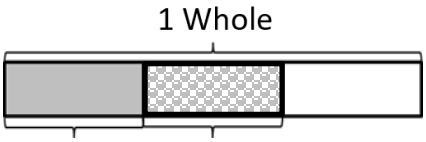
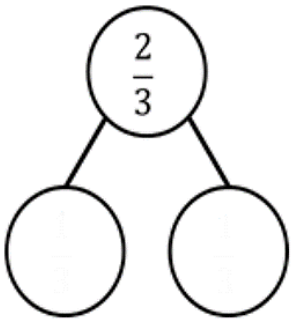
Name _____

1. Write a number sentence and draw a number bond to show the shaded part.

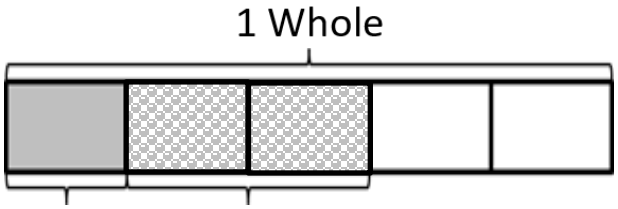
a.



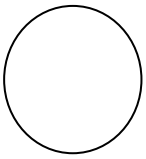
$\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$



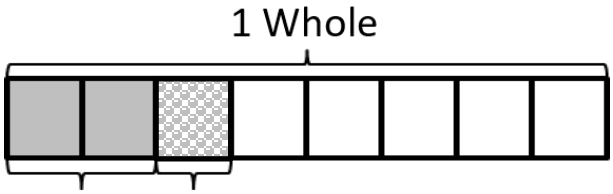
b.



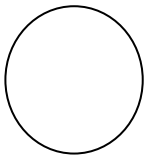
$\frac{\square}{\square} + \frac{\square}{\square} = \frac{3}{\square}$



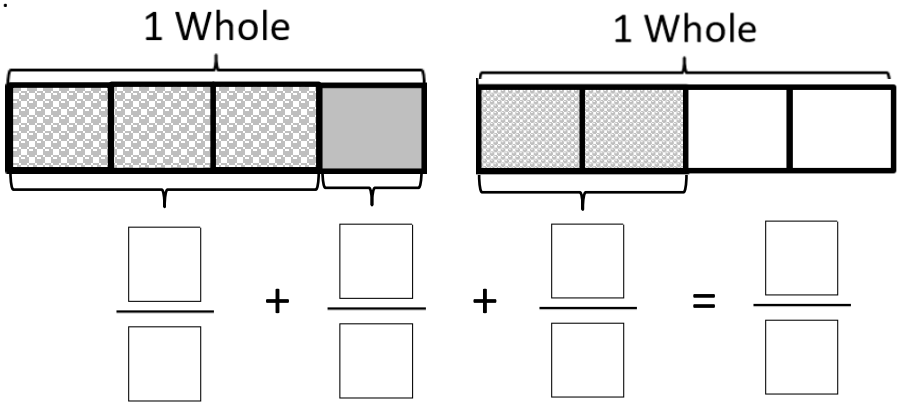
c.



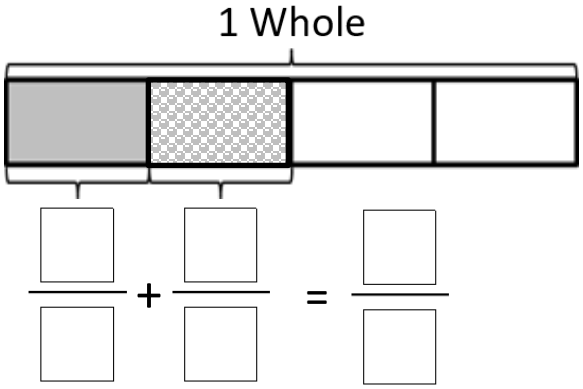
$\frac{\square}{\square} + \frac{\square}{\square} = \frac{\square}{\square}$



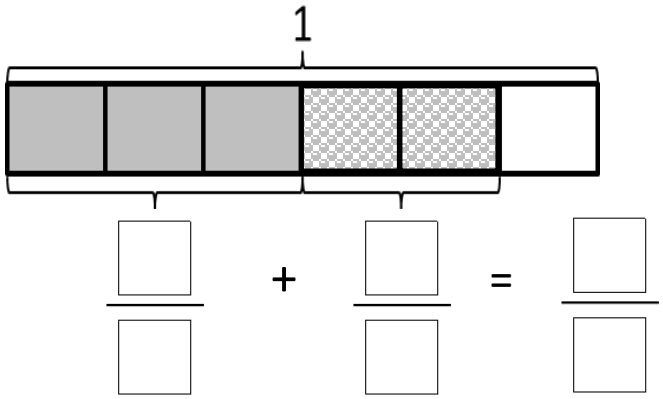
d.



d.



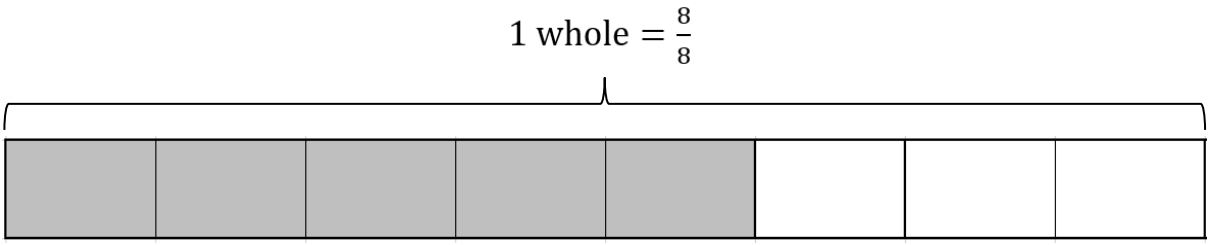
e.



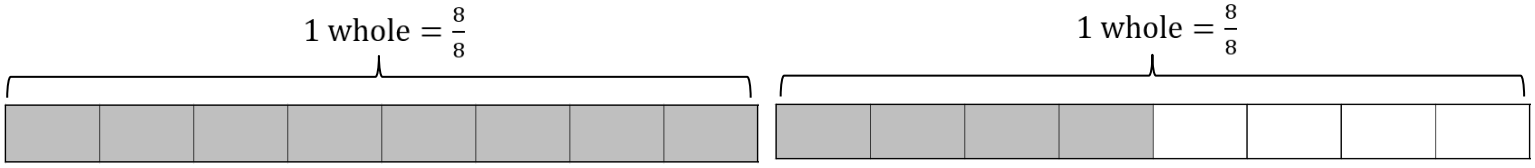
Name _____ Date _____

1. Circle each addend on the tape diagram to show how the fraction is decomposed.

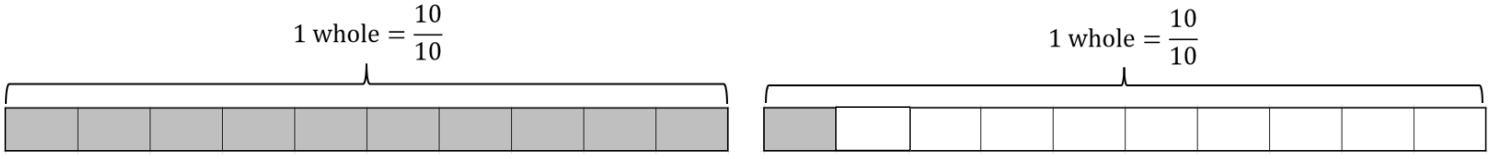
a. $\frac{5}{8} = \frac{2}{8} + \frac{2}{8} + \frac{1}{8}$



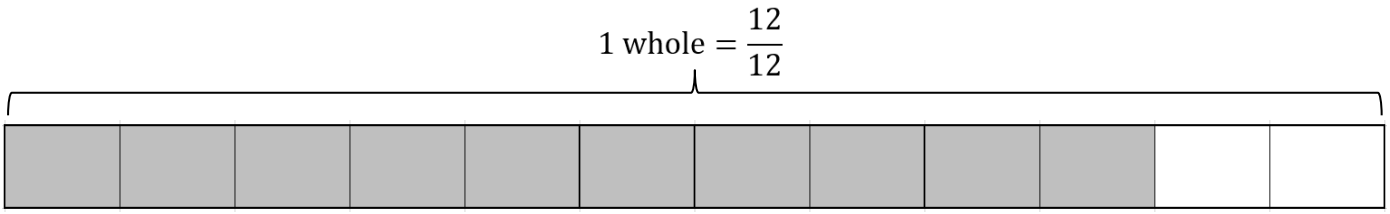
b. $\frac{12}{8} = \frac{6}{8} + \frac{2}{8} + \frac{4}{8}$



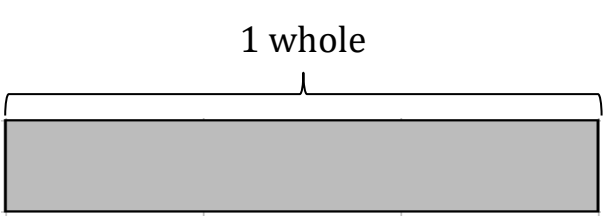
c. $\frac{11}{10} = \frac{5}{10} + \frac{5}{10} + \frac{1}{10}$

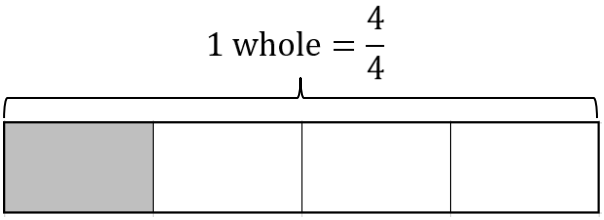


d. $\frac{10}{12} = \frac{6}{12} + \frac{2}{12} + \frac{2}{12}$

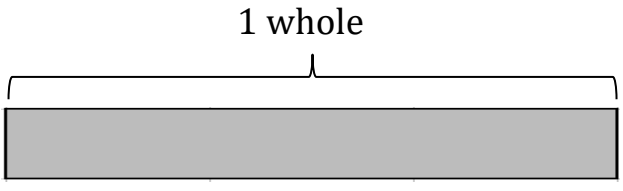


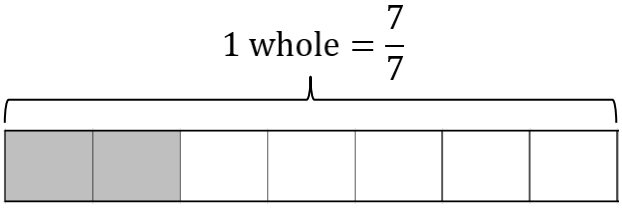
e. $1\frac{1}{4} = 1 + \frac{1}{4}$





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

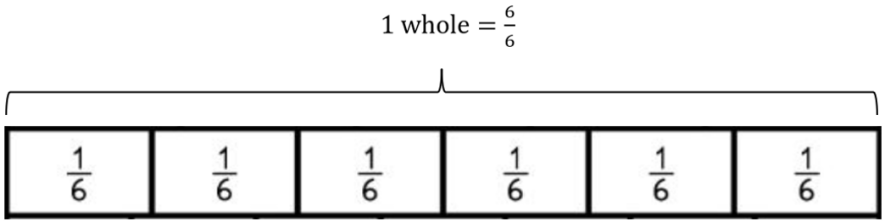




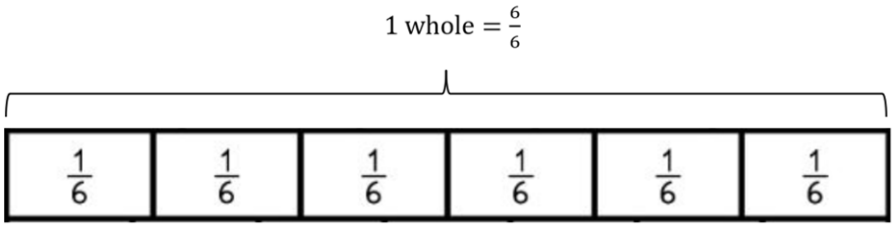
Name _____ Date _____

1. Step 1: Shade a tape diagram of the given fraction.
   Step 2: Record the decomposition as a sum of fractions in **two different ways**.

a.

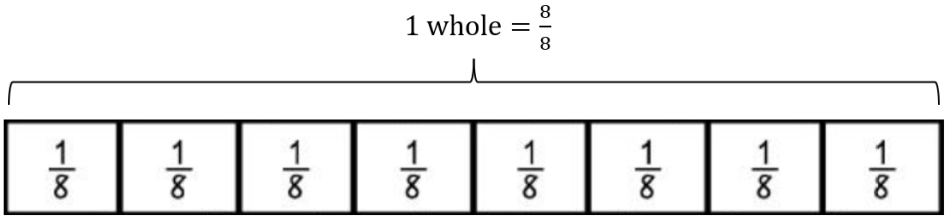


$\frac{5}{6} =$ _____

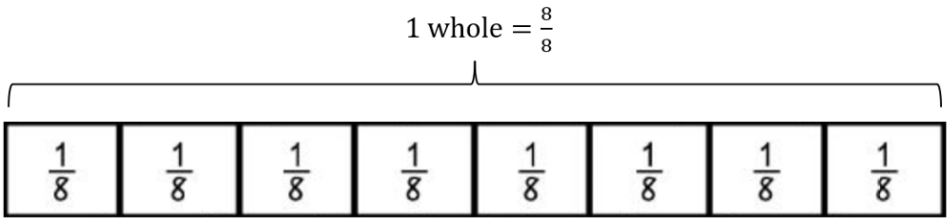


$\frac{5}{6} =$ _____

b.

