	19 - 8 =		27	85 - 8 =	
6	39 - 8 =		28	65 - 8 =	
7	10 - 8 =		29	16 - 8 =	
8	20 - 8 =		30	26 - 8 =	
9	50 - 8 =		31	36 - 8 =	
10	11 - 8 =		32	96 - 8 =	
11	21 - 8 =		33	76 - 8 =	
12	71 - 8 =		34	17 - 8 =	
13	12 - 8 =		35	27 - 8 =	
14	22 - 8 =		36	37 - 8 =	
15	82 - 8 =		37	87 - 8 =	
16	13 - 8 =		38	67 - 8 =	
17	23 - 8 =		39	70 - 8 =	
18	83 - 8 =		40	62 - 8 =	
19	14 - 8 =		41	84 - 8 =	
20	24 - 8 =		42	66 - 8 =	
21	34 - 8 =		43	91 - 8 =	
22	54 - 8 =		44	75 - 8 =	

B Improvement _____ # Correct _____

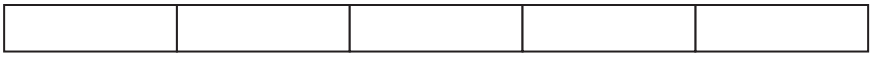
Subtract.

1	8 - 8 =		23	94 - 8 =	
2	18 - 8 =		24	15 - 8 =	
3	28 - 8 =		25	25 - 8 =	
4	9 - 8 =		26	35 - 8 =	
5	19 - 8 =		27	95 - 8 =	
6	69 - 8 =		28	75 - 8 =	
7	10 - 8 =		29	16 - 8 =	
8	20 - 8 =		30	26 - 8 =	
9	60 - 8 =		31	36 - 8 =	
10	11 - 8 =		32	66 - 8 =	
11	21 - 8 =		33	46 - 8 =	
12	81 - 8 =		34	17 - 8 =	
13	12 - 8 =		35	27 - 8 =	
14	22 - 8 =		36	37 - 8 =	
15	52 - 8 =		37	97 - 8 =	
16	13 - 8 =		38	77 - 8 =	
17	23 - 8 =		39	80 - 8 =	
18	93 - 8 =		40	71 - 8 =	
19	14 - 8 =		41	53 - 8 =	
20	24 - 8 =		42	45 - 8 =	
21	34 - 8 =		43	87 - 8 =	
22	74 - 8 =		44	54 - 8 =	

