


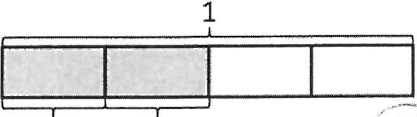
Name \_\_\_\_\_

Date \_\_\_\_\_

1. Draw a number bond and write the number sentence to match each tape diagram. The first one is done for you.

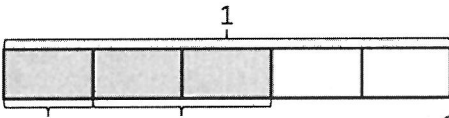
a. 

$$\frac{2}{3} = \frac{1}{3} + \frac{1}{3}$$

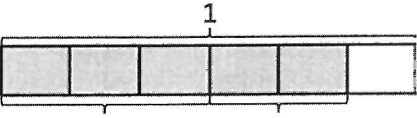
b. 

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

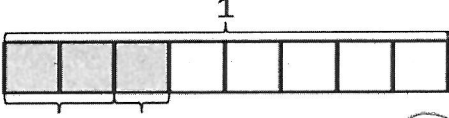
OR  $\frac{1}{2}$

c. 

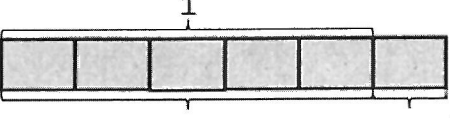
$$\frac{3}{5} = \frac{1}{5} + \frac{2}{5}$$

d. 

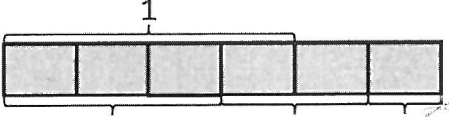
$$\frac{5}{6} = \frac{3}{6} + \frac{2}{6}$$

e. 

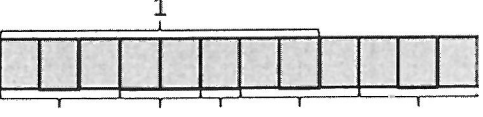
$$\frac{3}{8} = \frac{2}{8} + \frac{1}{8}$$

f. 

$$\frac{6}{5} = \frac{5}{5} + \frac{1}{5}$$

g. 

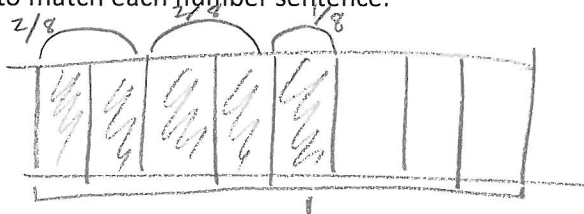
$$\frac{6}{4} = \frac{3}{4} + \frac{2}{4} + \frac{1}{4}$$

h. 

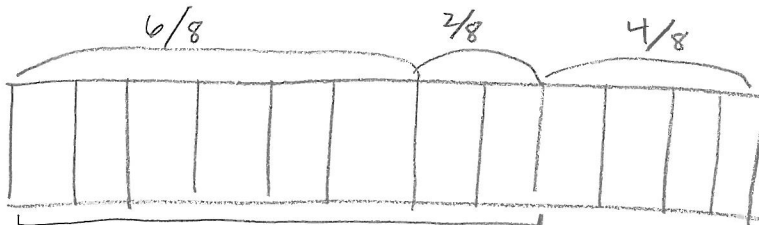
$$\frac{12}{8} = \frac{3}{8} + \frac{2}{8} + \frac{1}{8} + \frac{3}{8} + \frac{3}{8}$$

2. Draw and label tape diagrams to match each number sentence.

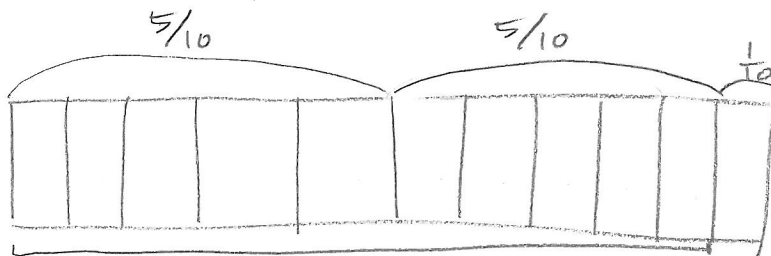
a.  $\frac{5}{8} = \frac{2}{8} + \frac{2}{8} + \frac{1}{8}$



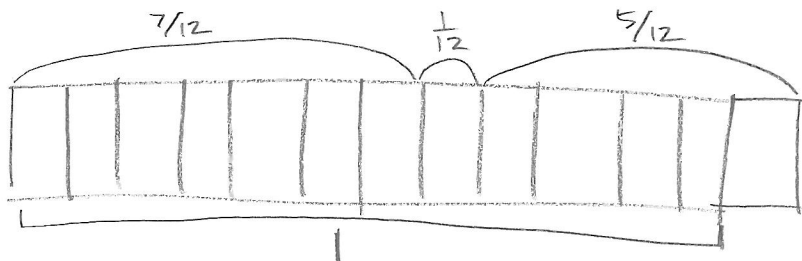
b.  $\frac{12}{8} = \frac{6}{8} + \frac{2}{8} + \frac{4}{8}$



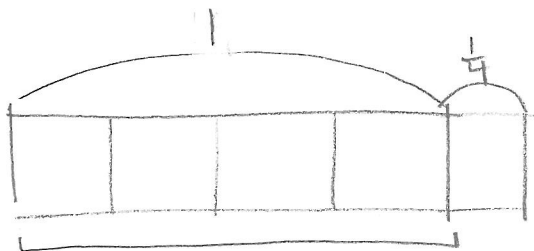
c.  $\frac{11}{10} = \frac{5}{10} + \frac{5}{10} + \frac{1}{10}$



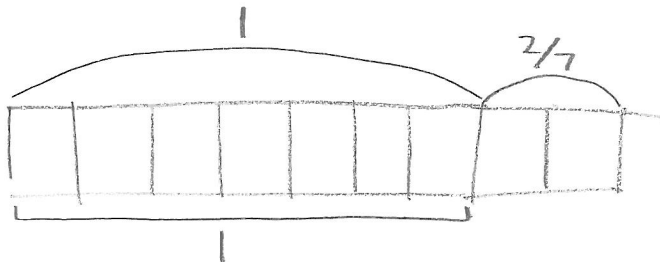
d.  $\frac{13}{12} = \frac{7}{12} + \frac{1}{12} + \frac{5}{12}$



e.  $1\frac{1}{4} = 1 + \frac{1}{4}$



f.  $1\frac{2}{7} = 1 + \frac{2}{7}$

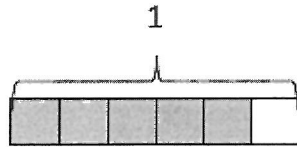


Name \_\_\_\_\_

Date \_\_\_\_\_

1. Step 1: Draw and shade a tape diagram of the given fraction.  
 Step 2: Record the decomposition as a sum of unit fractions.  
 Step 3: Record the decomposition of the fraction two more ways.  
 (The first one has been done for you.)

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

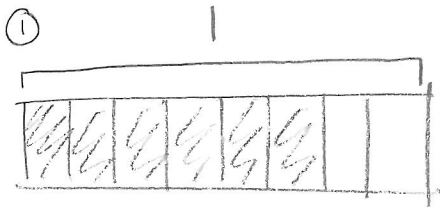


$$\frac{5}{6} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$$

$$\frac{5}{6} = \frac{2}{6} + \frac{2}{6} + \frac{1}{6}$$

$$\frac{5}{6} = \frac{1}{6} + \frac{4}{6}$$

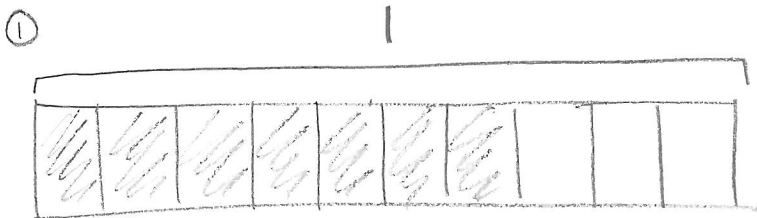
b.  $\frac{6}{8}$



$$\frac{6}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$$

③ 2 MORE WAYS

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

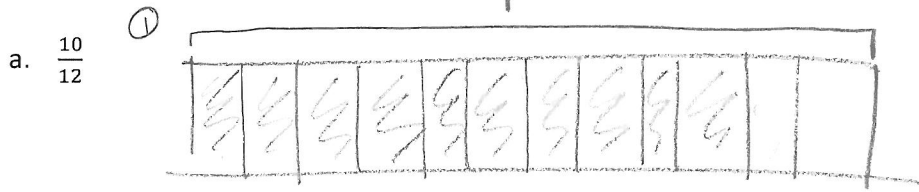


$$\frac{7}{10} = \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10}$$

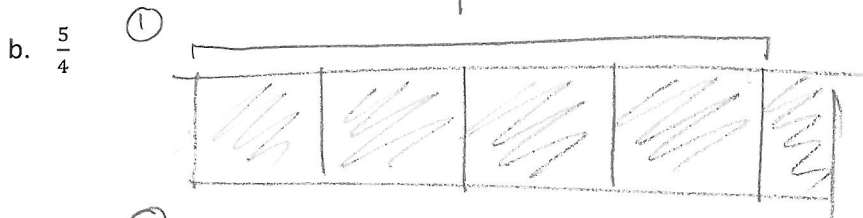
③ 2 MORE WAYS

2. Step 1: Draw and shade a tape diagram of the given fraction.

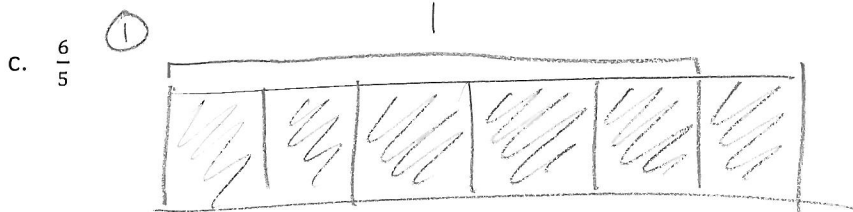
Step 2: Record the decomposition of the fraction in three different ways using number sentences.



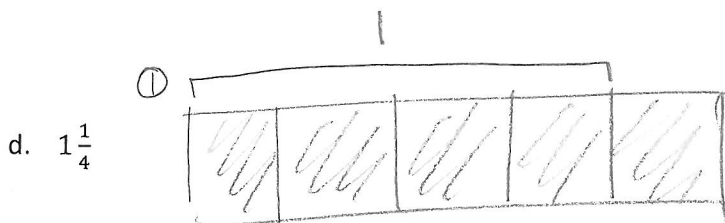
② 3 WAYS (ANSWERS VARY)



② 3 WAYS (ANSWERS VARY)



② 3 WAYS (ANSWERS VARY)

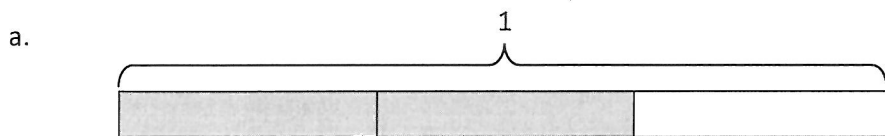


② 3 WAYS (ANSWERS VARY)

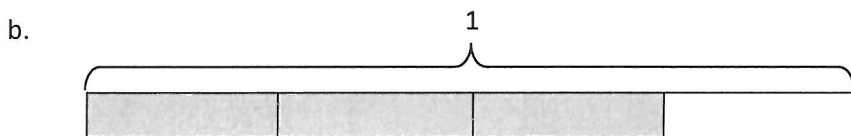
Name \_\_\_\_\_

Date \_\_\_\_\_

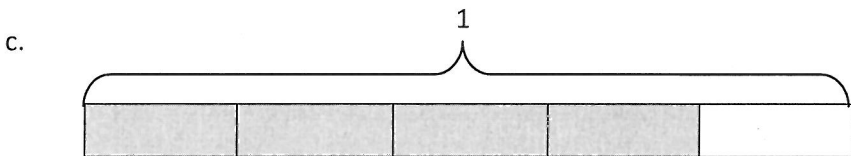
1. Decompose each fraction modeled by a tape diagram as a sum of unit fractions. Write the equivalent multiplication sentence. The first one has been done for you.



