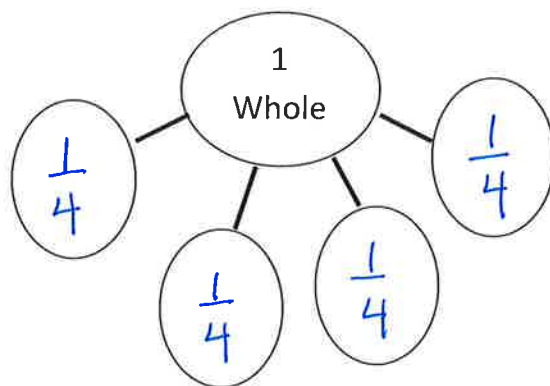
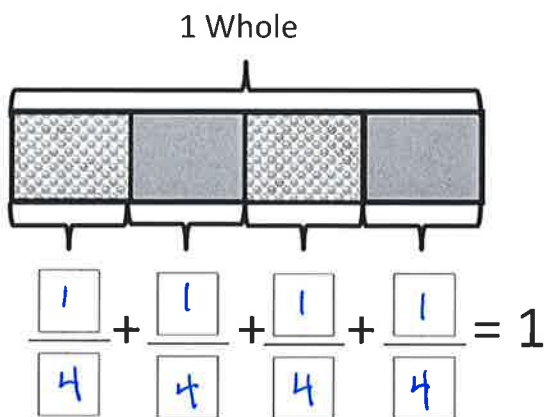
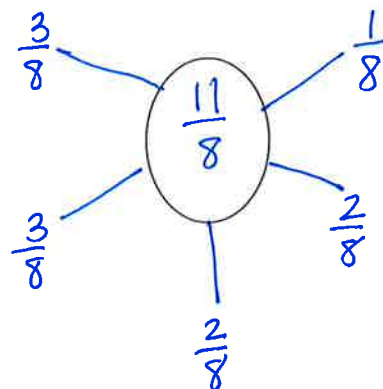
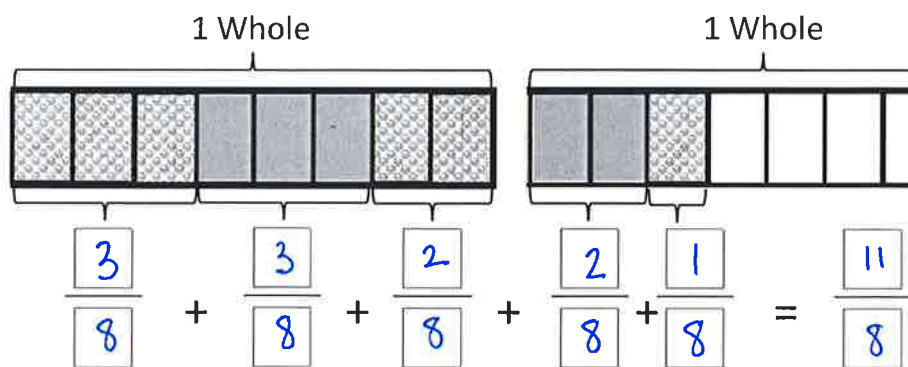


Name key

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



2.

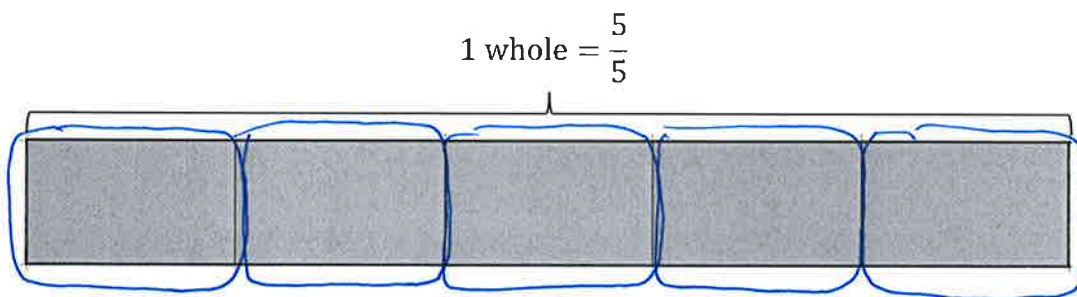


Name Key

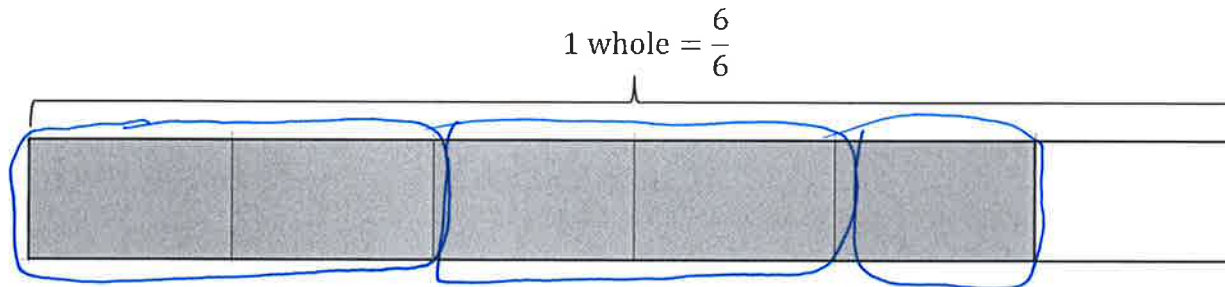
Date _____

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

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



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

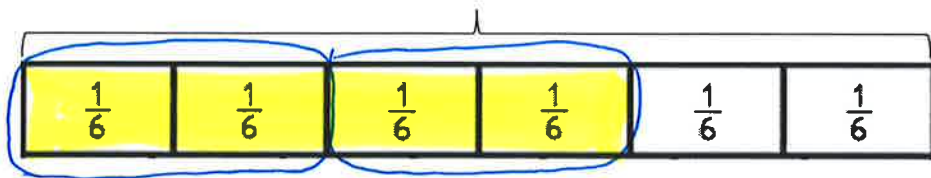


Name Key

Step 1: Shade a tape diagram of the given fraction.

Step 2: Record the decomposition as a sum of fractions in **two different ways**.

