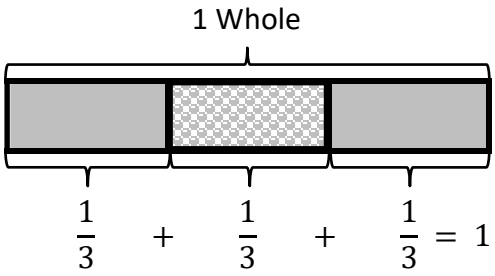
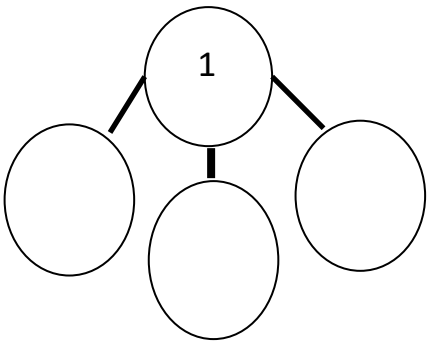
Name _____

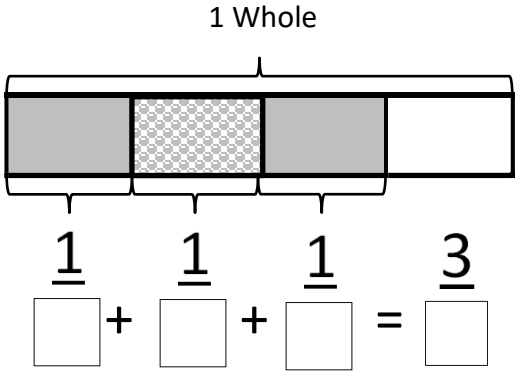
1. Write a number sentence and draw a number bond to show the shaded part.

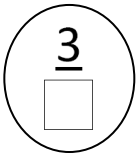
a.



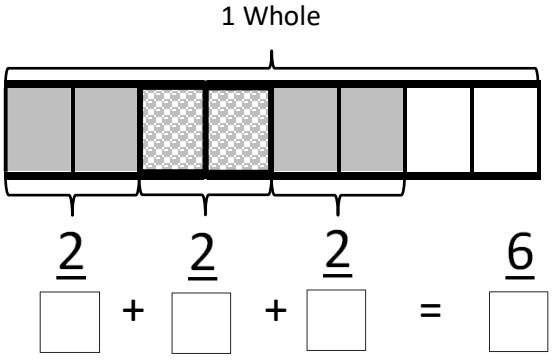


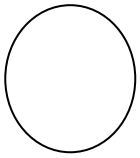
b.



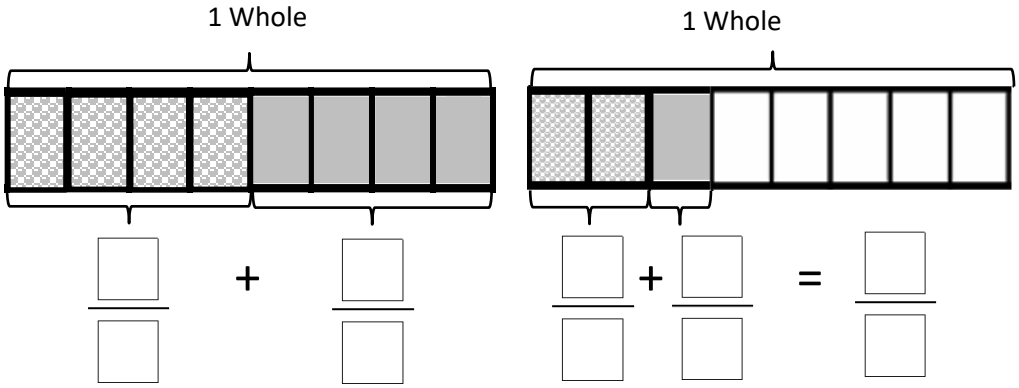


c.

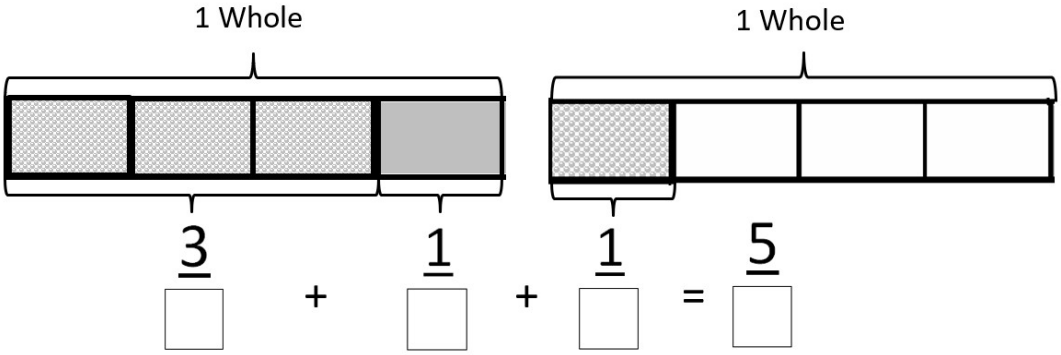




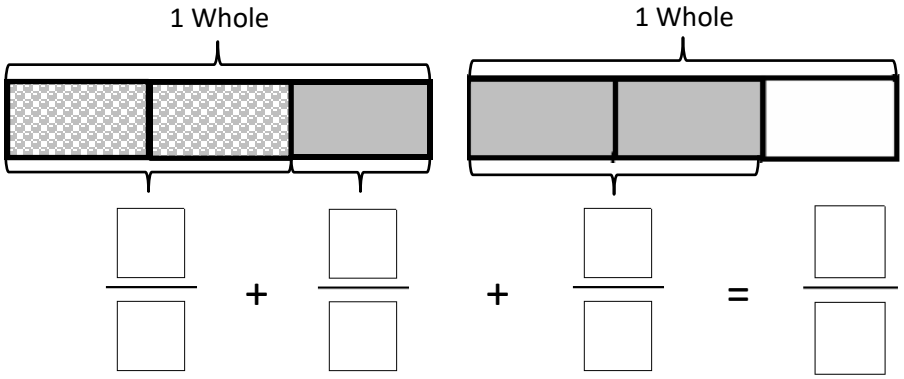
d.



e.



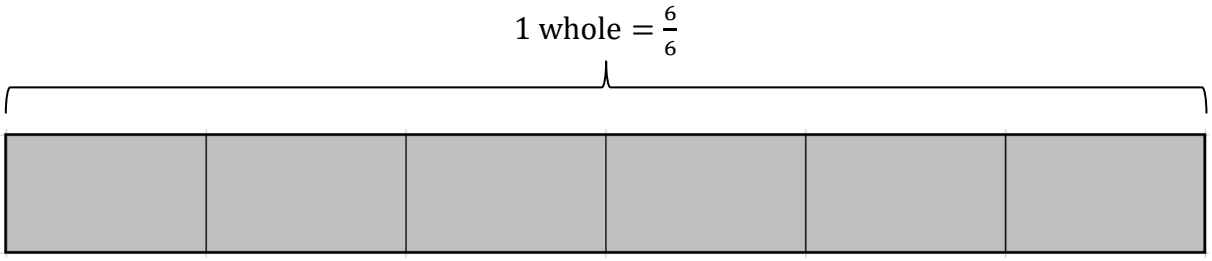
f.



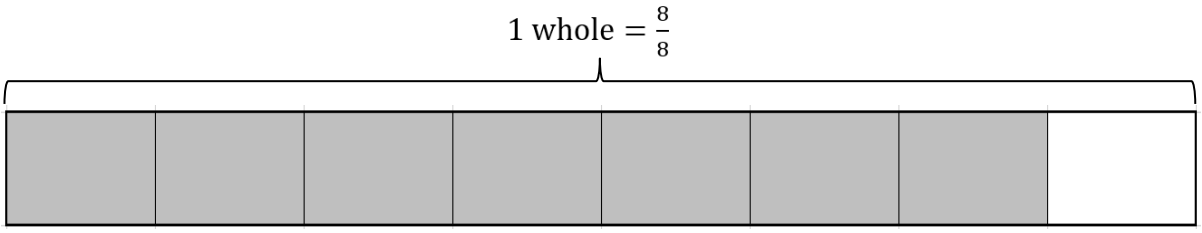
Name _____

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

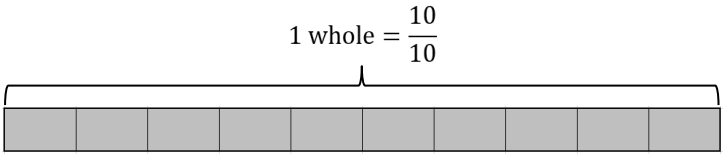
a. $1 = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

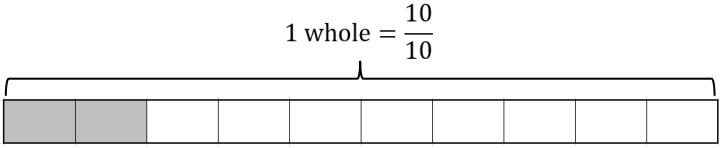


b. $\frac{7}{8} = \frac{3}{8} + \frac{3}{8} + \frac{1}{8}$

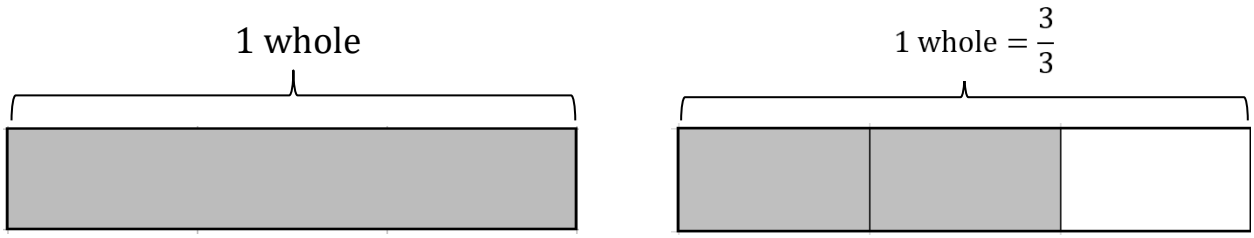


c. $\frac{12}{10} = \frac{6}{10} + \frac{4}{10} + \frac{2}{10}$

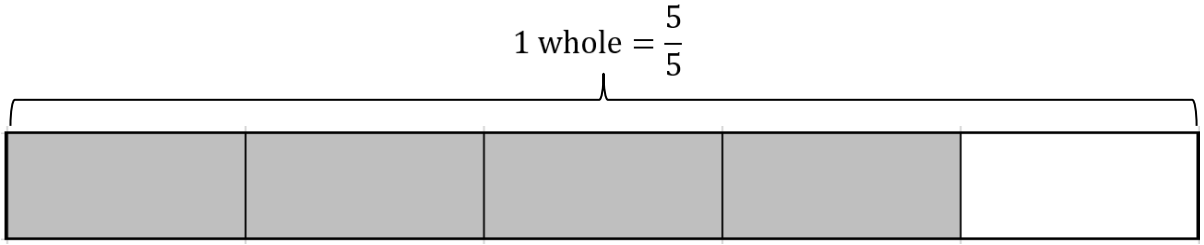




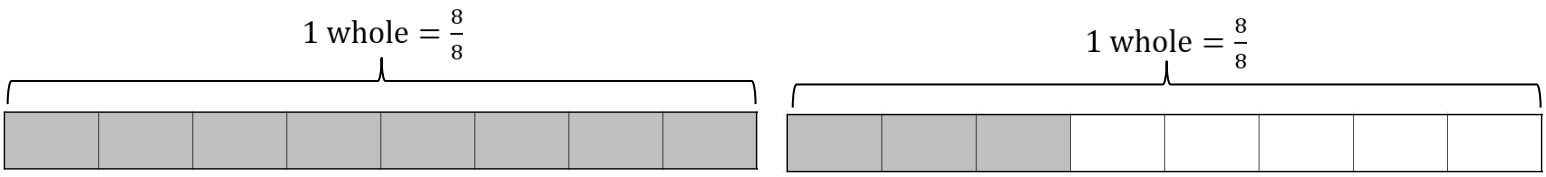
d. $1\frac{2}{3} = 1 + \frac{2}{3}$



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



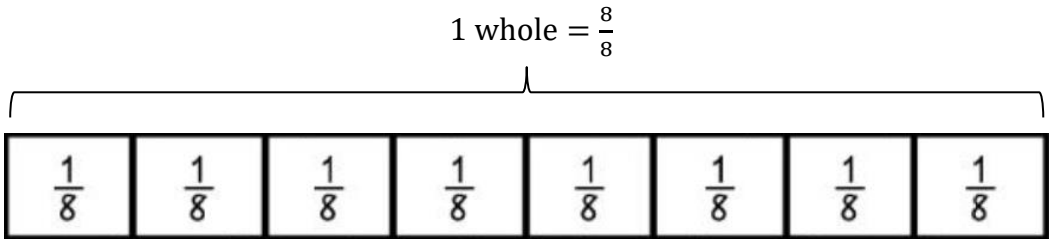
f. $\frac{11}{8} = \frac{7}{8} + \frac{1}{8} + \frac{3}{8}$



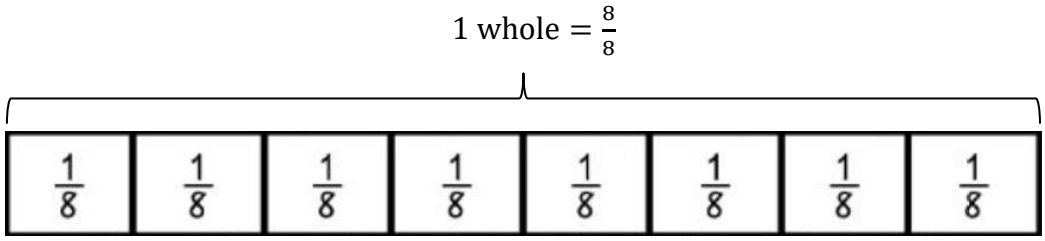
Name _____

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.

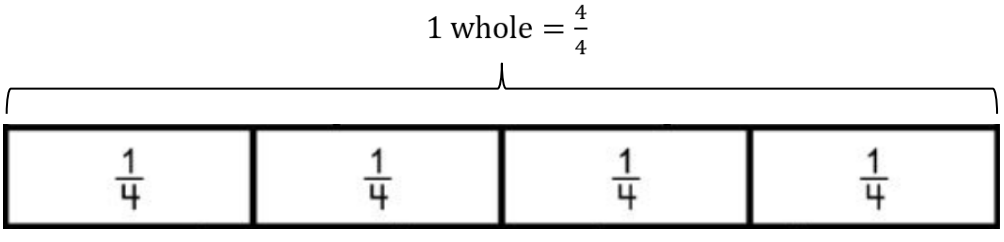


$\frac{5}{8} =$ _____

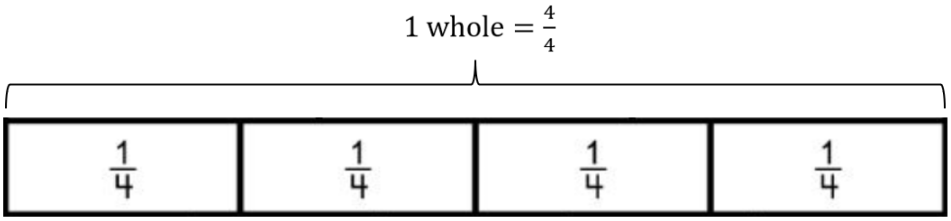


$\frac{5}{8} =$ _____

b.