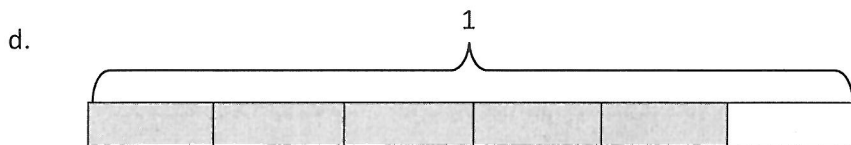
$$\frac{2}{3} = \frac{1}{3} + \frac{1}{3} \quad \frac{2}{3} = 2 \times \frac{1}{3}$$



$$\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4} \quad \frac{3}{4} = 3 \times \frac{1}{4}$$



$$\frac{4}{5} = \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} \quad \frac{4}{5} = 4 \times \frac{1}{5}$$



$$\frac{5}{6} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} \quad \frac{5}{6} = 5 \times \frac{1}{6}$$

2. Write the following fractions greater than 1 as the sum of two products.

a. *\* ANSWERS VARY*

$\frac{4}{3} = (2 \times \frac{1}{3}) + (2 \times \frac{1}{3})$  EXAMPLE

b. *\**

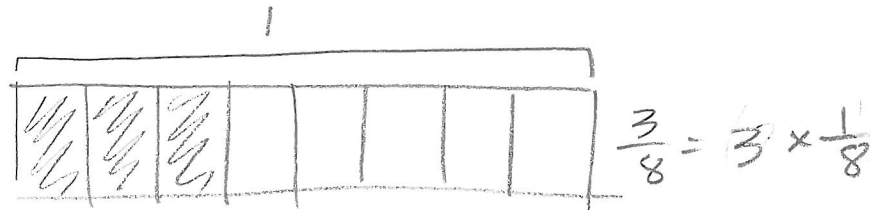
$\frac{8}{6} = (6 \times \frac{1}{6}) + (2 \times \frac{1}{6})$  EXAMPLE

3. Draw a tape diagram and record the given fraction's decomposition into unit fractions as a multiplication sentence.

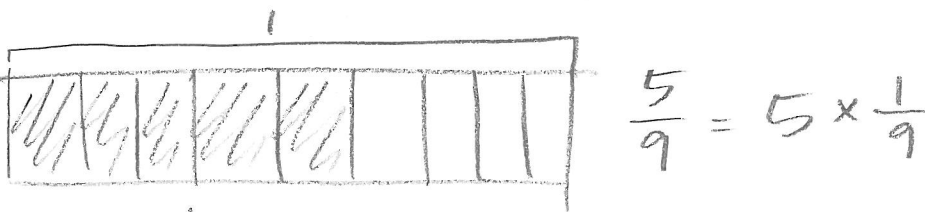
a.  $\frac{3}{5}$



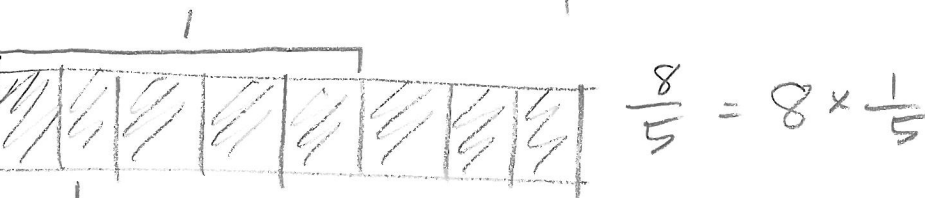
b.  $\frac{3}{8}$



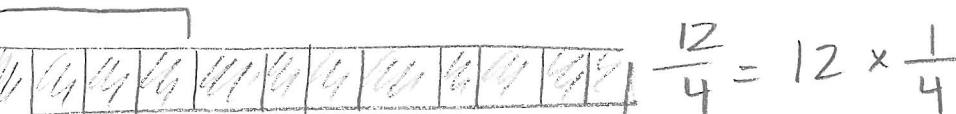
c.  $\frac{5}{9}$



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



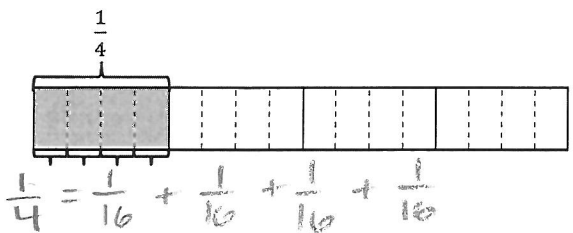
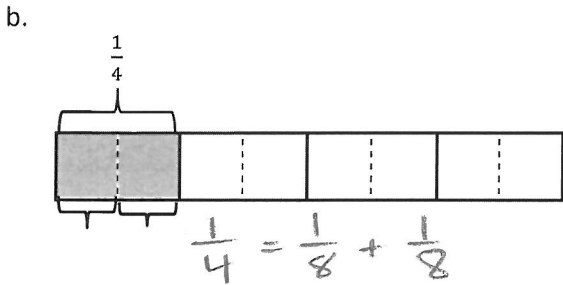
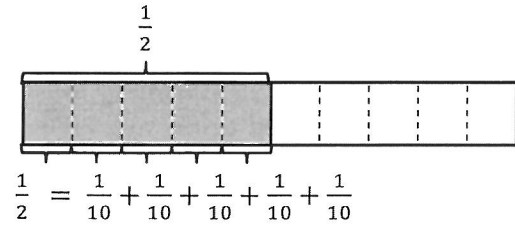
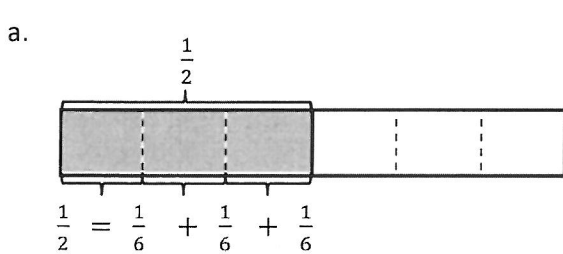
e.  $\frac{12}{4}$



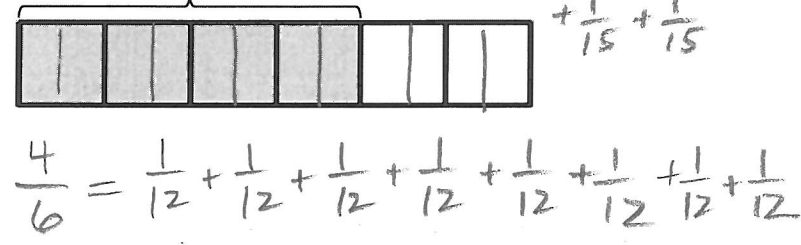
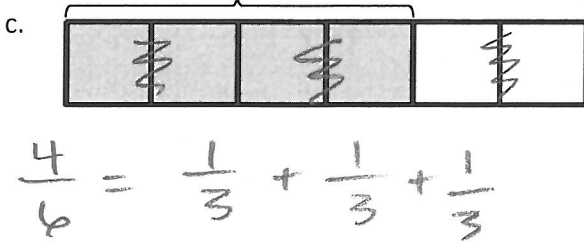
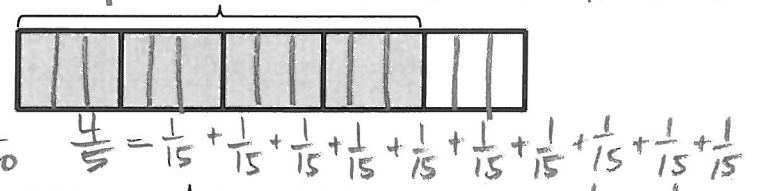
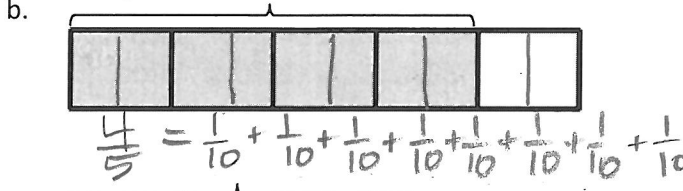
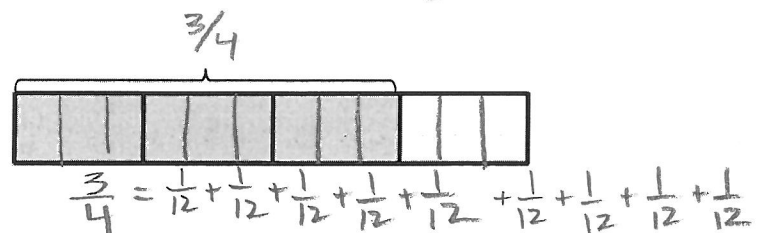
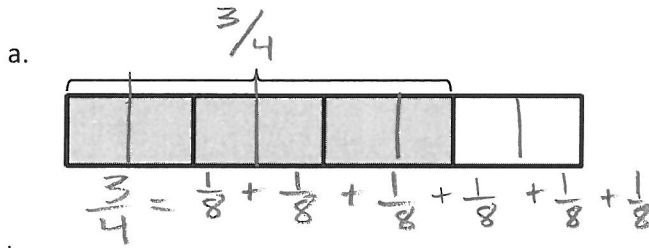
Name \_\_\_\_\_

Date \_\_\_\_\_

1. The total length of each tape diagram represents 1 whole. Decompose the shaded unit fractions as the sum of smaller unit fractions in at least two different ways. The first one has been done for you.

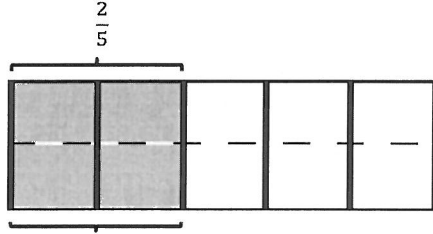


2. The total length of each tape diagram represents 1 whole. Decompose the shaded fractions as the sum of smaller unit fractions in at least two different ways. ANSWERS VARY... EXAMPLES GIVEN

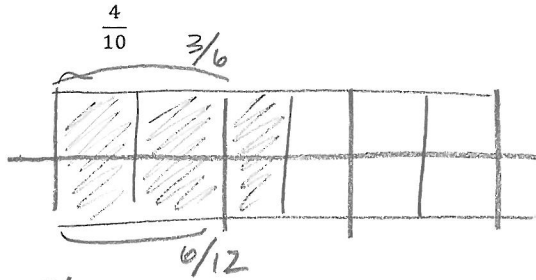


3. Draw tape diagrams to prove the following statements. The first one has been done for you.

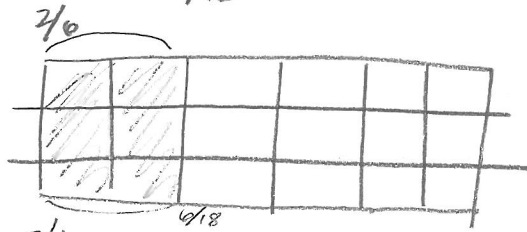
a.  $\frac{2}{5} = \frac{4}{10}$



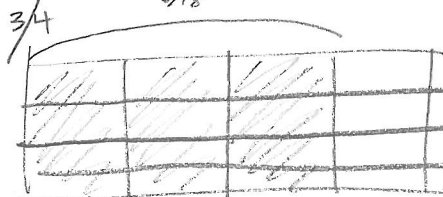
b.  $\frac{3}{6} = \frac{6}{12}$



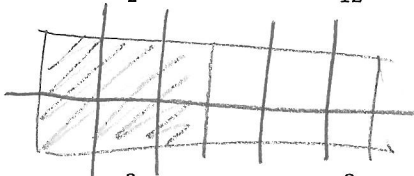
c.  $\frac{2}{6} = \frac{6}{18}$



d.  $\frac{3}{4} = \frac{12}{16}$

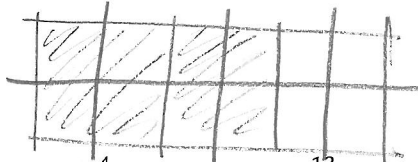


4. Show that  $\frac{1}{2}$  is equivalent to  $\frac{6}{12}$  using a tape diagram and a number sentence.



$$\frac{1}{2} = 6 \times \frac{1}{12} = \frac{6}{12}$$

5. Show that  $\frac{2}{3}$  is equivalent to  $\frac{8}{12}$  using a tape diagram and a number sentence.



$$\frac{2}{3} = \frac{1}{12} \times 8 = \frac{8}{12}$$

6. Show that  $\frac{4}{5}$  is equivalent to  $\frac{12}{15}$  using a tape diagram and a number sentence.



$$\frac{4}{5} = \frac{1}{15} \times 12 = \frac{12}{15}$$

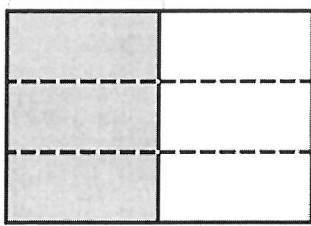


Name \_\_\_\_\_

Date \_\_\_\_\_

1. Draw horizontal lines to decompose each rectangle into the number of rows as indicated. Use the model to give the shaded area as both a sum of unit fractions and as a multiplication sentence.