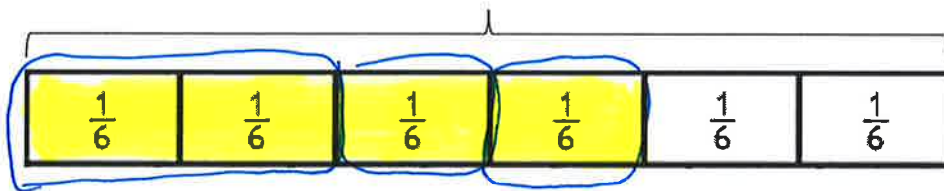
1 whole = $\frac{6}{6}$



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

possible equations

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

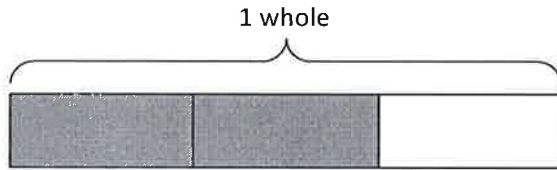


$\frac{4}{6} = \frac{2}{6} + \frac{1}{6} + \frac{1}{6}$

Name key

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

a.

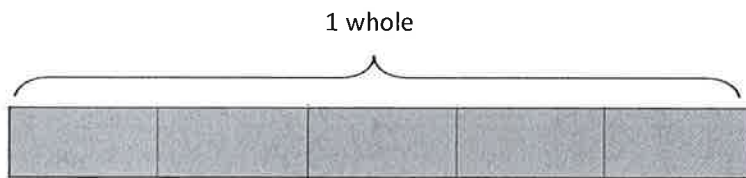


Sum of unit fractions: $\frac{2}{3} = \frac{1}{3} + \frac{1}{3}$

Multiplication Sentence:

$$\frac{2}{3} = 2 \text{ groups of } \frac{1}{3} = 2 \times \frac{1}{3}$$

b.



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

Multiplication Sentence:

$$\frac{5}{5} = 5 \text{ groups of } \frac{1}{5} = 5 \times \frac{1}{5}$$

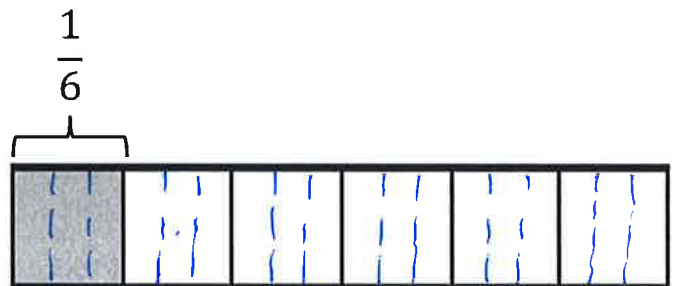
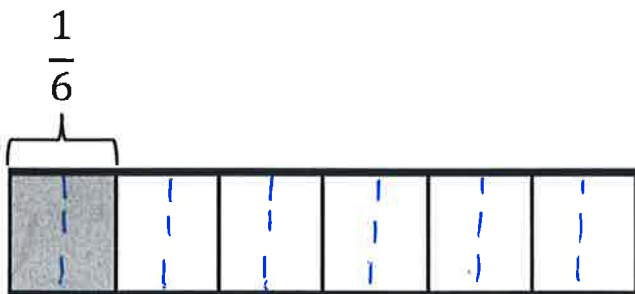
2. Write a number sentence showing the fraction as multiplying the **unit fraction**.

$$\frac{6}{9} = 6 \text{ groups of } \frac{1}{9} = 6 \times \frac{1}{9}$$

Name Key

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

(Draw dotted lines to decompose the pieces.)

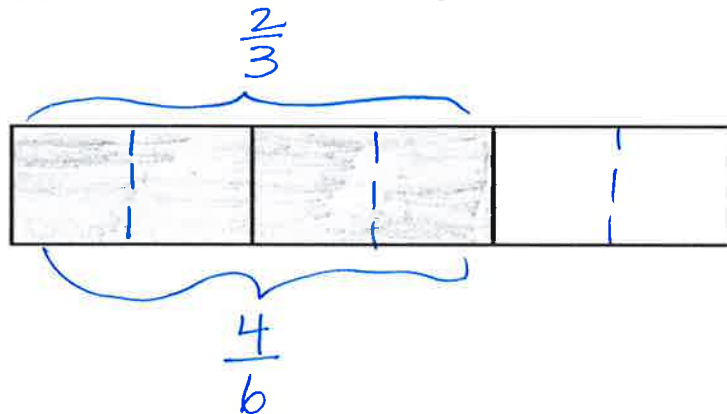


$$\frac{1}{6} = \frac{1}{12} + \frac{1}{12}$$

$$\frac{1}{6} = \frac{1}{18} + \frac{1}{18} + \frac{1}{18}$$

2. Draw and label a tape diagram to prove the following statement.

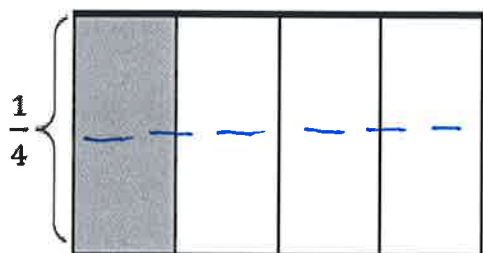
$$\frac{2}{3} = \frac{4}{6}$$



Name Key

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

2 rows



= Equivalent Fractions: $\frac{1}{4} = \frac{2}{8}$

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

X Multiplication Sentence:

$\frac{1}{4} = 2$ groups of $\frac{1}{8}$ \rightarrow $\frac{1}{4} = 2 \times \frac{1}{8}$

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

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

+ Sum of unit fractions:

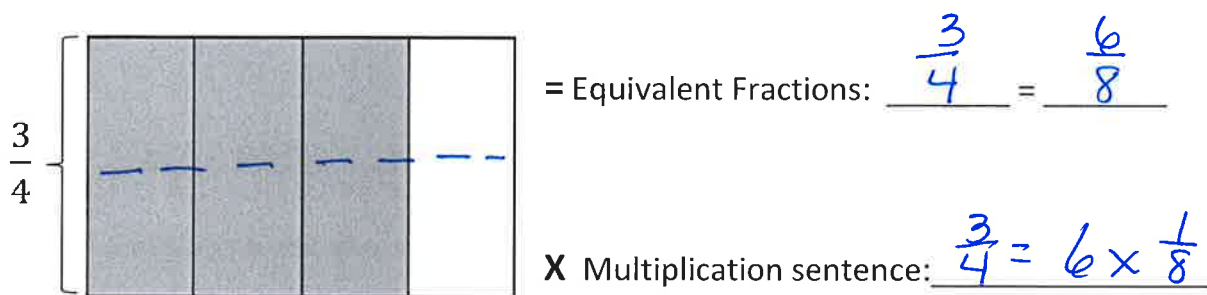
$\frac{1}{5} = \frac{1}{10} + \frac{1}{10}$

X Multiplication:

$\frac{1}{5} = 2$ groups of $\frac{1}{10}$ \rightarrow $\frac{1}{5} = 2 \times \frac{1}{10}$