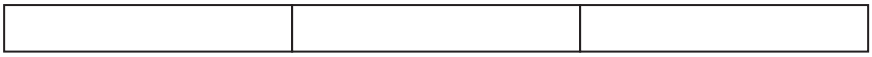
Name _____ Date _____

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

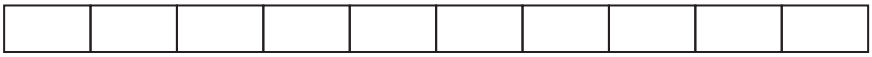
1. 2 fifths



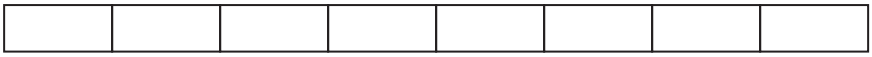
2 thirds



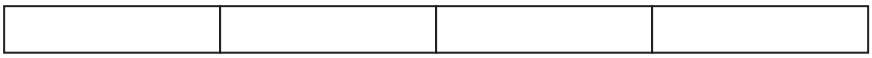
2. 2 tenths



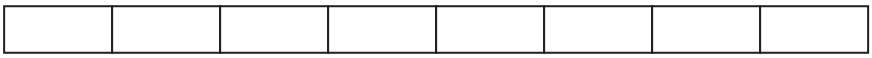
2 eighths



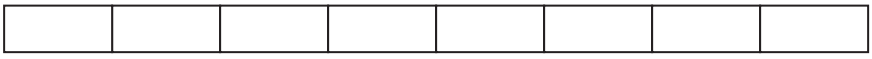
3. 3 fourths



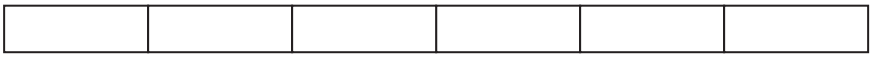
3 eighths



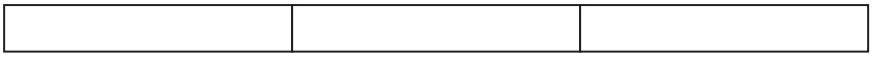
4. 4 eighths



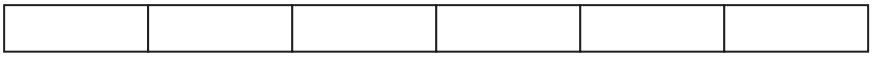
4 sixths



5. 3 thirds



3 sixths



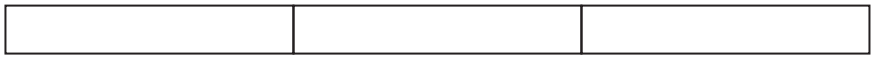
6. After softball, Leslie and Kelly each buy a half-liter bottle of water. Leslie drinks 3 fourths of her water. Kelly drinks 3 fifths of her water. Who drinks the least amount of water? Draw a picture to support your answer.

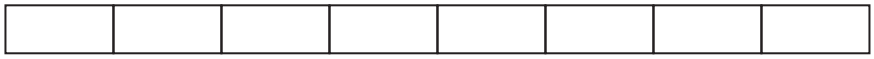
7. Becky and Malory get matching piggy banks. Becky fills $\frac{2}{3}$ of her piggy bank with pennies. Malory fills $\frac{2}{4}$ of her piggy bank with pennies. Whose piggy bank has more pennies? Draw a picture to support your answer.

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 _____

1. Shade the models to compare the fractions.

2 thirds 

2 eighths 

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

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

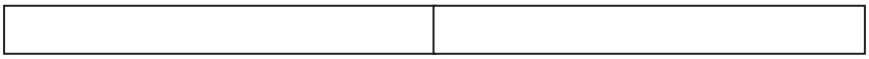
3 sevenths

3 fourths

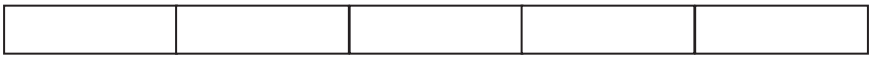
Name _____ Date _____

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

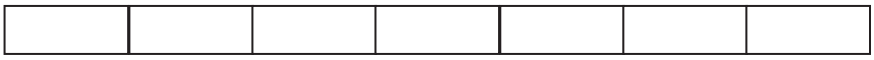
1. 1 half



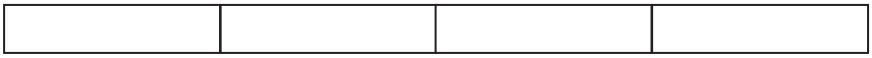
1 fifth



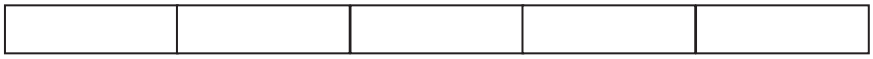
2. 2 sevenths



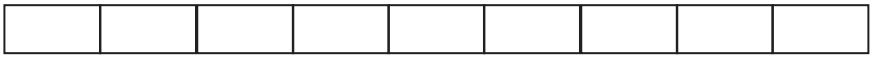
2 fourths



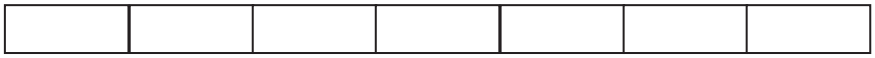
3. 4 fifths



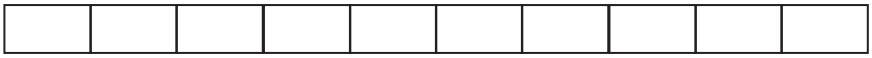
4 ninths



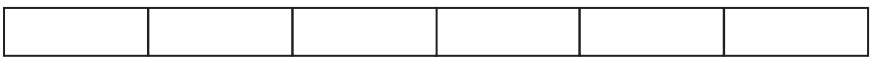
4. 5 sevenths



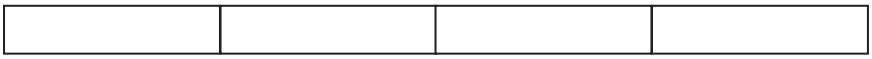
5 tenths



5. 4 sixths



4 fourths



6. Saleem and Edwin use inch rulers to measure the lengths of their caterpillars. Saleem's caterpillar measures 3 fourths of an inch. Edwin's caterpillar measures 3 eighths 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.

