Name
Brighter Choice Charter School for Boys
$\qquad$

## $4^{\text {th }}$ Grade Math Remote Learning Packet

## Week 22




Name: $\qquad$

BCCS-B

Week 22 Day 1 Date: $\qquad$ Howard Morehouse Hampton

LEQ: How can I use a formula to find the area and perimeter of a rectangle?
Objective: I can use formulas to help find the area and perimeter of a rectangle.
Review:
To find the area of a rectangle we can multiply the length x width ( $\mathrm{L} \times \mathrm{W}$ )
For example: $\quad 15 \mathrm{in}$.


This rectangle above has a width of 8 inches and a length of 15 inches. To find the area I will multiply $8 \times 15$.
$8 \times 15=120$ square inches
When we are writing our answers to an area question we write it as square units.
To find the perimeter of ANY shape (not just rectangles and squares) we add the lengths of all the sides together. $(S+S+S+S)$

To find the perimeter of the rectangle above I would add: $15+15+8+8$.
The perimeter of this rectangle is 46 inches. We DO NOT write our answers as square units when finding the perimeter.

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## Practice

Find the area and perimeter of each rectangle.
a.

12 cm

perimeter $=$ $\qquad$ area $=$ $\qquad$
b.

9 m

perimeter $=$ $\qquad$ area $=$ $\qquad$
c.

11 km

$\qquad$
perimeter $=$
area $=$
d.

12 cm

$\qquad$
area $=$
e.

8 cm



Name: $\qquad$
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Week 22 Day 2 Date: $\qquad$

LEQ: How do I use the steps of long division to solve and find a quotient?
Objective: I can use all 4 steps of long division to find quotients and remainders to multi-digit dividend problems.

Review:

| Divide <br> Multiply <br> Subtract <br> Bring Down <br>  <br> $\qquad$$5 \longdiv { 2 3 5 }$ <br> $20 \downarrow$ <br> 35 |
| :--- |

- These steps in the tool kit should be repeated for each digit in the dividend. In this example, 5 could not go into 2 so you have to look at the first 2 numbers (23).
- 5 can go into 234 times ( $5 \times 4=20$ ) That is as close as we can get.
- $23-20=3$ and then bring down the 5 .
- How many times can 5 go into 35 ?- 7 times because $5 \times 7=35$
- $35-35=0$, therefore we have no remainder.

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Practice
$4 \longdiv { 1 4 8 }$
$2 \longdiv { 1 0 6 }$
$5 \longdiv { 4 8 0 }$
$3 \longdiv { 2 1 9 }$
$8 \longdiv { 3 0 4 }$
$4 \longdiv { 2 2 0 }$


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LEQ: How do I solve 2 digit by 2 digit multiplication problems?
Objective: I can solve 2 digit by 2 digits multiplication problems by following the steps in the tool kit.

Review:

## 2 digit by 2 digit Multiplication

1. Multiply the ones. Use the digit in the ones place (on the bottom) and multiply it by both digits on the top.
2. Add a zero to the ones place.
3. Multiply the tens. Use the digit in the tens place (on the bottom) and multiOply it by both digits on the top.
4. Add together the two partial products.


## Practice

b.

| 71 |
| ---: |
| $\times \quad 33$ |

c. | 98 |
| ---: |
| $\times \quad 9 \quad 3$ |

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h. $\begin{array}{r}79 \\ \times \quad 2 \quad 3 \\ \hline\end{array}$
k.

| 5 | 1 |
| :--- | :--- |
| 4 | 9 |



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Week 22 Day 4 Date: $\qquad$ Howard Morehouse Hampton

LEQ: How can I use rounding rules to round a number to a given place?
Objective: I can use the rounding rules I have learned to round numbers to various places.

Review:

## Rounding Rules

1. Circle the digit in the place that you are rounding to.
2. Point to the neighbor directly to the right
3. Look at the neighbor:

- If the neighbor is 5 or more $(5,6,7,8$ or 9$)$ the circled digit rounds up.
- If the neighbor is less than $5(4,3,2,1$ or 0$)$ the circled digit stays the same.