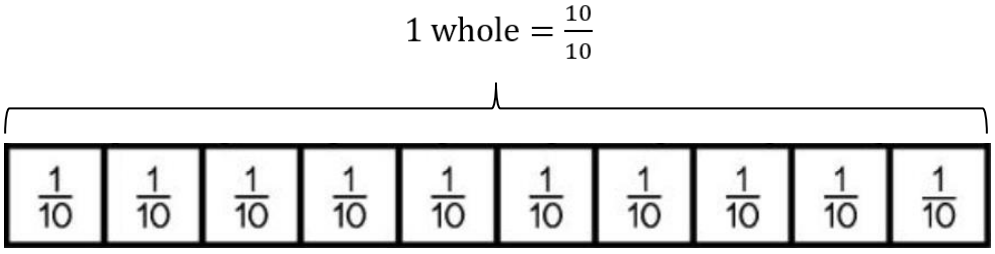


$\frac{6}{8} =$ _____

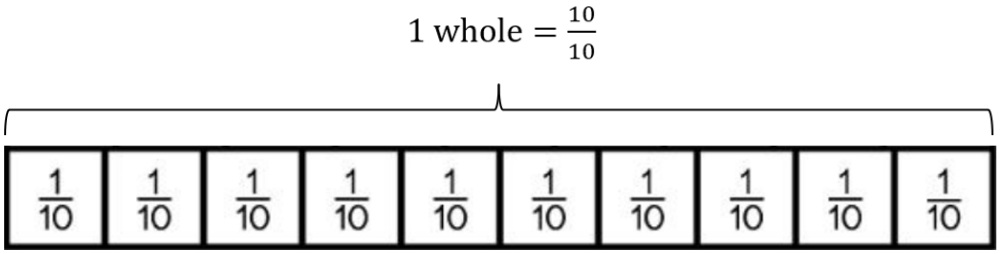


$\frac{6}{8} =$ _____

c.



$\frac{7}{10} =$ _____



$\frac{7}{10} =$ _____

2. Write two different number sentences showing how you can decompose the fraction.

a. $\frac{10}{12}$ = _____

$\frac{10}{12}$ = _____

b. $\frac{5}{4}$ = _____

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

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

$\frac{6}{5}$ = _____

d. $\frac{5}{4}$ = _____

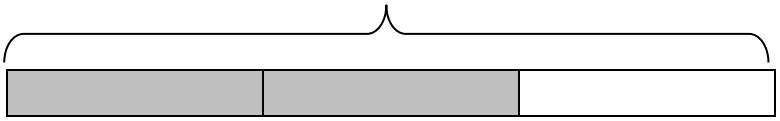
$\frac{5}{4}$ = _____

Name _____

1. Decompose each fraction as a sum of unit fractions.
   Write the equivalent multiplication sentence.

Multiplication Sentence

a. 1 whole



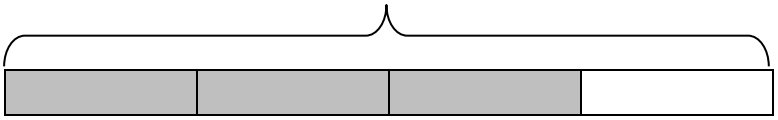
$\frac{2}{3}$ = _____ groups of _____

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

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

---

b. 1 whole

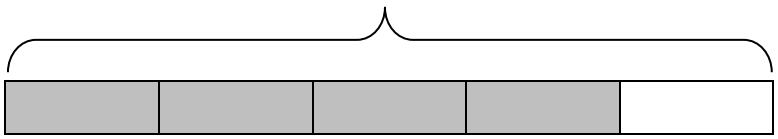


$\frac{3}{4}$ = _____ groups of _____

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

---

c. 1 whole

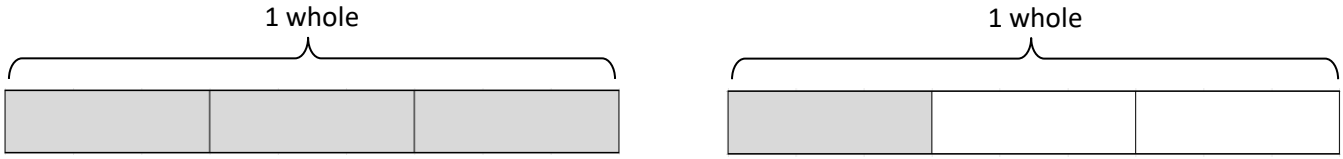


$\frac{4}{5}$ = _____ groups of _____

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

2. Write the following fractions as the **sum** of two **products**.

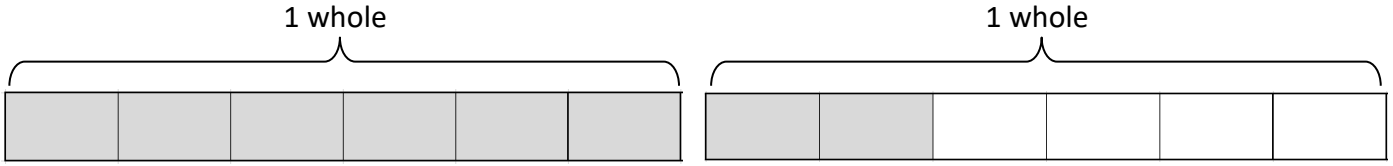
a.



$\frac{4}{3}$ = (_____ groups of _____) AND (_____ group of _____)

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

b.



$\frac{8}{6}$ = (_____ groups of _____) AND (_____ groups of _____)

$\frac{8}{6}$ = _____

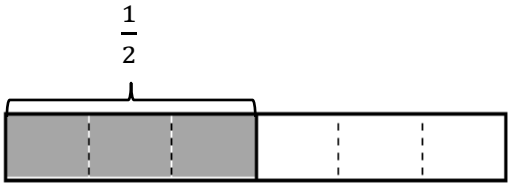
3. Write a number sentence showing the fraction as multiplying the **unit fraction**.

$\frac{3}{5}$ = _____ groups of _____ = _____

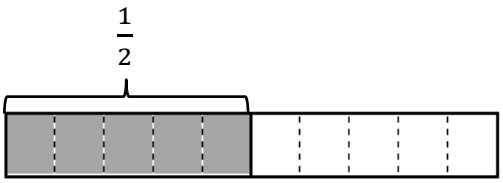
Name _____

1. The total length of each tape diagram represents 1 whole. Show the shaded unit fractions as the sum of smaller **unit fractions** in **two different ways**.

a.

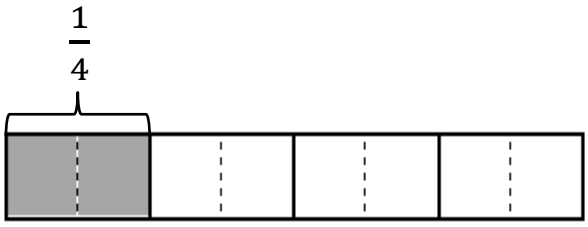


$\frac{1}{2} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

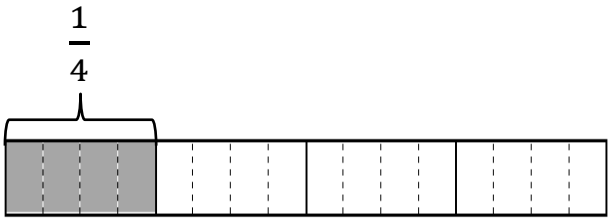


$\frac{1}{2} = \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10}$

b.



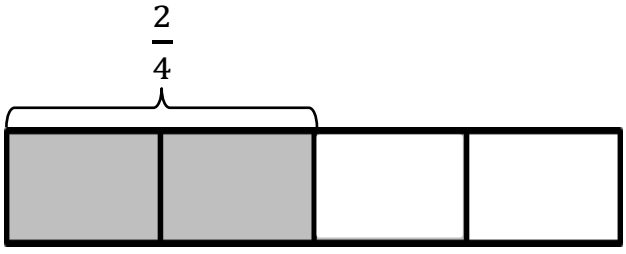
$\frac{1}{4}$ = _____ + _____



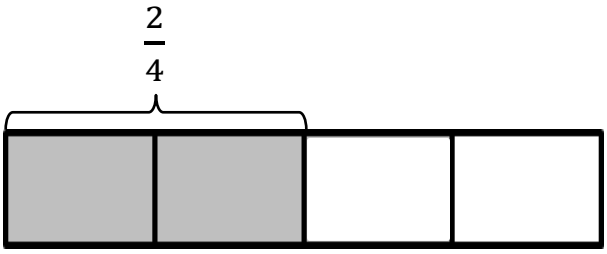
$\frac{1}{4}$ = _____ + _____ + _____ + _____

(Draw dotted lines to decompose the pieces.)

c.

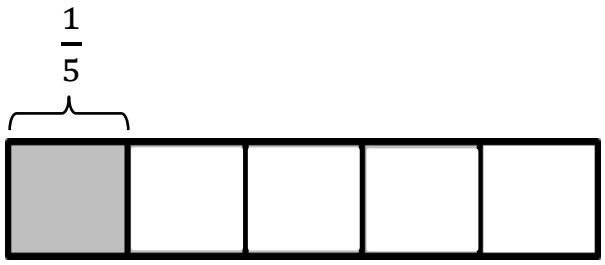


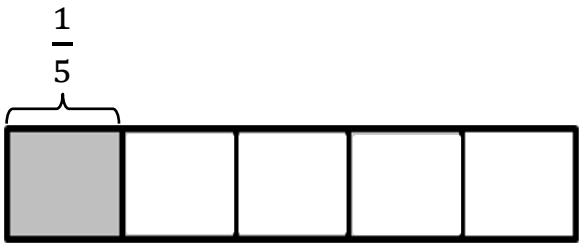
_____ = _____



_____ = _____

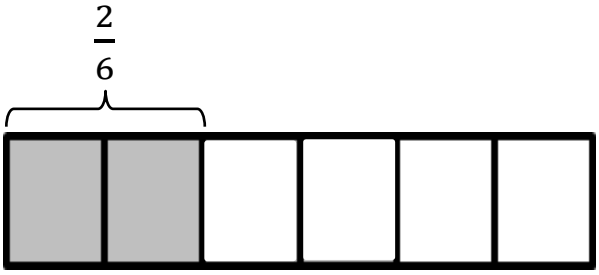
d.

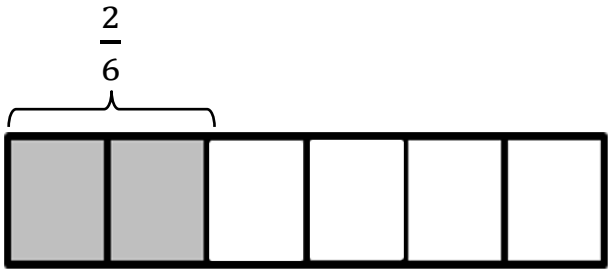




_____ = _____ _____ = _____

e.

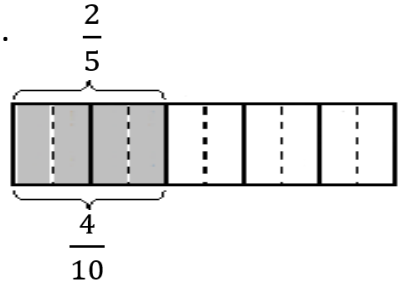




_____ = _____ _____ = _____

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

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



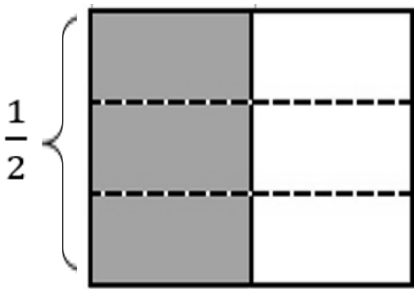
b. $\frac{3}{6} = \frac{6}{12}$

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

Name _____

1. Decompose each rectangle into the number of rows shown. Write the shaded area as both a sum of unit fractions and as a multiplication sentence.

a. 3 rows



= Equivalent Fractions: $\frac{1}{2} =$ _____

\+ Sum of unit fractions: $\frac{1}{2} =$ _____

X Multiplication Sentence:

$\frac{1}{2} =$ = _____ groups of _____ ➡ $\frac{1}{2} =$ _____ x _____

---

b. 2 rows

= Equivalent Fractions: $\frac{1}{4} =$ _____

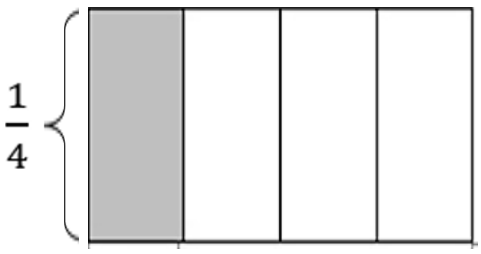
\+ Sum of unit fractions: $\frac{1}{4} =$ _____

X Multiplication Sentence:

$\frac{1}{4} =$ = _____ groups of _____ ➡ $\frac{1}{4} =$ _____ x _____

---

c. 3 rows



= Equivalent Fractions: $\frac{1}{4} =$ _____

\+ Sum of unit fractions: $\frac{1}{4} =$ _____

X Multiplication Sentence:

$\frac{1}{4} =$ = _____ groups of _____ ➡ $\frac{1}{4} =$ _____ x _____

2. Show the equivalent fractions as a sum of unit fractions and as a multiplication sentence.

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

+ Sum of unit fractions:

$\frac{1}{3}$ = _____

X Multiplication:

$\frac{1}{3}$ = = _____ groups of _____ ➡ $\frac{1}{3}$ = _____ x _____

---

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

+ Sum of unit fractions:

$\frac{1}{3}$ = _____

X Multiplication:

$\frac{1}{3}$ = = _____ groups of _____ ➡ $\frac{1}{3}$ = _____ x _____

---

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

+ Sum of unit fractions:

$\frac{1}{5}$ = _____

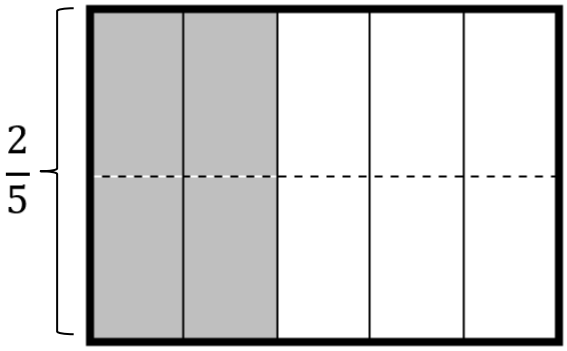
X Multiplication:

$\frac{1}{5}$ = = _____ groups of _____ ➡ $\frac{1}{5}$ = _____ x _____

Name _____

1. Decompose each rectangle into the number of pieces shown. Write the equivalent fractions as both a sum of unit fractions and as a multiplication sentence.

a. **Tenths**



= Equivalent Fractions: $\frac{2}{5} = \_\_\_\_$

X Multiplication sentence:

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

$$\frac{2}{5} = \left(\frac{1}{10} + \frac{1}{10}\right) + \left(\frac{1}{10} + \frac{1}{10}\right) = \frac{4}{10}$$

---

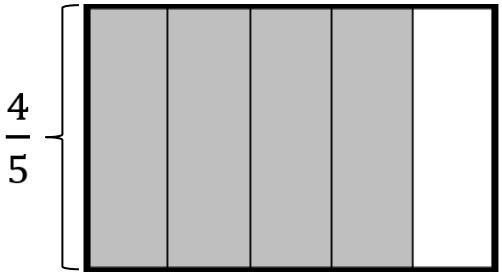
b. **Eighths**

= Equivalent Fractions: _____ = _____

X Multiplication sentence: _____

$$\frac{2}{4} = (\_\_\_\_\_) + (\_\_\_\_\_) = \_\_\_\_$$

c. Tenths



= Equivalent Fractions: _____ = _____

X Multiplication sentence: _____

$\frac{4}{5}$ = (_____) + (_____) + (_____) + (_____) = _____

---

2. Use fraction pieces to show the equivalent fractions. Write the equivalent fractions as the sum of unit fractions and as multiplication sentences.