Name Key

1. Decompose the rectangle into **eighths**. Write the equivalent fractions as both a sum of unit fractions and as a multiplication sentence.



$$\frac{3}{4} = \left(\frac{1}{8} + \frac{1}{8} \right) + \left(\frac{1}{8} + \frac{1}{8} \right) + \left(\frac{1}{8} + \frac{1}{8} \right) = \frac{6}{8}$$

2. Show the decomposition represented by the number sentence below.

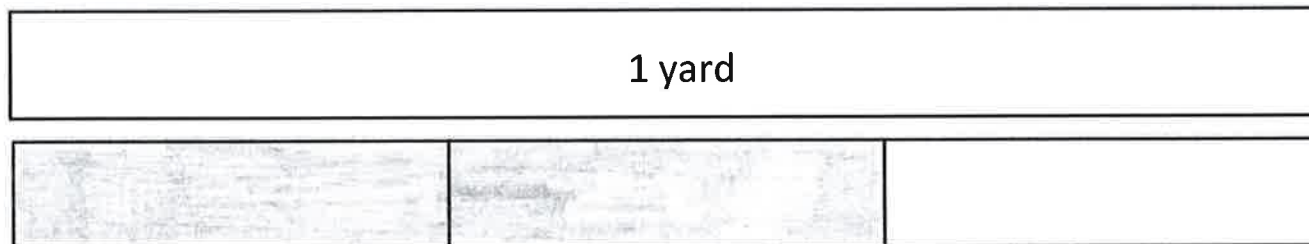
$$\frac{3}{5} = \frac{6}{10}$$

$$\frac{3}{5} = \left(\frac{1}{10} + \frac{1}{10} \right) + \left(\frac{1}{10} + \frac{1}{10} \right) + \left(\frac{1}{10} + \frac{1}{10} \right) = \frac{6}{10}$$

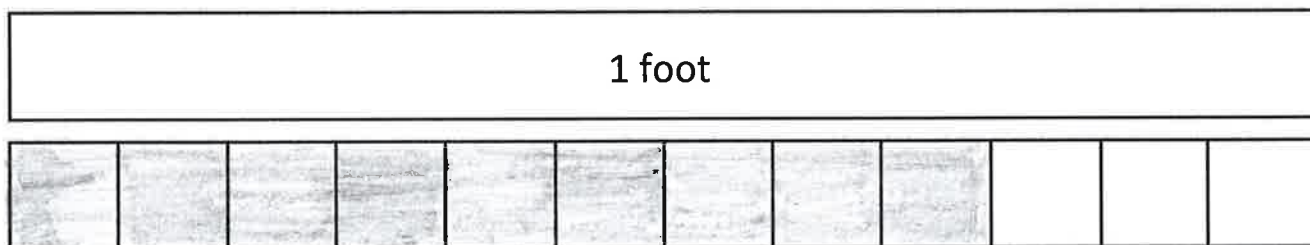
Name Key

1. Shade in pictures to show the fractions.

a. 2 feet equal what fraction of a yard? 2 feet = $\frac{2}{3}$ yard



b. 9 inches equal what fraction of a foot? 9 inches = $\frac{9}{12}$ foot



2. Write the fractions that belong in the blanks.

a. 1 inch equals what fraction of a foot? 1 inch = $\frac{1}{12}$ foot

b. 1 inch equals what fraction of a yard? 1 inch = $\frac{1}{36}$ yard

c. 1 foot equals what fraction of a yard? 1 foot = $\frac{1}{3}$ yard

Name Key

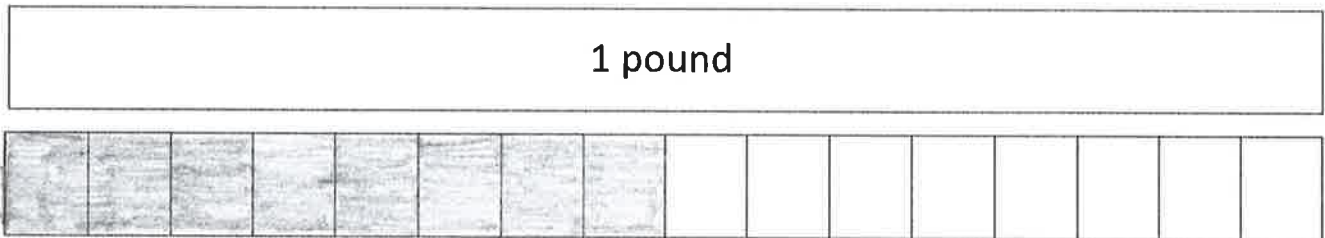
1. Fill in the blanks.

a. 1 pound = 16 ounces

b. 1 ounce is $\frac{1}{16}$ of a pound

3. Shade in the tape diagram to show how ounces relate to pounds.

8 ounces = $\frac{8}{16}$ of a pound



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

Unit form: 14 ounces Fraction of a pound: $\frac{14}{16}$



Name Key

1. Fill in the blanks.

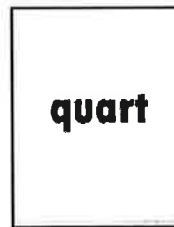
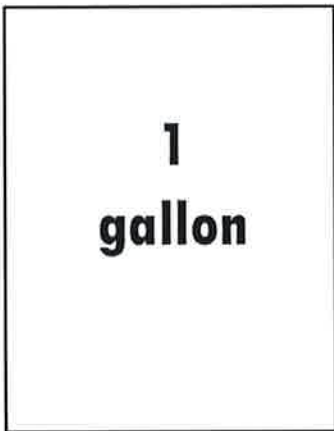
a. 1 gallon = 4 quarts