4. Everything after the circle digit changes to a zero.

## Practice

Round each number to the nearest thousand.


861 - $\qquad$ 4,467 - $\qquad$

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Practice


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Which two strawberry numbers round to 1,000 ?
$\qquad$ and $\qquad$

Which two strawberry numbers round to 2,000 ?
$\qquad$


Write True or False for each statement.

3,338 rounds to 3,000 . $\qquad$
8,833 rounds to 8,000 . $\qquad$
455 rounds to 1,000. $\qquad$

398 rounds to 0. $\qquad$


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Week 22 Day 5 Date: $\qquad$
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LEQ: How can I use what I have learned to name various geometric figures?
Objective: I can definitions and models to name other figures that are similar.
Review:

| Point | Line Segment | Line | Ray |
| :---: | :---: | :---: | :---: |
|  |  |  | $\stackrel{\bullet}{F} \quad \stackrel{\bullet}{G}$ |
| A point is pictured by a dot. It is named with a capital letter. This is point $\boldsymbol{A}$. | A line segment is a straight path between 2 points. This is line segment $B C$ or $C B$. It is written $\overline{\boldsymbol{B C}}$ or $\overline{\boldsymbol{C B}}$. | A line is a straight path that goes on forever in both directions. This is line $D E$ or ED. It is written $\overleftrightarrow{D E}$ or $\overleftrightarrow{E D}$. | A ray is a straight path that goes on forever in one directions. This is ray $F G$. It is written $\overrightarrow{\boldsymbol{F G}}$. |

## Practice

Write if each is a point, line segment, line, or ray and its name.
Example:


$$
\text { Line } T S \text { or } S T \quad \overleftrightarrow{T S} \text { or } \overleftrightarrow{S T}
$$

1. 


2.

3.

4.

5.

6. $\oint^{\uparrow} U$
7.

8.

$\overleftrightarrow{A B}$ and $\overleftrightarrow{C D}$ are parallel lines.
They never cross, even if they
are extended.
7.

8.

9.

$\qquad$
$4^{\text {th }}$ Grade Math Remote Learning Packet
Week 23


Dear Educator,
My signature is proof that I have reviewed my scholar's work and supported him to the best of my ability to complete all assignments.
(Parent Signature)
(Date)
Parents please note that all academic packets are also available on our website at www.brighterchoice.org under the heading "Remote Learning." All academic packets assignments are mandatory and must be completed by all scholars.


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Week 23 Day 1 Date: $\qquad$
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LEQ: How can I use addition to find the measurement of a missing angle?
Objective I can use the addition of adjacent angle measures to solve problems using a symbol for the unknown angle measure.

## Do Now

Review dividing with zeros
$6 \div 2=$ $\qquad$ $60 \div 2=$ $\qquad$ $600 \div 2=$ $\qquad$ $6000 \div 2=$

Rewrite in standard form and solve.

9 tens $\div 3=$ $\qquad$ $=$ $\qquad$ 12 tens $\div 4=$ $\qquad$ $=$

12 tens $\div 3=$ $\qquad$ $=$ $\qquad$
Input
Problem 1: what is a reflex angle?
https://www.youtube.com/watch?v=IxkqJc3P40E
A reflex angle is an angle that $\qquad$ Let's Practice!
1.

$工^{\circ}+20^{\circ}=360^{\circ}$
$d^{\circ}=$ $\qquad$ -
2.

$\sim^{\circ}+\ldots{ }^{\circ}=360^{\circ}$
$\qquad$
$c^{\circ}=$

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## Your Turn!

3. 


$\qquad$
$e^{\circ}=$ $\qquad$

Problem 2: find the unknown angle

| $\hat{x} x^{\wedge} \mid \mathrm{C}$ | Trace angle $A B C$, what kind of angle is this? |
| :---: | :---: |
| $80^{\circ}$ | How many degree does this angle measure? |
| A B | How many degrees does the angle represented by $x$ measure? $\qquad$ |
|  | How do we know? |


$\xrightarrow[\mathrm{K}]{\text { Trace angle KLM, what kind of angle is this? }}$| How many degrees does |
| :--- |
| it measure? |
| How many degrees does the angle |
| represented by x represent? |

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Your Turn


Using the right angle given and the acute angle that measures 60 degrees, find the measurement of angle $X$.