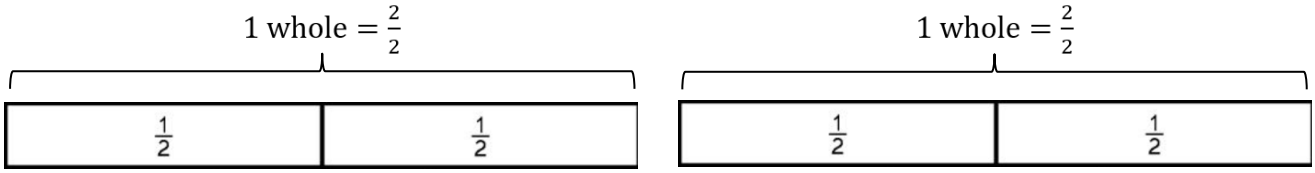


$\frac{3}{4} =$ _____

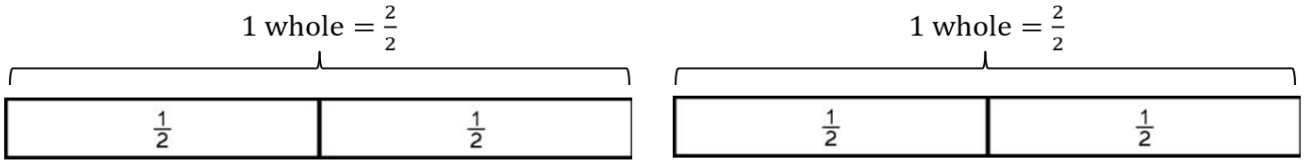


$\frac{3}{4} =$ _____

c.



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



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

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

a. $\frac{7}{8}$ = _____

$\frac{7}{8}$ = _____

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

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

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

$\frac{7}{5}$ = _____

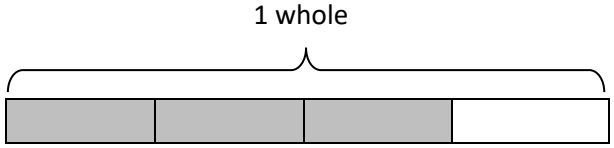
d. $\frac{4}{3}$ = _____

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

Name _____

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

a.



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

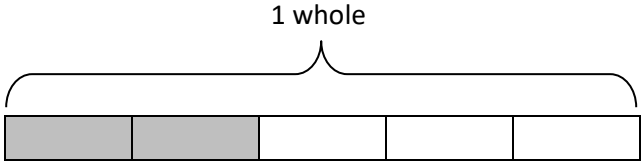
Multiplication Sentence

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

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

---

b.

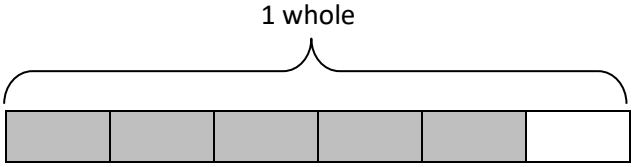


$\frac{2}{5} =$ _____ groups of _____

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

---

c.

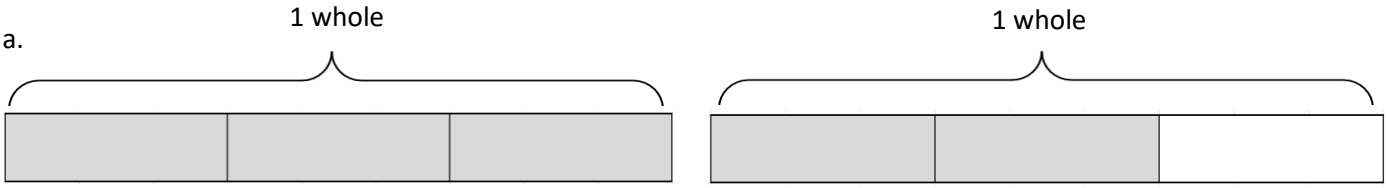


$\frac{5}{6} =$ _____ groups of _____

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

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

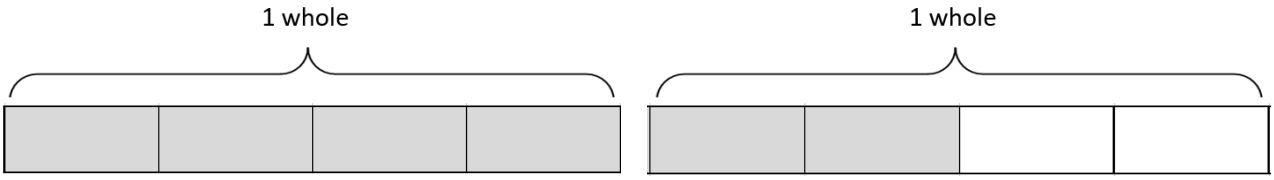
a.



$\frac{5}{3}$ = (_____ groups of _____) AND (_____ groups of _____)

$\frac{5}{3}$ = (____ x ____) + (____ x ____)

b.



$\frac{6}{4}$ = (_____ groups of _____) AND (_____ groups of _____)

$\frac{6}{4}$ = _____

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

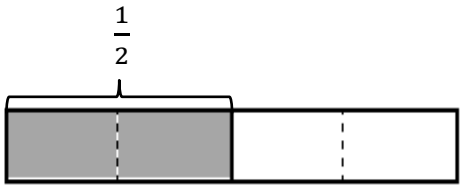
a. $\frac{4}{5}$ = _____ groups of _____ = _____

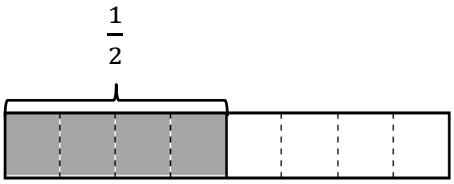
b. $\frac{5}{8}$ = _____ groups of _____ = _____

Name _____

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.

a.

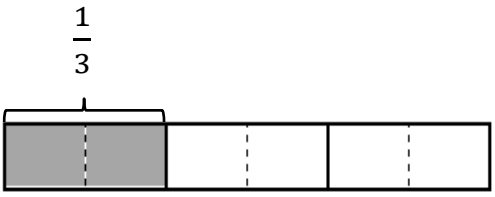


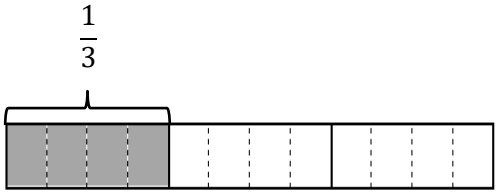


$\frac{1}{2} = \frac{1}{4} + \frac{1}{4}$

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

b.



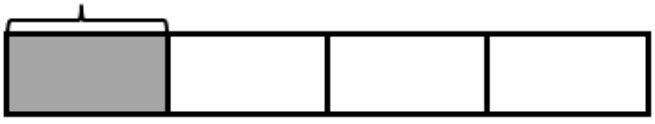


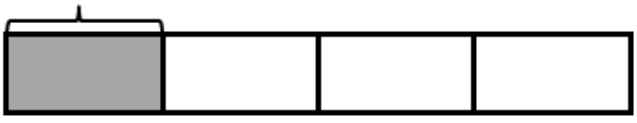
$\frac{1}{3} =$ _____ + _____

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

(Draw dotted lines to decompose the pieces.)

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

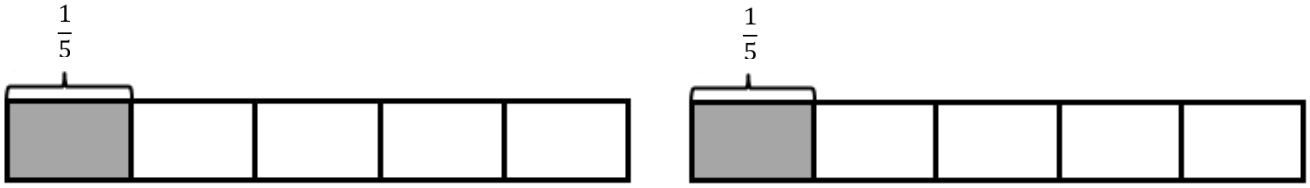




_____ = _____

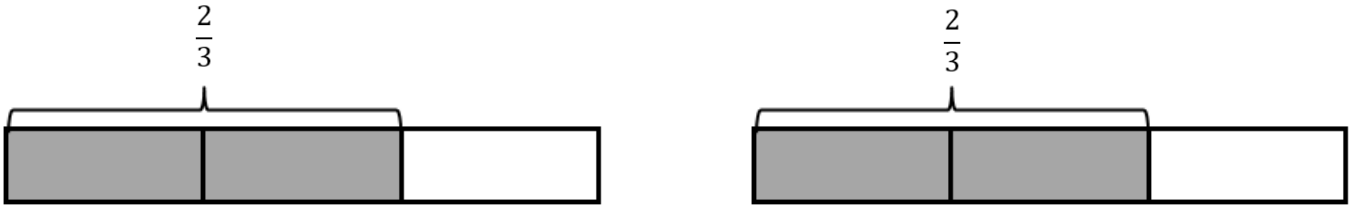
_____ = _____

d.



_____ = _____ _____ = _____

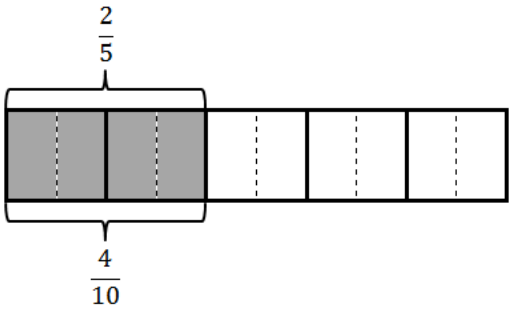
e.



_____ = _____ _____ = _____

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

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



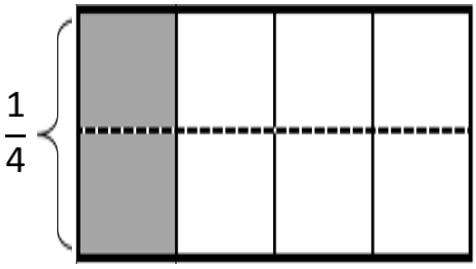
b. $\frac{2}{6} = \frac{4}{12}$

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

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. 2 rows



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

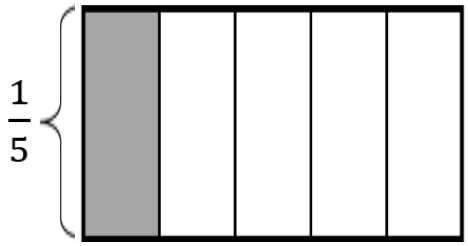
+ Sum of unit fractions: $\frac{1}{4} = \frac{1}{8} +$ _____

X Multiplication Sentence:

$\frac{1}{4}$ = _____ groups of _____ ➡ $\frac{1}{4} = 2 \times$ _____

---

b. 2 rows



= Equivalent Fractions: $\frac{1}{5}$ = _____

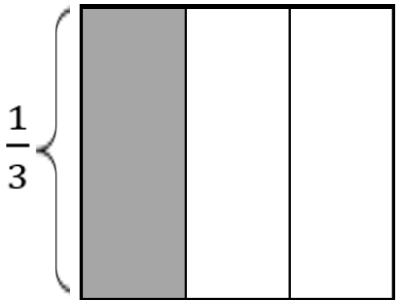
+ Sum of unit fractions: $\frac{1}{5}$ = _____

X Multiplication sentence:

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

---

c. 4 rows



= Equivalent Fractions: $\frac{1}{3}$ = _____

+ Sum of unit fractions: $\frac{1}{3}$ = _____

X Multiplication sentence:

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

2. Write the equivalent fractions as the sum of unit fractions and as multiplication sentences.

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

+ Sum of unit fractions:

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

X Multiplication:

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

---

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

+ Sum of unit fractions:

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

X Multiplication:

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

---

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

+ Sum of unit fractions:

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

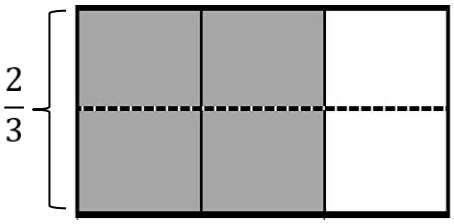
X Multiplication:

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



$\frac{2}{3} = \left(\frac{1}{6} + \frac{1}{6}\right) + \left(\frac{1}{6} + \frac{1}{6}\right) = \frac{4}{6}$

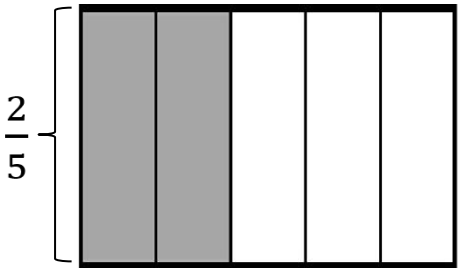
= Equivalent Fractions: $\frac{2}{3} = \frac{4}{6}$

X Multiplication Sentence:

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

---

   b. Tenths

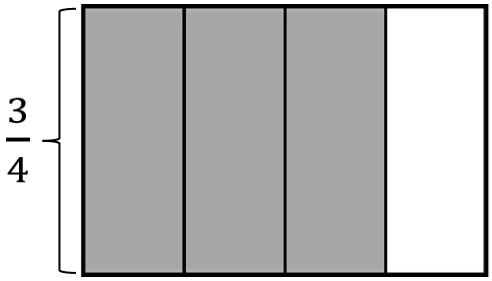


= Equivalent Fractions: _____ = _____

X Multiplication sentence: _____

$\frac{2}{5} =$ (_____) + (_____) = _____

c. Twelfths



= Equivalent Fractions: _____ = _____

X Multiplication sentence: _____

$\frac{3}{4} =$ (_____) + (_____) + (_____) = _____

---

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

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

$\frac{3}{5} =$ (_____) + (_____) + (_____) = _____

X Multiplication sentence: _____

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

$\frac{3}{4} =$ (_____) + (_____) + (_____) = _____

X Multiplication sentence: _____

Make your own equivalent fraction:

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

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

X Multiplication sentence: _____

Name _____

2. Complete the tables.

a.

Yards	Feet
1	
2	
3	
5	
10	

b.

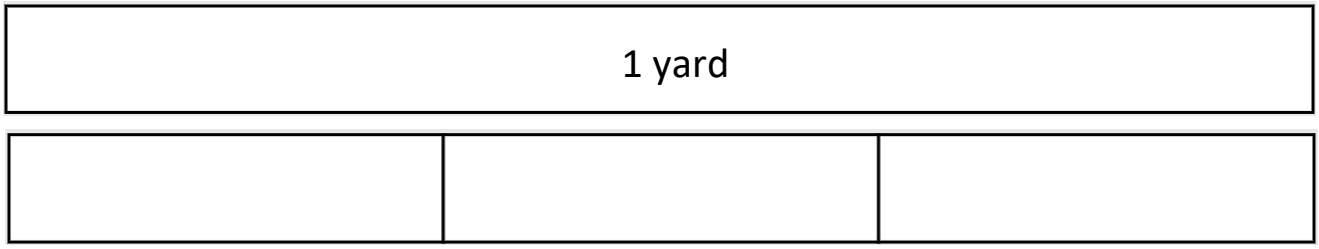
Feet	Inches
1	
2	
5	
10	
15	

c.