b. 1 gallon = 8 pints

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

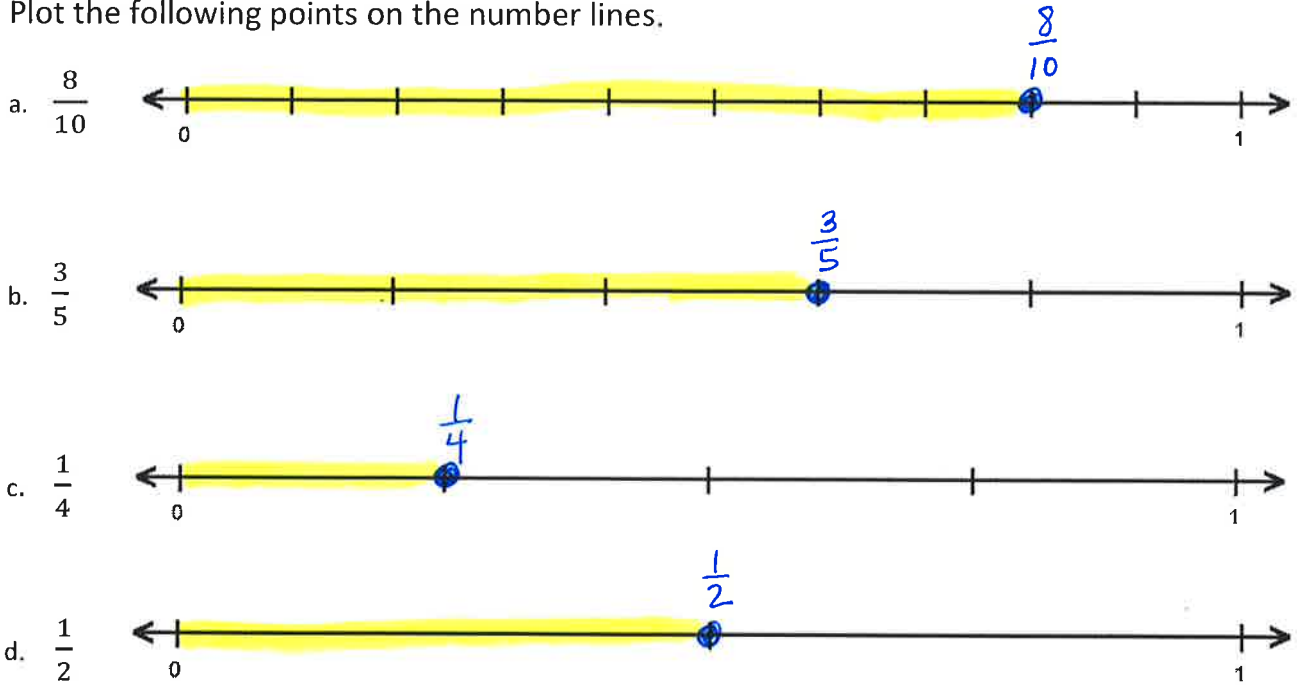
a. 10 cups = $\frac{10}{16}$ of a gallon

b. 3 cups = $\frac{3}{4}$ of a quart



Name Key

1. Plot the following points on the number lines.



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

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

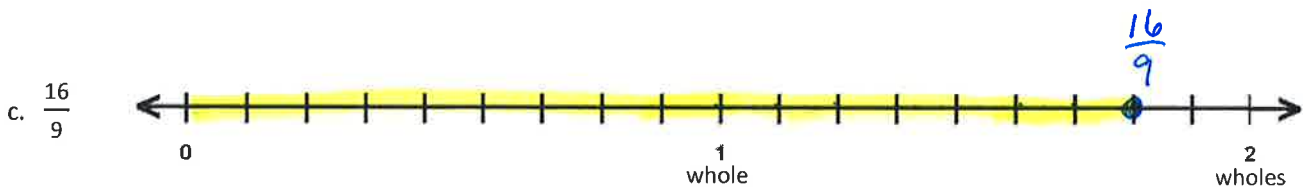
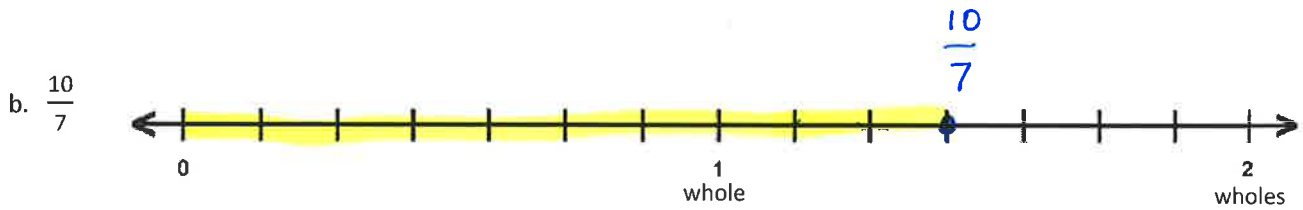
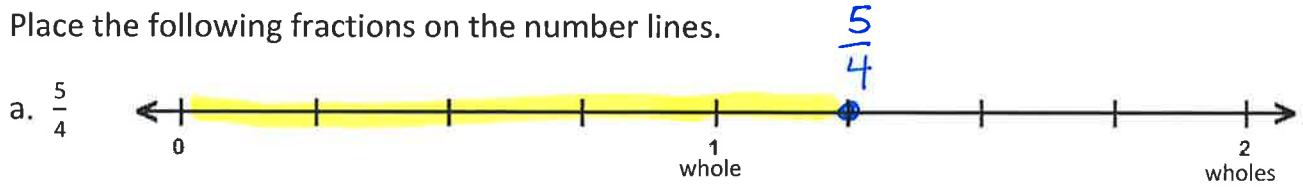
b. $\frac{8}{10} > \frac{3}{5}$