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

$\frac{2}{3}$ = (_____) + (_____) = _____

X Multiplication sentence: _____

Name _____

2. Complete the tables.

a.

Yards	Feet
1	
2	
3	
5	
10	

b.

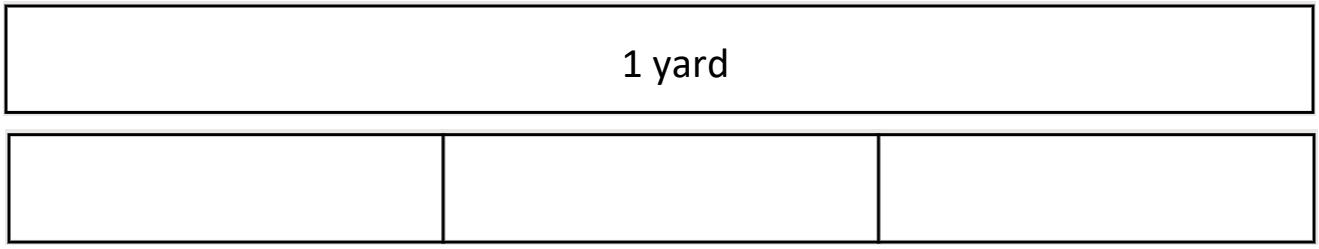
Feet	Inches
1	
2	
5	
10	
15	

c.

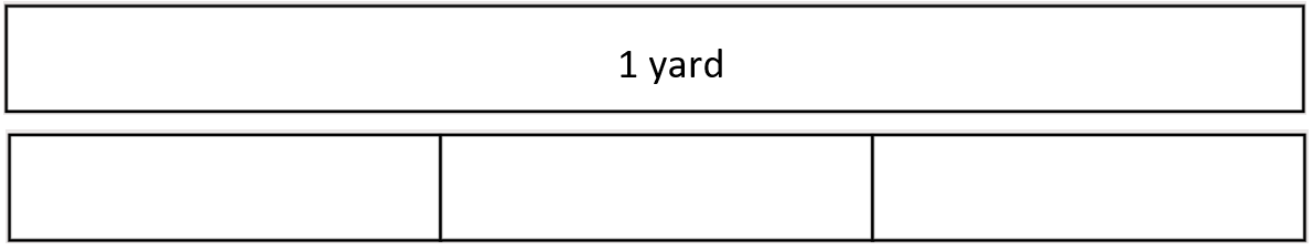
Yards	Inches
1	
2	
3	
5	
10	

3. Shade in pictures to show the fractions.

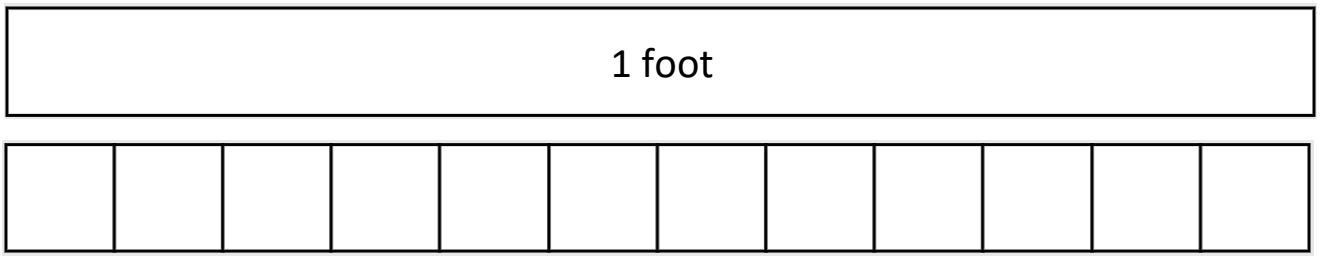
a. 2 feet equal what fraction of a yard? 2 feet = _____ yard



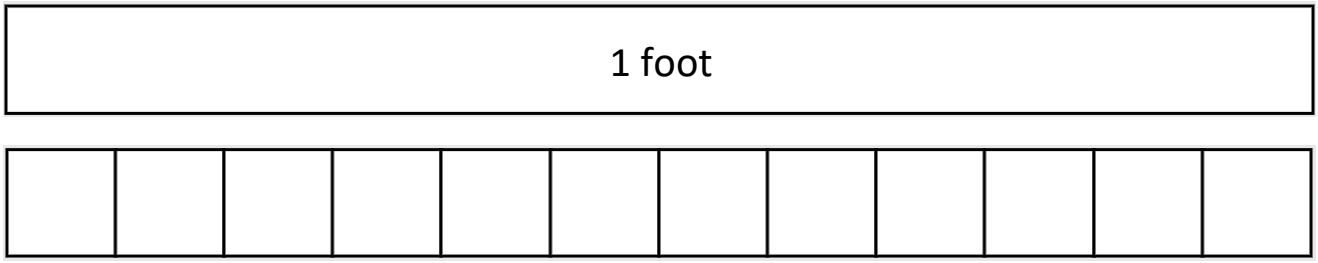
b. 1 foot equals what fraction of a yard? 1 foot = _____ yard



c. 5 inches equal what fraction of a foot? 5 inches = _____ foot



d. 10 inches equal what fraction of a foot? 10 inches = _____ foot



3. Relate inches and yards as fractions.

a. 1 inch equals what fraction of a yard? 1 inch = _____ yard

b. 12 inches equal what fraction of a yard? 12 inches = _____ yard

c. 32 inches equal what fraction of a yard? 32 inches = _____ yard

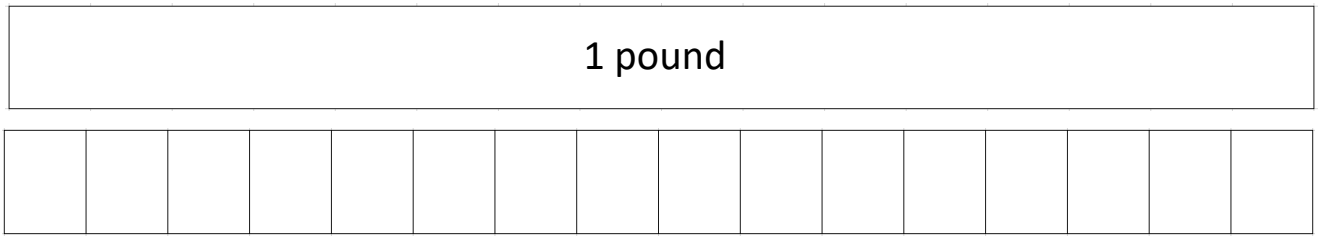
Name _____

1. Complete the conversion table.

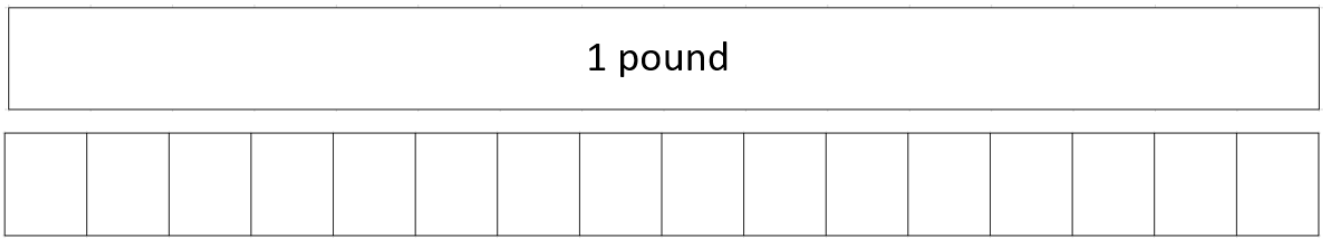
Pounds	Ounces
1	
2	
4	
10	

2. Shade in the tape diagrams to show how ounces relate to pounds.

a. 5 ounces = _____ of a pound

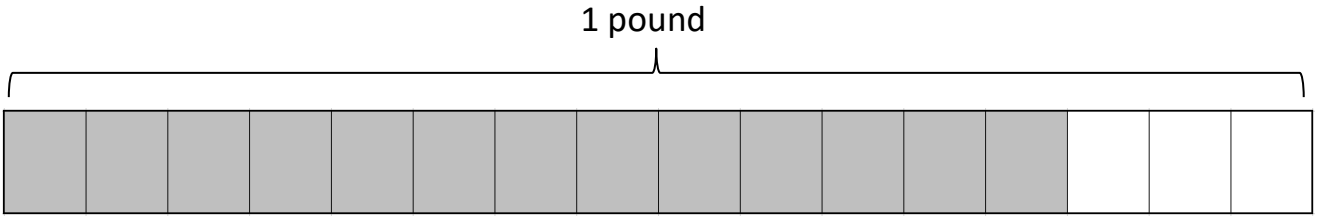


a. 3 ounces = _____ of a pound

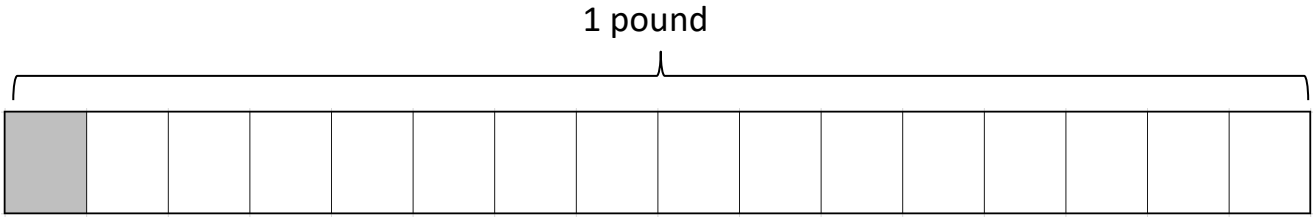


3. Show the shaded portion as ounces in unit form AND as a fraction of a pound.

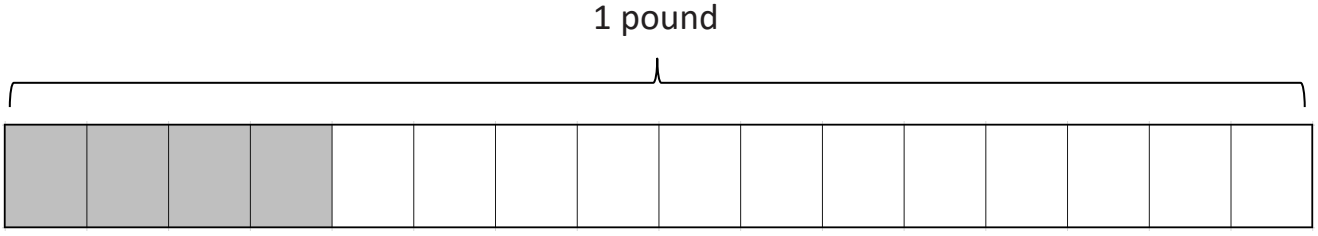
a. Unit form: _____ Fraction of a pound: _____