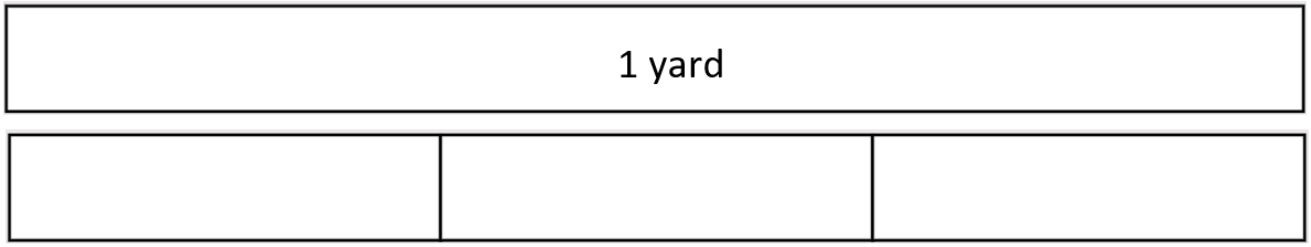
Yards	Inches
1	
2	
3	
5	
10	

3. Shade in pictures to show the fractions.

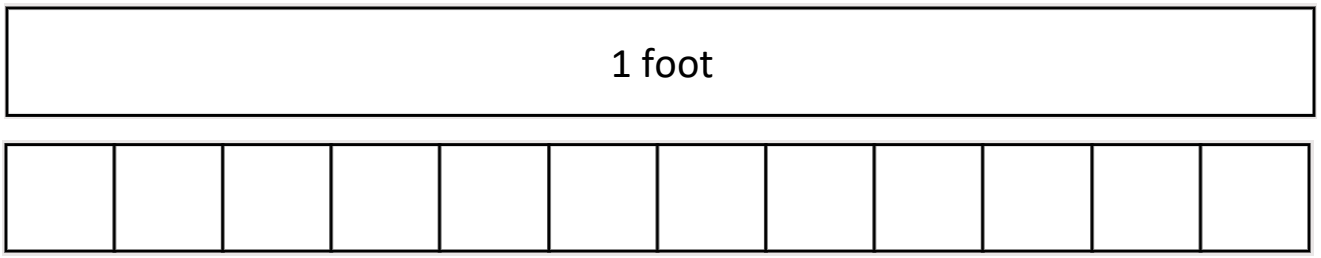
a. 2 feet equal what fraction of a yard? 2 feet = _____ yard



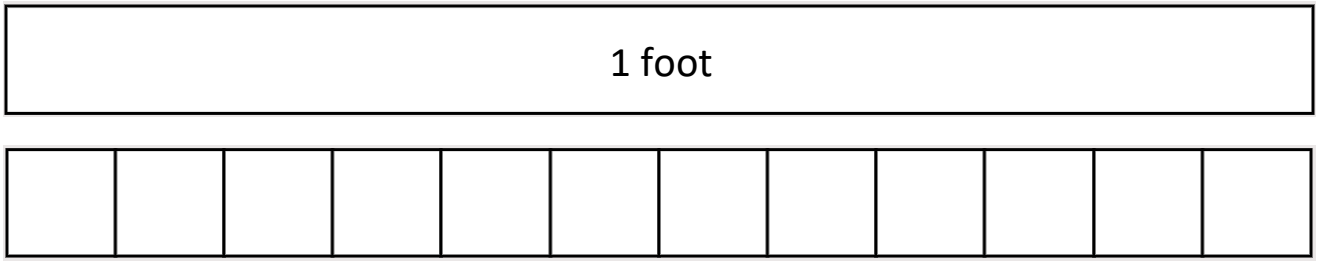
b. 1 foot equals what fraction of a yard? 1 foot = _____ yard



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

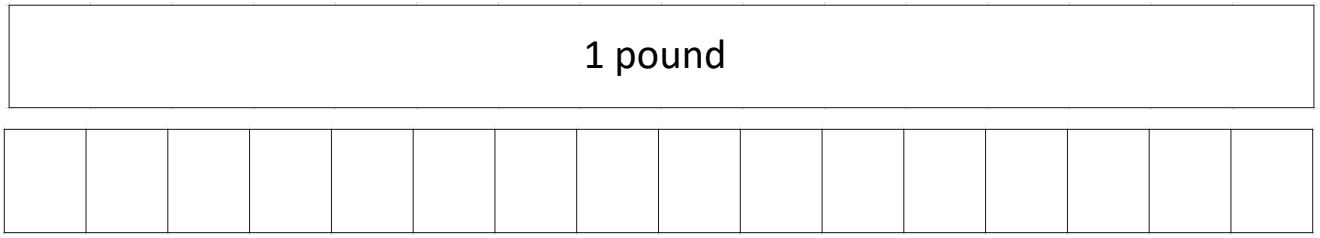
Name _____

1. Complete the conversion chart.

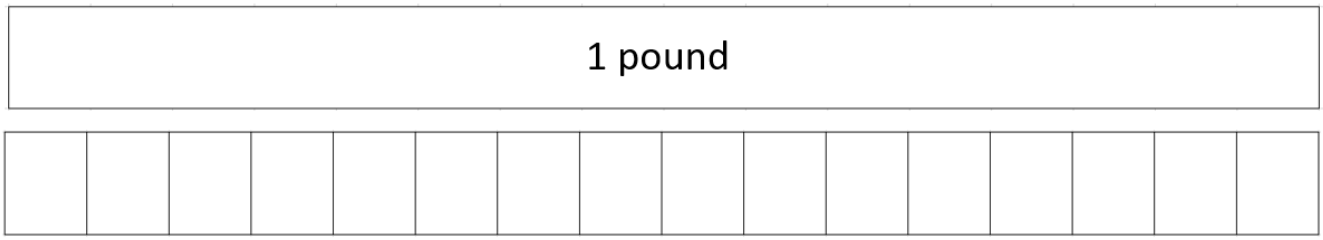
Pounds	Ounces
1	
2	
3	
5	
10	
100	

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

a. 6 ounces = _____ of a pound

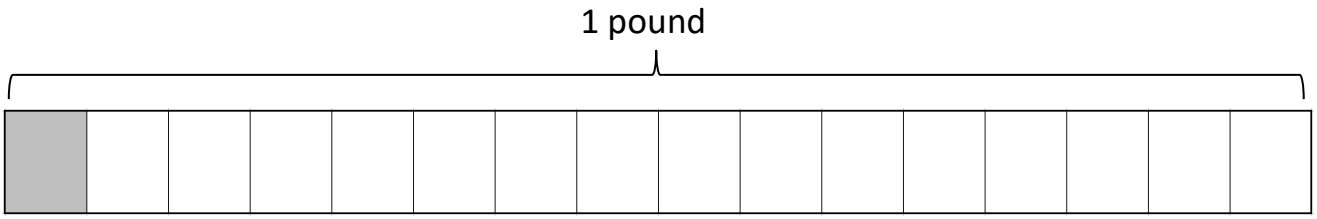


a. 12 ounces = _____ of a pound

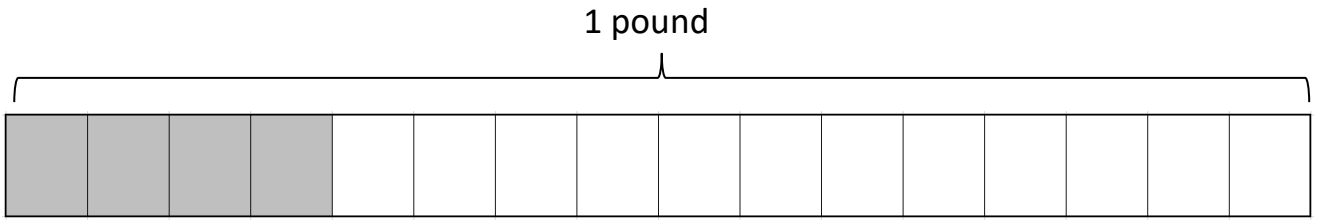


3. Show the shaded portion as ounces in unit form AND as a fraction of a pound.

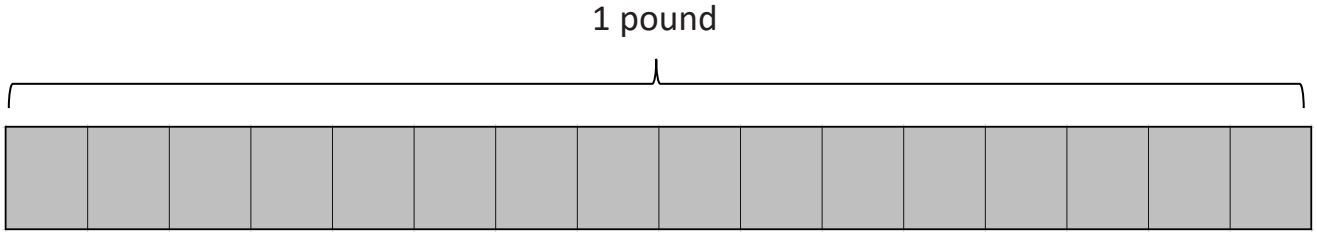
a. Unit form: _____ Fraction of a pound: _____



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



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



Name _____

1. Complete the conversion charts.

Gallons	Quarts
1	
2	
3	
5	
10	

Gallons	Pints
1	
2	
3	
5	
10	

Gallons	Cups
1	
2	
3	
5	
10	

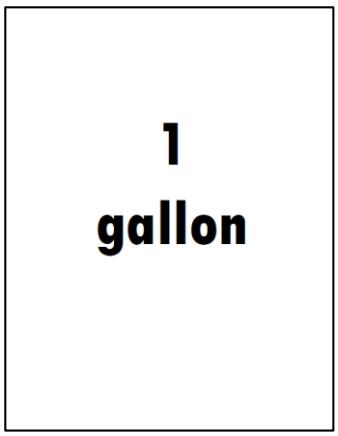
Quarts	Cups
1	
2	
3	
5	
10	

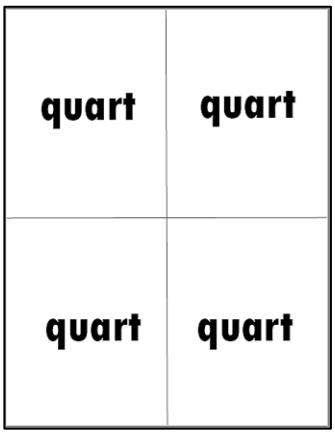
Quarts	Pints
1	
2	
3	
5	
10	

Pints	Cups
1	
2	
3	
5	
10	

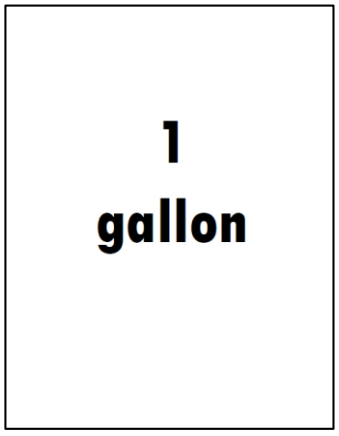
2. Shade in the area models to show how capacity relates to fractions.

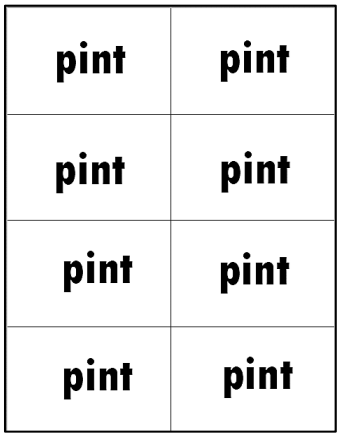
a. 2 quarts = _____ of a gallon



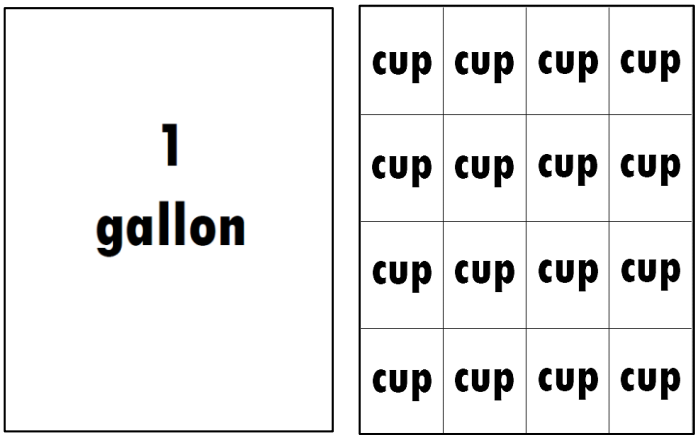


b. 6 pints = _____ of a gallon

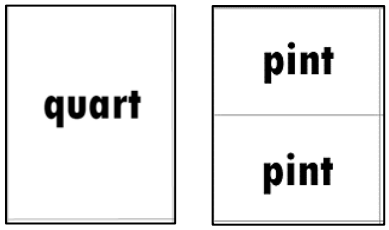




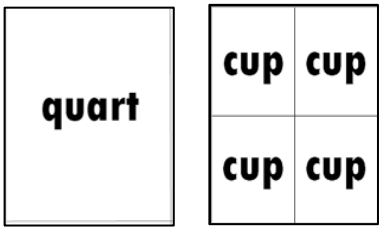
c. 8 cups = _____ of a gallon



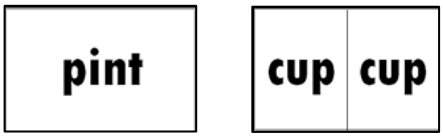
d. 1 pint = _____ of a quart



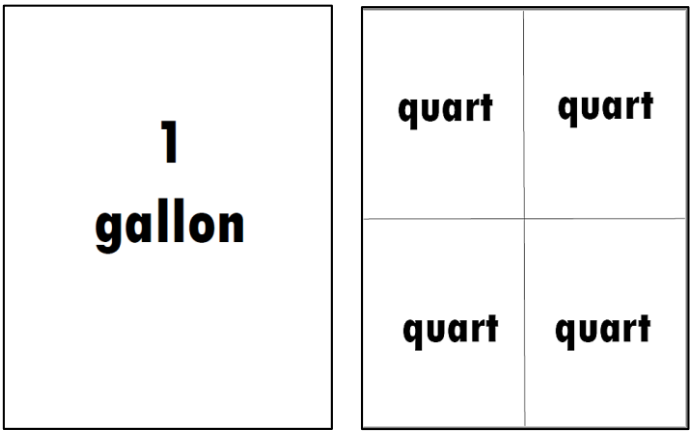
e. 2 cups = _____ of a quart



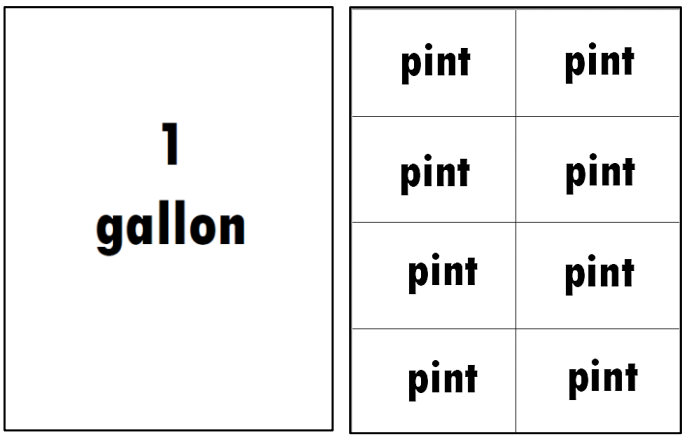
f. 1 cup = _____ of a pint



g. 3 quarts = _____ of a gallon



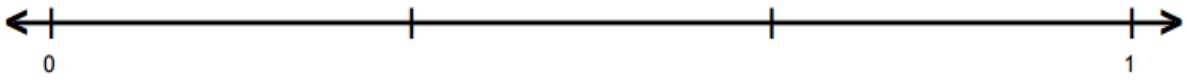
h. 4 pints = _____ of a gallon



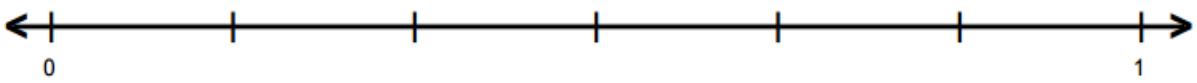
Name _____

1. Plot the following points on the number lines.

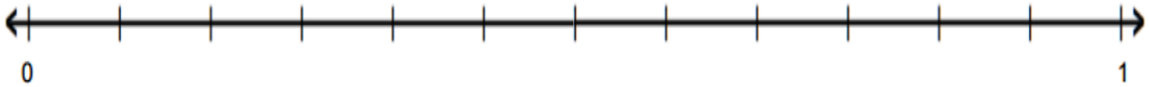
a. $\frac{1}{3}$



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



c. $\frac{7}{12}$

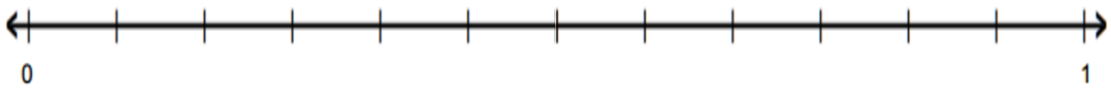


d. Use the number lines to compare the fractions by writing >, <, or = .