c. $\frac{1}{2} < \frac{3}{5}$

d. $\frac{1}{4} < \frac{8}{10}$

Name Key

1. Place the following fractions on the number lines.



2. Use the number lines to compare the fractions using $>$, $<$, or $=$.

a. $\frac{5}{4} < \frac{10}{7}$

b. $\frac{5}{4} < \frac{16}{9}$

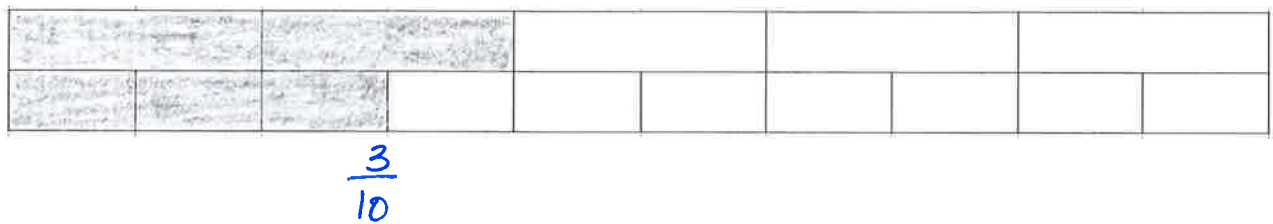
c. $\frac{16}{9} > \frac{10}{7}$

Name Key

1. Since $\frac{1}{3} > \frac{1}{6}$ then $\frac{2}{3} > \frac{2}{6}$

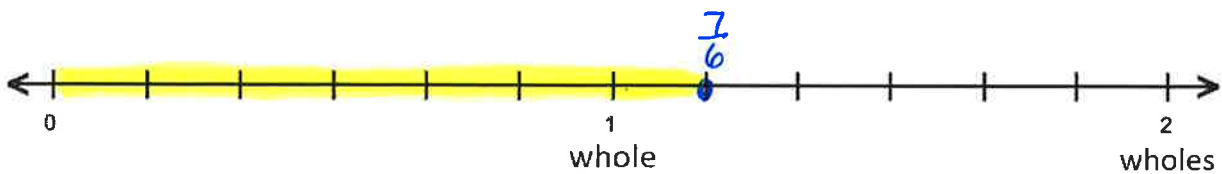
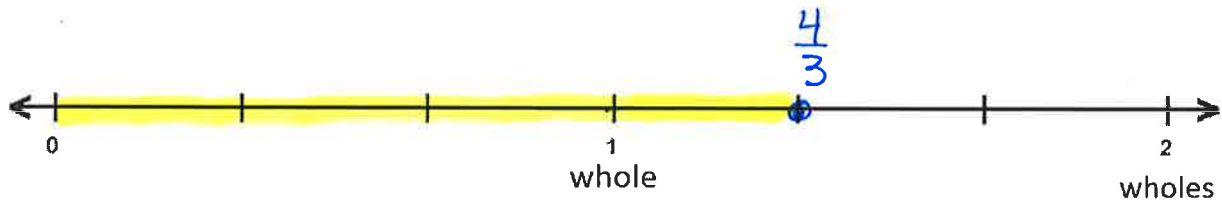
2. Shade in tape diagrams to compare the following fractions:

$\frac{2}{5} > \frac{3}{10}$



3. Use number lines to compare the following fractions:

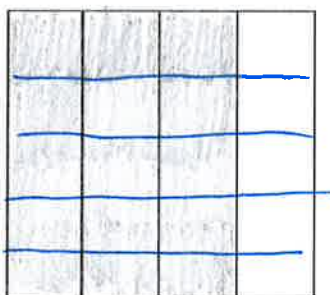
$\frac{4}{3} > \frac{7}{6}$



Name Key

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

$$\frac{3}{4} \quad \underline{\quad} \quad \frac{4}{5}$$



$$\frac{3}{4} \times \frac{5}{5} = \frac{15}{20}$$



$$\frac{4}{5} \times \frac{4}{4} = \frac{16}{20}$$

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

$$\frac{2}{6} \quad \underline{\quad} \quad \frac{3}{5}$$

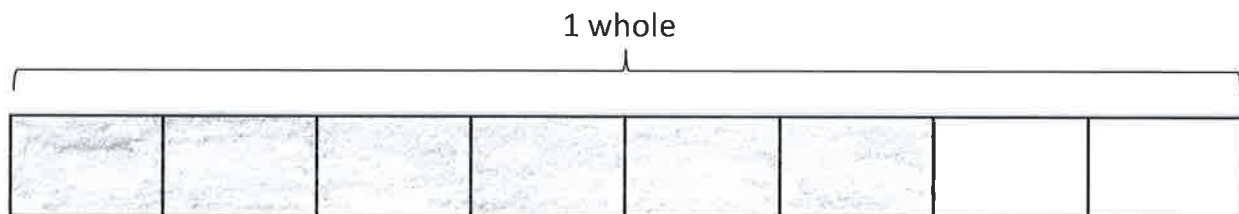
$$\frac{2 \times 5}{6 \times 5} = \frac{10}{30}$$

$$\frac{3 \times 6}{5 \times 6} = \frac{18}{30}$$

Name key

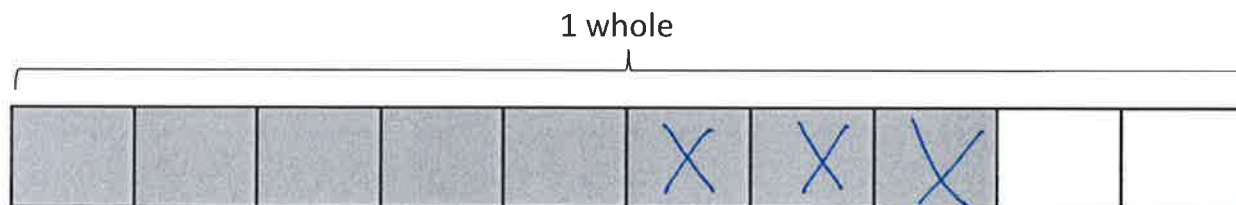
1. Find the sum.

$$\frac{2}{8} + \frac{4}{8} = \underline{\frac{6}{8}}$$



2. Find the difference.

$$\frac{8}{10} - \frac{3}{10} = \underline{\frac{5}{10}}$$



Name Key

Date _____

1. Find the difference

a. $\frac{6}{9} - \frac{5}{9} = \underline{\frac{1}{9}}$

b. $\frac{5}{6} - \frac{3}{6} = \underline{\frac{2}{6}}$

2. Find the sum.

a. $\frac{5}{12} + \frac{10}{12} = \underline{\frac{15}{12}}$

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

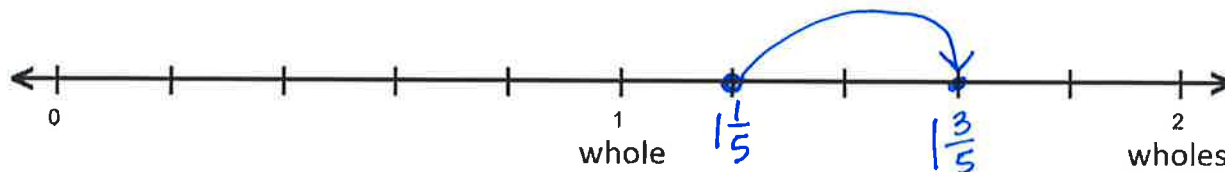
3. Write True or False.

a. The sum for Problem 2a above is greater than 1 whole. Trueb. The sum for Problem 2b above is equal to 1 whole. True

Name Key

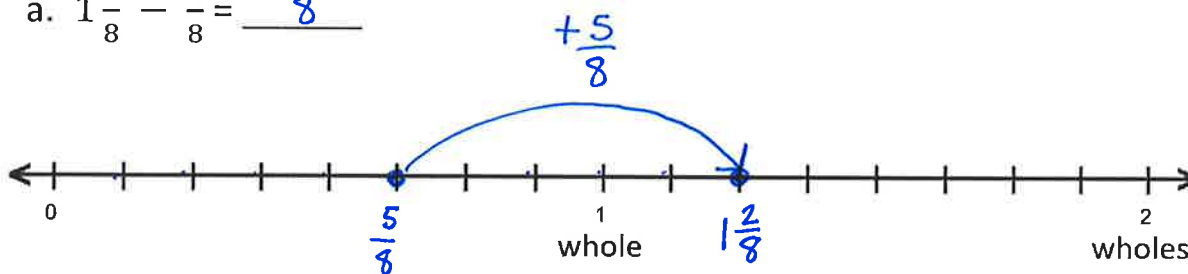
1. Find the sum by adding on the number line.