- a. 3 rows

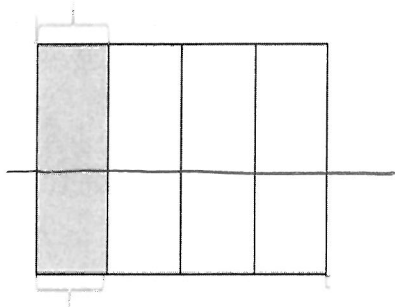


$$\frac{1}{2} = \frac{3}{6}$$

$$\frac{1}{2} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{3}{6}$$

$$\frac{1}{2} = 3 \times \frac{1}{6} = \frac{3}{6}$$

- b. 2 rows

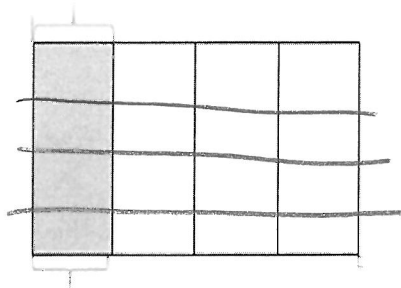


$$\frac{1}{4} = \frac{2}{8}$$

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

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

- c. 4 rows



$$\frac{1}{4} = \frac{4}{16}$$

$$\frac{1}{4} = \frac{1}{16} + \frac{1}{16} + \frac{1}{16} + \frac{1}{16} = \frac{4}{16}$$

$$\frac{1}{4} = 4 \times \frac{1}{16} = \frac{4}{16}$$

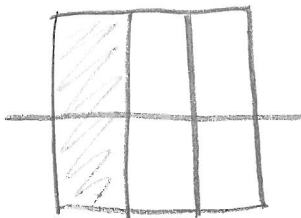
2. Draw area models to show the decompositions represented by the number sentences below. Represent the decomposition as a sum of unit fractions and as a multiplication sentence.

a.  $\frac{1}{3} = \frac{2}{6}$

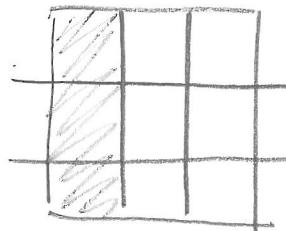
$$\frac{1}{3} = \frac{1}{6} + \frac{1}{6} = \frac{2}{6}$$

b.  $\frac{1}{3} = \frac{3}{9}$

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



$$\frac{1}{3} = 2 \times \frac{1}{6} = \frac{2}{6}$$



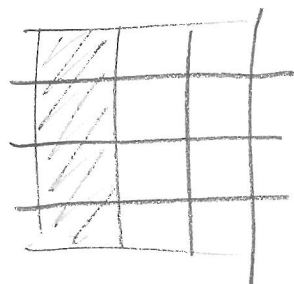
$$\frac{1}{3} = 3 \times \frac{1}{9} = \frac{3}{9}$$

c.  $\frac{1}{3} = \frac{4}{12}$

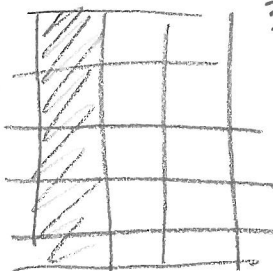
$$\frac{1}{3} = \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} = \frac{4}{12}$$

d.  $\frac{1}{3} = \frac{5}{15}$

$$\frac{1}{3} = \frac{1}{15} + \frac{1}{15} + \frac{1}{15} + \frac{1}{15} + \frac{1}{15} = \frac{5}{15}$$



$$\frac{1}{3} = 4 \times \frac{1}{12} = \frac{4}{12}$$



$$\frac{1}{3} = 5 \times \frac{1}{15} = \frac{5}{15}$$

e.  $\frac{1}{5} = \frac{2}{10}$

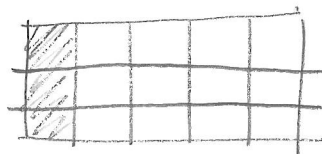
$$\frac{1}{5} = \frac{1}{10} + \frac{1}{10} = \frac{2}{10}$$

f.  $\frac{1}{5} = \frac{3}{15}$

$$\frac{1}{5} = \frac{1}{15} + \frac{1}{15} + \frac{1}{15} = \frac{3}{15}$$



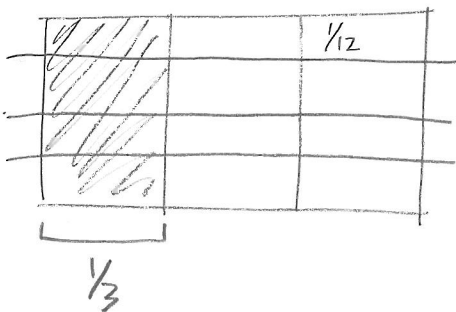
$$\frac{1}{5} = \frac{1}{10} \times 2 = \frac{2}{10}$$



$$\frac{1}{5} = \frac{1}{15} \times 3 = \frac{3}{15}$$

3. Explain why  $\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$  is the same as  $\frac{1}{3}$ .

Answers vary

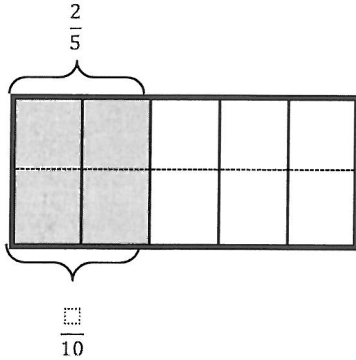


Name \_\_\_\_\_

Date \_\_\_\_\_

1. Each rectangle represents 1 whole. Draw horizontal lines to decompose each rectangle into the number of units as indicated. Use the model to give the shaded area as a sum and as a product of unit fractions. Use parentheses to show the relationship between the number sentences. The first one has been partially done for you.

a. Tenths



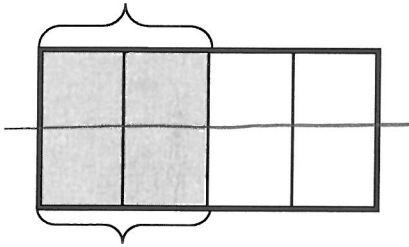
$$\frac{2}{5} = \frac{4}{\square}$$

$$\frac{\square}{5} + \frac{\square}{5} = \left(\frac{1}{10} + \frac{1}{10}\right) + \left(\frac{1}{10} + \frac{1}{10}\right) = \frac{4}{\square}$$

$$\left(\frac{1}{10} + \frac{1}{10}\right) + \left(\frac{1}{10} + \frac{1}{10}\right) = \left(2 \times \frac{\square}{\square}\right) + \left(2 \times \frac{\square}{\square}\right) = \frac{4}{\square}$$

$$\frac{2}{5} = 4 \times \frac{\square}{\square} = \frac{4}{\square}$$

b. Eighths



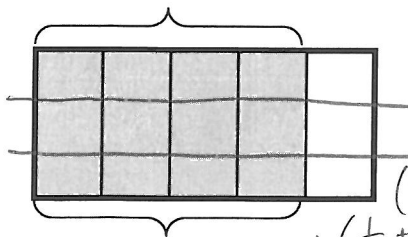
$$\frac{2}{4} = \frac{4}{8}$$

$$\frac{1}{4} + \frac{1}{4} = \left(\frac{1}{8} + \frac{1}{8}\right) + \left(\frac{1}{8} + \frac{1}{8}\right) = \frac{4}{8}$$

$$\left(\frac{1}{8} + \frac{1}{8}\right) + \left(\frac{1}{8} + \frac{1}{8}\right) = \left(2 \times \frac{1}{8}\right) + \left(2 \times \frac{1}{8}\right) = \frac{4}{8}$$

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

c. Fifteenths



$$\frac{4}{5} = \frac{12}{15}$$

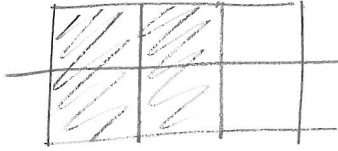
$$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right) + \left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right) + \left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right)$$

$$\left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right) + \left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right) + \left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right) = \frac{12}{15}$$

$$\left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right) + \left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right) + \left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right) + \left(\frac{1}{15} + \frac{1}{15} + \frac{1}{15}\right) = \left(3 \times \frac{1}{15}\right) + \left(3 \times \frac{1}{15}\right) + \left(3 \times \frac{1}{15}\right) + \left(3 \times \frac{1}{15}\right) = \frac{12}{15}$$

2. Draw area models to show the decompositions represented by the number sentences below. Express each as a sum and product of unit fractions. Use parentheses to show the relationship between the number sentences.

a.  $\frac{2}{3} = \frac{4}{6}$

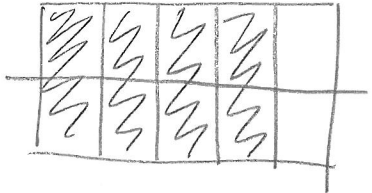


$$\frac{2}{3} = \frac{4}{6}$$

$$\frac{1}{3} + \frac{1}{3} = \left(\frac{1}{6} + \frac{1}{6}\right) + \left(\frac{1}{6} + \frac{1}{6}\right) = \frac{4}{6}$$

$$\frac{2}{3} = 4 \times \frac{1}{6} = \frac{4}{6}$$

b.  $\frac{4}{5} = \frac{8}{10}$



$$\frac{4}{5} = \frac{8}{10}$$

$$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \left(\frac{1}{10} + \frac{1}{10}\right) + \left(\frac{1}{10} + \frac{1}{10}\right) + \left(\frac{1}{10} + \frac{1}{10}\right) + \left(\frac{1}{10} + \frac{1}{10}\right) = \frac{8}{10}$$

$$\frac{4}{5} = 8 \times \frac{1}{10} = \frac{8}{10}$$

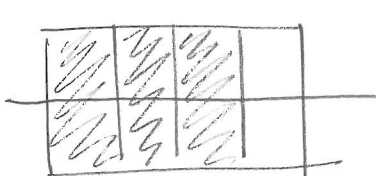
3. Step 1: Draw an area model for a fraction with the denominator of 3, 4, or 5.

Step 2: Shade in more than one fractional unit.

Step 3: Partition the area model again to find an equivalent fraction.

Step 4: Write the equivalent fractions as a number sentence. (If you have written a number sentence like this one already in this homework, start over.)

Answers vary... Sample 😊



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

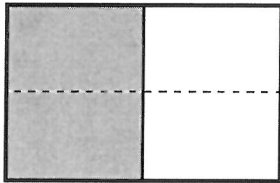
Name \_\_\_\_\_

Date \_\_\_\_\_

Each rectangle represents 1 whole.

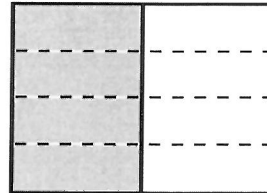
1. The shaded unit fractions have been decomposed into smaller units. Express the equivalent fractions in a number sentence using multiplication. The first one has been done for you.

a.



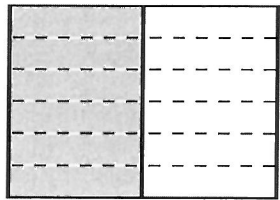
$$\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$$

b.



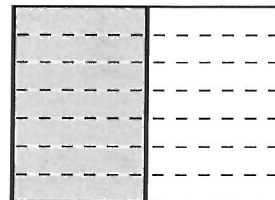
$$\frac{1}{2} = \frac{1 \times 4}{2 \times 4} = \frac{4}{8}$$

c.



$$\frac{1}{2} = \frac{1 \times 6}{2 \times 6} = \frac{6}{12}$$

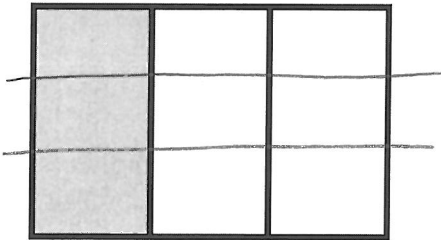
d.



$$\frac{1}{2} = \frac{1 \times 7}{2 \times 7} = \frac{7}{14}$$

2. Decompose the shaded fractions into smaller units using the area models. Express the equivalent fractions in a number sentence using multiplication. *Examples given... answers vary*

a.



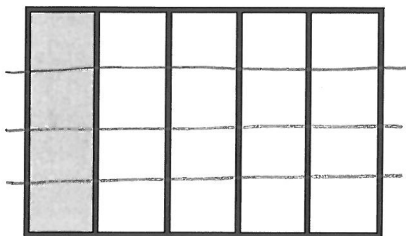
$$\frac{1}{3} = \frac{1 \times 3}{3 \times 3} = \frac{3}{9}$$

b.



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

c.



$$\frac{1}{5} = \frac{1 \times 4}{5 \times 4} = \frac{4}{20}$$

d.

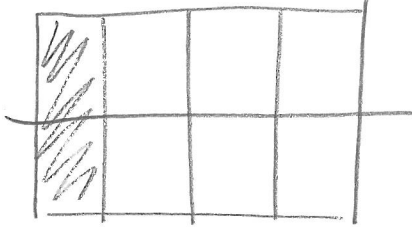


$$\frac{1}{8} = \frac{1 \times 9}{8 \times 9} = \frac{9}{72}$$

\*Just for fun :)

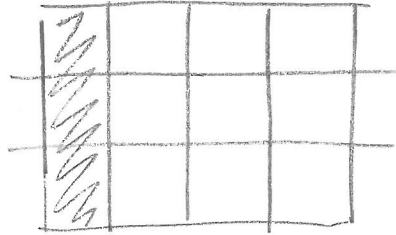
3. Draw three different area models to represent 1 fourth by shading.  
Decompose the shaded fraction into (a) eighths, (b) twelfths, and (c) sixteenths.  
Use multiplication to show how each fraction is equivalent to 1 fourth.

a.