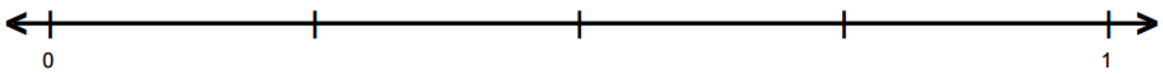
a. $\frac{7}{12}$ _____ $\frac{1}{3}$ b. $\frac{7}{12}$ _____ $\frac{5}{6}$

2. Plot the following points on the number lines.

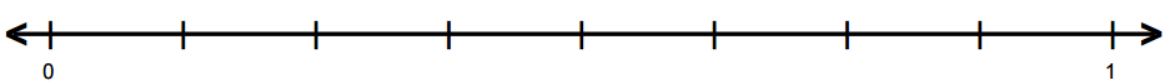
a. $\frac{11}{12}$



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



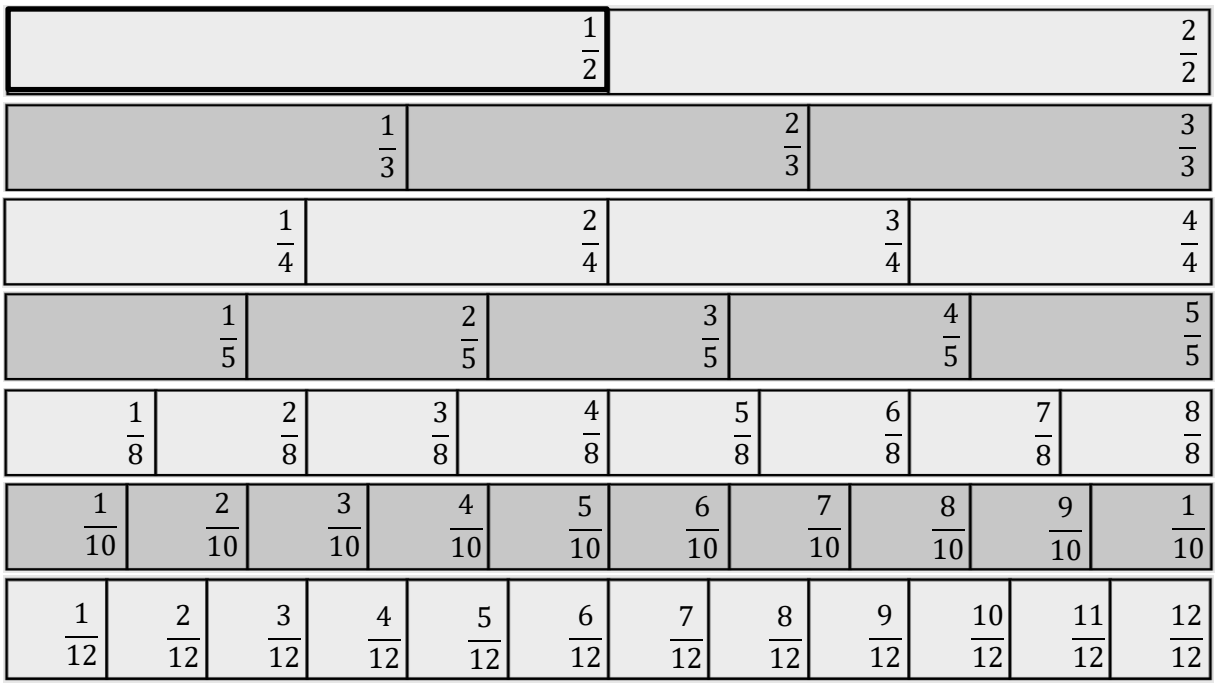
c. $\frac{3}{8}$



d. Select two fractions above and use the number lines to compare them by writing >, <, or =.

_____

3. Use the benchmark of ½ to compare the fractions given below by writing =, > or <.



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

b. $\frac{1}{2}$ _____ $\frac{7}{8}$

c. $\frac{1}{2}$ _____ $\frac{2}{5}$

d. $\frac{9}{10}$ _____ $\frac{1}{2}$

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

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

g. $\frac{1}{2}$ _____ $\frac{5}{10}$

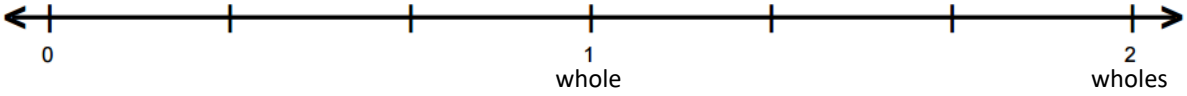
h. $\frac{11}{12}$ _____ $\frac{1}{2}$

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

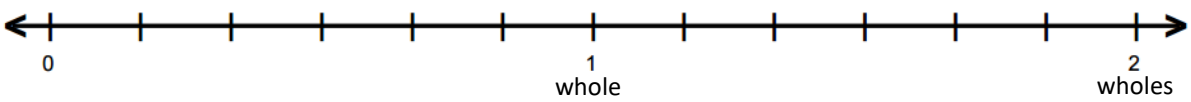
Name _____

1. Place the following fractions on the number lines.

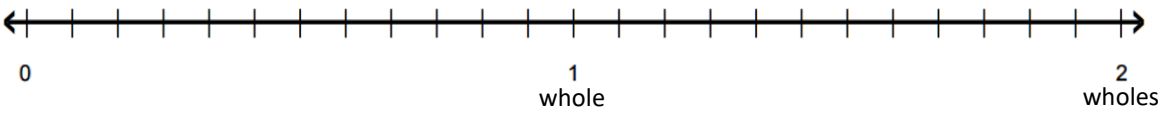
a. $\frac{4}{3}$



b. $\frac{11}{6}$



c. $\frac{17}{12}$



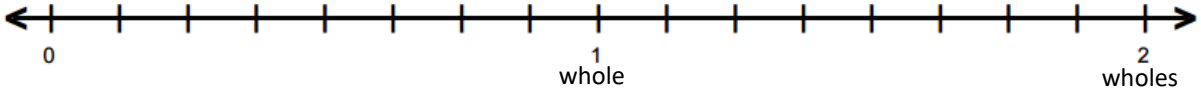
2. Use the number lines in Problem 1 to compare the fractions by writing >, <, or = .

a. $1\frac{5}{6}$ _____ $1\frac{5}{12}$

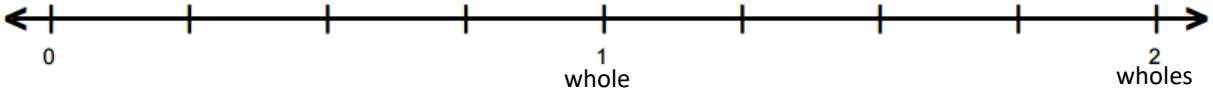
b. $1\frac{1}{3}$ _____ $1\frac{5}{12}$

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

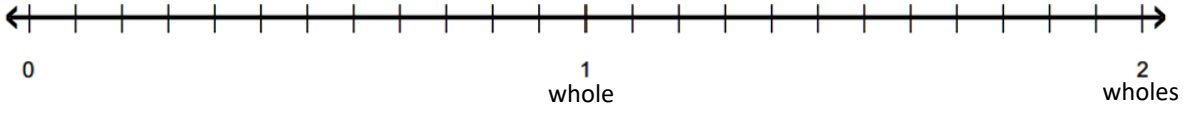
a. $\frac{11}{8}$



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



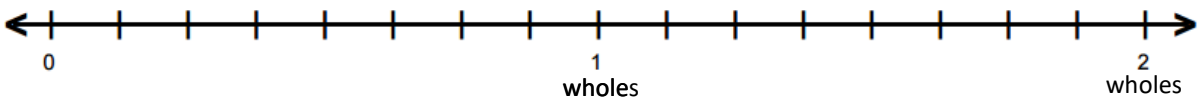
c. $\frac{15}{12}$

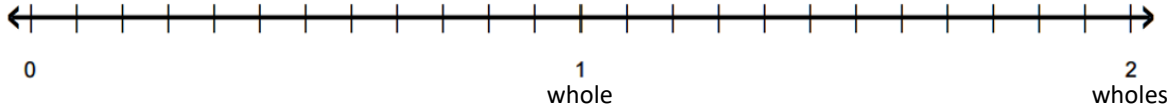


4. Use the number line in Problem 3 to explain whether $\frac{11}{8}$ or $\frac{15}{12}$ is greater.

5. Use the number lines to compare the fractions. Write > or < on the lines.

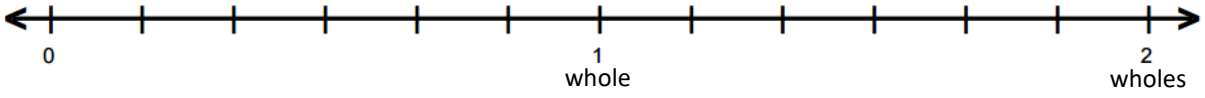
a. $\frac{3}{8}$ _____ $\frac{7}{12}$

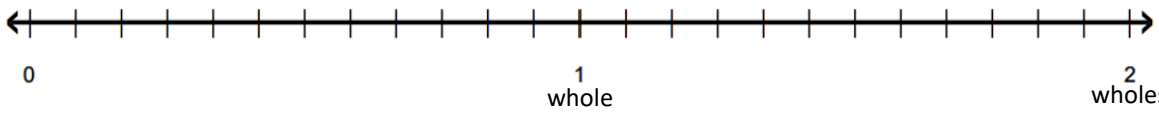




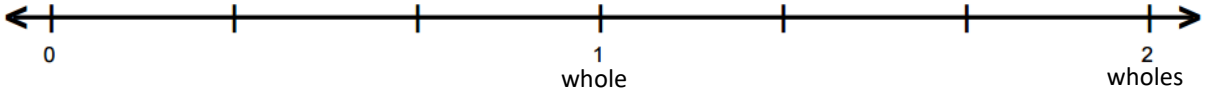
b. $\frac{5}{12}$ _____ $\frac{7}{8}$

c. $\frac{8}{6}$ _____ $\frac{11}{12}$

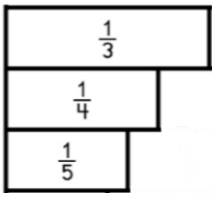




d. $\frac{5}{12}$ _____ $\frac{1}{3}$



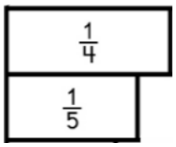
Name _____



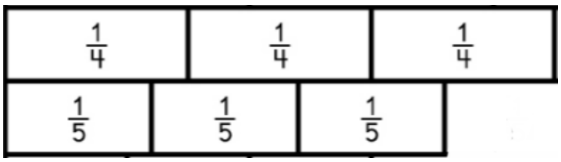
As the number in the denominator gets bigger, the size of the fraction gets _____.

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

   a. 1 fourth _____ 1 fifth

   b. 3 fourths _____ 3 fifths

   c. 1 tenth _____ 1 twelfth

   d. 7 tenths _____ 7 twelfths

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

   a. Since $\frac{1}{5}$ ____ $\frac{1}{6}$ then $\frac{4}{5}$ ____ $\frac{4}{6}$

   b. Since $\frac{1}{4}$ ____ $\frac{1}{3}$ then $\frac{2}{4}$ ____ $\frac{2}{3}$

   c. Since $\frac{1}{8}$ ____ $\frac{1}{4}$ then $\frac{3}{8}$ ____ $\frac{3}{4}$

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

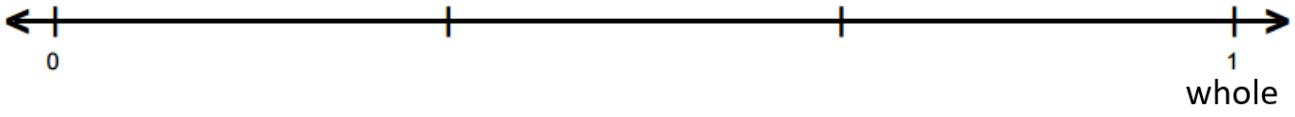
a. $\frac{2}{3}$ _____ $\frac{5}{6}$

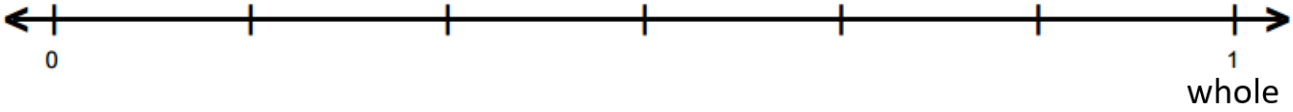
b. $\frac{3}{4}$ _____ $\frac{7}{8}$

c. $1\frac{3}{4}$ _____ $1\frac{7}{12}$

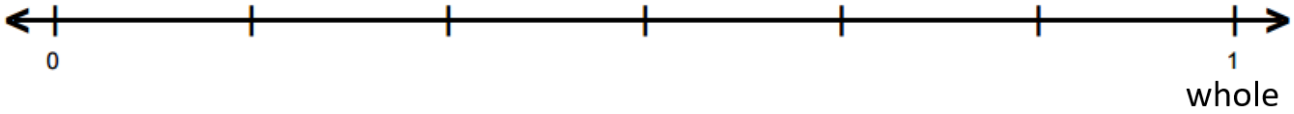
4. Plot fractions on the number line to model each pair of fractions.
   Use >, <, or = to compare.