b. Unit form: _____ Fraction of a pound: _____



c. Unit form: _____ Fraction of a pound: _____



Name _____

1. Fill in the blanks.

a. 1 gallon = _____ quarts

b. 1 gallon = _____ pints

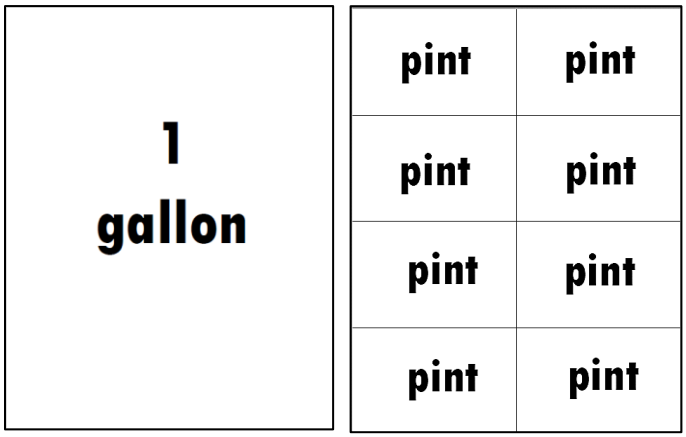
c. 1 gallon = _____ cups

d. 1 quart = _____ pints

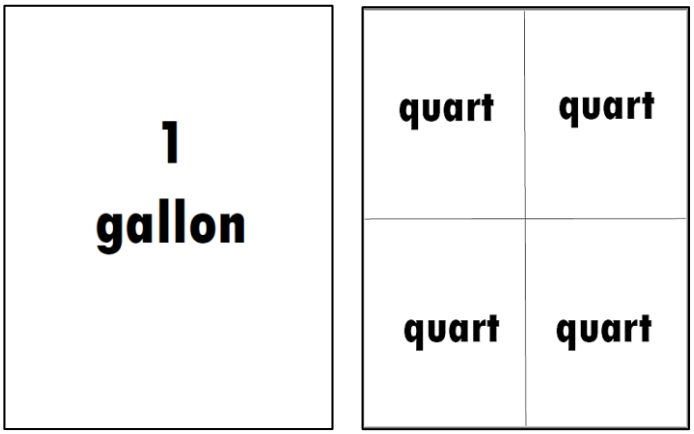
e. 1 pint = _____ cups

2. Shade in the area models to show how capacity relates to fractions.

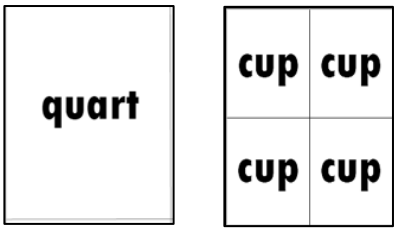
a. 6 pints = _____ of a gallon



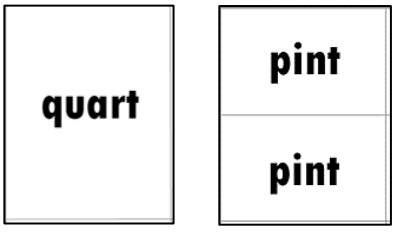
b. 1 quart = _____ of a gallon



c. 1 cup = _____ of a quart

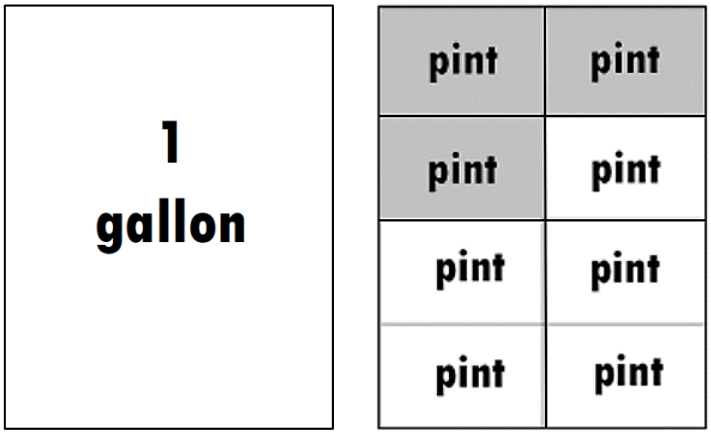


b. 1 pint = _____ of a quart

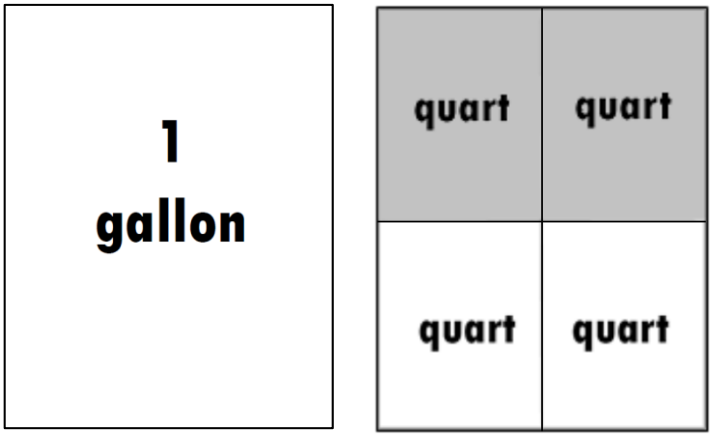


3. Name the shaded portion in unit form AND as a fraction.

a. Unit form = _____ Fraction of a gallon = _____



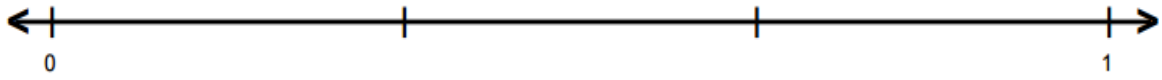
b. Unit form = _____ Fraction of a gallon = _____



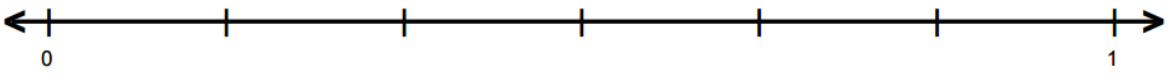
Name _____

1. Plot the following points on the number lines.

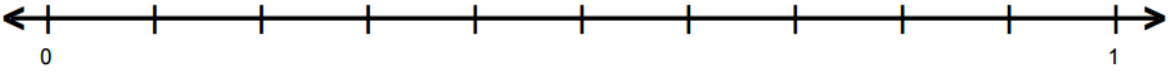
a. $\frac{2}{3}$



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



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



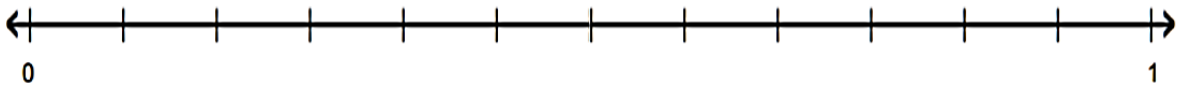
2. Use the number lines in Part (1) to compare the fractions by writing >, <, or = .

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

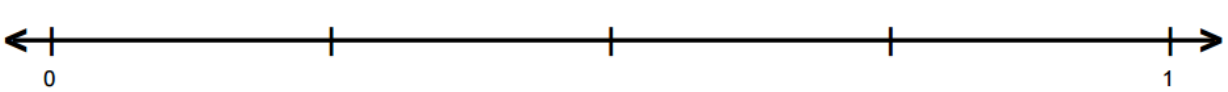
b. $\frac{4}{10}$ _____ $\frac{1}{6}$

3. Plot the following points on the number lines.

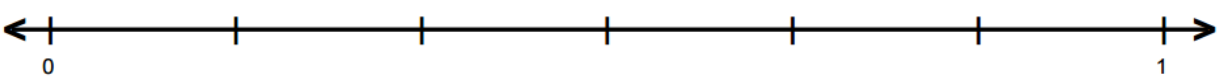
a. $\frac{5}{12}$



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



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



4. Select two fractions from Part (1), and use the number lines to compare them by writing >, <, or =.

_____

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

a. $\frac{1}{6}$ _____ $\frac{1}{4}$

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

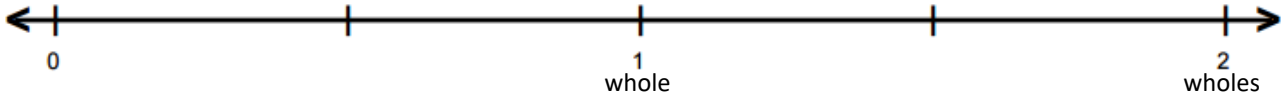
c. $\frac{3}{4}$ _____ $\frac{3}{12}$

d. $\frac{4}{6}$ _____ $\frac{4}{12}$

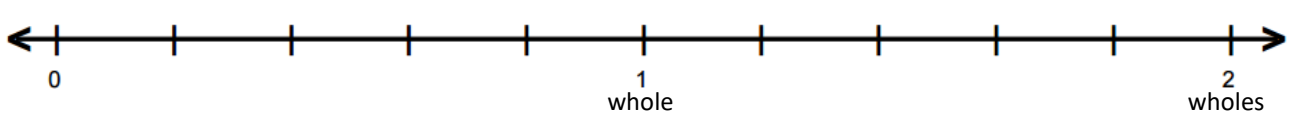
Name _____

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

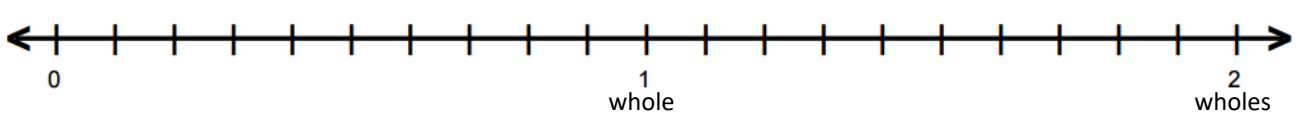
a. $\frac{3}{2}$



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



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



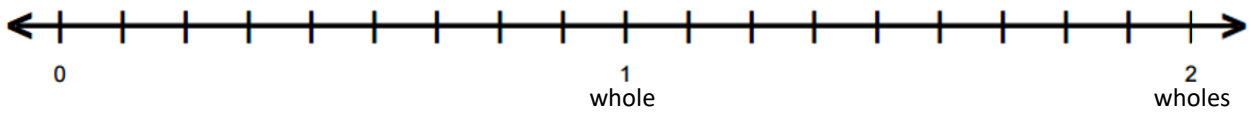
2. Use the number lines in Problem 1 to compare the fractions by writing >, <, or = .

a. $1\frac{1}{2}$ _____ $1\frac{4}{10}$

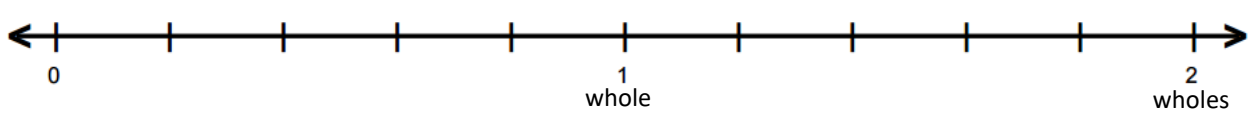
b. $1\frac{1}{2}$ _____ $1\frac{4}{5}$

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

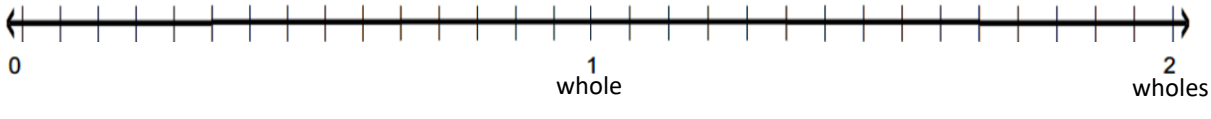
a. $\frac{12}{9}$



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



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



4. Use the number lines in Problem 3 to explain whether $\frac{12}{9}$ or $\frac{18}{15}$ is greater.

5. Compare the fractions given below by writing > or < on the lines. Use the number lines on the next page if needed.

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. $\frac{8}{9}$ _____ $\frac{3}{2}$

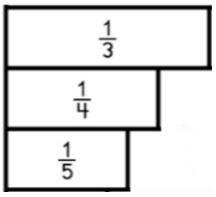
g. $\frac{7}{8}$ _____ $\frac{11}{10}$

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

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

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

Name _____



As the number in the denominator gets bigger, the size of the fraction gets _____.

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

a. 1 third _____ 1 sixth	b. 2 thirds _____ 2 sixths
c. 1 fourth _____ 1 fifth	d. 3 fourths _____ 3 fifths

2. Compare by reasoning about the following pairs of fractions with the same numerators. Use >, <, or =.

a. Since $\frac{1}{6}$ _____ $\frac{1}{5}$ then $\frac{3}{6}$ _____ $\frac{3}{5}$

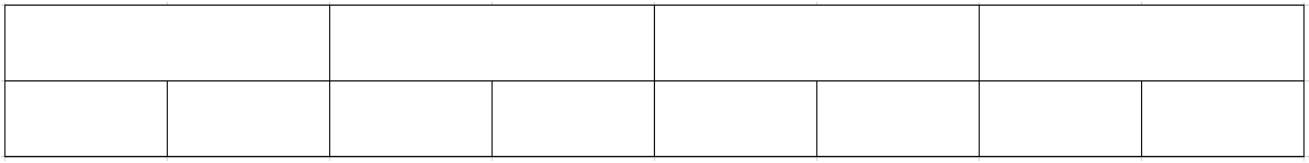
b. Since $\frac{1}{3}$ _____ $\frac{1}{2}$ then $\frac{2}{3}$ _____ $\frac{2}{2}$

c. Since $\frac{1}{8}$ _____ $\frac{1}{10}$ then $\frac{4}{8}$ _____ $\frac{4}{10}$

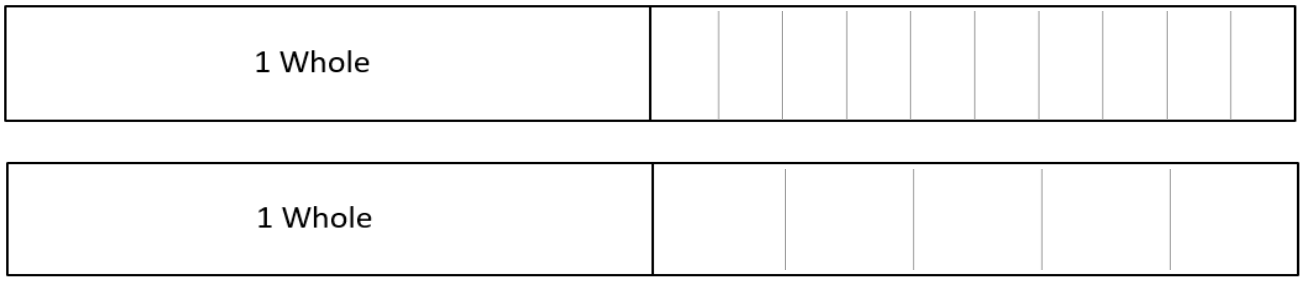
3. Shade in two tape diagrams to model each pair of the following fractions. Use >, <, or = to compare.