Multiply.

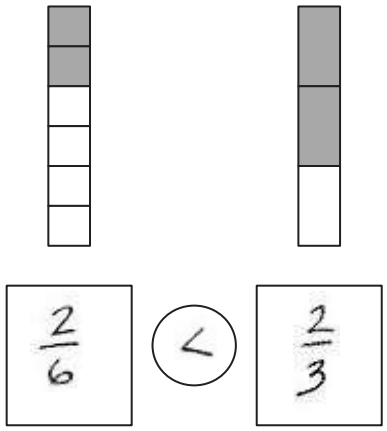
8 x 1 = _____	8 x 2 = _____	8 x 3 = _____	8 x 4 = _____
8 x 5 = _____	8 x 6 = _____	8 x 7 = _____	8 x 8 = _____
8 x 9 = _____	8 x 10 = _____	8 x 5 = _____	8 x 6 = _____
8 x 5 = _____	8 x 7 = _____	8 x 5 = _____	8 x 8 = _____
8 x 5 = _____	8 x 9 = _____	8 x 5 = _____	8 x 10 = _____
8 x 6 = _____	8 x 5 = _____	8 x 6 = _____	8 x 7 = _____
8 x 6 = _____	8 x 8 = _____	8 x 6 = _____	8 x 9 = _____
8 x 6 = _____	8 x 7 = _____	8 x 6 = _____	8 x 7 = _____
8 x 8 = _____	8 x 7 = _____	8 x 9 = _____	8 x 7 = _____
8 x 8 = _____	8 x 6 = _____	8 x 8 = _____	8 x 7 = _____
8 x 8 = _____	8 x 9 = _____	8 x 9 = _____	8 x 6 = _____
8 x 9 = _____	8 x 7 = _____	8 x 9 = _____	8 x 8 = _____
8 x 9 = _____	8 x 8 = _____	8 x 6 = _____	8 x 9 = _____
8 x 7 = _____	8 x 9 = _____	8 x 6 = _____	8 x 8 = _____
8 x 9 = _____	8 x 7 = _____	8 x 6 = _____	8 x 8 = _____

multiply by 8 (1–5)

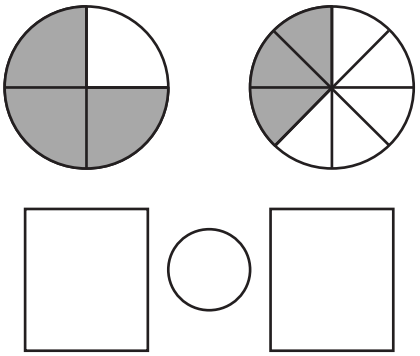
Name _____ Date _____

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

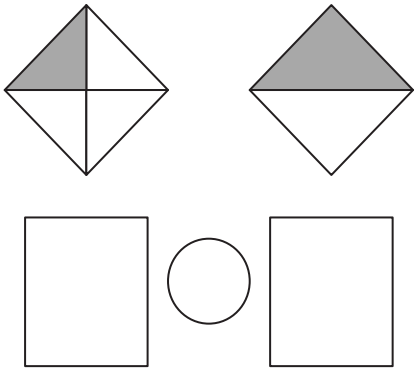
1.



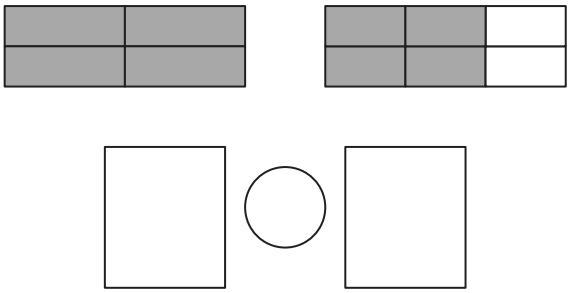
2.