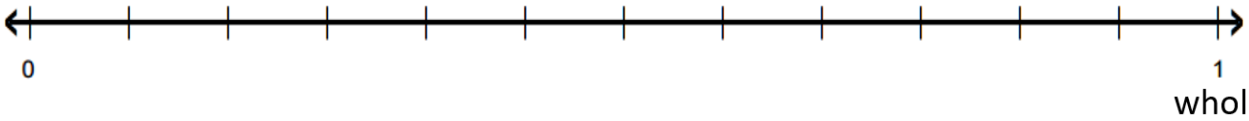
a. $\frac{2}{3}$ _____ $\frac{5}{6}$





b. $\frac{2}{6}$ _____ $\frac{5}{12}$



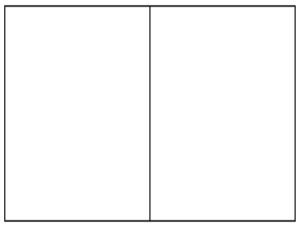


Name _____

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

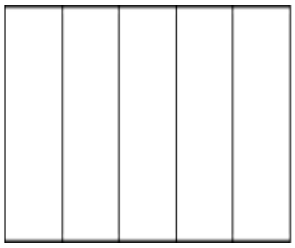
a. $\frac{1}{2}$ _____ < _____ $\frac{2}{3}$

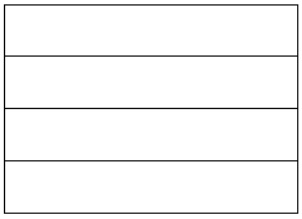
$\frac{1\times3}{2\times3} = \frac{3}{6}$



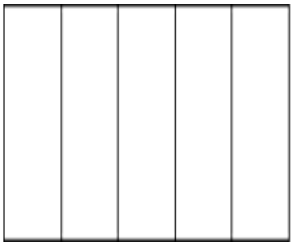
$\frac{2\times2}{3\times2} = \frac{4}{6}$

b. $\frac{4}{5}$ _____ $\frac{3}{4}$

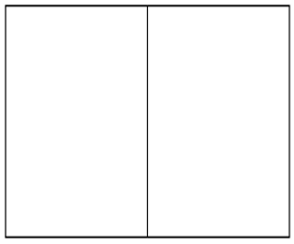




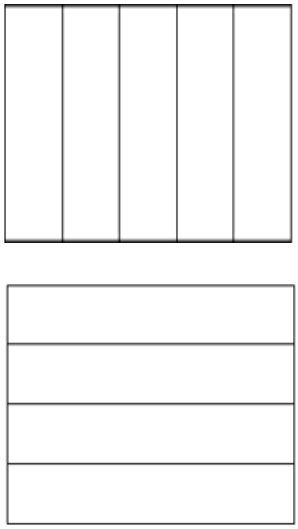
c. $\frac{3}{5}$ _____ $\frac{2}{3}$



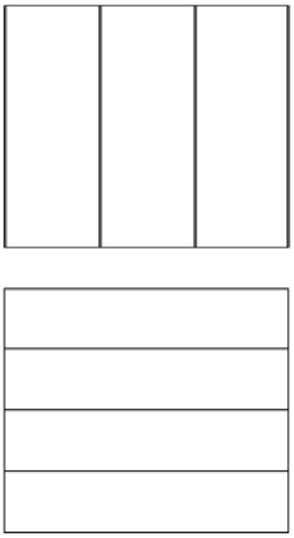
d. $\frac{1}{2}$ _____ $\frac{2}{4}$



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



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



2. Rename the fractions, as needed in order to compare by writing >, <, or =.

a. $\frac{3}{5}$ _____ $\frac{5}{6}$

$\frac{3\times6}{5\times6} =$ $\frac{5\times5}{6\times5} =$

b. $\frac{2}{6}$ _____ $\frac{3}{8}$

$\frac{2\times8}{6\times8} =$ $\frac{3\times6}{8\times6} =$

c. $\frac{7}{5}$ _____ $\frac{10}{8}$

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

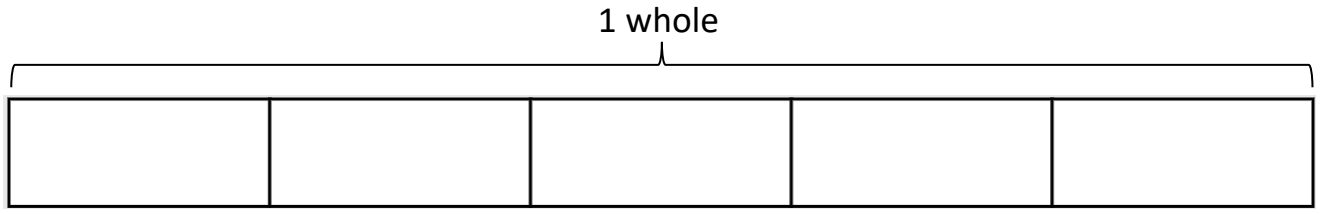
d. $\frac{4}{3}$ _____ $\frac{6}{5}$

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

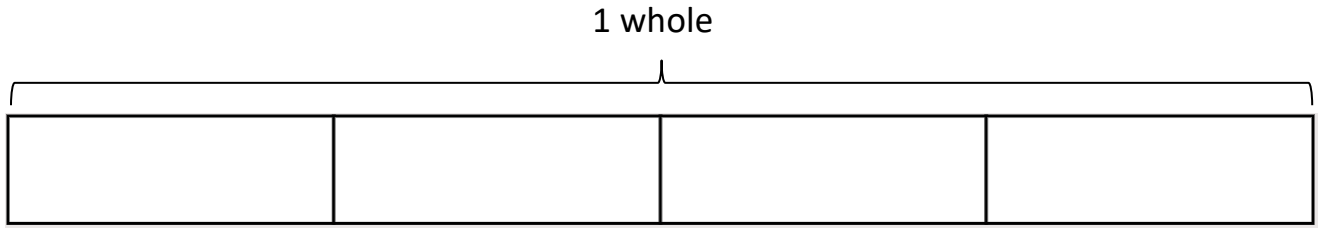
Name _____

1. Shade in fractions to find the sum.

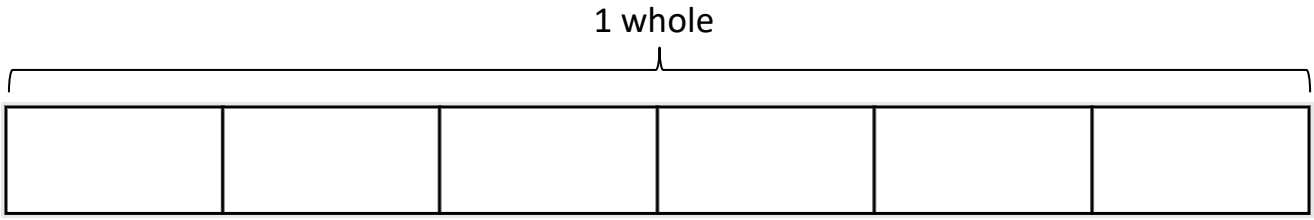
a. 3 fifths + 1 fifth = _____



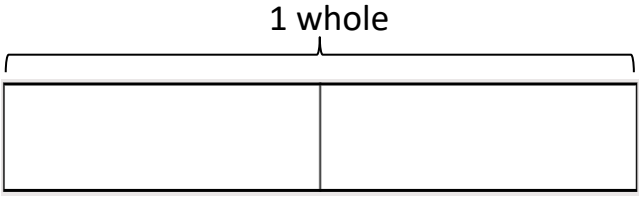
b. 1 fourth + 2 fourths = _____

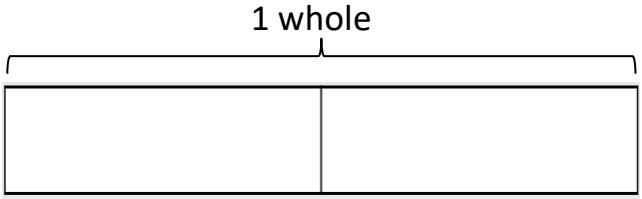


c. $\frac{2}{6} + \frac{3}{6} =$ _____



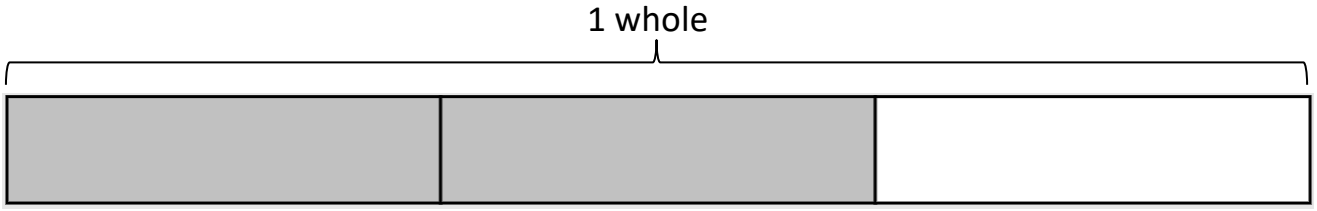
d. $\frac{2}{2} + \frac{1}{2} =$ _____



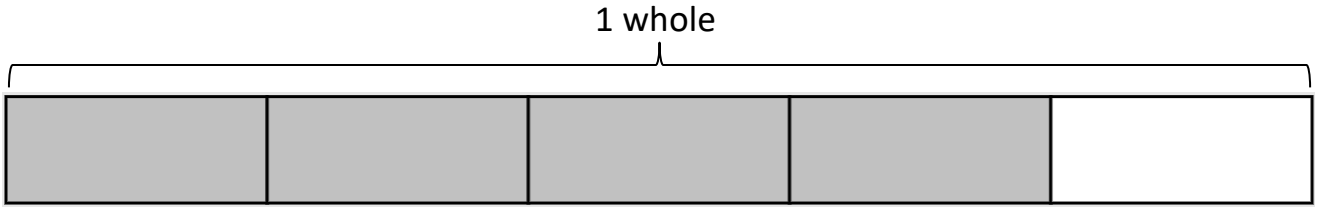


2. Cross off fractions to find the difference.

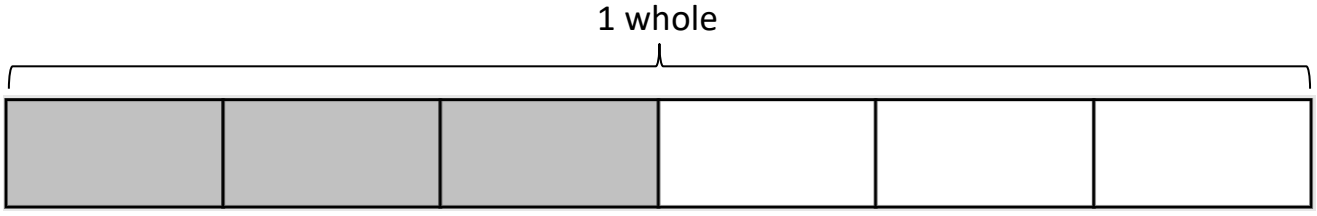
a. 2 thirds - 1 third = _____



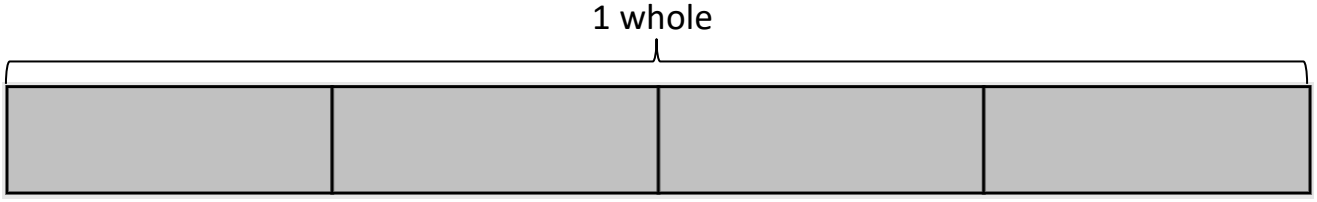
b. 4 fifths - 1 fifth = _____



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



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



Name _____ Date _____

1. Solve. Write the difference in unit form.

   a. 3 fifths – 1 fifth =

   _____

   b. 5 fifths – 3 fifths =

   _____

   c. 3 halves – 2 halves =

   _____

   6 fourths – 3 fourths =

   _____

2. Solve.

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

   b. $\frac{6}{8} - \frac{4}{8}$ = _____

   c. $\frac{3}{10} - \frac{3}{10}$ = _____

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

   e. $\frac{5}{4} - \frac{4}{4}$ = _____

   f. $\frac{5}{4} - \frac{3}{4}$ = _____

3. Solve. Write the sum in unit form.

   a. 2 fourths + 1 fourth =

   _____

   b. 4 fifths + 3 fifths =

   _____

4. Solve.

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

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

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

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

e. $\frac{6}{9} + \frac{2}{9} =$ _____

f. $\frac{7}{10} + \frac{3}{10} =$ _____

g. $\frac{5}{6} + \frac{7}{6} =$ _____

h. $\frac{2}{8} + \frac{5}{8} =$ _____

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.

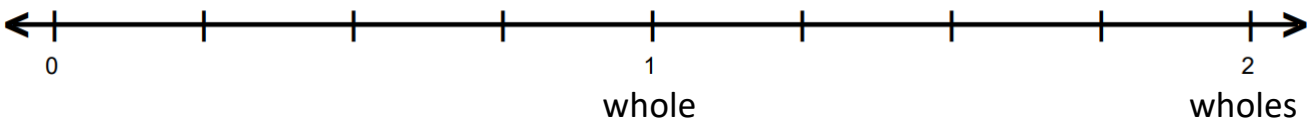
Name _____

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

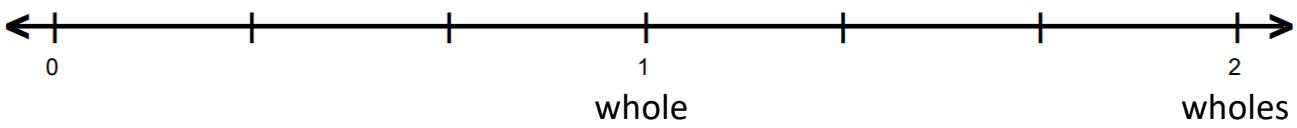
a. $\frac{8}{5}, \frac{2}{5}, \frac{10}{5}$ _____ + _____ = _____ _____ + _____ = _____ _____ - _____ = _____ _____ - _____ = _____	b. $\frac{15}{8}, \frac{7}{8}, \frac{8}{8}$ _____ + _____ = _____ _____ + _____ = _____ _____ - _____ = _____ _____ - _____ = _____