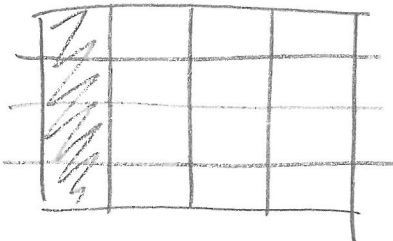
$$\frac{1}{4} = \frac{1 \times 2}{4 \times 2} = \frac{2}{8}$$

b.



$$\frac{1}{4} = \frac{1 \times 3}{4 \times 3} = \frac{3}{12}$$

c.



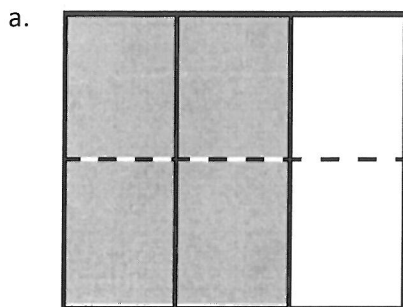
$$\frac{1}{4} = \frac{1 \times 4}{4 \times 4} = \frac{4}{16}$$

Name \_\_\_\_\_

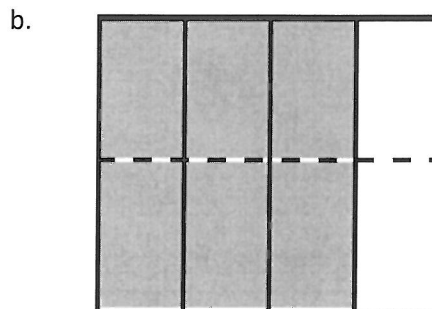
Date \_\_\_\_\_

Each rectangle represents 1 whole.

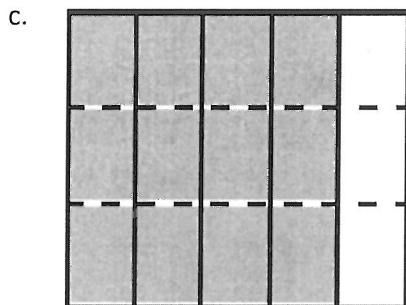
1. The shaded fractions have been decomposed into smaller units. Express the equivalent fractions in a number sentence using multiplication. The first one has been done for you.



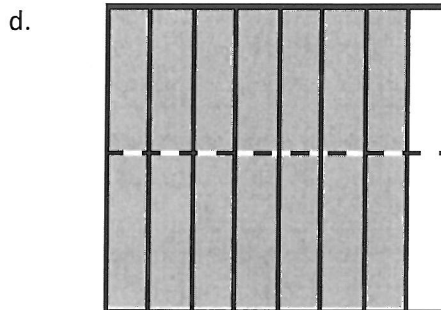
$$\frac{2}{3} = \frac{2 \times 2}{3 \times 2} = \frac{4}{6}$$



$$\frac{3}{4} = \frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$$

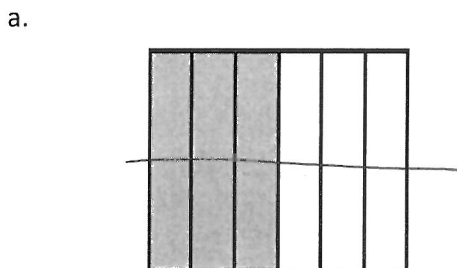


$$\frac{4}{5} = \frac{4}{5} \times \frac{3}{3} = \frac{12}{15}$$

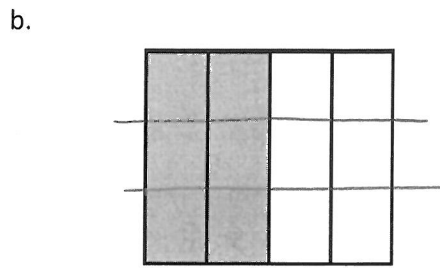


$$\frac{6}{7} = \frac{6}{7} \times \frac{2}{2} = \frac{12}{14}$$

2. Decompose both shaded fractions into twelfths. Express the equivalent fractions in a number sentence using multiplication.



$$\frac{3}{6} = \frac{3}{6} \times \frac{2}{2} = \frac{6}{12}$$

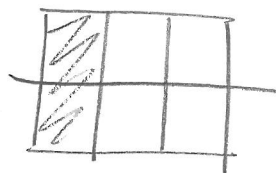


$$\frac{2}{4} = \frac{2}{4} \times \frac{3}{3} = \frac{6}{12}$$

3. Draw area models to prove that the following number sentences are true.

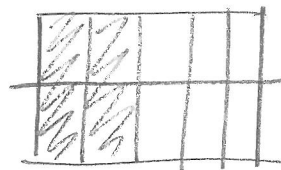
a.

$$\frac{1}{3} = \frac{2}{6}$$



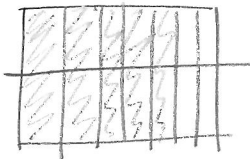
b.

$$\frac{2}{5} = \frac{4}{10}$$



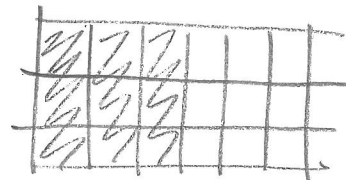
c.

$$\frac{5}{7} = \frac{10}{14}$$



d.

$$\frac{3}{6} = \frac{9}{18}$$



4. Use multiplication to create an equivalent fraction for each fraction below. *Answers vary 😊 examples given*

a.

$$\frac{2}{3} = \frac{2}{3} \times \frac{2}{2} = \frac{4}{6}$$

b.

$$\frac{5}{6} = \frac{5}{6} \times \frac{10}{10} = \frac{50}{60}$$

c.

$$\frac{6}{5} = \frac{6}{5} \times \frac{5}{5} = \frac{30}{25}$$

d.

$$\frac{10}{8} = \frac{10}{8} \times \frac{100}{100} = \frac{1000}{800}$$

5. Determine which of the following are true number sentences. Correct those that are false by changing the right-hand side of the number sentence.

a.

~~$\frac{2}{3} = \frac{4}{9}$~~   $\frac{2}{3} = \frac{2}{3} \times \frac{3}{3} = \frac{6}{9}$

b.

$\frac{5}{6} = \frac{10}{12}$   $\frac{5}{6} = \frac{5}{6} \times \frac{2}{2} = \frac{10}{12}$

c.

~~$\frac{3}{5} = \frac{6}{15}$~~   $\frac{3}{5} = \frac{3}{5} \times \frac{3}{3} = \frac{9}{15}$

d.

$\frac{7}{4} = \frac{21}{12}$   $\frac{7}{4} = \frac{7}{4} \times \frac{3}{3} = \frac{21}{12}$



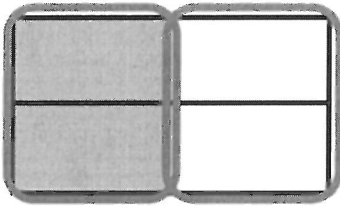
Name \_\_\_\_\_

Date \_\_\_\_\_

Each rectangle represents one whole.

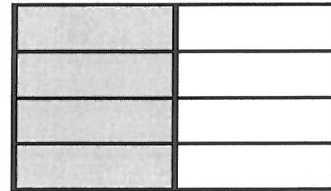
1. Compose the shaded fractions into larger fractional units. Express the equivalent fractions in a number sentence using division. The first one has been done for you.

a.



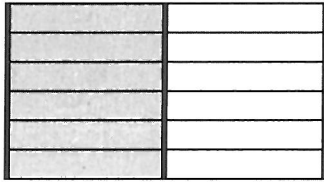
$$\frac{2}{4} = \frac{2 \div 2}{4 \div 2} = \frac{1}{2}$$

b.



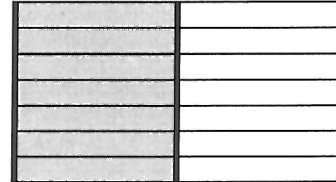
$$\frac{4}{8} = \frac{4 \div 4}{8 \div 4} = \frac{1}{2}$$

c.



$$\frac{6}{12} = \frac{6 \div 6}{12 \div 6} = \frac{1}{2}$$

d.

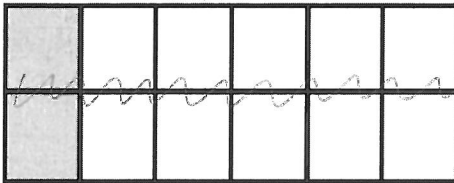


$$\frac{7}{14} = \frac{7 \div 7}{14 \div 7} = \frac{1}{2}$$

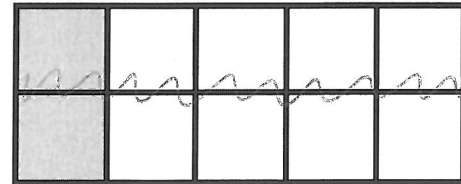
2. Compose the shaded fractions into larger fractional units. Express the equivalent fractions in a number sentence using division.

$$\frac{2}{12} = \frac{2 \div 2}{12 \div 2} = \frac{1}{6}$$

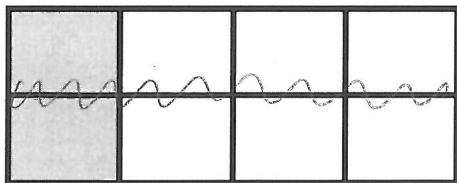
a.



b.

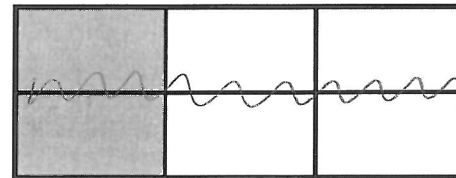


c.



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

d.



$$\frac{2}{6} = \frac{2 \div 2}{6 \div 2} = \frac{1}{3}$$

- e. What happened to the size of the fractional units when you renamed the fraction?

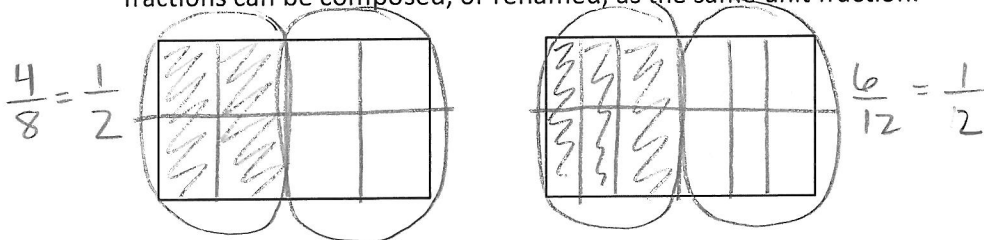
When I composed the fraction,  
the fractional units became larger.

- f. What happened to the total number of units in the whole when you renamed the fraction?

There were fewer total units in the whole when I composed the fraction

3.

- a. In the first area model, show 4 eighths. In the second area model, show 6 twelfths. Show how both fractions can be composed, or renamed, as the same unit fraction.

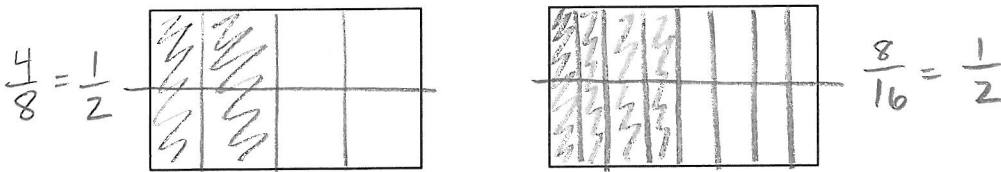


- b. Express the equivalent fractions in a number sentence using division.

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

4.

- a. In the first area model below, show 4 eighths. In the second area model, show 8 sixteenths. Show how both fractions can be composed, or renamed, as the same unit fraction.



- b. Express the equivalent fractions in a number sentence using division.

$$\frac{4}{8} = \frac{4}{8} \div \frac{4}{4} = \frac{1}{2} \quad \frac{8}{16} = \frac{8}{16} \div \frac{8}{8} = \frac{1}{2}$$

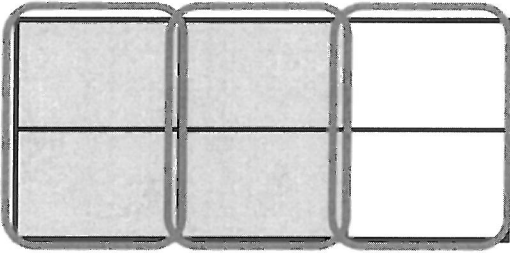
Name \_\_\_\_\_

Date \_\_\_\_\_

Each rectangle represents one whole.