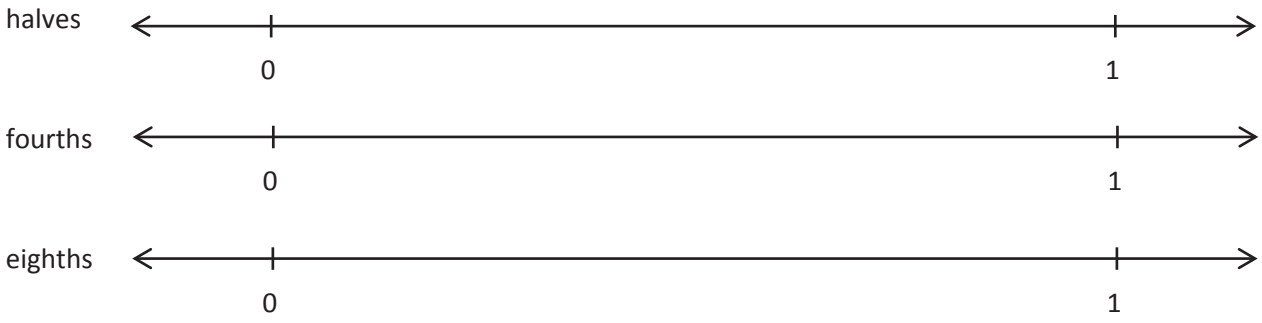
3.



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. $\frac{4}{4}$ ◯ $\frac{4}{8}$

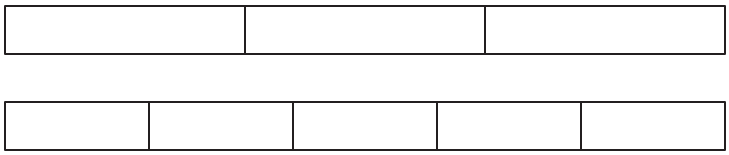
c. $\frac{2}{4}$ ◯ $\frac{2}{8}$

Draw your own model to compare the following fractions.

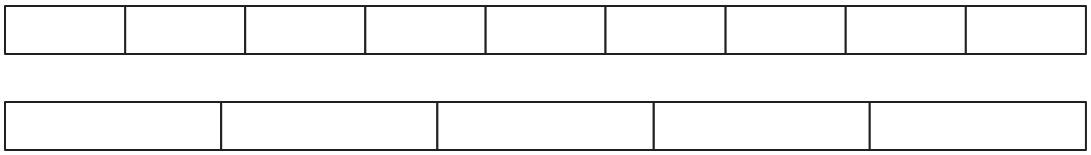
6. $\frac{3}{10}$ ◯ $\frac{3}{5}$

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.



Name _____ Date _____

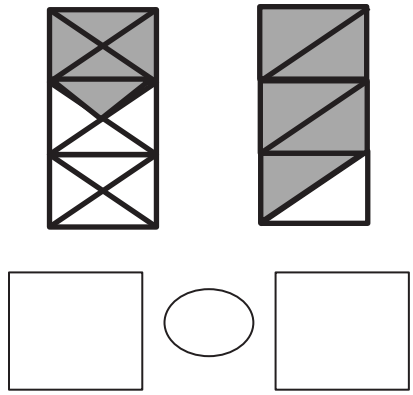
1. Complete the number sentence by writing >, <, or =.

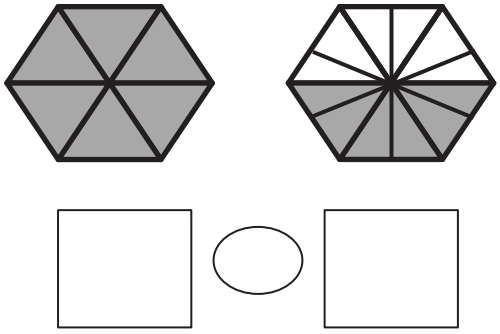
$\frac{3}{5}$ _____ $\frac{3}{9}$

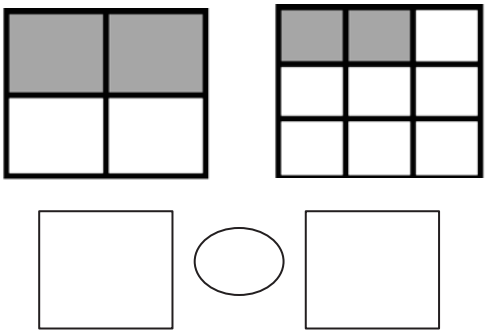
2. Draw 2 number lines with endpoints 0 and 1 to show each fraction in Problem 1. Use the number lines to explain how you know your comparison in Problem 1 is correct.