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

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

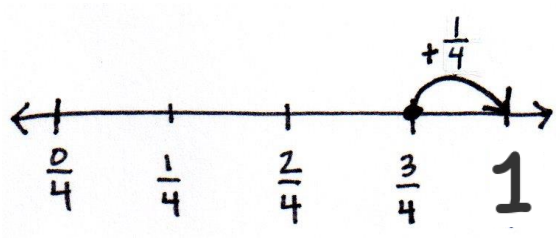


b. $1\frac{1}{3} + \frac{1}{3} =$ _____

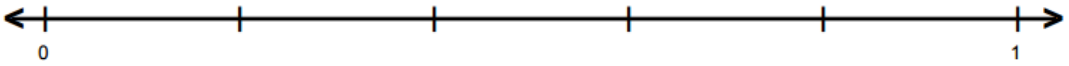


3. Find the difference by counting up on the number line.

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

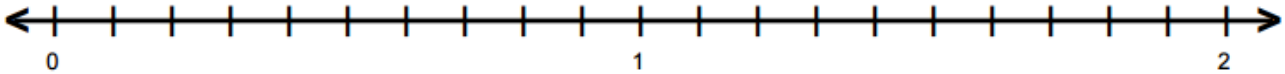


b. $1 - \frac{3}{5} =$ _____



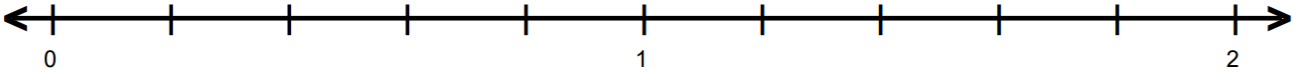
whole

c. $1\frac{2}{10} - \frac{7}{10} =$ _____



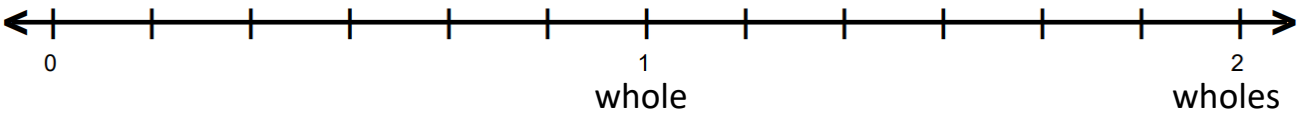
whole wholes

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

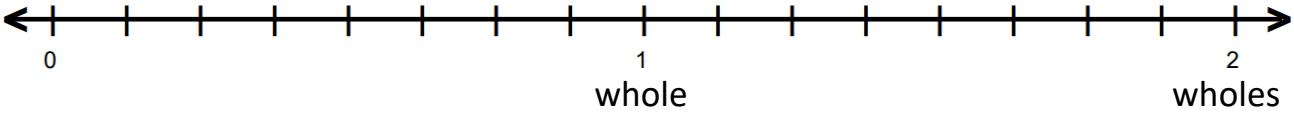


whole wholes

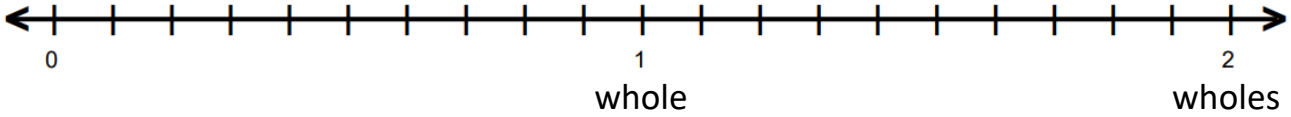
e. $1\frac{3}{6} - \frac{4}{6} =$ _____



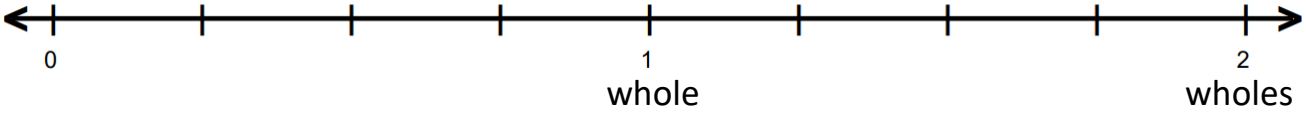
f. $1\frac{6}{8} - \frac{7}{8} =$ _____



g. $1\frac{1}{10} - \frac{7}{10} =$ _____



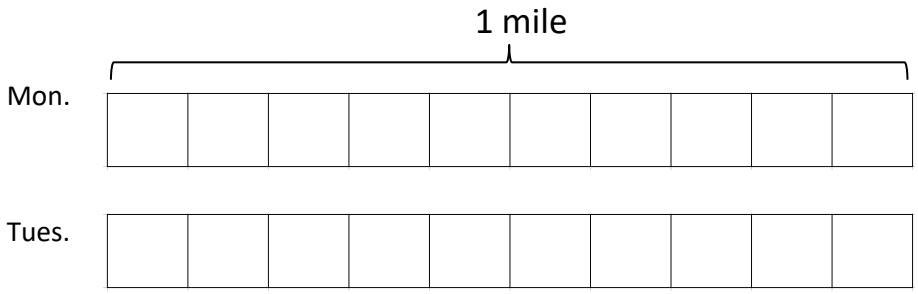
h. $1\frac{3}{4} - \frac{4}{4} =$ _____



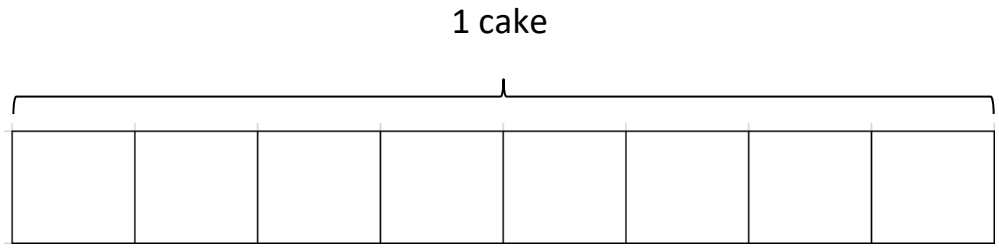
Name _____

Shade in tape diagrams to solve.

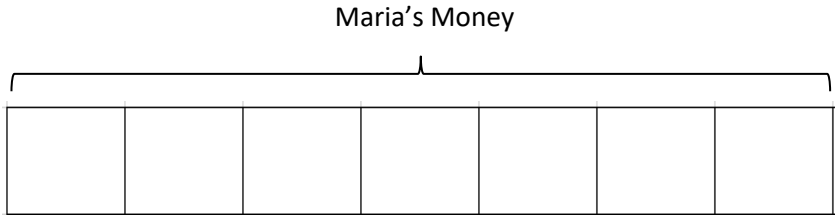
1. Sue ran $\frac{9}{10}$ mile on Monday and $\frac{7}{10}$ mile on Tuesday. How many miles did Sue run in the 2 days?



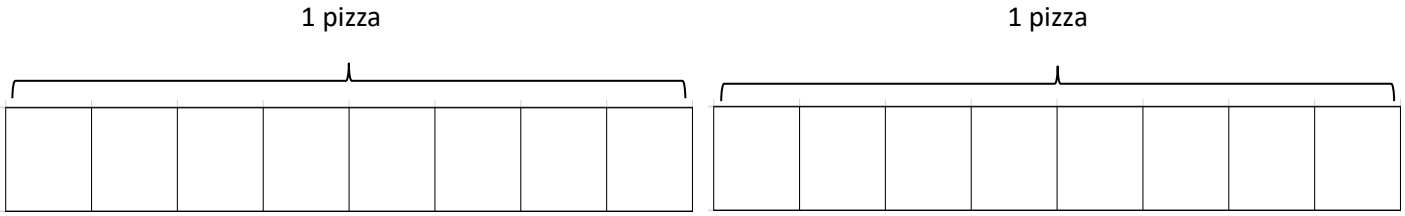
2. Mr. Salazar cut his son's birthday cake into 8 equal pieces. Mr. Salazar, Mrs. Salazar, and the birthday boy each ate 1 piece of cake. What fraction of the cake was left?



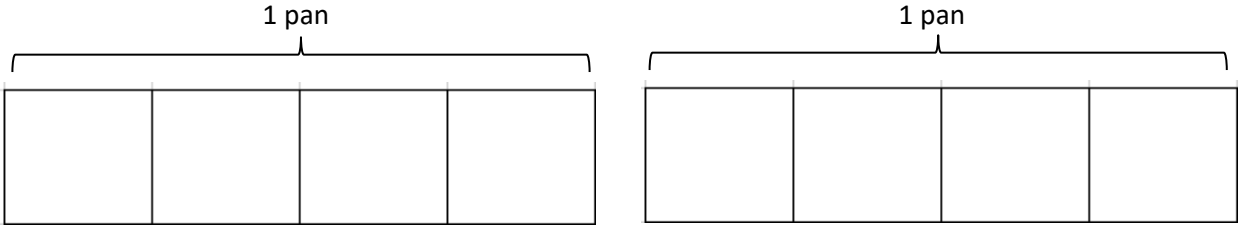
3. Maria spent $\frac{4}{7}$ of her money on a book and saved the rest. What fraction of her money did Maria save?



4. Mrs. Jones had $1\frac{4}{8}$ pizzas left after a party. After giving some to Gary, she had $\frac{7}{8}$ pizza left. What fraction of a pizza did she give Gary?



5. A baker had 2 pans of corn bread. He served $1\frac{1}{4}$ pans. What fraction of a pan was left?



Name _____

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

   a. Count by 1 thirds. Start at 0 thirds. End at 6 thirds.

   $\frac{0}{3}$, $\frac{1}{3}$, _____

   b. Count by 1 half. Start at 0 halves. End at 8 halves.

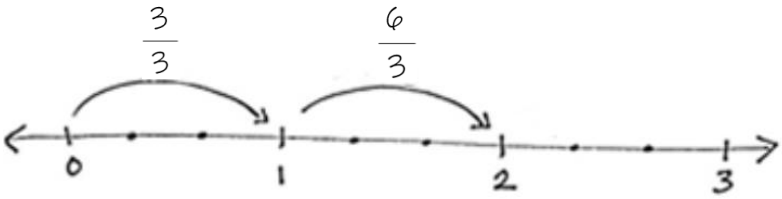
   _____

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

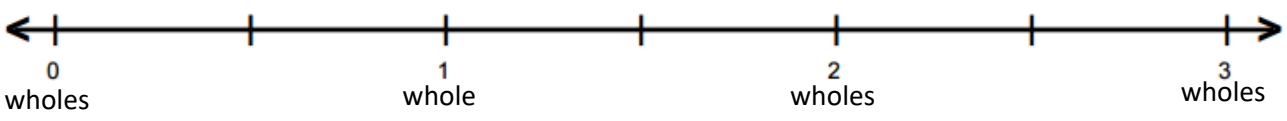
$$\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4} \quad + \quad \frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4} \quad + \quad \frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}=3$$

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

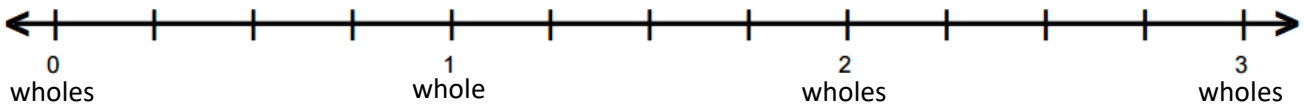
   a. $6 \times \frac{1}{3} = 2$



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

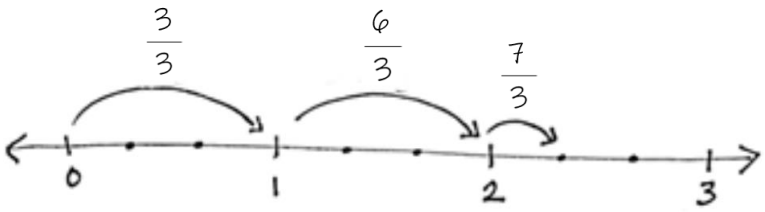


c. $12 \times \frac{1}{4} =$ _____

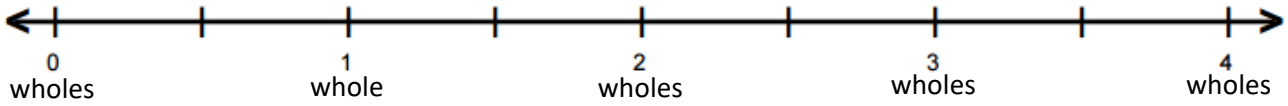


4. Multiply, as shown below. Write the product as a mixed number.

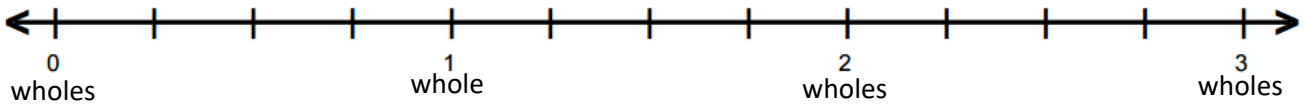
7 copies of 1 third = $7 \times \frac{1}{3} = 2\frac{1}{3}$



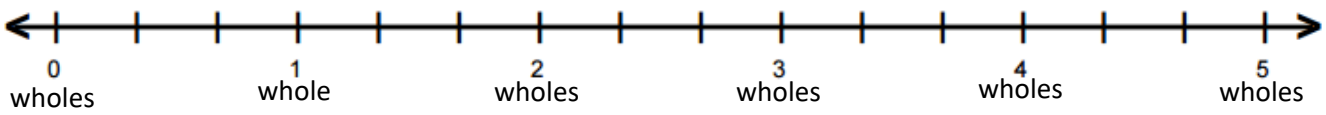
a. 7 copies of 1 half = _____



b. $10 \times \frac{1}{4} =$ _____



c. $14 \times \frac{1}{3} =$ _____



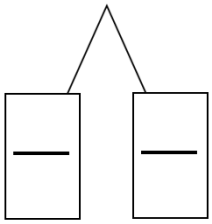
Name _____

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

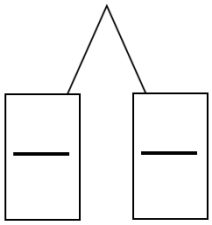
a. $\frac{11}{3} = 3 + \frac{2}{3} = 3\frac{2}{3}$

$\frac{9}{3}$ $\frac{2}{3}$

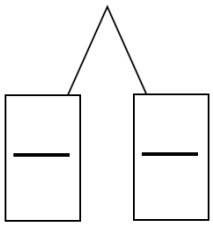
b. $\frac{12}{5}$ = _____ + _____ = _____



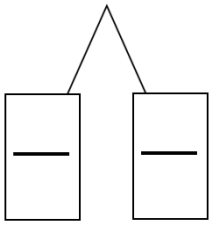
c. $\frac{10}{2}$ = _____ + _____ = _____



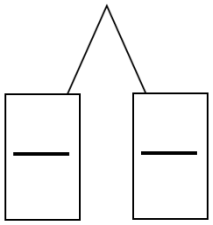
d. $\frac{15}{4}$ = _____ + _____ = _____



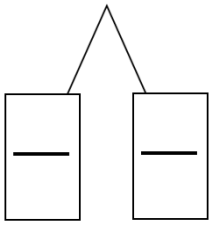
e. $\frac{11}{3}$ = _____ + _____ = _____



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



g. $\frac{17}{4}$ = _____ + _____ = _____



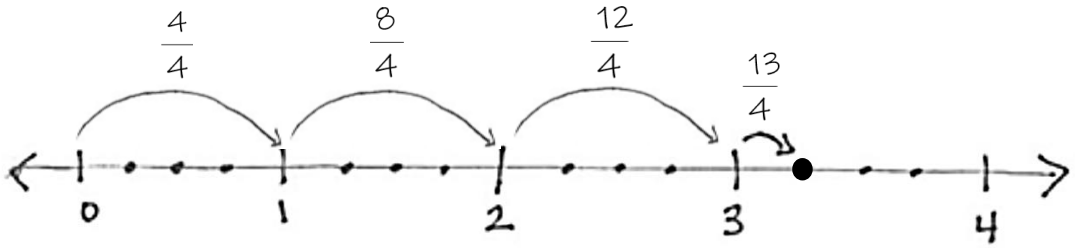
2. Use any strategy to convert each fraction to a mixed number.

a. $\frac{9}{4}$ =	b. $\frac{17}{5}$ =	c. $\frac{25}{6}$ =
d. $\frac{30}{7}$ =	e. $\frac{38}{8}$ =	f. $\frac{30}{9}$ =
g. $\frac{23}{10}$ =	h. $\frac{14}{10}$ =	i. $\frac{37}{12}$ =