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

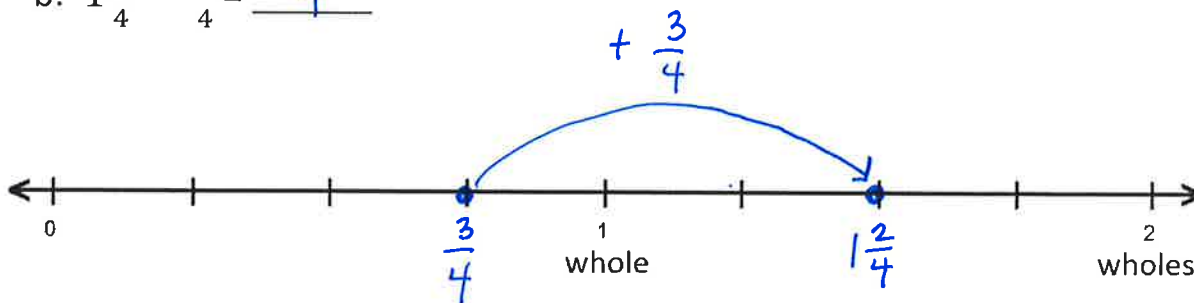


2. Find the difference by counting up on the number line.

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



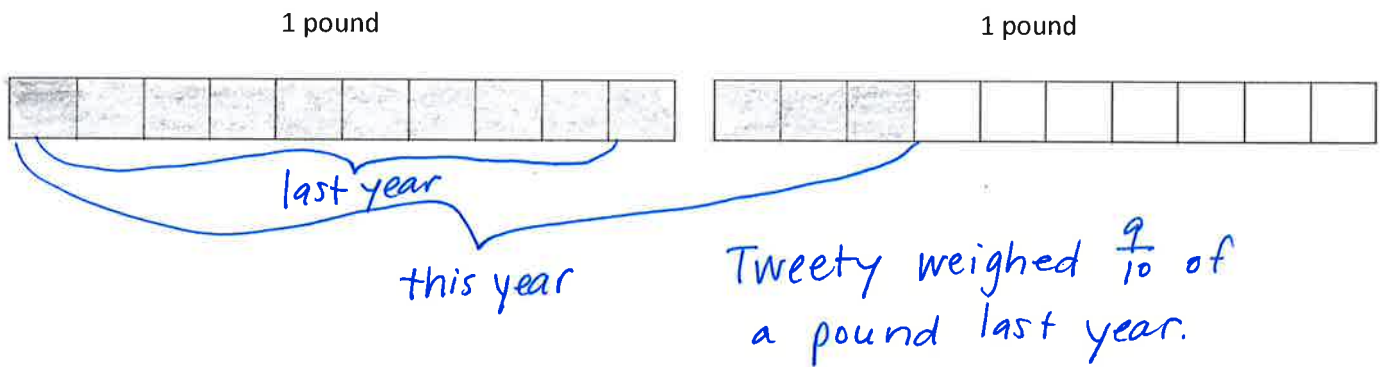
b. $1\frac{2}{4} - \frac{3}{4} = \underline{\frac{3}{4}}$



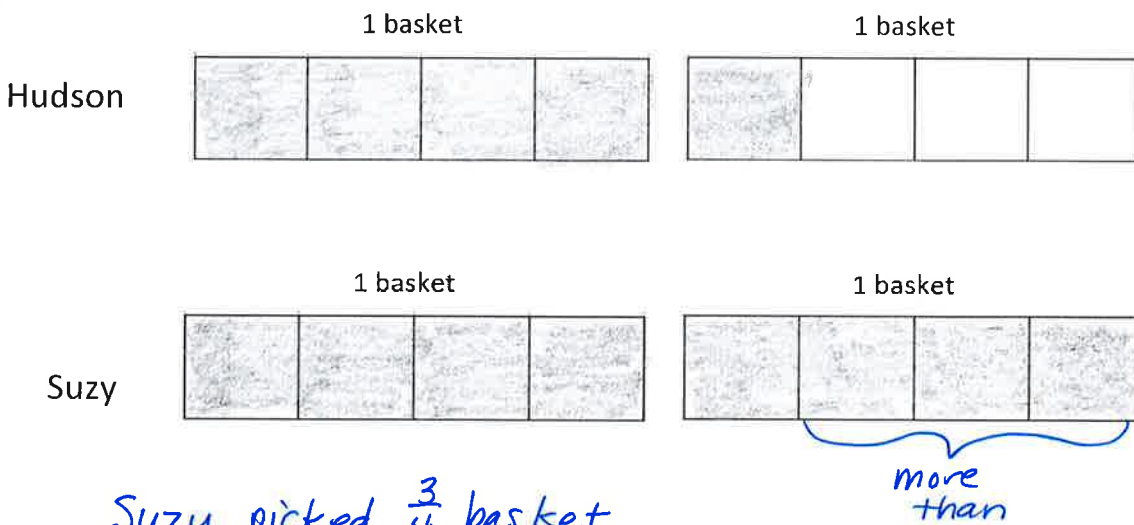
Name Key

Shade in tape diagrams to solve.

1. Mrs. Smith took her bird to the vet. Tweety weighed $1\frac{3}{10}$ pounds. The vet said that Tweety weighed $\frac{4}{10}$ pound more than last year. How much did Tweety weigh last year?



2. Hudson picked $1\frac{1}{4}$ baskets of apples. Suzy picked 2 baskets of apples. What fraction of a basket more did Suzy pick than Hudson?

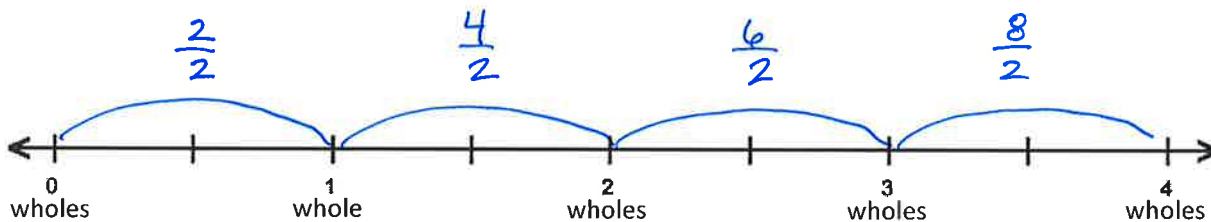


Suzy picked $\frac{3}{4}$ basket more than Hudson

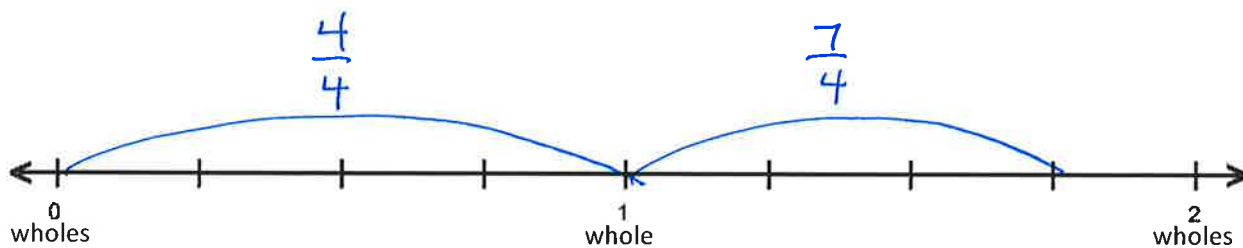
Name Key

Multiply and write the product as a mixed number. Use a number line to support your answer.