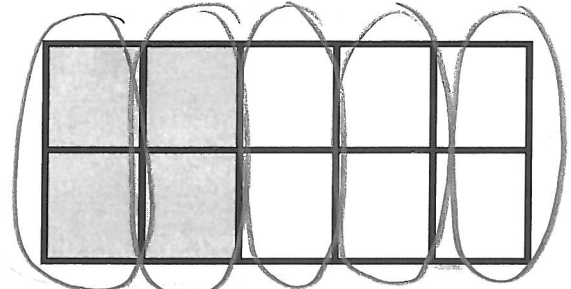
1. Compose the shaded fraction into larger fractional units. Express the equivalent fractions in a number sentence using division. The first one has been done for you.

a.



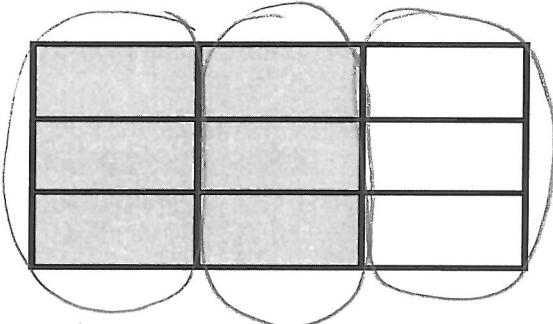
$$\frac{4}{6} = \frac{4 \div 2}{6 \div 2} = \frac{2}{3}$$

b.



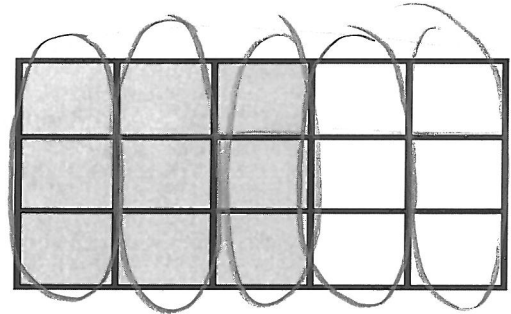
$$\frac{4}{10} \div \frac{2}{2} = \frac{2}{5}$$

c.



$$\frac{6}{9} = \frac{6}{9} \div \frac{3}{3} = \frac{2}{3}$$

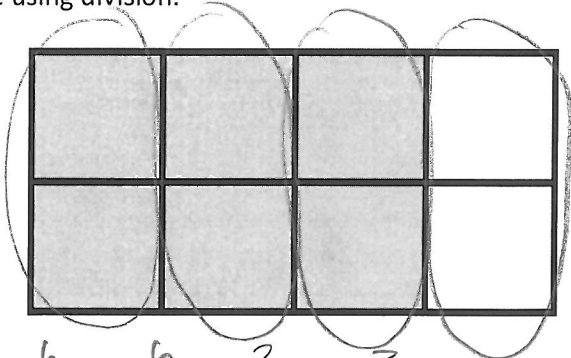
d.



$$\frac{9}{15} = \frac{9}{15} \div \frac{3}{3} = \frac{3}{5}$$

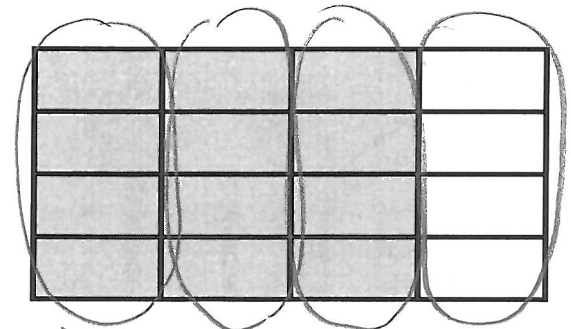
2. Compose the shaded fractions into larger fractional units. Express the equivalent fractions in a number sentence using division.

a.



$$\frac{6}{8} = \frac{6}{8} \div \frac{2}{2} = \frac{3}{4}$$

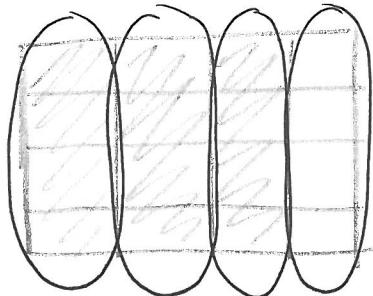
b.



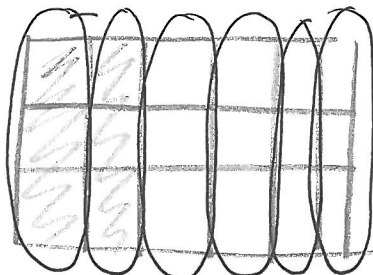
$$\frac{12}{16} = \frac{12}{16} \div \frac{4}{4} = \frac{3}{4}$$

3. Draw an area model to represent each number sentence below.

a.  $\frac{12}{16} = \frac{12 \div 4}{16 \div 4} = \frac{3}{4}$



b.  $\frac{6}{18} = \frac{6 \div 3}{18 \div 3} = \frac{2}{6}$



4. Use division to rename each fraction given below. Draw a model if that helps you. See if you can use the largest common factor.

a.  $\frac{6}{9} = \frac{6 \div 3}{9 \div 3} = \frac{2}{3}$

b.  $\frac{4}{12} = \frac{4 \div 4}{12 \div 4} = \frac{1}{3}$

c.  $\frac{10}{15} = \frac{10 \div 5}{15 \div 5} = \frac{2}{3}$

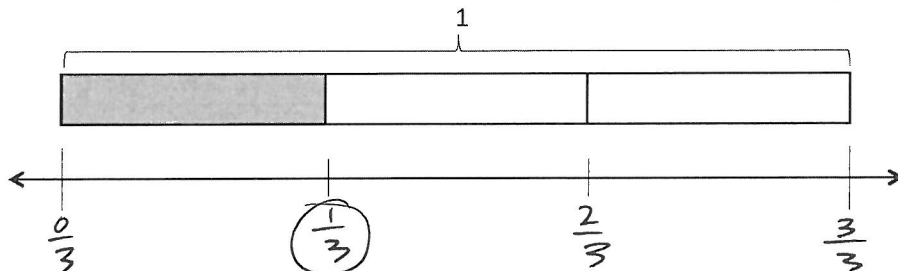
d.  $\frac{12}{16} = \frac{12 \div 4}{16 \div 4} = \frac{3}{4}$

Name \_\_\_\_\_

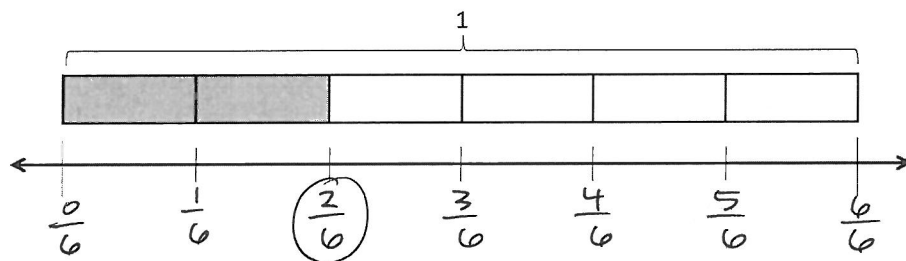
Date \_\_\_\_\_

1. Label each number line with the fractions shown on the tape diagram. Circle the fraction that labels the point on the number line that also names the selected part of the tape diagram.

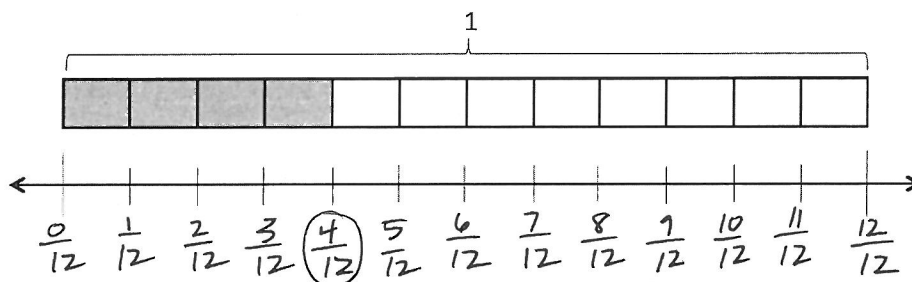
a.



b.



c.



2. Write number sentences using multiplication to show

- a. the fraction represented in 1(a) is equivalent to the fraction represented in 1(b).

$$\frac{1}{3} = \frac{1}{3} \times \frac{2}{2} = \frac{2}{6}$$

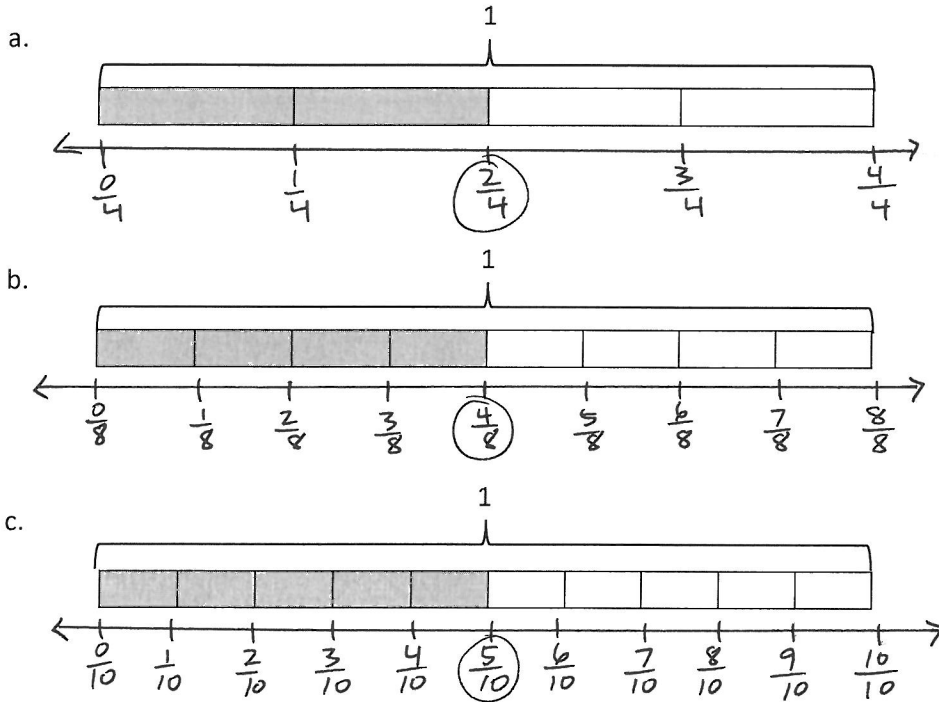
a. b.

- b. the fraction represented in 1(a) is equivalent to the fraction represented in 1(c).

$$\frac{1}{3} = \frac{1}{3} \times \frac{4}{4} = \frac{4}{12}$$

a. c.

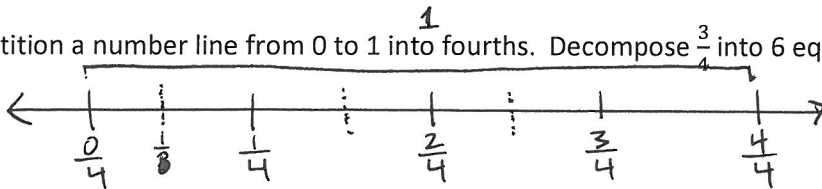
3. Use each shaded tape diagram below as a ruler to draw a number line. Mark each number line with the unit fractions shown on the tape diagram, and circle the fraction that labels the point on the number line that also names the selected part of the tape diagram.



4. Write number sentences using division to show

- a. the fraction represented in 3(a) is equivalent to the fraction represented in 3(b).  $\frac{2}{4} = \frac{2}{4} \times \frac{2}{2} = \frac{4}{8}$   
 $\frac{4}{8} = \frac{4}{8} \div \frac{2}{2} = \frac{2}{4}$
- b. the fraction represented in 3(a) is equivalent to the fraction represented in 3(c).  
*oops! typo*

5. a. Partition a number line from 0 to 1 into fourths. Decompose  $\frac{3}{4}$  into 6 equal lengths.



- b. Write a number sentence using multiplication to show what fraction represented on the number line is equivalent to  $\frac{3}{4}$ .  $\frac{3}{4} = \frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$
- c. Write a number sentence using division to show what fraction represented on the number line is equivalent to  $\frac{3}{4}$ .  $\frac{6}{8} = \frac{6}{8} \div \frac{2}{2} = \frac{3}{4}$

Name \_\_\_\_\_

Date \_\_\_\_\_

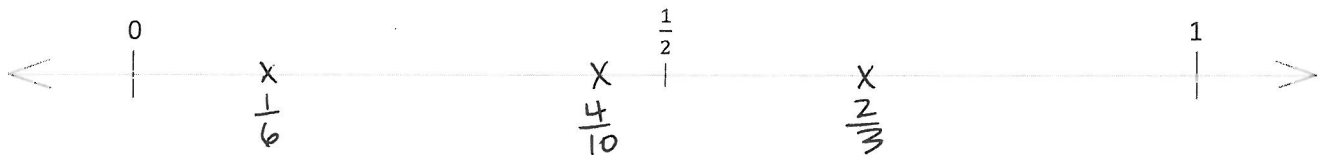
1.

a. Plot the following points on the number line without measuring.