Angle X measures $\qquad$

How did you find the measurement of angle $X$ ? $\qquad$
$\qquad$
$\qquad$


Using the straight angle given and the obtuse angle that measures 132 degrees, find the measurement of angle $X$.

Angle X measures $\qquad$

How did you find the measurement of angle $X$ ? $\qquad$
$\qquad$
$\qquad$
Let's try this one together


What do we know about this angle?

What can we do to begin to solve for $x$ ?

Solve for $x$.

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Input
Problem 2: Decompose a $360^{\circ}$ angle into smaller angles. Recognize that the smaller angles add up to $360^{\circ}$.


Look at the image below, what do you notice?


Using what we discussed in the image
I notice:
above, let's solve for $x, y$ and $z$ in the following image:

$\square$
$x=$ $Y=$

Z=

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## Application Problem

$O$ is the intersection of $\overline{R S}$ and $\overline{T V}$.
$g^{\circ}=$ $\qquad$ $h^{\circ}=$ $\qquad$
$\qquad$ $\angle T O S$ is $125^{\circ}$.


## Exit Ticket



Write equations using variables to represent the unknown angle measurements. Find the unknown angle measurements numerically.

$X=$ $\qquad$ $Y=$ $\qquad$ Z= $\qquad$

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## Homework

Write an equation, and solve for the unknown angle measurements numerically.
1.


$$
\ldots{ }^{\circ}+320^{\circ}=360^{\circ}
$$

$$
a^{\circ}=
$$

$\qquad$。

$$
ـ^{\circ}+{ }^{\circ}=360^{\circ}
$$

$$
b^{\circ}=
$$

$\qquad$ $-$
3.


$$
c^{\circ}=
$$



$$
d^{\circ}=
$$



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LEQ: How can I classify triangles?
Objective: I can Analyze and classify triangles based on side length, angle measure or both.

## Do Now

$O$ is the intersection of $\overline{W X}, \overline{Y Z}$, and $\overline{U O}$.

$$
k^{\circ}=
$$

$\qquad$ $m^{\circ}=$ $\qquad$ $n^{\circ}=$ $\qquad$ $\angle X O Z$ is $36^{\circ}$.

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Nearpod video: classifying triangles.
There are 3 different triangles that we will focus on during this lesson:
Equilateral- $\qquad$

Isosceles-
$\qquad$
$\qquad$
Scalene- $\qquad$
$\qquad$

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| Sketch of <br> Triangle | Attributes <br> (Include side lengths and angle <br> measures.) |  | Classification |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| A |  |  |  |  |
| B |  |  |  |  |
| C |  |  |  |  |
| D |  |  |  |  |
|  |  |  |  |  |
| F |  |  |  |  |
|  |  |  |  |  |

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Classify each triangle by its side lengths and angle measurements. Circle the correct names.

|  | Classify Using Side Lengths |  |  | Classify Using Angle Measurements |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\bigcirc$ | Equilateral | Isosceles | Scalene | Acute | Right | Obtuse |
| b. | Equilateral | Isosceles | Scalene | Acute | Right | Obtuse |
| c. | Equilateral | Isosceles | Scalene | Acute | Right | Obtuse |
| d. | Equilateral | Isosceles | Scalene | Acute | Right | Obtuse |

Use a ruler to connect points to form two other triangles. Use each point only once. None of the triangles may overlap. One or two points will be unused.
Name and classify the three triangles below. The first one has been done for you.


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| Name the Triangles Using <br> Vertices | Classify by Side Length | Classify by Angle Measurement |
| :---: | :---: | :---: |
| $\triangle F J K$ | Scalene | Obtuse |
|  |  |  |
|  |  |  |

## Exit Ticket

The triangles below have been classified by shared attributes (side length or angle type). Use the words acute, right, obtuse, scalene, isosceles, or equilateral to label the headings to identify the way the triangles have been sorted.