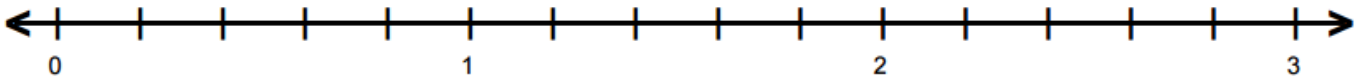
Name _____

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

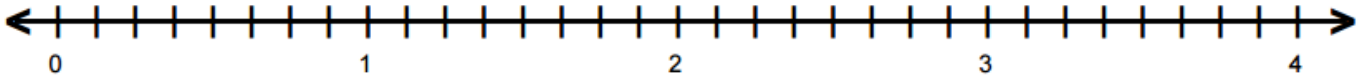
a. $3\frac{1}{4} = 3 + \frac{1}{4} = \frac{12}{4} + \frac{1}{4} = \frac{13}{4}$



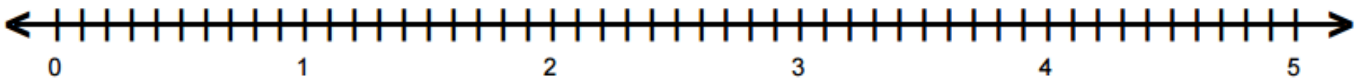
b. $2\frac{4}{5} =$ _____



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



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



2. Convert each mixed number to a fraction greater than 1.

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

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

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

d. $4\frac{6}{8}$ = _____

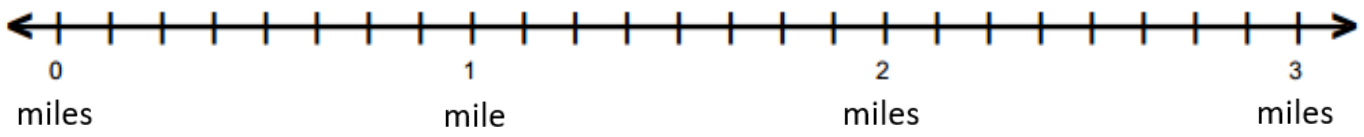
3. Use any strategy to convert each mixed number to a fraction greater than 1.

a. $2\frac{3}{4}$	b. $2\frac{2}{5}$	c. $3\frac{3}{6}$
d. $3\frac{3}{8}$	e. $3\frac{1}{10}$	f. $4\frac{3}{8}$

Name _____

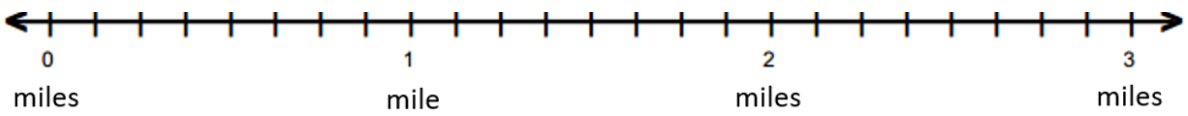
1. The chart shows the distance in miles that fourth graders in Ms. Smith's class were able to run before stopping for a rest. Create a line plot to display the data in the table.

Student	Joe	Arianna	Bobbi	Morgan	Jack	Sasha	Tyler	Jenny	Anson	Candy
Distance	$2\frac{4}{8}$	$1\frac{6}{8}$	$2\frac{1}{8}$	$1\frac{5}{8}$	$2\frac{5}{8}$	$2\frac{2}{8}$	$2\frac{4}{8}$	$\frac{5}{8}$	$2\frac{2}{8}$	$2\frac{4}{8}$



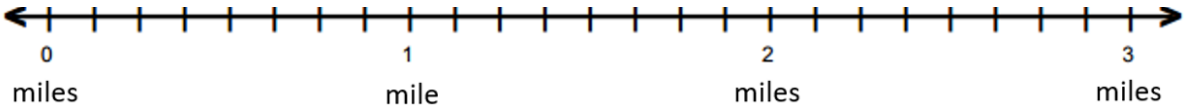
1. Solve each problem.
   a. Who ran a mile farther than Jenny? _____
   b. Who ran a mile less than Jack? _____
   c. Two students ran exactly $2\frac{2}{8}$ miles. Identify the students. _____

   Mark the $2\frac{2}{8}$ point on the number line.

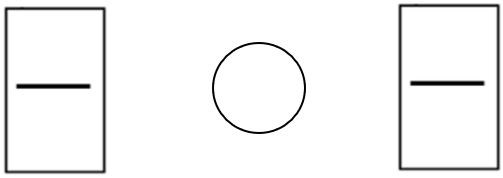


   How many $\frac{1}{8}$ mile did each of these students run in all? _____

d. Plot both the longest run and the shortest run on the number line. What is the difference, in miles, between the longest and shortest distance run? _____



e. Compare the distances run by Arianna and Morgan using >, <, or =.

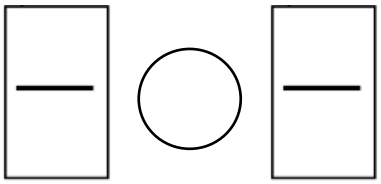


Arianna Morgan

f. Ms. Smith ran twice as far as Jenny. How far did Jenny run? _____

How far did Ms. Smith run if she ran twice as far as Jenny? _____

g. Mr. Reynolds ran $\frac{11}{8}$ miles. Use >, <, or = to compare the distance Mr. Reynolds ran to the distance that Ms. Smith ran.



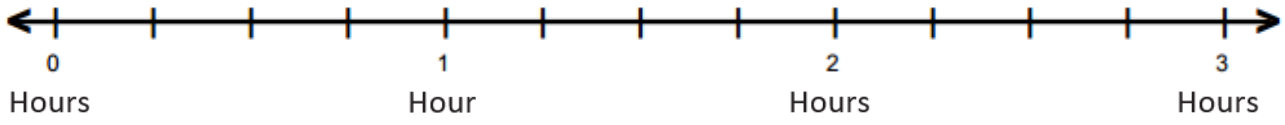
Mr. R Ms. S

h. Who ran farther, Ms. Smith or Mr. Reynolds? _____

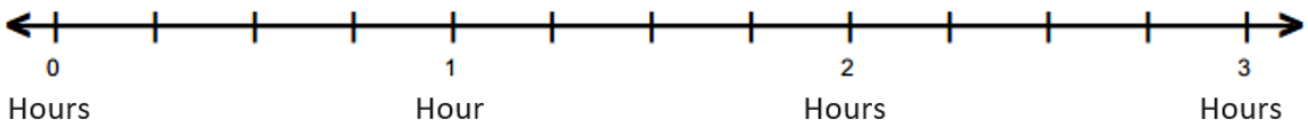
Name _____

1. Mr. O'Neil asked his students to record the length of time in hours that they read over the weekend. The times are listed in the table. Make a line plot of the data.

Student	Robin	Bill	Katrina	Kelly	Marty	Gail	Scott	Ben
Time	$\frac{2}{4}$	1	$\frac{3}{4}$	$1\frac{3}{4}$	$1\frac{2}{4}$	$2\frac{1}{4}$	$1\frac{3}{4}$	$2\frac{2}{4}$



2. One of the students read $\frac{3}{4}$ hour on Friday, $\frac{3}{4}$ hour on Saturday, and $\frac{3}{4}$ hour on Sunday. Add these fractions on the number line.



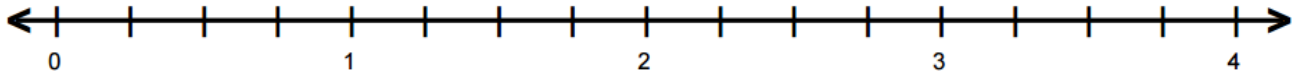
How many hours did that student read over the weekend? _____

Look at the chart to name the student that read this much. _____

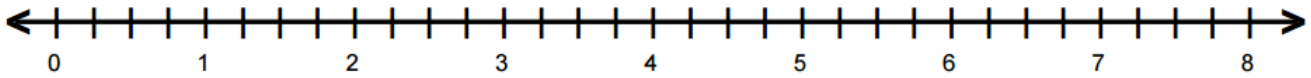
Name _____

1. Use number lines to solve.

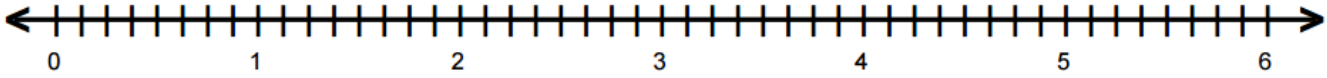
a. $3\frac{1}{4} + \frac{1}{4} =$ _____



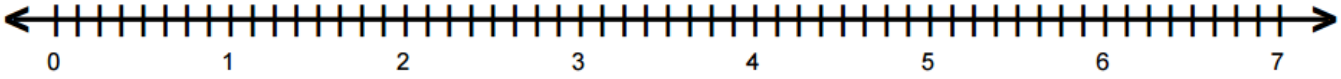
b. $7\frac{3}{4} + \frac{1}{4} =$ _____



c. $5\frac{2}{8} + \frac{3}{8} =$ _____



d. $6\frac{7}{8} + \frac{1}{8} =$ _____

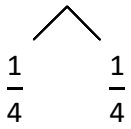


2. Complete the number sentences.

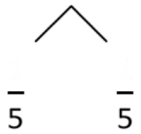
a. $4\frac{7}{8} +$ _____ $= 5$	b. $7\frac{2}{5} +$ _____ $= 8$
c. $3 = 2\frac{1}{6} +$ _____	d. $12 = 11\frac{1}{12} +$ _____

3. Use a number bonds to show how to make one. Solve.

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



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



4. Solve any way. Express answers as mixed numbers.

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

g. $2\frac{7}{10} + \frac{8}{10}$	h. $6\frac{5}{10} + \frac{7}{10}$

5. To solve $7\frac{9}{10} + \frac{5}{10}$, Maria wrote, $7\frac{9}{10} + \frac{1}{10} = 8$ and $8 + \frac{4}{10} = 8\frac{4}{10}$.

   Explain Maria's solution:

Name _____

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

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

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

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

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

e. $1\frac{3}{4} + 3\frac{3}{4}$ _____

f. $2\frac{4}{6} + 1\frac{5}{6}$ _____

g. $1\frac{3}{4} + 3\frac{3}{4}$ _____

h. $3\frac{3}{8} + 2\frac{6}{8}$ _____

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

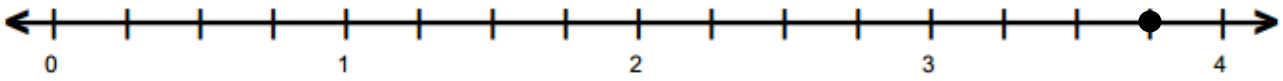
j. $2\frac{6}{8} + 3\frac{7}{8}$ _____

k. $3\frac{8}{10} + 2\frac{7}{10}$ _____

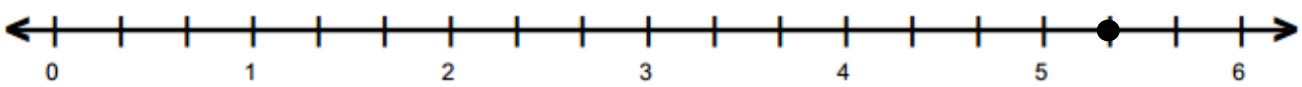
Name _____

1. Subtract. Model with a number line.

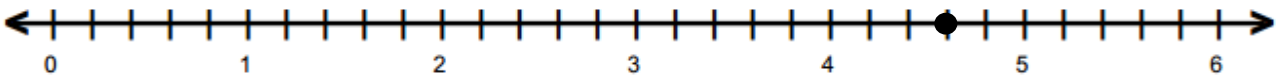
a. $3\frac{3}{4} - \frac{1}{4} =$ _____



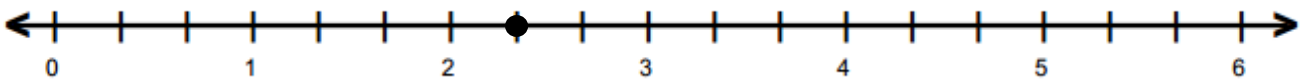
b. $5\frac{1}{3} - \frac{2}{3} =$ _____



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

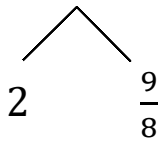


d. $2\frac{1}{3} - \frac{2}{3} =$ _____

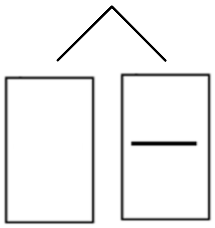


2. Decompose the total to subtract the fractions.

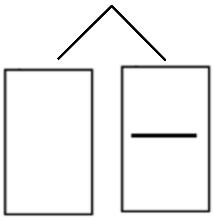
a. $3\frac{1}{8} - \frac{3}{8} = 2\frac{9}{8} - \frac{3}{8} = 2\frac{6}{8}$



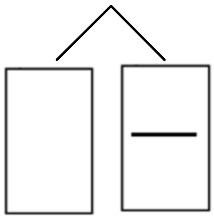
b. $5\frac{1}{8} - \frac{7}{8} =$ _____



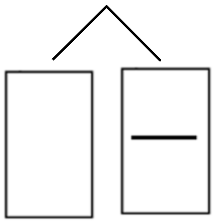
c. $4\frac{3}{5} - \frac{4}{5} =$ _____



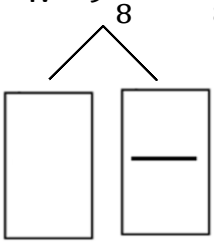
d. $2\frac{4}{6} - \frac{5}{6} =$ _____



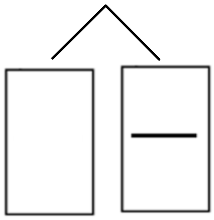
e. $6\frac{4}{12} - \frac{7}{12} =$ _____



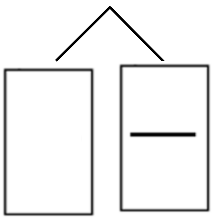
f. $9\frac{1}{8} - \frac{5}{8} =$ _____



g. $7\frac{1}{6} - \frac{5}{6} =$ _____



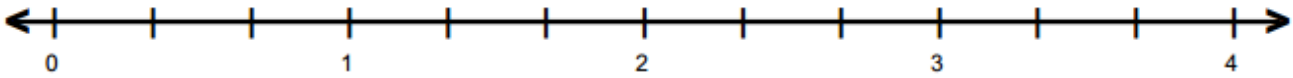
h. $8\frac{3}{10} - \frac{4}{10} =$ _____



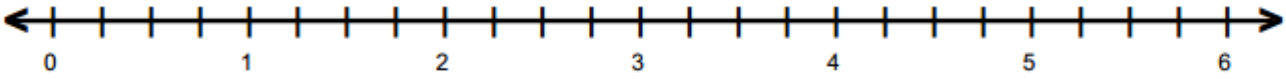
Name _____

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

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



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

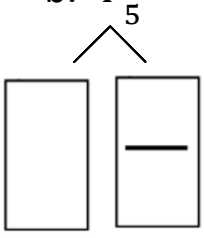


2. Subtract by decomposing the total.

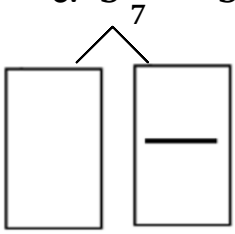
a. $3\frac{1}{4} - 1\frac{3}{4} =$ $2\frac{5}{4} - 1\frac{3}{4} =$ $(2-1) + \left(\frac{5}{4} - \frac{3}{4}\right) =$ _____