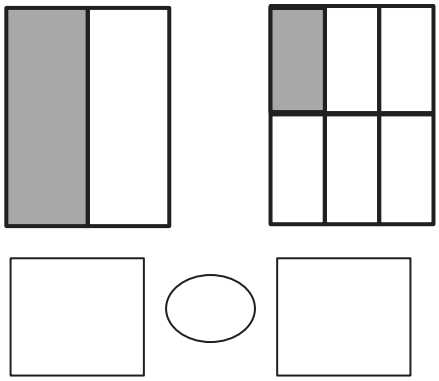
Name _____ Date _____

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

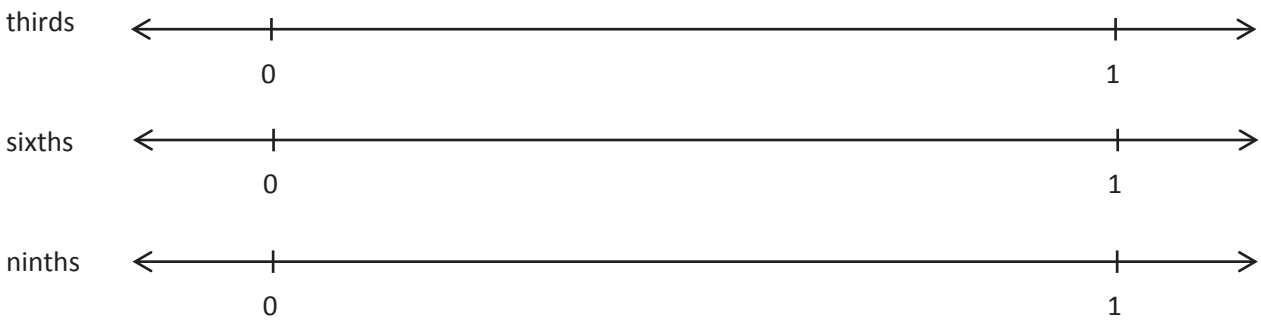
1. 

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. $\frac{2}{6}$ ◯ $\frac{2}{3}$

b. $\frac{5}{9}$ ◯ $\frac{5}{6}$

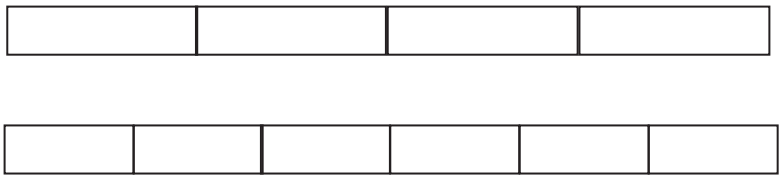
c. $\frac{3}{3}$ ◯ $\frac{3}{9}$

Draw your own models to compare the following fractions.

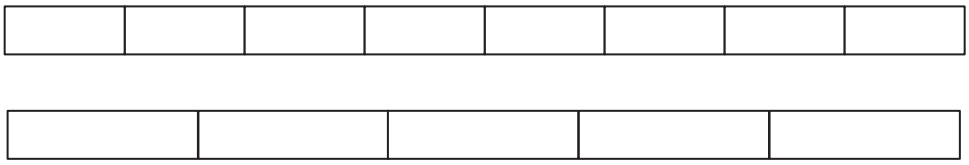
6. $\frac{7}{10}$ ◯ $\frac{7}{8}$

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 their 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.