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

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

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

b. Use the number line in Part (a) to compare the fractions by writing  $>$ ,  $<$ , or  $=$  on the lines:

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

ii.  $\frac{4}{10} > \frac{1}{6}$

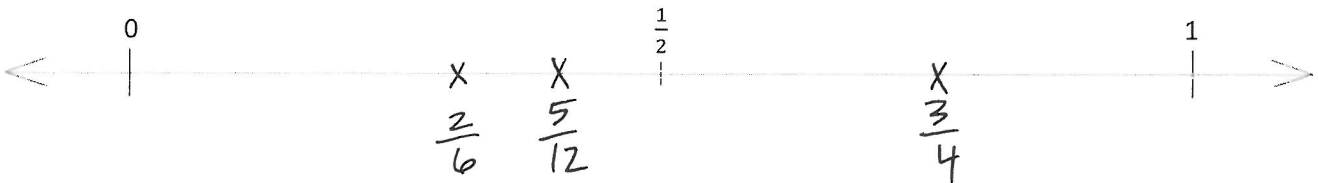
2.

a. Plot the following points on the number line without measuring.

i.  $\frac{5}{12}$

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

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

b. Select two fractions from Part (a), and use the given number line to compare them by writing  $>$ ,  $<$ , or

=.

answers vary.  
 examples:  $\frac{5}{12} < \frac{1}{2}$      $\frac{3}{4} > \frac{2}{6}$

c. Explain how you plotted the points in Part (a).

answers vary... hint! is the fraction more or less than half?

3. Compare the fractions given below by writing  $>$  or  $<$  on the lines.

Give a brief explanation for each answer referring to benchmark fractions of  $0$ ,  $\frac{1}{2}$ , and  $1$ .

a.  $\frac{1}{2}$   $>$   $\frac{1}{4}$

b.  $\frac{6}{8}$   $>$   $\frac{1}{2}$

c.  $\frac{3}{4}$   $>$   $\frac{3}{5}$

d.  $\frac{4}{6}$   $<$   $\frac{9}{12}$

e.  $\frac{2}{3}$   $>$   $\frac{1}{4}$

f.  $\frac{4}{5}$   $>$   $\frac{8}{12}$

g.  $\frac{1}{3}$   $<$   $\frac{3}{6}$

h.  $\frac{7}{8}$   $>$   $\frac{3}{5}$

i.  $\frac{51}{100}$   $>$   $\frac{5}{10}$

j.  $\frac{8}{14}$   $>$   $\frac{49}{100}$



Name \_\_\_\_\_

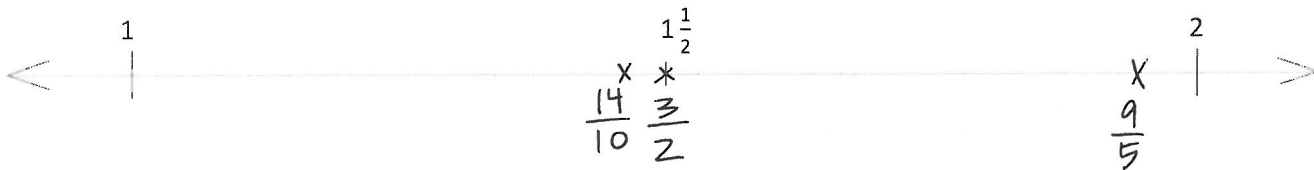
Date \_\_\_\_\_

1. Place the following fractions on the number line given.

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

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

c.  $\frac{14}{10}$

2. Use the number line in Problem 1 to compare the fractions by writing  $>$ ,  $<$ , or  $=$  on the lines:

a.  $1\frac{1}{6}$   $<$   $1\frac{4}{12}$

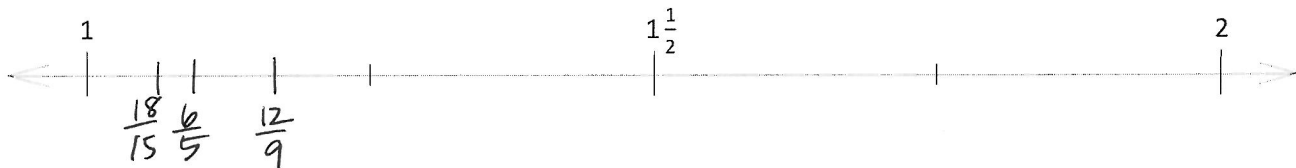
b.  $1\frac{1}{2}$   $<$   $1\frac{4}{5}$

3. Place the following fractions on the number line given.

a.  $\frac{12}{9}$   
 $\frac{4}{3}$   $\frac{3}{3}$

b.  $\frac{6}{5}$   
 $\frac{6}{5}$   $\frac{1}{5}$

c.  $\frac{18}{15}$   
 $\frac{15}{15}$   $\frac{3}{15}$

4. Use the number line in Problem 3 to explain the reasoning you used when determining whether  $\frac{12}{9}$  or  $\frac{18}{15}$  was greater.

$$\begin{array}{ccc} \frac{12}{9} & \frac{18}{15} & \\ \swarrow \quad \searrow & \swarrow \quad \searrow & \\ \frac{4}{3} \quad \frac{3}{3} & \frac{6}{5} \quad \frac{1}{5} & \\ \frac{9}{9} & \frac{15}{15} \quad \frac{3}{15} & \\ & & \frac{3}{9} > \frac{3}{15} \end{array}$$

5. Compare the fractions given below by writing  $>$  or  $<$  on the lines.  
Give a brief explanation for each answer referring to benchmark fractions.

a.  $\frac{2}{5}$  <  $\frac{6}{8}$

b.  $\frac{6}{10}$  <  $\frac{5}{6}$

c.  $\frac{6}{4}$  >  $\frac{7}{8}$

d.  $\frac{1}{4}$  <  $\frac{8}{12}$

e.  $\frac{14}{12}$  <  $\frac{11}{6}$

f.  $\frac{8}{9}$  <  $\frac{3}{2}$

g.  $\frac{7}{8}$  <  $\frac{11}{10}$

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

i.  $\frac{3}{8}$  <  $\frac{3}{2}$

j.  $\frac{9}{6}$  >  $\frac{16}{12}$

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Compare the pairs of fractions by reasoning about the size of the units. Use  $>$ ,  $<$ , or  $=$ .

a. 1 third  $>$  1 sixth

b. 2 halves  $>$  2 thirds

c. 2 fourths  $>$  2 sixths

d. 5 eighths  $>$  5 tenths

2. Compare by reasoning about the following pairs of fractions with the same or related numerators. Use  $>$ ,  $<$ , or  $=$ . Explain your thinking using words, pictures, or numbers. Problem 2(b) has been done for you.

a.  $\frac{3}{6} > \frac{3}{7}$

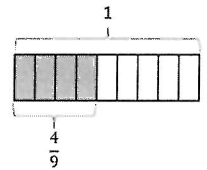
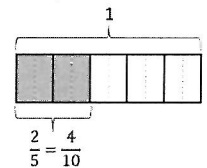
b.  $\frac{2}{5} < \frac{4}{9}$

because  $\frac{2}{5} = \frac{4}{10}$

4 tenths is less

than 4 ninths because

tenths are smaller than ninths.

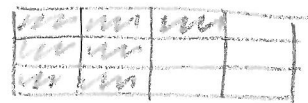


c.  $\frac{3}{11} > \frac{3}{13}$

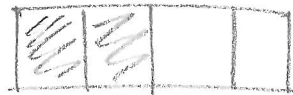
d.  $\frac{5}{7} < \frac{10}{13}$

3. Draw two tape diagrams to model each pair of the following fractions with related denominators. Use  $>$ ,  $<$ , or  $=$  to compare.

a.  $\frac{3}{4} > \frac{7}{12}$



b.  $\frac{2}{4} > \frac{1}{8}$

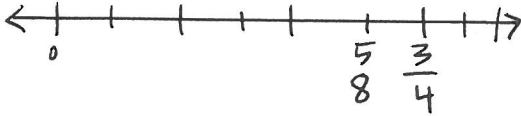


c.  $1\frac{4}{10} < 1\frac{3}{5}$

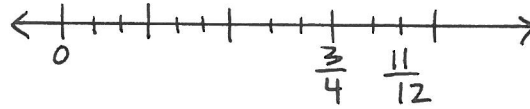


4. Draw one number line to model each pair of fractions with related denominators. Use  $>$ ,  $<$ , or  $=$  to compare.

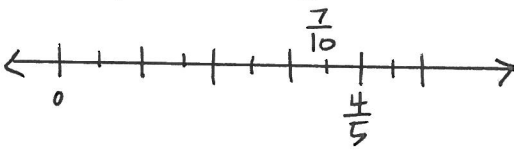
a.  $\frac{3}{4} > \frac{5}{8}$



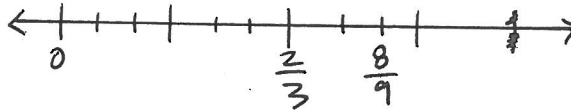
b.  $\frac{11}{12} > \frac{3}{4}$



c.  $\frac{4}{5} > \frac{7}{10}$



d.  $\frac{8}{9} > \frac{2}{3}$



5. Compare each pair of fractions using  $>$ ,  $<$ , or  $=$ . Draw a model if you choose to.

a.  $\frac{1}{7} < \frac{2}{7}$

b.  $\frac{5}{7} < \frac{11}{14}$

c.  $\frac{7}{10} > \frac{3}{5}$

d.  $\frac{2}{3} > \frac{9}{15}$

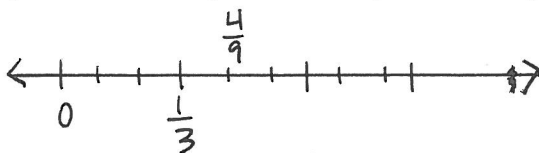
e.  $\frac{3}{4} = \frac{9}{12}$

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

g.  $\frac{4}{3} > 1\frac{2}{9}$

h.  $1\frac{1}{3} > \frac{9}{7}$

6. Simon claims  $\frac{4}{9}$  is greater than  $\frac{1}{3}$ . Ted thinks  $\frac{4}{9}$  is less than  $\frac{1}{3}$ . Who is correct? Support your answer with a picture.


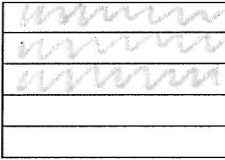

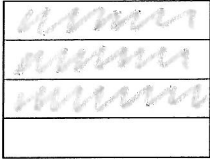

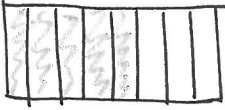
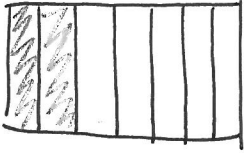
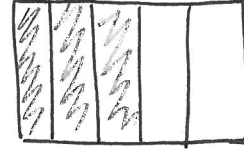
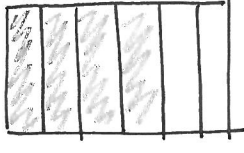
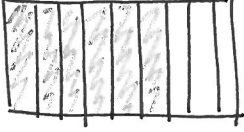

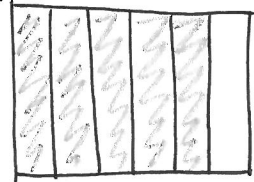


Simon is correct

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Draw an area model for each pair of fractions, and use it to compare the two fractions by writing a  $>$ ,  $<$ , or  $=$  symbol on the line. The first two have been partly done for you. Each rectangle represents one whole.

<p>a. <math>\frac{1}{2}</math> _____ <math>&lt;</math> _____ <math>\frac{3}{5}</math></p> <p><math>\frac{1 \times 5}{2 \times 5} = \frac{5}{10}</math>    <math>\frac{3 \times 2}{5 \times 2} = \frac{6}{10}</math></p>   <p><math>\frac{5}{10} &lt; \frac{6}{10}</math> so <math>\frac{1}{2} &lt; \frac{3}{5}</math></p>	<p>b. <math>\frac{2}{3}</math> _____ <math>&lt;</math> _____ <math>\frac{3}{4}</math></p> <p><math>\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}</math></p> <p><math>\frac{3}{4} \times \frac{3}{3} = \frac{9}{12}</math></p> <p><math>\frac{8}{12} &lt; \frac{9}{12}</math></p>  
<p>c. <math>\frac{4}{6}</math> _____ <math>&gt;</math> _____ <math>\frac{5}{8}</math></p> <p><math>\frac{4}{6} \times \frac{4}{4} = \frac{16}{24}</math></p> <p><math>\frac{5}{8} \times \frac{3}{3} = \frac{15}{24}</math></p> <p><math>\frac{16}{24} &gt; \frac{15}{24}</math></p>  	<p>d. <math>\frac{2}{7}</math> _____ <math>&lt;</math> _____ <math>\frac{3}{5}</math></p> <p><math>\frac{2}{7} \times \frac{5}{5} = \frac{10}{35}</math></p> <p><math>\frac{3}{5} \times \frac{7}{7} = \frac{21}{35}</math></p> <p><math>\frac{10}{35} &lt; \frac{21}{35}</math></p>  
<p>e. <math>\frac{4}{6}</math> _____ <math>=</math> _____ <math>\frac{6}{9}</math></p> <p><math>\frac{4}{6} \times \frac{3}{3} = \frac{12}{18}</math></p> <p><math>\frac{6}{9} \times \frac{2}{2} = \frac{12}{18}</math></p>  	<p>f. <math>\frac{4}{5}</math> _____ <math>&lt;</math> _____ <math>\frac{5}{6}</math></p> <p><math>\frac{4}{5} \times \frac{6}{6} = \frac{24}{30}</math></p> <p><math>\frac{5}{6} \times \frac{5}{5} = \frac{25}{30}</math></p>  

2. Rename the fractions as needed using multiplication in order to compare the two fractions in each pair by writing a  $>$ ,  $<$ , or  $=$ .