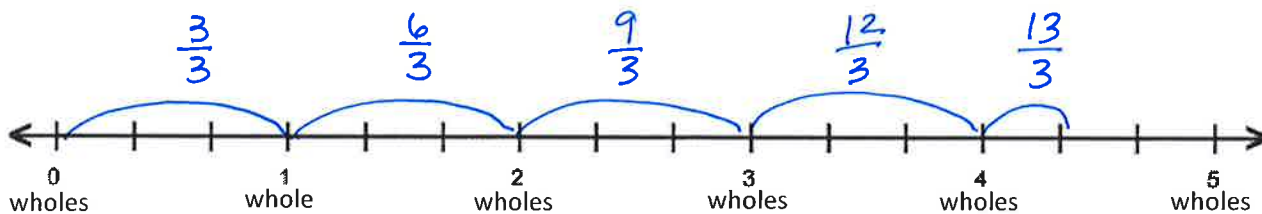
1. $8 \times \frac{1}{2} = \underline{4}$



2. 7 copies of 1 fourth = $\underline{1 \frac{3}{4}}$



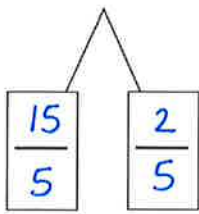
3. $13 \times \frac{1}{3} = \underline{4 \frac{1}{3}}$



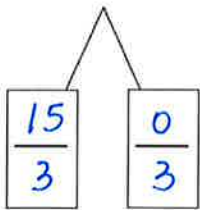
Name Key

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

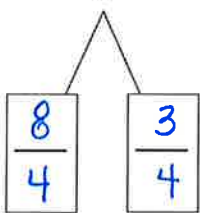
a. $\frac{17}{5} = \underline{3} + \underline{\frac{2}{5}} = \underline{3\frac{2}{5}}$



b. $\frac{15}{3} = \underline{5} + \underline{\frac{0}{3}} = \underline{5}$



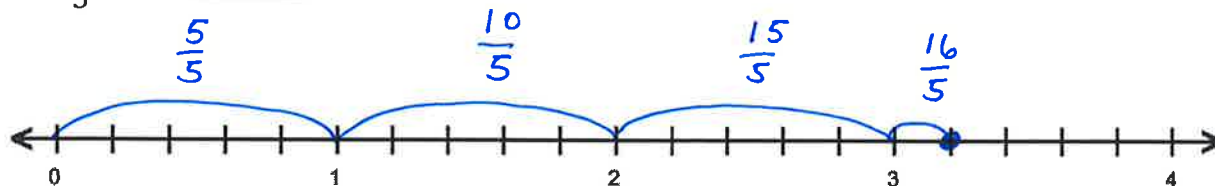
c. $\frac{11}{4} = \underline{2} + \underline{\frac{3}{4}} = \underline{2\frac{3}{4}}$



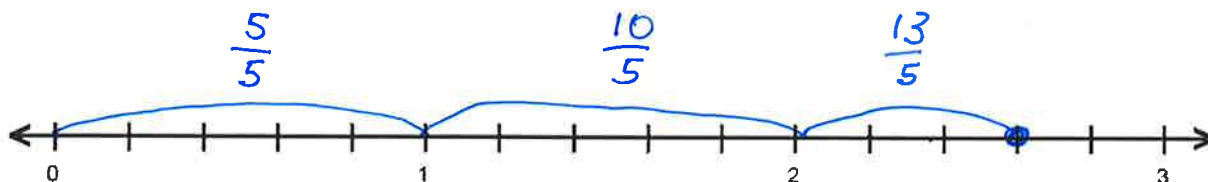
Name Key

Use a number line to convert each mixed number to a fraction greater than 1.

1. $3\frac{1}{5} = \frac{16}{5}$



2. $2\frac{3}{5} = \frac{13}{5}$



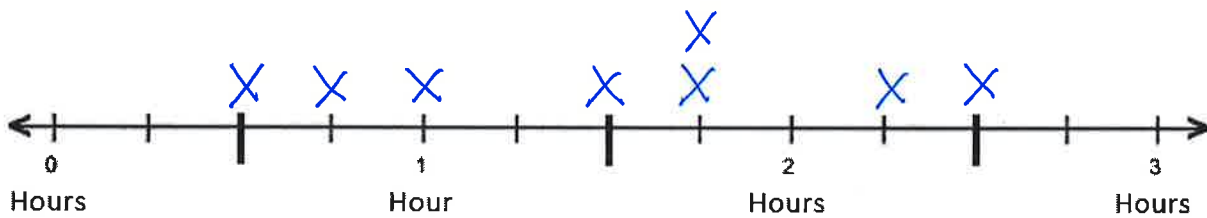
Use any strategy to convert the mixed number into an improper fraction.

3. $4\frac{2}{9} = \frac{38}{9}$

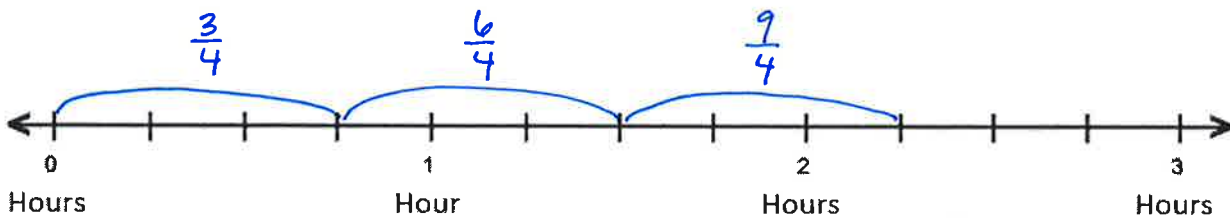
Name Key

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.