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

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



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

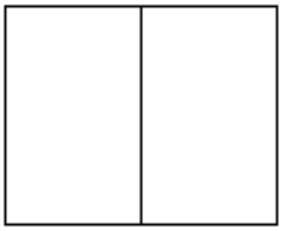


Name _____

1. Draw an area model for each pair of fractions to make like denominators. Compare the two fractions by writing >, <, or = on the line.

a. $\frac{1}{2}$ _____<_____ $\frac{3}{5}$

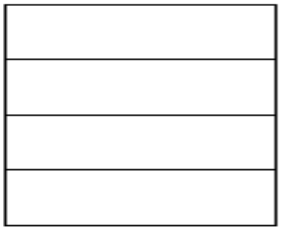
$\frac{1\times5}{2\times5} = \frac{5}{10}$



$\frac{3\times2}{5\times2} = \frac{6}{10}$

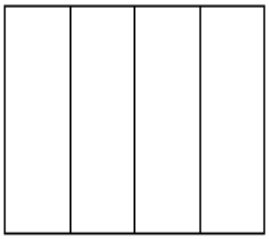
$\frac{5}{10} < \frac{6}{10}$ so $\frac{1}{2} < \frac{3}{5}$

b. $\frac{2}{3}$ _____ $\frac{3}{4}$



c. $\frac{2}{3}$ _____ $\frac{4}{5}$

d. $\frac{2}{4}$ _____ $\frac{1}{3}$



2. Rename the fractions in order to compare each pair of fractions. Write >, <, or =.

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

$\frac{2\times4}{3\times4} =$ $\frac{2\times3}{4\times3} =$

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

$\frac{4\times2}{7\times2} =$ $\frac{1\times7}{2\times7} =$

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

$\frac{\times}{\times} =$ $\frac{\times}{\times} =$

d. $\frac{2}{3}$ _____ $\frac{5}{8}$

$\frac{\times}{\times} =$ $\frac{\times}{\times} =$

e. $\frac{1}{4}$ _____ $\frac{2}{8}$

$\frac{\times}{\times} =$ $\frac{\times}{\times} =$

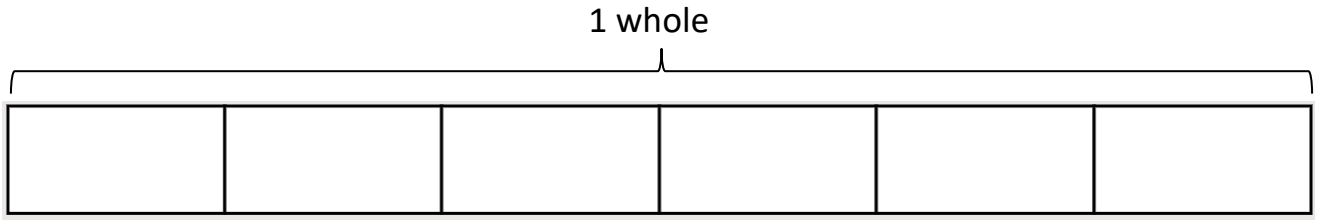
f. $\frac{2}{3}$ _____ $\frac{3}{6}$

$\frac{\times}{\times} =$ $\frac{\times}{\times} =$

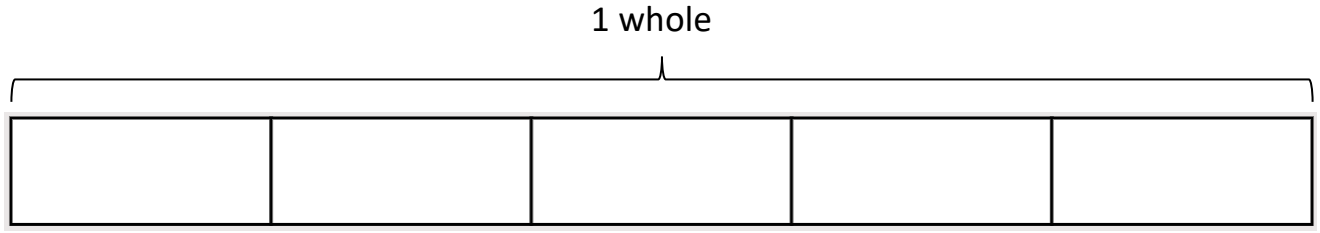
Name _____ Date _____

1. Shade in fractions to find the sum.

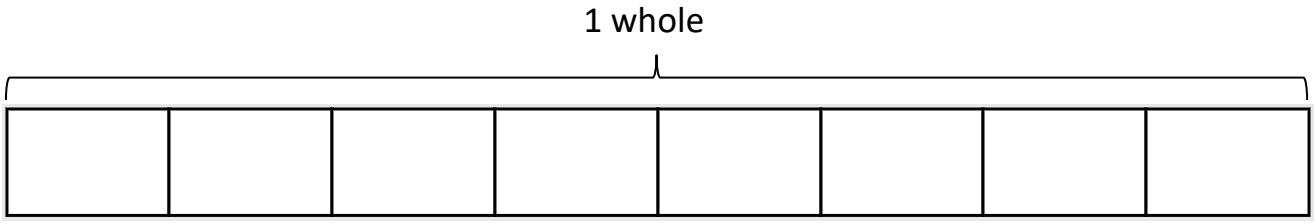
a. 3 sixths + 2 sixths = _____



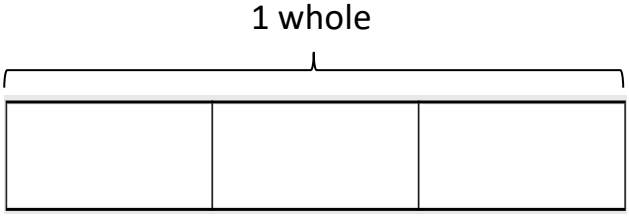
b. 2 fifths + 3 fifths = _____

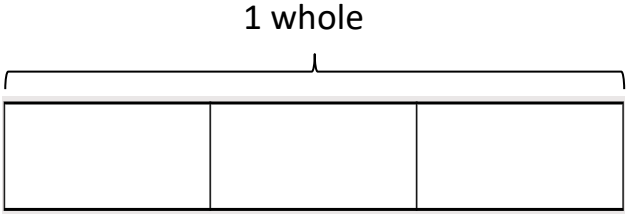


c. $\frac{3}{8} + \frac{2}{8} =$ _____



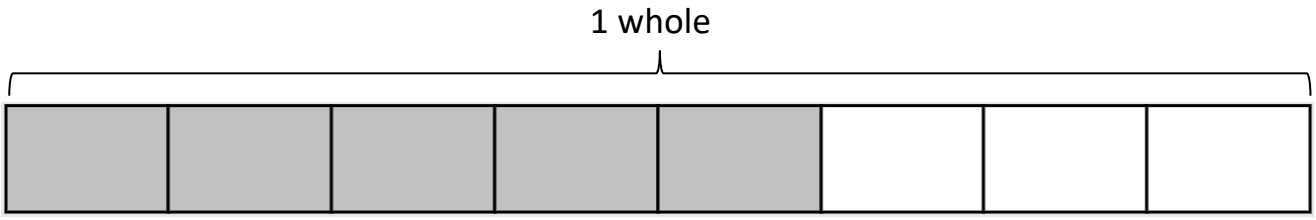
c. $\frac{2}{3} + \frac{2}{3} =$ _____



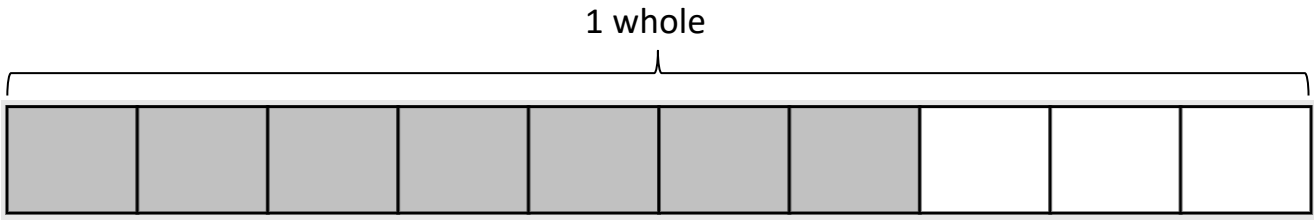


2. Cross off fractions to find the difference.

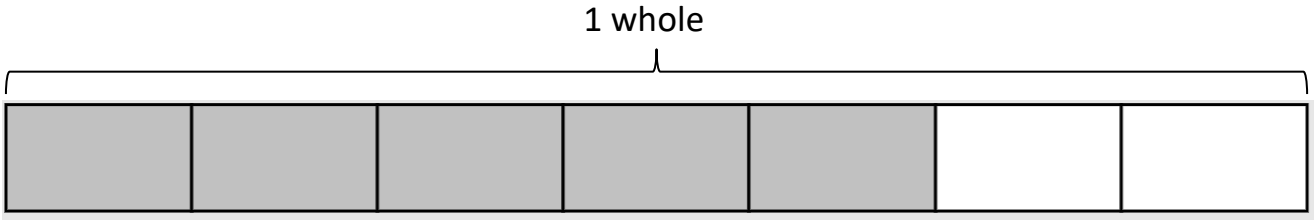
a. 5 eighths - 2 eighths = _____



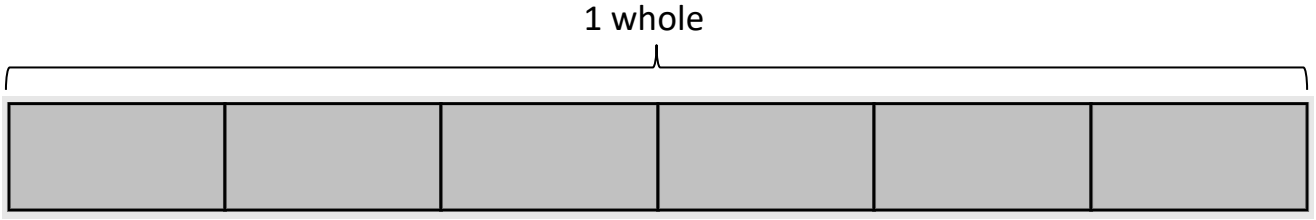
b. 7 tenths - 5 tenths = _____



c. $\frac{5}{7} - \frac{2}{7} =$ _____



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



Name _____ Date _____

1. Solve. Write the difference in unit form.

   a. 3 sixths – 2 sixths =

   _____

   b. 5 tenths – 3 tenths =

   _____

   c. 3 fourths – 2 fourths =

   _____

   d. 5 thirds – 2 thirds =

   _____

2. Solve.

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

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

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

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

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

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

3. Solve. Write the sum in unit form.

   a. 2 fourths + 3 fourths = _____

   b. 3 eighths + 4 eighths = _____

4. Solve.

a. $\frac{5}{11} + \frac{6}{11} =$ _____

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

c. $\frac{3}{4} + \frac{3}{4} =$ _____

d. $\frac{8}{12} + \frac{2}{12} =$ _____

e. $\frac{5}{8} + \frac{1}{8} =$ _____

f. $\frac{8}{10} + \frac{2}{10} =$ _____

g. $\frac{3}{5} + \frac{1}{5} =$ _____

h. $\frac{4}{3} + \frac{2}{3} =$ _____

5. Put a box around the sums above that are equal to 1 whole.

6. Circle the sums above that are greater than 1 whole.

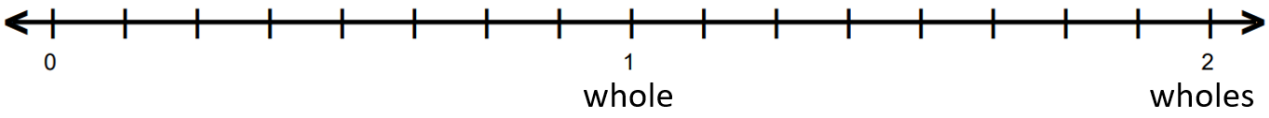
Name _____

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

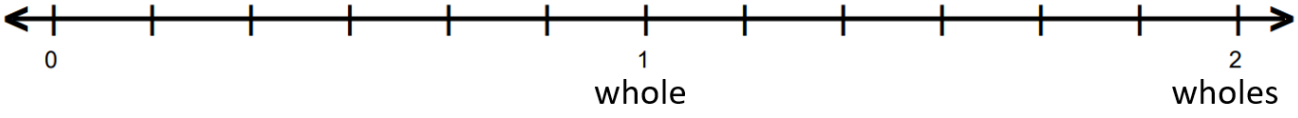
a. $\frac{5}{6}, \frac{4}{6}, \frac{9}{6}$ _____ + _____ = _____ _____ + _____ = _____ _____ - _____ = _____ _____ - _____ = _____	b. $\frac{5}{9}, \frac{13}{9}, \frac{8}{9}$ _____ + _____ = _____ _____ + _____ = _____ _____ - _____ = _____ _____ - _____ = _____