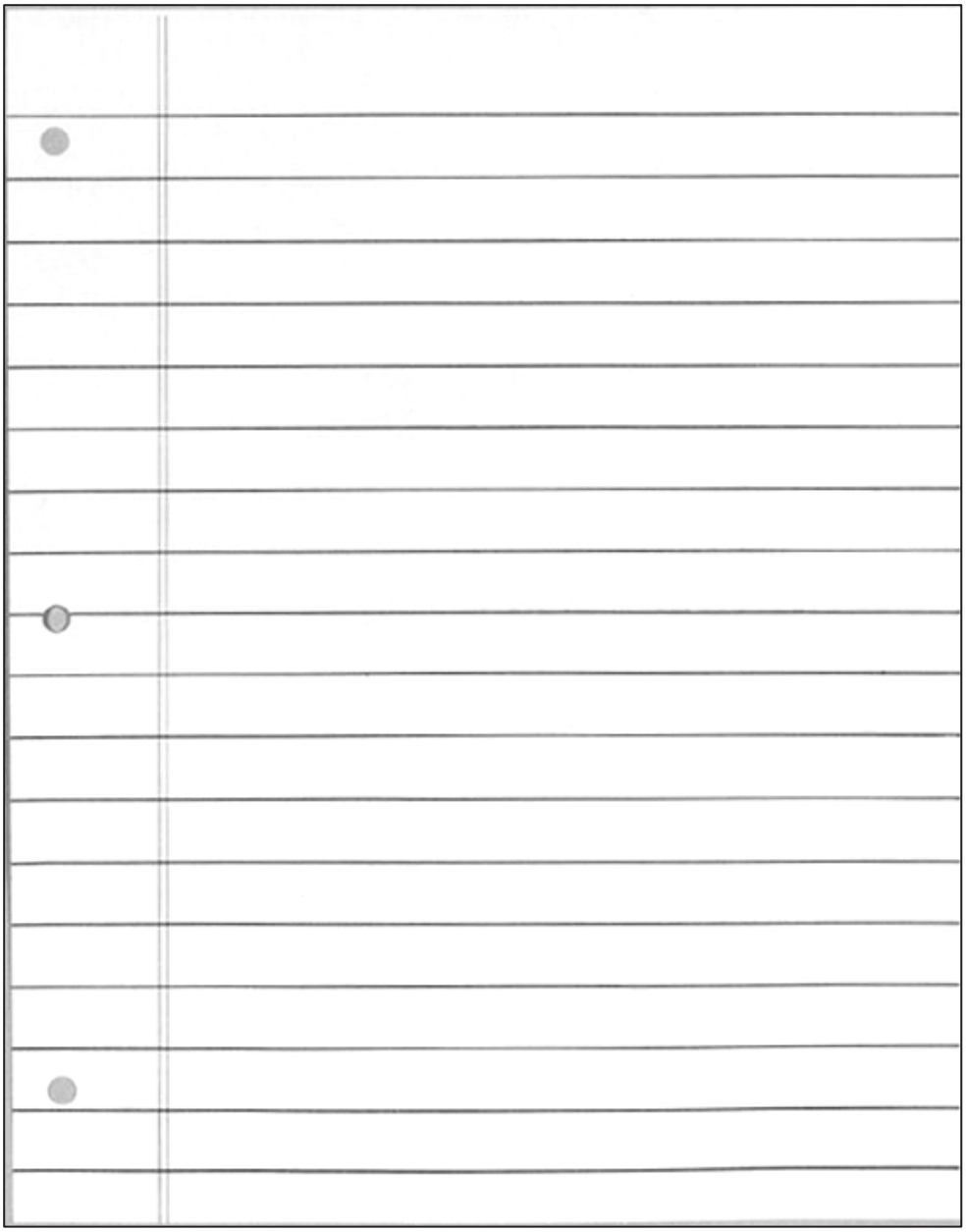
Multiply.