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

b.  $\frac{4}{7} > \frac{1}{2}$

c.  $\frac{5}{4} > \frac{9}{8}$

d.  $\frac{8}{12} > \frac{5}{8}$

3. Use any method to compare the fractions. Record your answer using  $>$ ,  $<$ , or  $=$ .

a.  $\frac{8}{9} > \frac{2}{3}$

b.  $\frac{4}{7} < \frac{4}{5}$

c.  $\frac{3}{2} = \frac{9}{6}$   
 $\frac{3}{2} = \frac{2}{2} \cdot \frac{3}{2} = \frac{6}{6}$   
 $\frac{9}{6} = \frac{3}{6} \cdot \frac{3}{2} = \frac{9}{6}$

d.  $\frac{11}{7} < \frac{5}{3}$   
 $\frac{11}{7} = \frac{7}{7} + \frac{4}{7}$   
 $\frac{5}{3} = \frac{3}{3} + \frac{2}{3}$

4. Explain which method you prefer to compare fractions. Provide an example using words, pictures, and numbers.

Answers vary 😊

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Solve.

a. 3 sixths  $-$  2 sixths = 1 sixth

b. 5 tenths  $-$  3 tenths = 2 tenths

c. 3 fourths  $-$  2 fourths = 1 fourth

d. 5 thirds  $-$  2 thirds = 3 thirds

2. Solve.

a.  $\frac{3}{5} - \frac{2}{5} = \frac{1}{5}$

b.  $\frac{7}{9} - \frac{3}{9} = \frac{4}{9}$

c.  $\frac{7}{12} - \frac{3}{12} = \frac{4}{12}$

d.  $\frac{6}{6} - \frac{4}{6} = \frac{2}{6}$

e.  $\frac{5}{3} - \frac{2}{3} = \frac{3}{3}$

f.  $\frac{7}{4} - \frac{5}{4} = \frac{2}{4}$

3. Solve. Use a number bond to decompose the difference. Record your final answer as a mixed number. Problem (a) has been completed for you.

$$a. \frac{12}{6} - \frac{3}{6} = \frac{9}{6} = 1\frac{3}{6}$$

$$b. \frac{17}{8} - \frac{6}{8} = \frac{11}{8} = 1\frac{3}{8}$$

$$c. \frac{9}{5} - \frac{3}{5} = \frac{6}{5} = 1\frac{1}{5}$$

$$d. \frac{11}{4} - \frac{6}{4} = \frac{5}{4} = 1\frac{1}{4}$$

$$e. \frac{10}{7} - \frac{2}{7} = \frac{8}{7} = 1\frac{1}{7}$$

$$f. \frac{21}{10} - \frac{9}{10} = \frac{12}{10} = 1\frac{2}{10}$$

4. Solve. Write the sum in unit form.

a. 4 fifths + 2 fifths = 6 fifths

b. 5 eighths + 2 eighths = 7 eighths

5. Solve.

a.  $\frac{3}{11} + \frac{6}{11} = \frac{9}{11}$

b.  $\frac{3}{10} + \frac{6}{10} = \frac{9}{10}$

6. Solve. Use a number bond to decompose the sum. Record your final answer as a mixed number.

a.  $\frac{3}{4} + \frac{3}{4} = \frac{6}{4} = 1\frac{2}{4}$

b.  $\frac{8}{12} + \frac{6}{12} = \frac{14}{12} = 1\frac{2}{12}$

c.  $\frac{5}{8} + \frac{7}{8} = \frac{12}{8} = 1\frac{4}{8}$

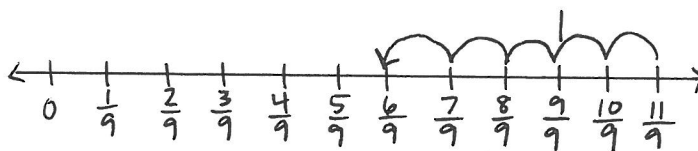
d.  $\frac{8}{10} + \frac{5}{10} = \frac{13}{10} = 1\frac{3}{10}$

e.  $\frac{3}{5} + \frac{6}{5} = \frac{9}{5} = 1\frac{4}{5}$

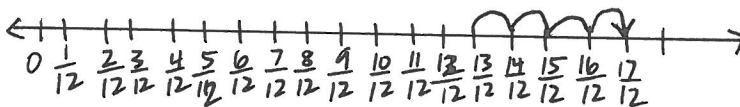
f.  $\frac{4}{3} + \frac{2}{3} = \frac{6}{3} = 2$

7. Solve. Then use a number line to model your answer.

a.  $\frac{11}{9} - \frac{5}{9} = \frac{6}{9}$



b.  $\frac{13}{12} + \frac{4}{12} = \frac{17}{12}$





Name \_\_\_\_\_

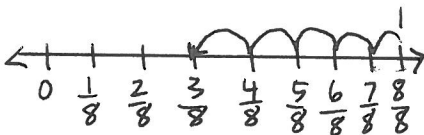
Date \_\_\_\_\_

1. Use the following three fractions to write two subtraction and two addition number sentences.

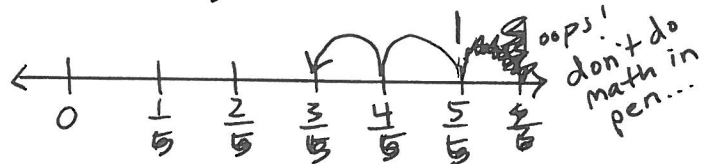
<p>a. <math>\frac{5}{6}, \frac{4}{6}, \frac{9}{6}</math></p> $\frac{5}{6} + \frac{4}{6} = \frac{9}{6}$ $\frac{4}{6} + \frac{5}{6} = \frac{9}{6}$	<p>b. <math>\frac{5}{9}, \frac{13}{9}, \frac{8}{9}</math></p> $\frac{5}{9} + \frac{8}{9} = \frac{13}{9}$ $\frac{8}{9} + \frac{5}{9} = \frac{13}{9}$
$\frac{9}{6} - \frac{5}{6} = \frac{4}{6}$ $\frac{9}{6} - \frac{4}{6} = \frac{5}{6}$	$\frac{13}{9} - \frac{5}{9} = \frac{8}{9}$ $\frac{13}{9} - \frac{8}{9} = \frac{5}{9}$

2. Solve. Model each subtraction problem with a number line, and solve by both counting up and subtracting.

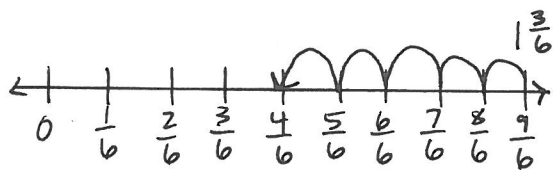
a.  $1 - \frac{5}{8} = \frac{3}{8}$



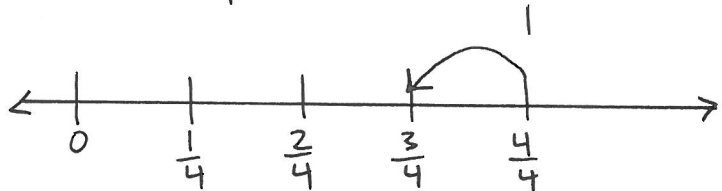
b.  $1 - \frac{2}{5} = \frac{3}{5}$



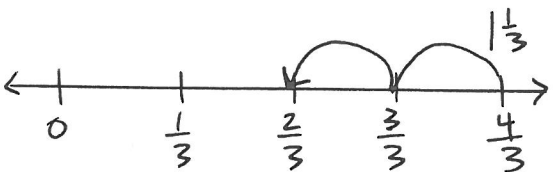
c.  $1\frac{3}{6} - \frac{5}{6} = \frac{4}{6}$



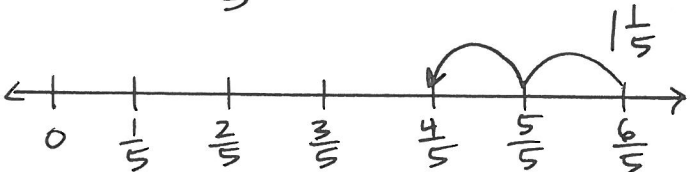
d.  $1 - \frac{1}{4} = \frac{3}{4}$



e.  $1\frac{1}{3} - \frac{2}{3} = \frac{2}{3}$



f.  $1\frac{1}{5} - \frac{2}{5} = \frac{4}{5}$



3. Find the difference in two ways. Use number bonds to decompose the whole. Part (a) has been completed for you.

a.  $1\frac{2}{5} - \frac{4}{5}$

$$\frac{5}{5} + \frac{2}{5} = \frac{7}{5}$$

$$\frac{5}{5} - \frac{4}{5} = \frac{1}{5}$$

$$\frac{7}{5} - \frac{4}{5} = \frac{3}{5}$$

$$\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$$

b.  $1\frac{3}{8} - \frac{7}{8}$

$$\textcircled{1} \frac{11}{8} - \frac{7}{8} = \frac{4}{8} *$$

$$\textcircled{2} \frac{8}{8} - \frac{7}{8} = \frac{1}{8} \quad \frac{1}{8} + \frac{3}{8} = \frac{4}{8} *$$

c.  $1\frac{1}{4} - \frac{3}{4}$

$$\textcircled{1} \frac{5}{4} - \frac{3}{4} = \frac{2}{4} *$$

$$\textcircled{2} \frac{4}{4} - \frac{3}{4} = \frac{1}{4} \quad \frac{1}{4} + \frac{1}{4} = \frac{2}{4} *$$

d.  $1\frac{2}{7} - \frac{5}{7}$

$$\textcircled{1} \frac{9}{7} - \frac{5}{7} = \frac{4}{7} *$$

$$\textcircled{2} \frac{7}{7} - \frac{5}{7} = \frac{2}{7} \quad \frac{2}{7} + \frac{2}{7} = \frac{4}{7} *$$

e.  $1\frac{3}{10} - \frac{7}{10}$


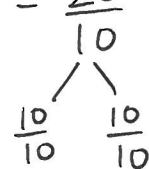
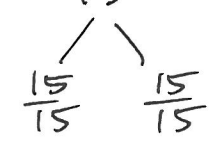
$$\textcircled{1} \frac{13}{10} - \frac{7}{10} = \frac{6}{10} *$$

$$\textcircled{2} \frac{10}{10} - \frac{7}{10} = \frac{3}{10} \quad \frac{3}{10} + \frac{3}{10} = \frac{6}{10} *$$

Name \_\_\_\_\_ Date \_\_\_\_\_

*answers vary... example solutions*

1. Show one way to solve each problem. Express sums and differences as a mixed number when possible. Use number bonds when it helps you. Part (a) is partially completed.