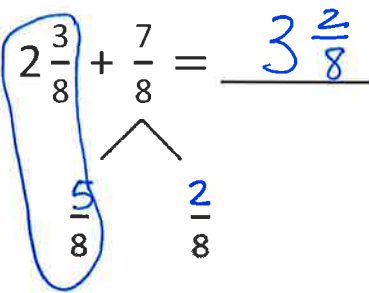
How many hours did that student read over the weekend? $2\frac{1}{4}$

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

Name Key

Solve.

1. Fill in the missing number. $3\frac{2}{5} + \underline{\frac{3}{5}} = 4$

2. $2\frac{3}{8} + \frac{7}{8} = \underline{3\frac{2}{8}}$


Name Key

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

a. $2\frac{3}{8} + 1\frac{5}{8}$ $2+1 = \textcircled{3}$ $\frac{3}{8} + \frac{5}{8} = \frac{8}{8} = \textcircled{1}$ $3+1 = 4$

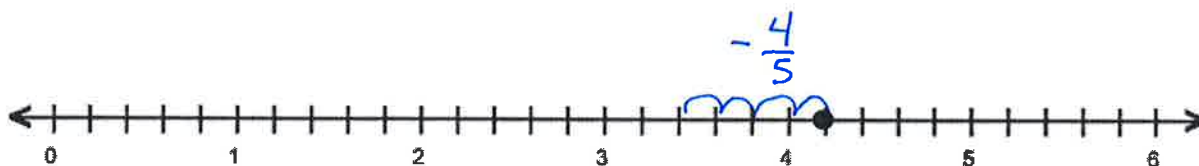
b. $3\frac{4}{5} + 2\frac{3}{5}$ $3+2 = \textcircled{5}$ $\frac{4}{5} + \frac{3}{5} = \frac{7}{5} = \textcircled{1\frac{2}{5}}$ $5 + 1\frac{2}{5} = 6\frac{2}{5}$

$\frac{5}{5}$ $\frac{2}{5}$

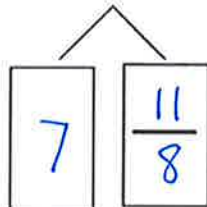
Name key

Solve.

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



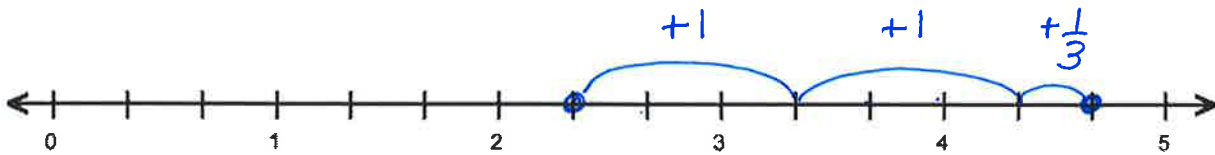
2. $8\frac{3}{8} - \frac{6}{8} = \underline{7\frac{5}{8}}$



Name Key

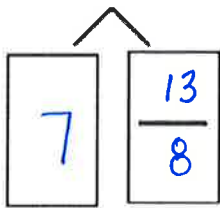
1. Write a related addition sentence. Use the number line to subtract by **counting on**

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



2. Subtract by decomposing the total.

$$8\frac{5}{8} - 6\frac{7}{8} = \underline{(7-6) + (\frac{13}{8} - \frac{7}{8})} = 1\frac{6}{8}$$



Name Key

1. Solve using unit form.

$$5 \times \frac{2}{3} = \underline{5} \times \underline{2} \text{ thirds} = \underline{10} \text{ thirds}$$

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

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

$$\underline{10} \times \underline{5} \text{ sixths} = \underline{50} \text{ sixths}$$

$$= \boxed{\frac{50}{6}}$$

Name Key

Solve.

1. $4 \times \frac{3}{4} = \frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4} = \underline{\frac{12}{4}}$

2. $3 \times \frac{2}{5} = \frac{2}{5} + \frac{2}{5} + \frac{2}{5} = \underline{\frac{6}{5}}$

3. $4 \times \frac{5}{8} = \underline{\frac{20}{8}}$

Name Key Date _____

Multiply. Write each product as a mixed number.

$$1. \quad 4 \times 5\frac{1}{8} = (4 \times 5) + (4 \times \frac{1}{8})$$
$$20 + \frac{4}{8} = 20\frac{4}{8}$$

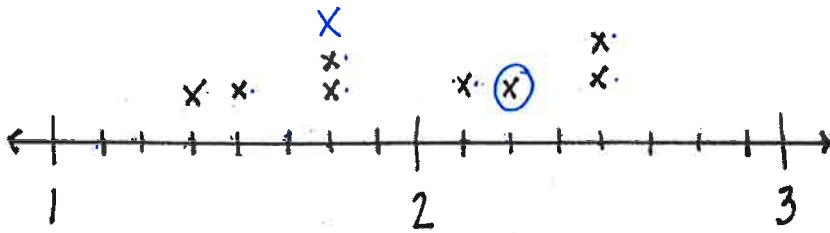
$$2. \quad 4 \times 3\frac{2}{10} = (4 \times 3) + (4 \times \frac{2}{10})$$
$$12 + \frac{8}{10} = 12\frac{8}{10}$$



Name Key

Coach Taylor asked his team to record the distance they ran during practice. The distances are listed in the table.

- Use the table to locate the **incorrect** data on the line plot. **Circle** any incorrect points. **Mark** any missing points.



Team Members	Distance (in miles)
Alec	$1\frac{6}{8}$ <i>ok</i>
Henry	$1\frac{4}{8}$ <i>ok</i>
Charles	$2\frac{1}{8}$ <i>ok</i>
Steve	$1\frac{6}{8}$ <i>ok</i>
Pitch	$2\frac{4}{8}$ ✓
Raj	$1\frac{6}{8}$ <i>missing</i>
Pam	$2\frac{4}{8}$ <i>ok</i>
Tony	$1\frac{3}{8}$ <i>ok</i>

- How many team members ran $1\frac{6}{8}$ miles or more?

6 members ran $1\frac{6}{8}$ or more.



Name Key

Find the sums.

$$1. \frac{0}{13} + \frac{1}{13} + \frac{2}{13} + \dots + \frac{13}{13}$$

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$$2. \frac{0}{12} + \frac{1}{12} + \frac{2}{12} + \dots + \frac{12}{12}$$

$6\frac{6}{12}$

Name Key

Complete the conversion tables. Describe the rule.

a.

Gallons	Quarts
1	4
2	8
3	12
4	16

Rule: $\times 4$ b.

Gallons	Pints
1	8
2	16
3	24
4	32

Rule: $\times 8$