2. Find the sum by adding on the number line.

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

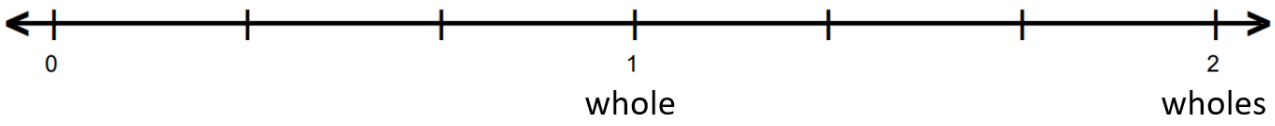


b. $1\frac{3}{6} + \frac{3}{6} =$ _____

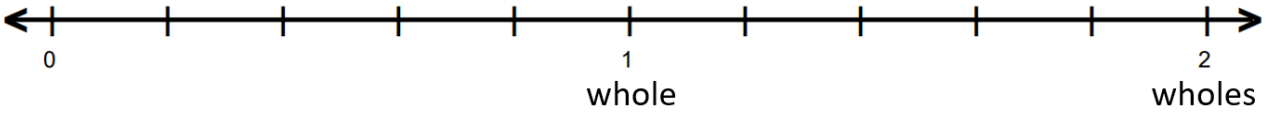


3. Find the difference by <u>counting up</u> on the number line.

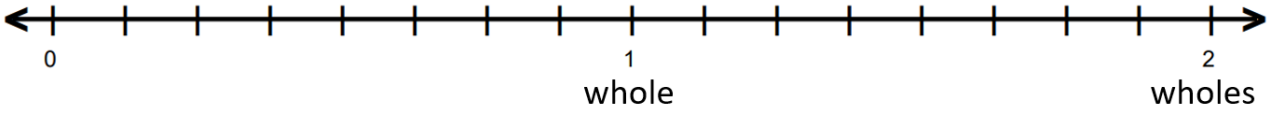
a. $1\frac{1}{3} - \frac{2}{3} =$ _____



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



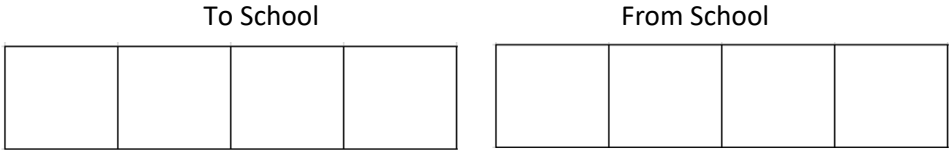
c. $1\frac{3}{8} - \frac{7}{8}$



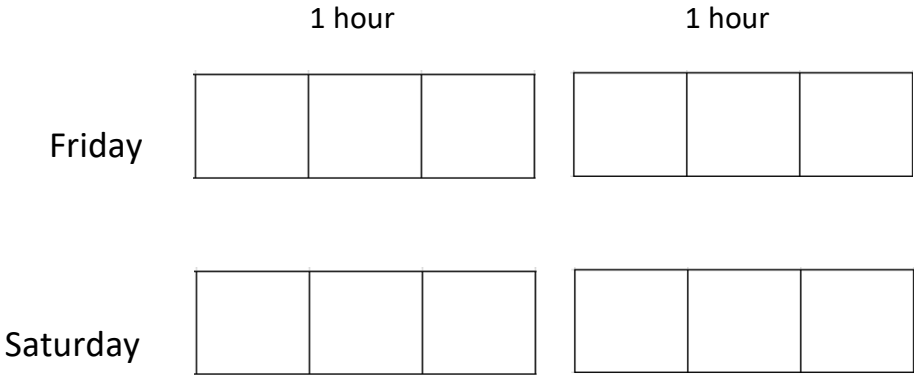
Name _____

Shade in tape diagrams to solve.

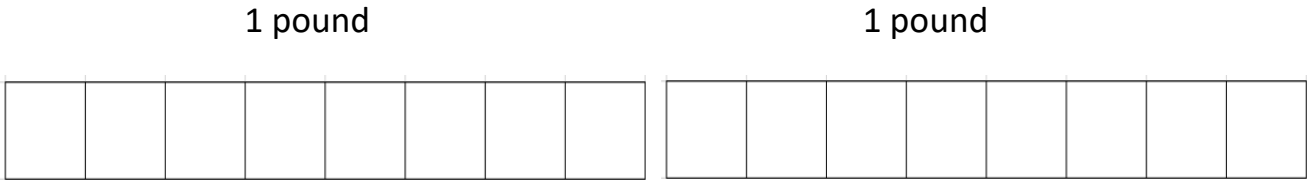
1. Elsa walked $\frac{3}{4}$ mile each way to and from school on Wednesday. How many miles did Elsa walk that day?



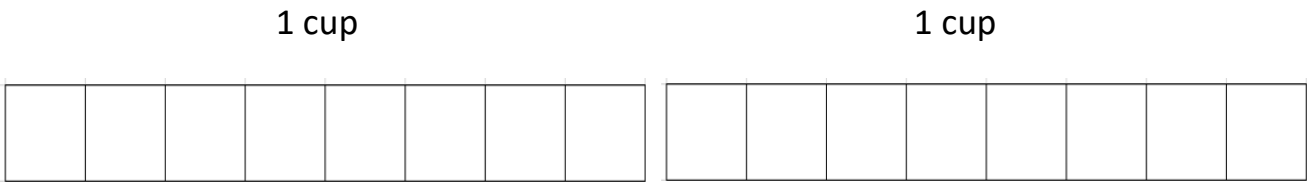
2. Zach spent $\frac{2}{3}$ hour reading on Friday and $1\frac{1}{3}$ hours reading on Saturday. How much more time did he read on Saturday than on Friday?



3. Mrs. Cash 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?



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?



Name _____

1. Circle fractions that are equivalent to a whole number. Record the whole number below the fraction.

   a. Count by 1 fourth. Start at 0 fourths. Stop at 6 fourths.

   $\frac{0}{4}$, $\frac{1}{4}$, _____

   0

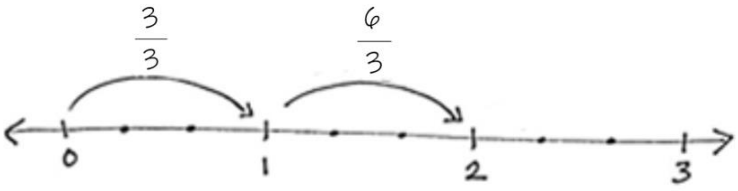
   b. Count by 1 sixth. Start at 0 sixths. Stop at 14 sixths.

2. Use parentheses to show how to make ones in the following number sentence.

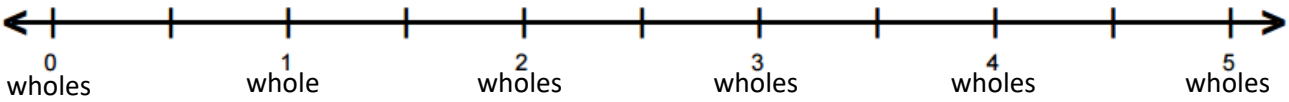
$$\frac{1}{3}+\frac{1}{3}+\frac{1}{3} + \frac{1}{3}+\frac{1}{3}+\frac{1}{3} + \frac{1}{3}+\frac{1}{3}+\frac{1}{3} + \frac{1}{3}+\frac{1}{3}+\frac{1}{3} = 4$$

3. Multiply, as shown below. Draw a number line to support your answer.

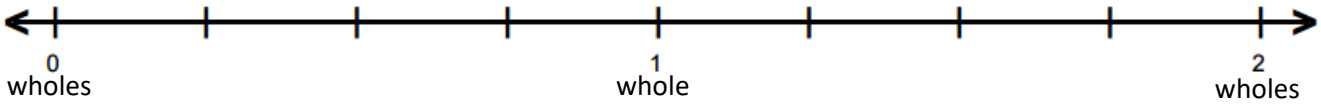
   a. $6 \times \frac{1}{3} = 2$



   b. $10 \times \frac{1}{2} =$ _____

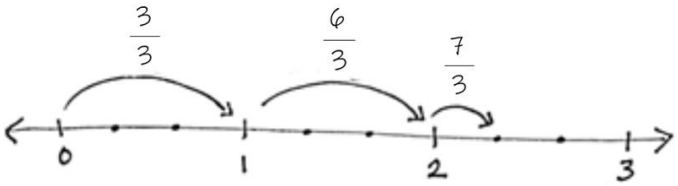


c. $8 \times \frac{1}{4} =$ _____

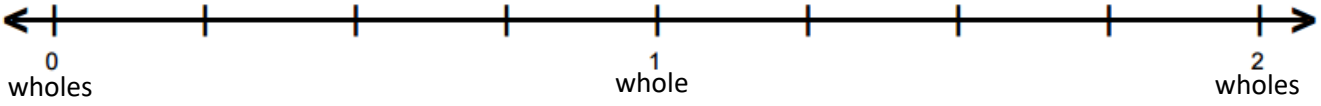


4. Multiply, as shown below. Write the product as a mixed number.

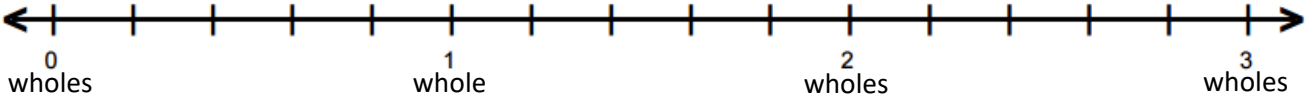
7 copies of 1 third = $7 \times \frac{1}{3} = 2\frac{1}{3}$



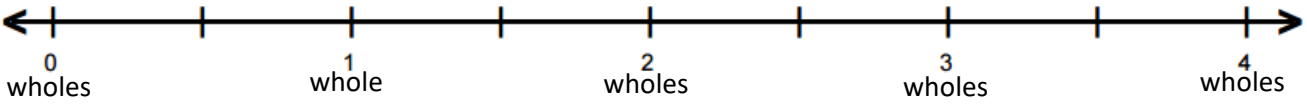
a. 7 copies of 1 fourth = _____



b. 11 groups of 1 fifth = _____



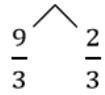
c. $7 \times \frac{1}{2} =$ _____



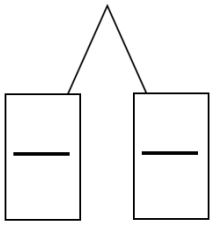
Name _____

1. Rename each fraction as a mixed number by decomposing it into two parts with a number bond.

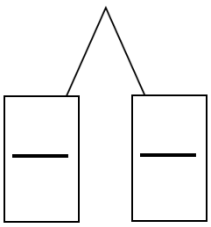
a. $\frac{11}{3} = 3 + \frac{2}{3} = 3\frac{2}{3}$



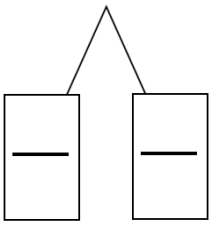
b. $\frac{13}{4}$ = _____ + _____ = _____



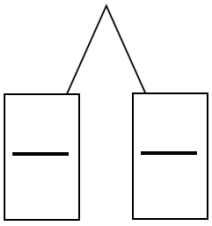
c. $\frac{16}{5}$ = _____ + _____ = _____



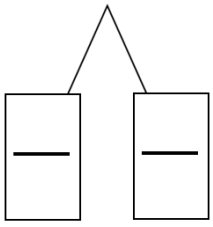
d. $\frac{9}{2}$ = _____ + _____ = _____



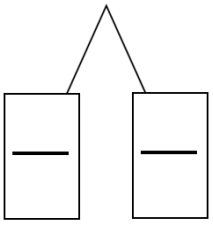
e. $\frac{14}{3}$ = _____ + _____ = _____



f. $\frac{11}{3}$ = _____ + _____ = _____



g. $\frac{13}{6}$ = _____ + _____ = _____



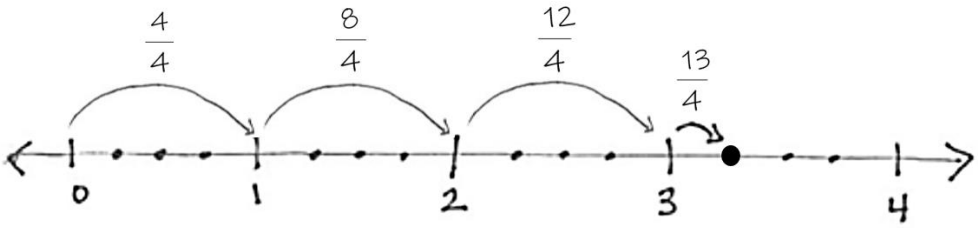
2. Use any strategy to convert each fraction to a mixed number.

a. $\frac{14}{3}$ =	b. $\frac{17}{4}$ =	c. $\frac{21}{5}$ =
d. $\frac{28}{6}$ =	e. $\frac{23}{7}$ =	f. $\frac{25}{8}$ =
g. $\frac{20}{9}$ =	h. $\frac{23}{10}$ =	i. $\frac{18}{12}$ =

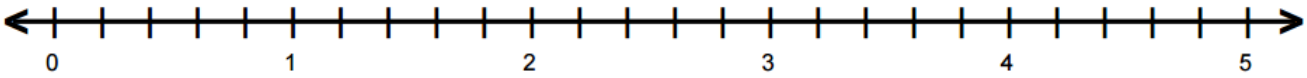
Name _____

1. Convert each mixed number to a fraction greater than 1. Use a number line to model your work.

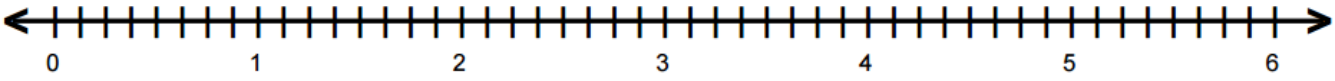
a. $3\frac{1}{4} = 3 + \frac{1}{4} = \frac{12}{4} + \frac{1}{4} = \frac{13}{4}$



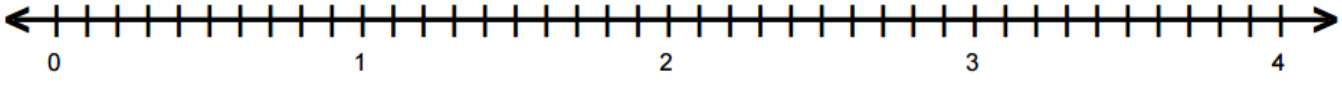
b. $4\frac{2}{5} =$ _____



c. $5\frac{3}{8} =$ _____



d. $3\frac{7}{10} =$ _____



2. Convert each mixed number to a fraction greater than 1. Show your work as in the example.

a. $3\frac{3}{4} = 3 + \frac{3}{4} = \frac{12}{4} + \frac{3}{4} = \frac{15}{4}$

b. $5\frac{2}{3}$ = _____

c. $4\frac{1}{5}$ = _____

d. $3\frac{7}{8}$ = _____

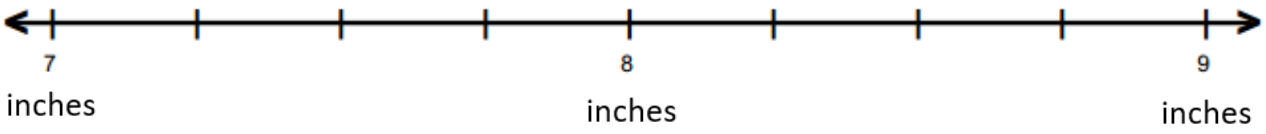
3. Use any strategy to convert each mixed number to a fraction greater than 1.

a. $2\frac{1}{3}$	b. $2\frac{3}{4}$	c. $3\frac{2}{5}$
d. $3\frac{1}{6}$	e. $4\frac{5}{12}$	f. $4\frac{2}{5}$
g. $4\frac{1}{10}$	h. $5\frac{1}{5}$	i. $5\frac{5}{6}$

Name _____

1. A group of children measured the lengths of their shoes. The measurements are shown in the table. Make a line plot to display the data.