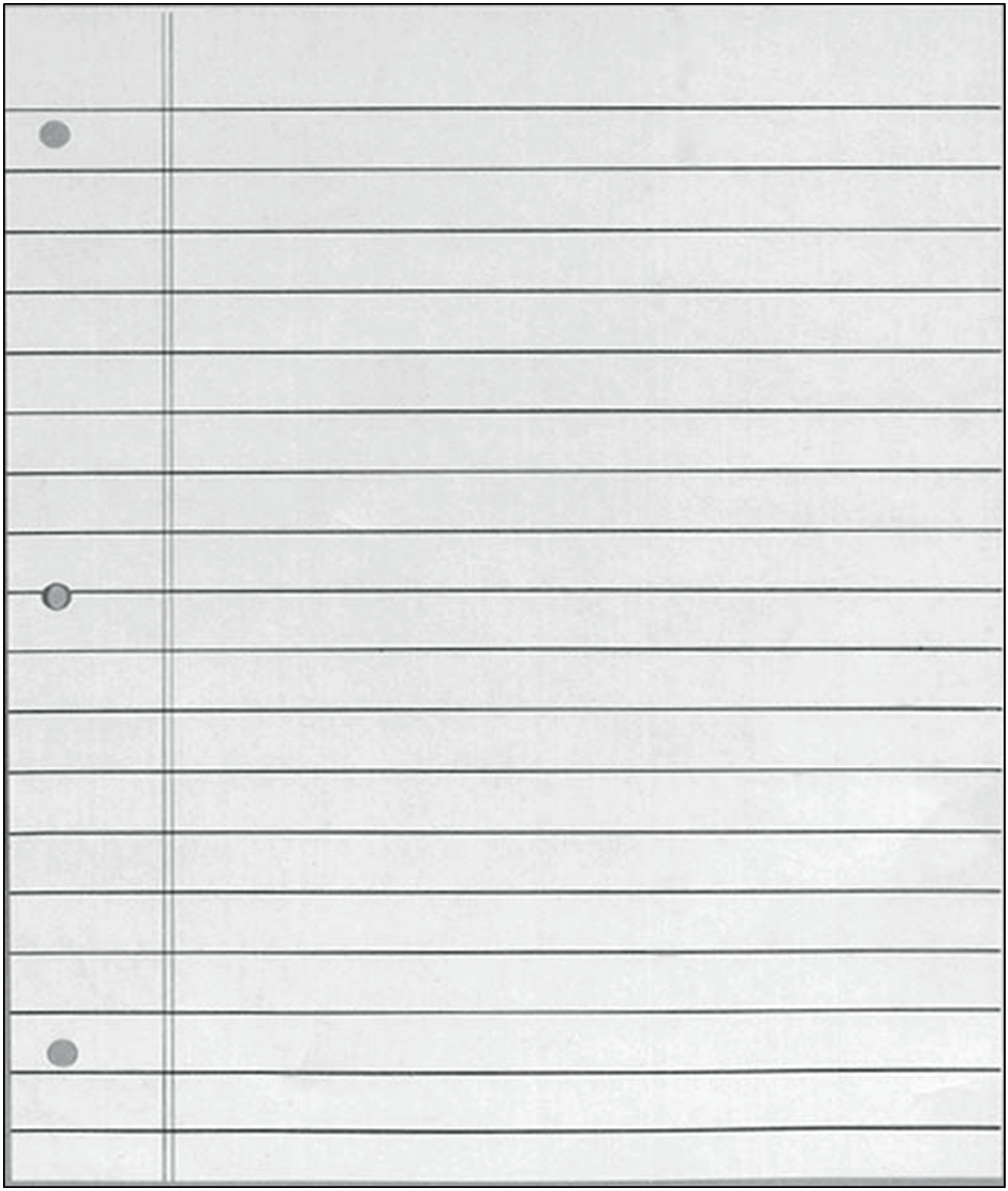
9 x 1 = _____	9 x 2 = _____	9 x 3 = _____	9 x 4 = _____
9 x 5 = _____	9 x 1 = _____	9 x 2 = _____	9 x 1 = _____
9 x 3 = _____	9 x 1 = _____	9 x 4 = _____	9 x 1 = _____
9 x 5 = _____	9 x 1 = _____	9 x 2 = _____	9 x 3 = _____
9 x 2 = _____	9 x 4 = _____	9 x 2 = _____	9 x 5 = _____
9 x 2 = _____	9 x 1 = _____	9 x 2 = _____	9 x 3 = _____
9 x 1 = _____	9 x 3 = _____	9 x 2 = _____	9 x 3 = _____
9 x 4 = _____	9 x 3 = _____	9 x 5 = _____	9 x 3 = _____
9 x 4 = _____	9 x 1 = _____	9 x 4 = _____	9 x 2 = _____
9 x 4 = _____	9 x 3 = _____	9 x 4 = _____	9 x 5 = _____
9 x 4 = _____	9 x 5 = _____	9 x 1 = _____	9 x 5 = _____
9 x 2 = _____	9 x 5 = _____	9 x 3 = _____	9 x 5 = _____
9 x 4 = _____	9 x 2 = _____	9 x 4 = _____	9 x 3 = _____
9 x 5 = _____	9 x 3 = _____	9 x 2 = _____	9 x 4 = _____
9 x 3 = _____	9 x 5 = _____	9 x 2 = _____	9 x 4 = _____

multiply by 9 (1–5)

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.





lined paper