$2 \quad \frac{5}{4}$

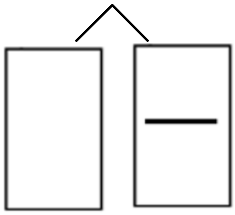
b. $4\frac{1}{5} - 2\frac{4}{5} =$ _____



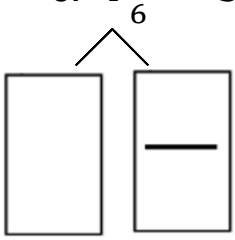
c. $5\frac{3}{7} - 3\frac{6}{7} =$ _____



d. $5\frac{3}{5} - 2\frac{4}{5} =$ _____



e. $4\frac{3}{6} - 3\frac{5}{6} =$ _____



3. Solve any way.

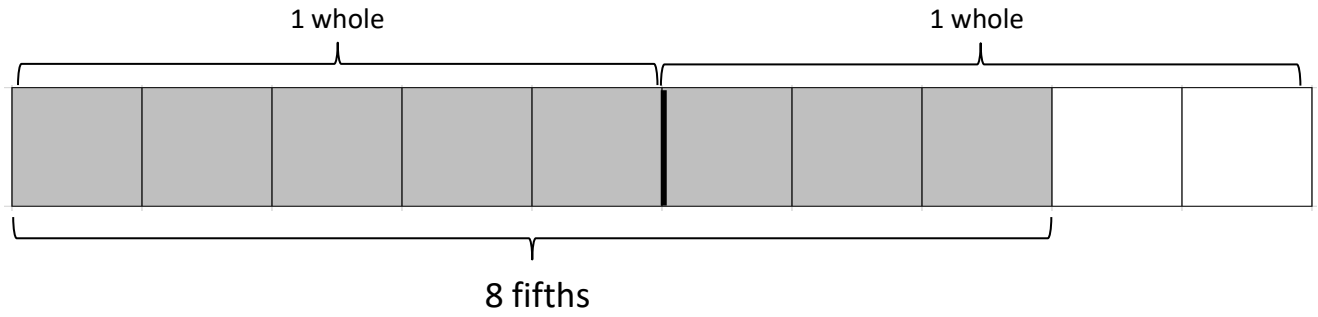
a. $6\frac{1}{4} - 3\frac{3}{4} =$ _____

b. $5\frac{1}{8} - 2\frac{7}{8} =$ _____

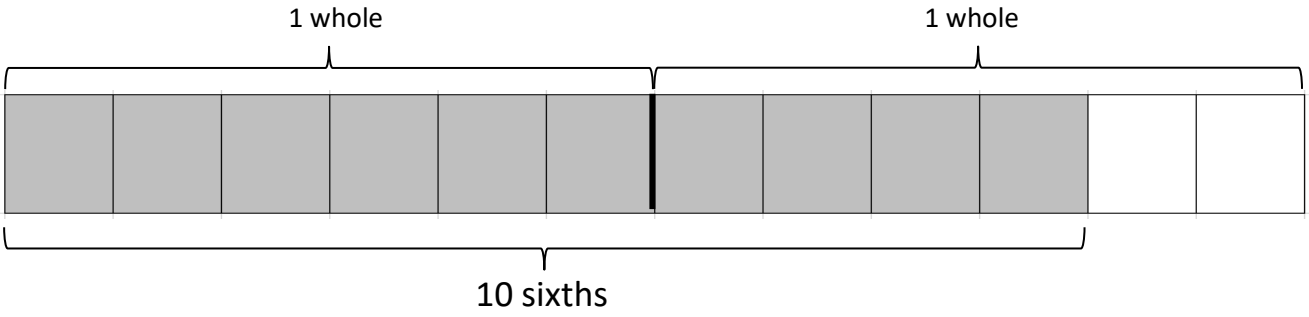
Name _____

1. Circle groups to show the following are true.

   a. 8 fifths = 4 × 2 fifths



   b. 10 sixths = 5 × 2 sixths



2. Write the expression in unit form to solve.

   a. $7 \times \frac{2}{3}$

   _____ x 2 thirds = _____ thirds

   b. $4 \times \frac{2}{4}$

   _____ x 2 fourths = _____ fourths

c. $6 \times \frac{3}{8}$

_____ x _____ eighths = _____ eighths

d. $6 \times \frac{5}{8}$

_____ x _____ eighths = _____ eighths

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

a. $7 \times \frac{4}{9} =$

_____ x _____ ninths = _____ ninths

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

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

_____ x _____ fifths = _____ fifths

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

c. $8 \times \frac{3}{4} =$

_____ x _____ fourths = _____ fourths

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

d. $6 \times \frac{3}{8} =$

_____ x _____ eighths = _____ eighths

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

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

_____ x _____ tenths = _____ tenths

$= \square$

f. $3 \times \frac{4}{100} =$

_____ x _____ hundredths =_____ hundredths

$= \square$

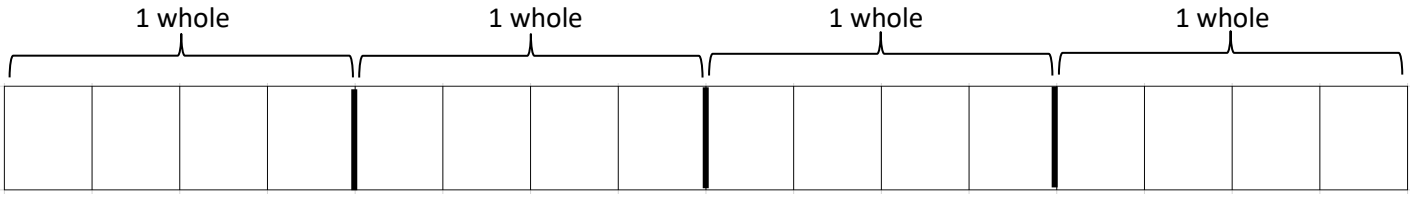
4. Maria needs $\frac{3}{5}$ yard of fabric for each costume. How many yards of fabric does she need for 6 costumes?

_____ x _____ fifths = _____ fifths

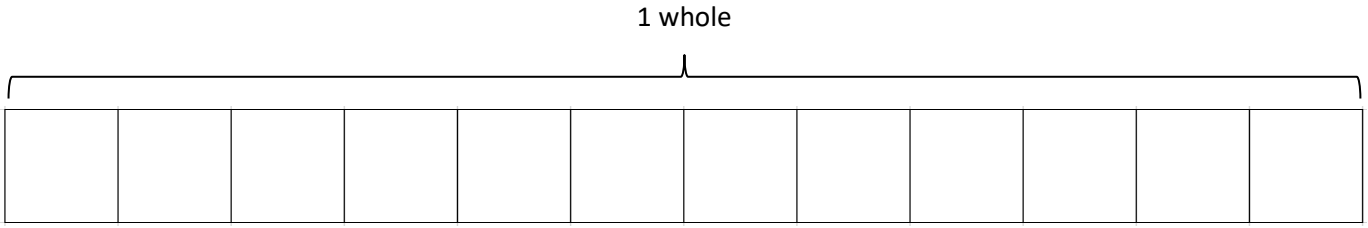
$= \square$

Name _____

1. Shade the tape diagram to represent: $\frac{3}{4}+\frac{3}{4}+\frac{3}{4}+\frac{3}{4}=$ _____



2. Shade the tape diagram to represent: $\frac{2}{12}+\frac{2}{12}+\frac{2}{12}=$ _____



Write a multiplication expression equal to: $\frac{3}{4}+\frac{3}{4}+\frac{3}{4}+\frac{3}{4}=$ 4 x _____ = _____

Write a multiplication expression equal to: $\frac{7}{12}+\frac{7}{12}+\frac{7}{12}=$ 3 x _____ = _____

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

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

b. $\frac{9}{10}+\frac{9}{10}+\frac{9}{10}=$ _____

4. Solve using any method.

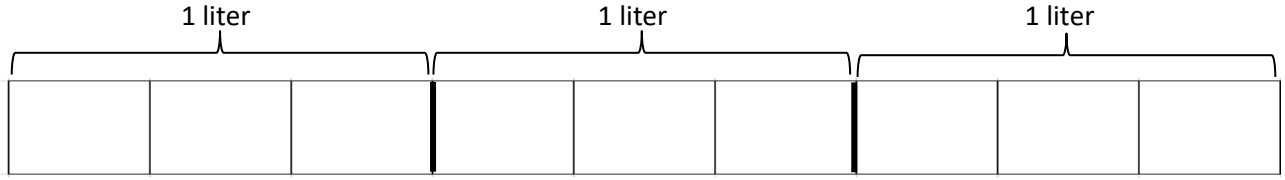
a. $3 \times \frac{2}{3} =$ _____

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

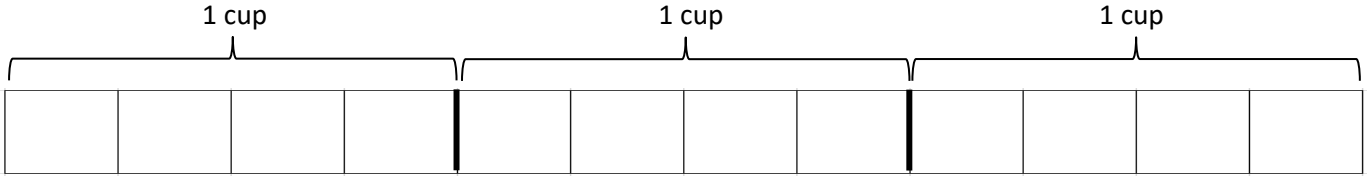
c. $5 \times \frac{2}{5} =$ _____

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

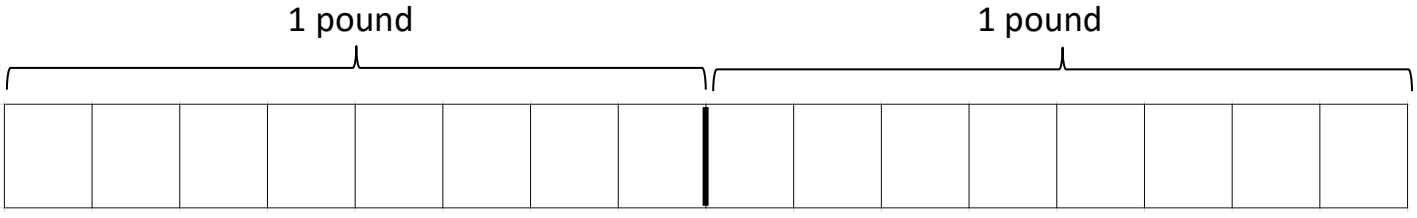
4. Morgan poured $\frac{2}{3}$ liter of punch into each of 4 bottles. How many liters of punch did she pour in all?



5. A recipe calls for $\frac{3}{4}$ cup rice. How many cups of rice are needed to make the recipe 4 times?



6. A butcher prepared 5 sausages using $\frac{3}{8}$ pound of meat for each. How many pounds did he use in all?



Name _____

1. Solve the following using the distributive property.

a. $3 \times 6\frac{1}{5}$

3 groups of _____

AND

3 groups of _____

_____ + _____ = _____

b. $2 \times 4\frac{1}{3}$

2 groups of _____

AND

2 groups of _____

_____ + _____ = _____

c. $3 \times 2\frac{2}{8}$

(_____ x _____) + (_____ x _____)

_____ + _____ = _____

d. $2 \times 4\frac{4}{10}$

(_____ x _____) + (_____ x _____)

_____ + _____ = _____

e. $3 \times 7\frac{1}{4}$

(_____ x _____) + (_____ x _____)

_____ + _____ = _____

f. $6 \times 3\frac{1}{8}$

(_____ x _____) + (_____ x _____)

_____ + _____ = _____

f. $4 \times 9\frac{1}{5}$ _____ _____ + _____ = _____	g. $4 \times 5\frac{1}{8}$ _____ _____ + _____ = _____

2. For one dance costume, Sasha needs $4\frac{1}{6}$ feet of ribbon. How much ribbon does she need for 5 identical costumes?

Name _____

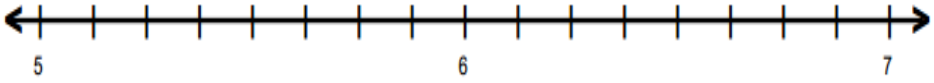
1. The chart to the right shows the height of some football players.
   a. Use the data to create a line plot at the bottom of this page and to answer the questions below.

Player	Height (in feet)
A	$6\frac{2}{8}$
B	$5\frac{7}{8}$
C	$6\frac{4}{8}$
D	$6\frac{2}{8}$
E	$6\frac{2}{8}$
F	$5\frac{7}{8}$
G	$6\frac{1}{8}$
H	$6\frac{5}{8}$
I	$5\frac{6}{8}$
J	$6\frac{1}{8}$

   b. What is the difference in height of the tallest and shortest players? _____

   c. Player I and Player B have a **combined** height that is $1\frac{1}{8}$ feet **taller** than a school bus. What is the height of a school bus? _____

2. One of the players on the team is now 4 times as tall as he was at birth, when he measured $1\frac{5}{8}$ feet. Who is the player? _____



3. Doctors recommend that players drink at least $3\frac{3}{4}$ quarts of water each day. At least how much water should be consumed per day by 6 players?

4. Doctors recommend that athletes each eat about $\frac{7}{10}$ pounds of protein each day. About how many combined pounds of protein should these 9 players eat per day?

Name _____

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

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

= _____

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

= _____

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

= _____

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

= _____

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

= _____

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

= _____

2. Describe a pattern you notice when adding the sums of fractions with even denominators as opposed to those with odd denominators.

3. Did the sums change if the addition started with the unit fraction rather than with 0?

4. Think about partners that make a whole to find the sums.

a. $\frac{0}{10} + \frac{1}{10} + \frac{2}{10} + \ldots \frac{10}{10}$

b. $\frac{0}{12} + \frac{1}{12} + \frac{2}{12} + \ldots \frac{12}{12}$

c. $\frac{0}{15} + \frac{1}{15} + \frac{2}{15} + \ldots + \frac{15}{15}$

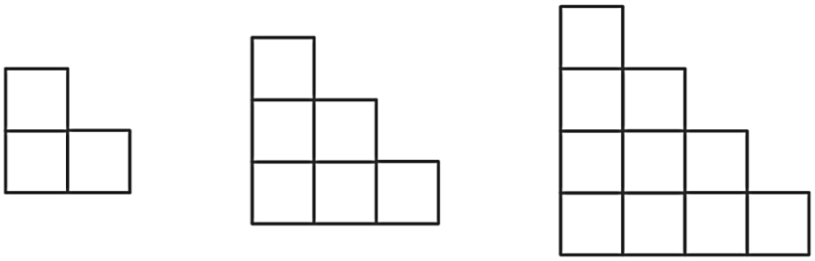
d. $\frac{0}{20} + \frac{1}{20} + \frac{2}{20} + \ldots \frac{20}{20}$

5. How can you apply this strategy to find the sum of all the whole numbers from 0 to 100?

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	6
2	7
	8
4	

Rule: _____

b.

input	output
3	0
	1
5	2
6	

Rule: _____

c.

input	output
1	10
2	
	30
4	40

Rule: _____

3. Complete the conversion tables. Describe the rule.

a.

Feet	Inches
2	
4	
6	
	96

Rule: _____

b.

Feet	Yards
3	1
6	2
9	
12	

Rule: _____

c.

Pounds	Ounces
1	
2	
	48
4	

Rule: _____

d.

Quarts	Pints
5	10
10	
15	
	40

Rule: _____