Student	Colin	Dave	Ben	Martha	Lily	Susan	Frances	Mary
Length of Shoe (inches)	$8\frac{2}{4}$	$7\frac{3}{4}$	$7\frac{2}{4}$	$7\frac{3}{4}$	8	$7\frac{1}{4}$	$7\frac{3}{4}$	$8\frac{3}{4}$



2. Solve each problem.

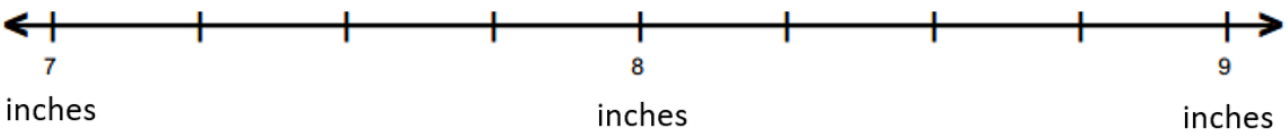
a. Who has a shoe length 1 inch longer than Dave? _____

b. Who has a shoe length 1 inch shorter than Colin? _____

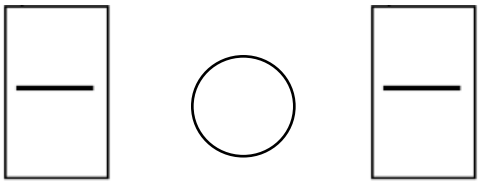
c. In one year, Susan's foot grew so now her shoe length is $\frac{1}{4}$ inch longer. What is her shoe size now? _____

d. Plot both Lily's and Martha's shoe lengths on the number line.

What is the difference, in inches, between Lily's and Martha's shoe lengths? _____



e. Compare the shoe length of Ben and Frances using >, <, or =.



Ben Frances

f. How many students had shoes that measured less than 8 inches? _____

g. How many children are shown on the line plot? _____

h. Mr. Jones' shoe length is $12\frac{1}{4}$ inches.

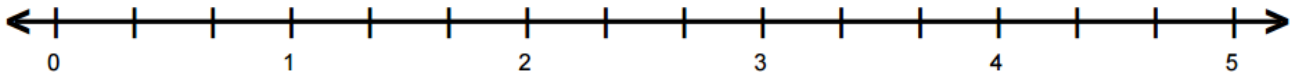
Is Mr. Jones' shoe length longer or shorter than the student with the longest show length? (Circle one)

LONGER SHORTER

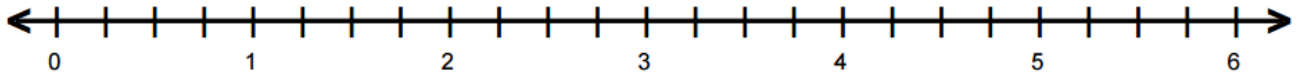
Name _____

1. Use number lines to solve.

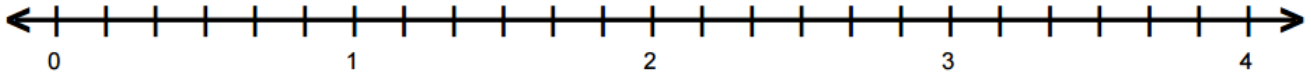
a. $4\frac{1}{3} + \frac{1}{3} =$ _____



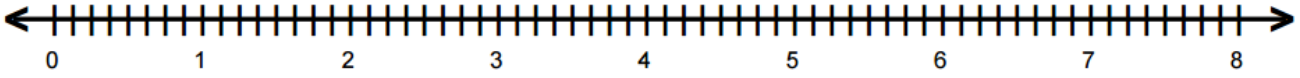
b. $5\frac{1}{4} + \frac{2}{4} =$ _____



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



d. $7\frac{3}{8} + \frac{5}{8} =$ _____

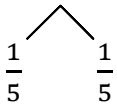


2. Complete the number sentences.

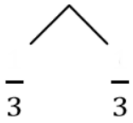
a. $3\frac{5}{6} +$ _____ $= 4$	b. $5\frac{3}{7} +$ ___ $= 6$
c. $5 = 4\frac{1}{8} +$ _____	d. $15 = 14\frac{4}{12} +$ _____

3. Draw number bonds to show how to make one. Solve.

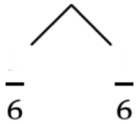
a. $2\frac{4}{5} + \frac{2}{5} =$ _____



b. $3\frac{2}{3} + \frac{2}{3} =$ _____



c. $4\frac{4}{6} + \frac{5}{6} =$ _____



4. Solve any way. Compose whole numbers if needed.

a. $2\frac{3}{5} + \frac{3}{5}$	b. $3\frac{6}{8} + \frac{4}{8}$
c. $5\frac{4}{6} + \frac{3}{6}$	d. $6\frac{6}{10} + \frac{7}{10}$
e. $8\frac{9}{10} + \frac{5}{10}$	f. $7\frac{8}{12} + \frac{11}{12}$

5. To solve $4\frac{8}{10} + \frac{3}{10}$, Carmen wrote, $4\frac{8}{10} + \frac{2}{10} = 5$, and $5 + \frac{1}{10} = 5\frac{1}{10}$. Explain Carmen's solution.

Name _____

1. Add the whole numbers. Add the fractions. Combine your answers.

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

b. $2\frac{2}{5} + 2\frac{2}{5}$ _____

c. $3\frac{3}{8} + 1\frac{5}{8}$ _____

d. $2\frac{2}{4} + 1\frac{3}{4}$ _____

e. $3\frac{4}{6} + 2\frac{5}{6}$ _____

f. $2\frac{3}{4} + 1\frac{3}{4}$ _____

g. $2\frac{7}{8} + 3\frac{4}{8}$ _____

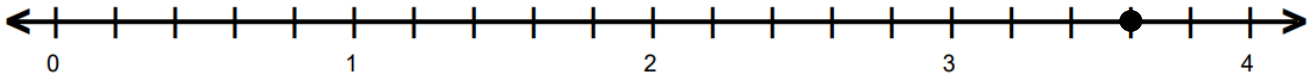
h. $1\frac{7}{10} + 4\frac{5}{10}$ _____

i. $1\frac{4}{5} + 1\frac{3}{5}$ _____

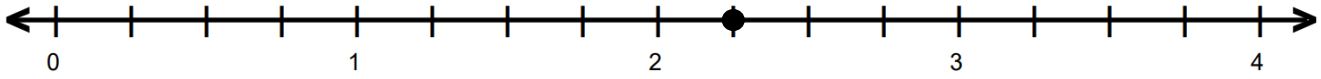
Name _____

1. Subtract. Model with a number line.

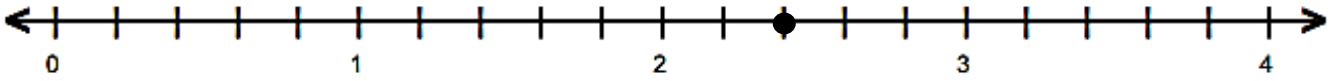
a. $3\frac{3}{5} - \frac{1}{5} =$ _____



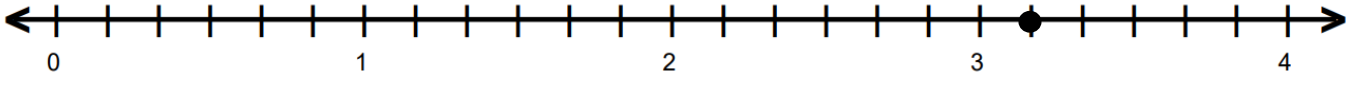
b. $2\frac{1}{4} - \frac{3}{4} =$ _____



c. $2\frac{2}{5} - \frac{4}{5} =$ _____

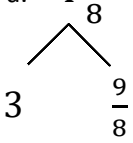


d. $3\frac{1}{6} - \frac{4}{6} =$ _____

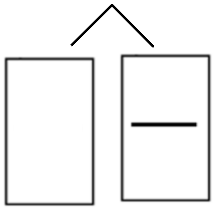


2. Decompose the total to subtract the fractions.

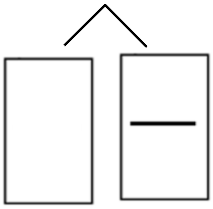
a. $4\frac{1}{8} - \frac{3}{8} = 3\frac{9}{8} - \frac{3}{8} = 3\frac{6}{8}$



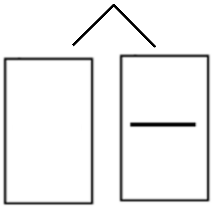
b. $5\frac{2}{5} - \frac{3}{5} =$ _____



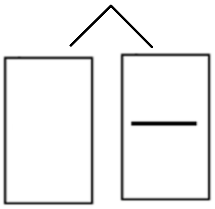
c. $7\frac{1}{8} - \frac{3}{8} =$ _____



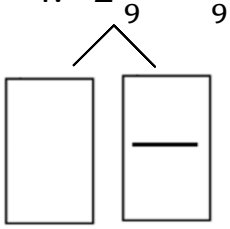
d. $3\frac{3}{9} - \frac{4}{9} =$ _____



e. $6\frac{3}{10} - \frac{7}{10} =$ _____



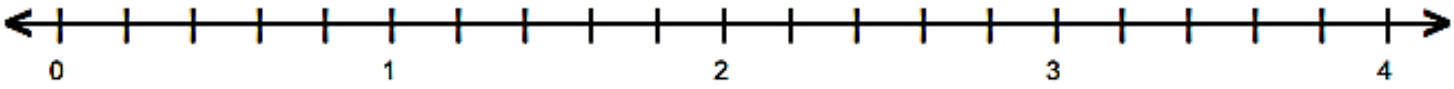
f. $2\frac{5}{9} - \frac{8}{9} =$ _____



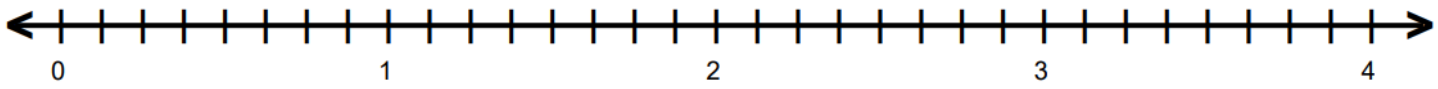
Name _____

1. Write a related addition sentence. Use a number line to subtract by **counting on**.

a. $3\frac{2}{5} - 1\frac{4}{5} =$ _____ $1\frac{4}{5} +$ _____ $= 3\frac{2}{5}$



b. $3\frac{3}{8} - 2\frac{5}{8} =$ _____ _____

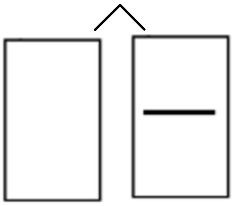


2. Subtract by decomposing the total.

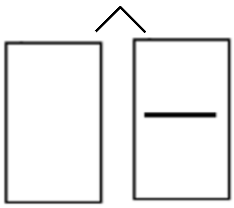
a. $4\frac{1}{5} - 1\frac{3}{5} =$ $3\frac{6}{5} - 1\frac{3}{5} =$ $(3-1) + \left(\frac{6}{5} - \frac{3}{5}\right) =$ _____

$3 \quad \frac{6}{5}$

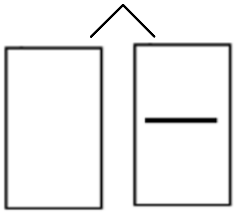
b. $4\frac{1}{7} - 2\frac{4}{7} =$ _____