<p>a. <math>\frac{1}{3} + \frac{2}{3} + \frac{1}{3}</math></p> $= \frac{3}{3} + \frac{1}{3} = 1 + \frac{1}{3}$ $= \underline{1\frac{1}{3}}$	<p>b. <math>\frac{5}{8} + \frac{5}{8} + \frac{3}{8}</math></p> $= \frac{5}{8} + \frac{3}{8} = 1 + \frac{5}{8}$ $= \underline{1\frac{5}{8}}$	<p>c. <math>\frac{4}{6} + \frac{6}{6} + \frac{1}{6}</math></p> $= \frac{6}{6} = 1 + \frac{4}{6} + \frac{1}{6}$ $= \underline{1\frac{5}{6}}$
<p>d. <math>1\frac{2}{12} - \frac{2}{12} - \frac{1}{12}</math></p> $= 1\frac{2}{12} - \frac{2}{12} = 1 - \frac{1}{12}$ $= \underline{\frac{11}{12}}$	<p>e. <math>\frac{5}{7} + \frac{1}{7} + \frac{4}{7}</math></p> $= \frac{10}{7}$  $= \underline{1\frac{3}{7}}$	<p>f. <math>\frac{4}{10} + \frac{7}{10} + \frac{9}{10}</math></p> $= \frac{20}{10}$  $= \underline{2}$
<p>g. <math>1 - \frac{3}{10} - \frac{1}{10}</math></p> $= 1 - \frac{4}{10}$ $= \frac{10}{10} - \frac{4}{10}$ $= \underline{\frac{6}{10}}$	<p>h. <math>1\frac{3}{5} - \frac{4}{5} - \frac{1}{5}</math></p> $= 1\frac{3}{5} - (\frac{4}{5} + \frac{1}{5})$ $= 1\frac{3}{5} - 1$ $= \underline{\frac{3}{5}}$	<p>i. <math>\frac{10}{15} + \frac{7}{15} + \frac{12}{15} + \frac{1}{15}</math></p> $= \frac{30}{15}$  $= \underline{2}$

2. Bonnie used two different strategies to solve  $\frac{5}{8} + \frac{2}{8} + \frac{5}{8}$ .

Bonnie's First Strategy

$$\frac{5}{8} + \frac{2}{8} + \frac{5}{8} = \frac{7}{8} + \frac{5}{8} = \frac{8}{8} + \frac{4}{8} = 1\frac{4}{8}$$

$$\begin{array}{c} \wedge \\ \frac{1}{8} \quad \frac{4}{8} \end{array}$$

Bonnie's Second Strategy

$$\frac{5}{8} + \frac{2}{8} + \frac{5}{8} = \frac{12}{8} = 1 + \frac{4}{8} = 1\frac{4}{8}$$

$$\begin{array}{c} \wedge \\ \frac{8}{8} \quad \frac{4}{8} \end{array}$$

Whose strategy do you like best? Why? *Answers vary 😊*

3. You gave one solution for each part of Problem 1. Now, for each problem indicated below, give a different solution method. *Answers vary, depending on how you solved #1 examples given*

1(b)  $\frac{5}{8} + \frac{5}{8} + \frac{3}{8}$

$$= \frac{13}{8} = 1\frac{5}{8}$$

$$\begin{array}{c} \wedge \\ \frac{8}{8} \quad \frac{5}{8} \end{array}$$

1(e)  $\frac{5}{7} + \frac{1}{7} + \frac{4}{7}$

$$= \frac{6}{7} + \frac{4}{7} = \frac{10}{7} = 1\frac{3}{7}$$

$$\begin{array}{c} \wedge \\ \frac{7}{7} \quad \frac{3}{7} \end{array}$$

1(h)  $1\frac{3}{5} - \frac{4}{5} - \frac{1}{5}$

$$= \frac{5}{5} + \frac{3}{5} - \frac{4}{5} - \frac{1}{5} = \frac{3}{5}$$

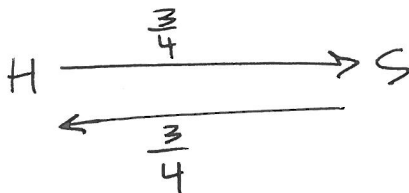
$$\begin{array}{c} \wedge \\ \frac{5}{5} \quad \frac{3}{5} \end{array} \dots \dots \dots$$

Name \_\_\_\_\_

Date \_\_\_\_\_

Use the RDW process to solve. **READ · DRAW · WRITE**

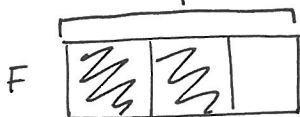
1. Isla walked  $\frac{3}{4}$  mile each way to and from school on Wednesday. How many miles did Isla walk that day?



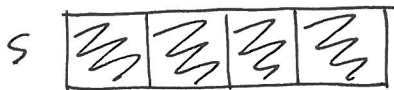
$$\frac{3}{4} + \frac{3}{4} = \frac{6}{4}$$

$$\frac{4}{4} \quad \wedge \quad \frac{2}{4} = 1 \frac{2}{4} \text{ miles}$$

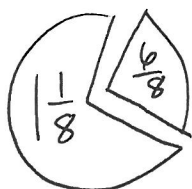
2. Zach spent  $\frac{2}{3}$  hour reading on Friday and  $1\frac{1}{3}$  hours reading on Saturday. How much more time did he read on Saturday than on Friday?



$$1\frac{1}{3} - \frac{2}{3} = \frac{2}{3} \text{ more hours reading on Saturday}$$

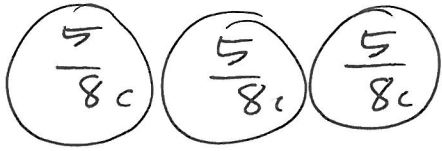


3. Mrs. Cashmore bought a large melon. She cut a piece that weighed  $1\frac{1}{8}$  pounds and gave it to her neighbor. The remaining piece of melon weighed  $\frac{6}{8}$  pound. How much did the whole melon weigh?



$$1\frac{1}{8} + \frac{6}{8} = 1\frac{7}{8} \text{ pounds}$$


4. Ally's little sister wanted to help her make some oatmeal cookies. First, she put  $\frac{5}{8}$  cup of oatmeal in the bowl. Next, she added another  $\frac{5}{8}$  cup of oatmeal. Finally, she added another  $\frac{5}{8}$  cup of oatmeal. How much oatmeal did she put in the bowl?



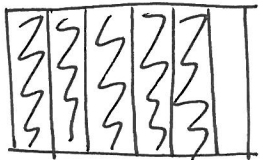
$$\frac{5}{8} + \frac{5}{8} + \frac{5}{8} = \frac{15}{8}$$

$$\frac{15}{8} = \frac{8}{8} + \frac{7}{8} = 1\frac{7}{8} \text{ cups of oatmeal}$$

5. Marcia baked 2 pans of brownies. Her family ate  $1\frac{5}{6}$  pans. What fraction of a pan of brownies was left?

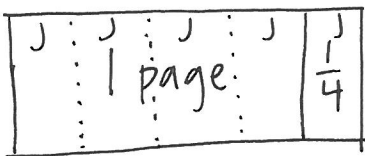


$$2 - 1\frac{5}{6} = \frac{1}{6} \text{ pan of brownies left}$$

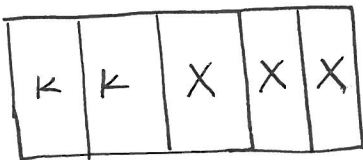


I ♥ brownies!

6. Joanie wrote a letter that was  $1\frac{1}{4}$  pages long. Katie wrote a letter that was  $\frac{3}{4}$  page shorter than Joanie's letter. How long was Katie's letter?



$$1\frac{1}{4} - \frac{3}{4} = \frac{2}{4}$$

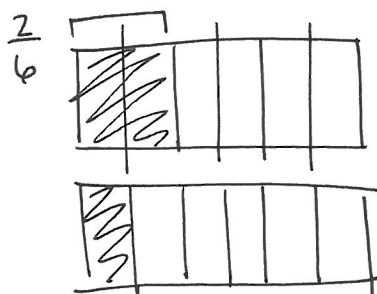


Name \_\_\_\_\_

Date \_\_\_\_\_

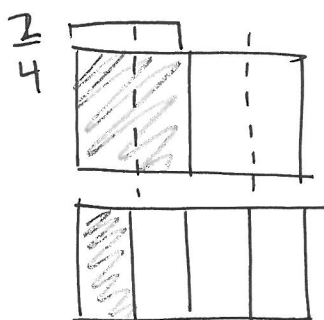
1. Use a tape diagram to represent each addend. Decompose one of the tape diagrams to make like units. Then write the complete number sentence.

a.  $\frac{1}{3} + \frac{1}{6}$



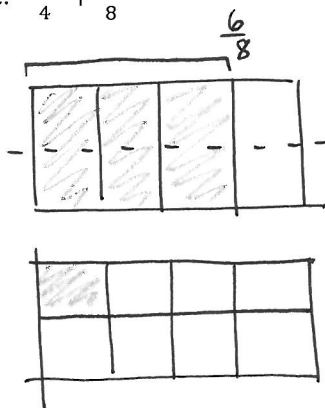
$$\frac{2}{6} + \frac{1}{6} = \frac{3}{6}$$

b.  $\frac{1}{2} + \frac{1}{4}$



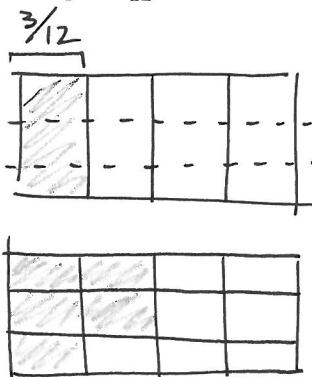
$$\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$$

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



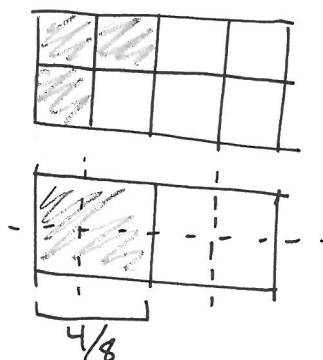
$$\frac{6}{8} + \frac{1}{8} = \frac{7}{8}$$

d.  $\frac{1}{4} + \frac{5}{12}$



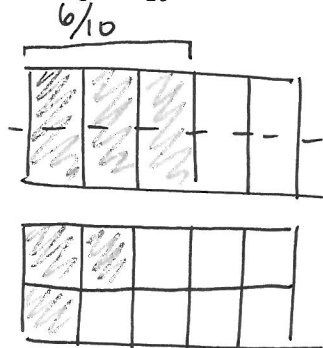
$$\frac{3}{12} + \frac{5}{12} = \frac{8}{12}$$

e.  $\frac{3}{8} + \frac{1}{2}$



$$\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$$

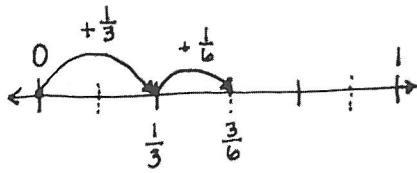
f.  $\frac{3}{5} + \frac{3}{10}$



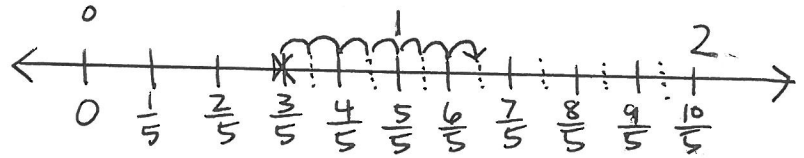
$$\frac{6}{10} + \frac{3}{10} = \frac{9}{10}$$

2. Estimate to determine if the sum is between 0 and 1 or 1 and 2. Draw a number line to model the addition. Then write a complete number sentence. The first one has been completed for you.

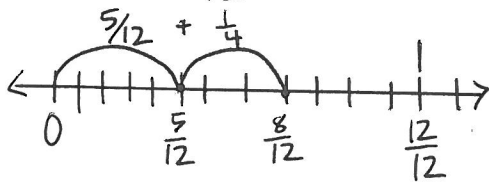
a.  $\frac{1}{3} + \frac{1}{6}$       $\frac{2}{6} + \frac{1}{6} = \frac{3}{6}$



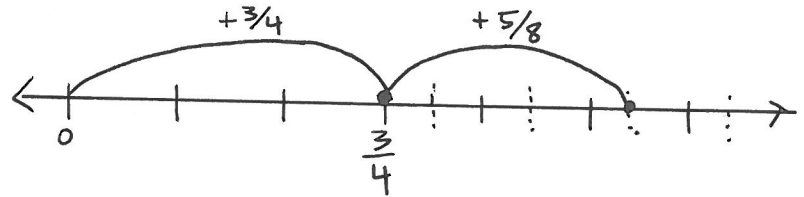
b.  $\frac{3}{5} + \frac{7}{10} = \frac{13}{10}$



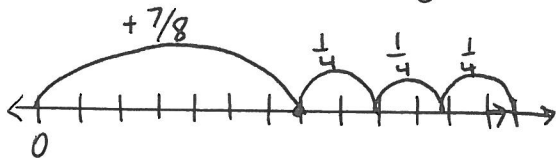
c.  $\frac{5}{12} + \frac{1}{4} = \frac{8}{12}$



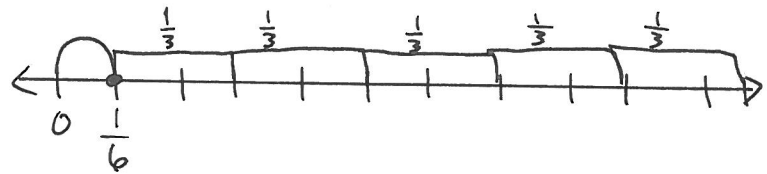
d.  $\frac{3}{4} + \frac{5}{8} = \frac{11}{8}$



e.  $\frac{7}{8} + \frac{3}{4} = \frac{13}{8}$



f.  $\frac{1}{6} + \frac{5}{3} = \frac{11}{6}$



3. Solve the following addition problem without drawing a model. Show your work.

$$\frac{5}{6} + \frac{1}{3} = \frac{5}{6} + \frac{2}{6} = \frac{7}{6}$$

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