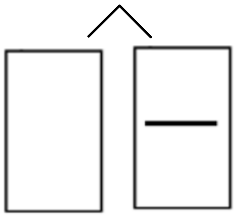
c. $5\frac{5}{12} - 3\frac{8}{12} =$ _____



d. $5\frac{5}{8} - 2\frac{7}{8} =$ _____



e. $4\frac{3}{12} - 3\frac{8}{12} =$ _____



3. Solve using any strategy.

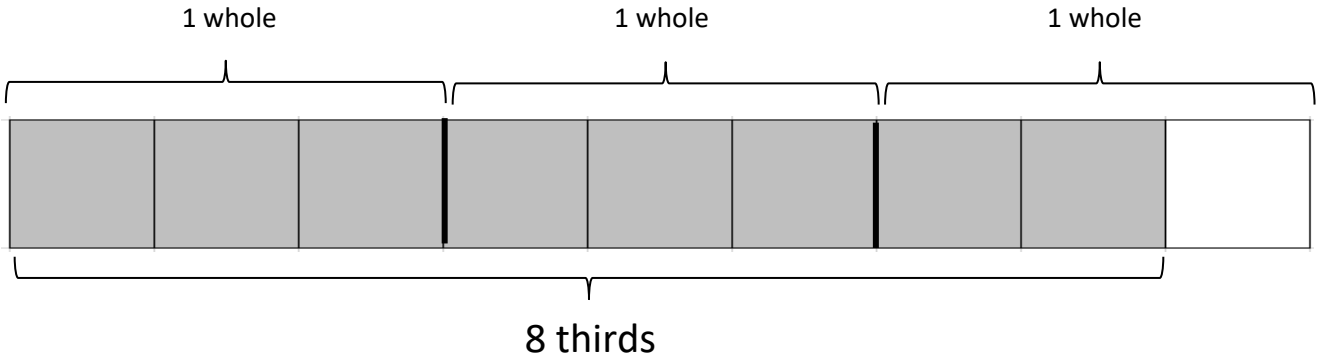
a. $6\frac{1}{9} - 4\frac{3}{9} =$ _____

b. $5\frac{3}{10} - 3\frac{6}{10} =$ _____

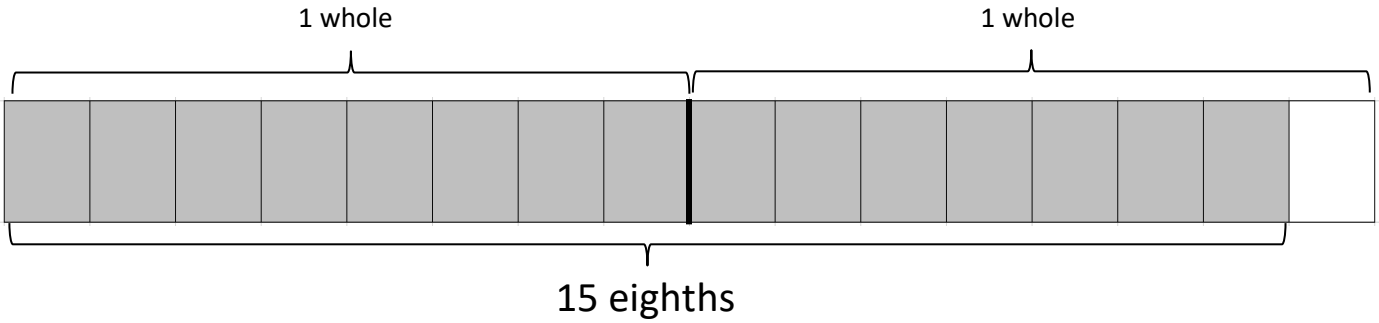
Name _____

1. Circle groups to show the following are true.

a. 8 thirds = 4 × (2 thirds)



b. 15 eighths = 3 × (5 eighths)



2. Write the expression in unit form to solve.

a. $10 \times \frac{2}{5}$

10 x 2 fifths = _____ fifths

b. $3 \times \frac{5}{6}$

____ x ____ sixths = ___ sixths

c. $9 \times \frac{4}{9}$

_____ x _____ ninths = _____ ninths

d. $7 \times \frac{3}{4}$

_____ x _____ fourths = _____ fourths

3. Solve. Write the final answer as a fraction.

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

_____ x _____ fourths = _____ fourths

= ☐

b. $7 \times \frac{5}{8} =$

_____ x _____ eighths = _____ eighths

= ☐

c. $13 \times \frac{2}{3} =$

_____ x _____ thirds = _____ thirds

= ☐

d. $12 \times \frac{2}{3} =$

_____ x _____ thirds = _____ thirds

= ☐

e. $11 \times \frac{7}{10} =$

_____ x _____ tenths = _____ tenths

= ☐

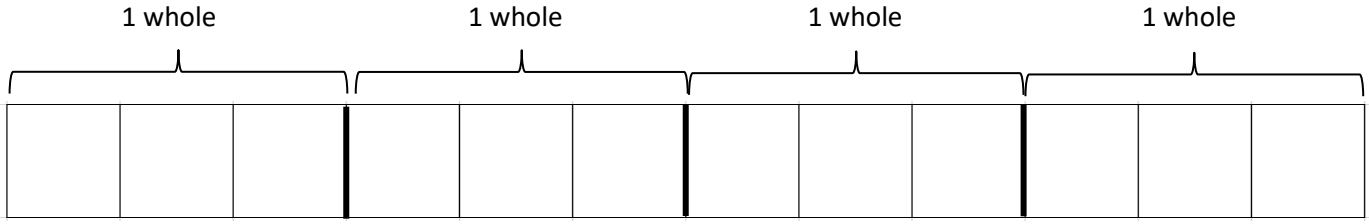
f. $7 \times \frac{8}{100} =$

_____ x _____ hundredths = _____ hundredths

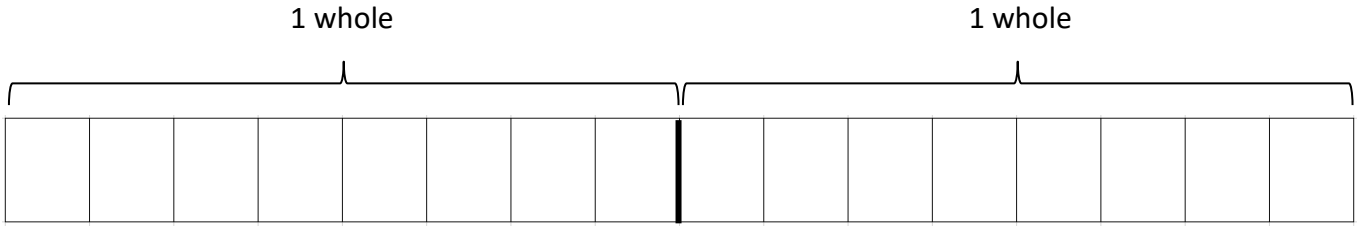
= ☐

Name _____

1. Shade tape diagram to represent: $\frac{2}{3}+\frac{2}{3}+\frac{2}{3}+\frac{2}{3}$ = _____



2. Draw a tape diagram to represent: $\frac{7}{8}+\frac{7}{8}=$ _____



3. Write a multiplication expression equal to $\frac{2}{3}+\frac{2}{3}+\frac{2}{3}+\frac{2}{3}$ = _____ x _____ = _____

4. Write a multiplication expression equal to $\frac{7}{8}+\frac{7}{8}+\frac{7}{8}$ = _____ x _____ = _____

5. Rewrite each repeated addition problem as a multiplication problem and solve.

a. $\frac{7}{5}+\frac{7}{5}+\frac{7}{5}+\frac{7}{5}=\ 4\times\frac{7}{5}\ =\ \frac{28}{5}$

b. $\frac{7}{10}+\frac{7}{10}+\frac{7}{10}$ = _____ x _____ = _____

c. $\frac{5}{12} + \frac{5}{12} + \frac{5}{12} + \frac{5}{12} + \frac{5}{12} + \frac{5}{12}$ = _____ x _____ = _____

d. $\frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8}$ = _____ x _____ =_____

4. Solve using any method.

a. $7 \times \frac{2}{9}$ = _____

b. $4 \times \frac{2}{3}$ = _____

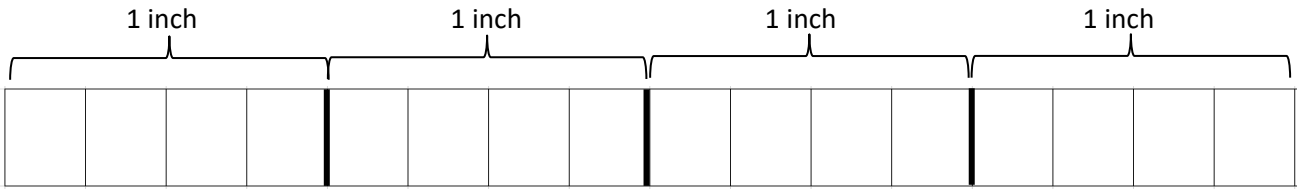
c. $4 \times \frac{2}{6} =$ _____

d. $2 \times \frac{5}{6}$ = _____

e. $3 \times \frac{3}{5}$ = _____

f. $4 \times \frac{2}{8}$ = _____

5. Cole is playing with interlocking blocks that are each $\frac{3}{4}$ inch tall. He makes a tower 5 blocks tall. How tall is his tower in inches?



Name _____

1. Solve the following using the distributive property.

a. $3 \times 6\frac{1}{5}$ 3 groups of _____ AND 3 groups of _____ _____ + _____ = _____	b. $5 \times 4\frac{1}{6}$ 5 groups of _____ AND 5 groups of _____ _____ + _____ = _____
c. $6 \times 2\frac{1}{10}$ (_____ x _____) + (_____ x _____) _____ + _____ = _____	d. $2 \times 7\frac{3}{10}$ (_____ x _____) + (_____ x _____) _____ + _____ = _____
e. $8 \times 7\frac{1}{9}$ (_____ x _____) + (_____ x _____) _____ + _____ = _____	f. $3 \times 12\frac{2}{8}$ (_____ x _____) + (_____ x _____) _____ + _____ = _____

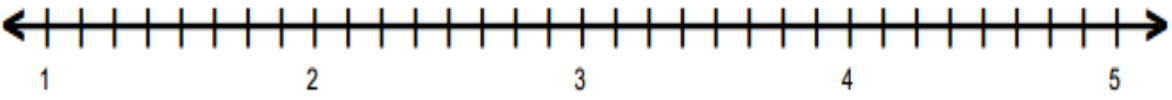
g. $3 \times 6\frac{1}{5}$ (_____ x _____) + (_____ x _____) _____ + _____ = _____	h. $5 \times 4\frac{1}{6}$ (_____ x _____) + (_____ x _____) _____ + _____ = _____
i. $6 \times 2\frac{2}{15}$ (_____ x _____) + (_____ x _____) _____ + _____ = _____	j. $2 \times 7\frac{3}{10}$ (_____ x _____) + (_____ x _____) _____ + _____ = _____
k. $8 \times 7\frac{1}{14}$ _____ _____ + _____ = _____	l. $3 \times 12\frac{3}{18}$ _____ _____ + _____ = _____

Name _____

The chart to the right shows the total monthly rainfall for a city.

1. Use the data to create a line plot at the bottom of this page and to answer the following questions.

Month	Rainfall (in inches)
Jan.	$2\frac{2}{8}$
Feb.	$1\frac{3}{8}$
Mar.	$2\frac{3}{8}$
Apr.	$2\frac{5}{8}$
May	$4\frac{2}{8}$
Jun.	$2\frac{2}{8}$
Jul.	$3\frac{7}{8}$
Aug.	$3\frac{2}{8}$
Sept.	$1\frac{5}{8}$
Oct.	$3\frac{2}{8}$
Nov.	$1\frac{6}{8}$
Dec.	$1\frac{5}{8}$



2. What is the difference in rainfall from the wettest and driest months?

3. How much more rain fell in May than in April?

4. What is the combined rainfall amount for the summer months of June, July, and August?

5. Name one month in which it rained twice as much as it rained in December.

6. Each inch of rain can produce ten times that many inches of snow. If all of the rainfall in January was in the form of snow, how many inches of snow fell in January?

Name _____

1. Combine fractions that make a whole to find the sums.

a. $\frac{0}{5} + \frac{1}{5} + \frac{2}{5} + \frac{3}{5} + \frac{4}{5} + \frac{5}{5}$

= _____

b. $\frac{0}{6} + \frac{1}{6} + \frac{2}{6} + \frac{3}{6} + \frac{4}{6} + \frac{5}{6} + \frac{6}{6}$

= _____

c. $\frac{0}{7} + \frac{1}{7} + \frac{2}{7} + \frac{3}{7} + \frac{4}{7} + \frac{5}{7} + \frac{6}{7} + \frac{7}{7}$

= _____

d. $\frac{0}{8} + \frac{1}{8} + \frac{2}{8} + \frac{3}{8} + \frac{4}{8} + \frac{5}{8} + \frac{6}{8} + \frac{7}{8} + \frac{8}{8}$

= _____

e. $\frac{0}{20} + \frac{1}{20} + \frac{2}{20} + \ldots \frac{20}{20}$

= _____

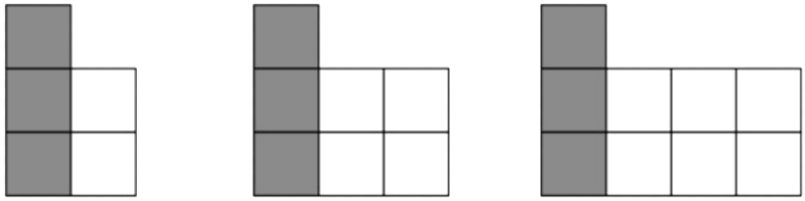
f. $\frac{0}{35} + \frac{1}{35} + \frac{2}{35} + \ldots \frac{35}{35}$

= _____

Name _____

1. Draw the next picture in the pattern. Describe the pattern.

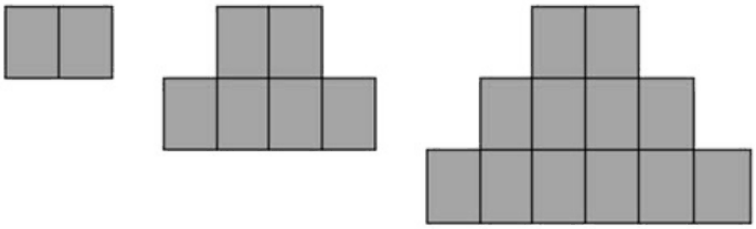
a.



_____

Describe the pattern: _____

b.



_____

Describe the pattern: _____

2. Complete the input/output tables. Describe the rule.

a.

Input	Output
1	5
2	
	15
	20

Rule: _____

b.

Input	Output
2	8
4	
	24
8	32

Rule: _____

3. Complete the conversion tables. Describe the rule.

a.

Pints	Cups
1	2
2	
	6
4	

Rule: _____

b.

Quarts	Cups
1	4
3	12
4	

Rule: _____

c.

Yards	Feet
3	
5	
7	
	27

Rule: _____

d.

Inches	Feet
12	1
24	
	3
48	

Rule: _____