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## Homework

Classify each triangle by its side lengths and angle measurements. Circle the correct names.

|  | Classify Using <br> Side Lengths | Classify Using <br> Angle Measurements |
| :--- | ---: | ---: | :--- | :--- | :--- |
| a. | Equilateral Isosceles Scalene | Acute Right Obtuse |



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LEQ: How can I classify quadrilaterals?
Objective; I can Classify quadrilaterals based on parallel and perpendicular lines and the presence or absence of angles of a specified size.

## Do Now

Rewrite the following numbers in standard form and then add together.
543 thousands 178 ones: $\qquad$
134 thousands 153 ones: $\qquad$
Add:

Rewrite the following numbers in standard form and then subtract.
817 thousands 560 ones: $\qquad$
426 thousands 145 ones: $\qquad$
Subtract:

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Input
https://www.youtube.com/watch?v=yiREqzDsMP8

## Quadrilateral:

$\qquad$
Problem 1: Construct and define trapezoids.
Step 1. Draw a straight, horizontal segment.
Step 2. Use your right angle template and ruler to draw a segment parallel to that segment.
Step 3. Draw a third segment that crosses both.
Step 4. Draw a fourth different segment that crosses both, but does not cross the third segment.

A trapezoid is $\qquad$
$\square$

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Problem 2: Construct and define parallelograms.
A parallelogram is $\qquad$

1. Draw a straight, horizontal segment.
2. Use your right angle template and ruler to draw a segment parallel to that segment.
3. Draw a third segment that crosses both.
4. Using your ruler and right angle template, draw a fourth different segment that crosses the first two segments and that is parallel to the third segment.

Problem 3: Construct and define rectangles.
A parallelogram is $\qquad$

Step 1. Draw a straight, horizontal segment.
Step 2. Use your right angle template and ruler to draw a segment parallel to that segment.
Step 3. Draw a third segment with a right angle, perpendicular to the base line.
Step 4. Draw a fourth segment that is also perpendicular to the first segment.

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Problem 4: Construct and define squares.
A square is $\qquad$

1. Draw a straight, horizontal segment.
2. Use your right angle template and ruler to draw a segment parallel to that segment.
3. Draw a third segment with a right angle, perpendicular to the base line.
4. Measure the length of the third side, and mark the same length on both of the first segments. Start the measurement at the third side.
5. Draw a fourth segment perpendicular to the first segment through those marks.

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Use the word bank to name each shape, being as specific as possible.

a.
b.

c.

d.

$\qquad$
$\qquad$

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Exit Ticket

1. In the space below draw a parallelogram.
2. Explain why a rectangle is a special parallelogram.

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## Homework-edlight

Construct the following figures based on the given attributes. Give a name to each figure you construct. Be as specific as possible.
a. A quadrilateral with four sides the same length and four right angles.
b. A quadrilateral with two sets of parallel sides.
c. A quadrilateral with only one set of parallel sides.
d. A parallelogram with four right angles.


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## Review of Mid-Module Assessment

1. How many degrees are in a right angle?
a. 180
b. 90
c. 270
d. 100
2. What is the name of an angle that has a measurement greater than 90 degrees but less than 180 degrees?
a. Acute
b. Straight
c. Obtuse
d. Right
3. What is the name of a figure that goes on forever in 2 directions?
a. Line segment
b. Ray
c. Line
d. Point
4. What term best describes the picture below?
a. Parallel lines
b. Intersecting lines
c. Perpendicular lines

d. Straight lines

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## Review of Mid-Module Assessment

5. What is the name of a pair of lines that forms right angles?
a. Intersecting lines
b. Perpendicular lines
c. Points
d. Parallel lines
6. Henry is standing in the middle of his yard facing his house. If he rotates (turns) 180 degrees, what will he is facing now?
a. Fence
b. Barn
c. Tree
d. House
7. What is the measurement of the angle below?


Fence
a. 60 degrees
b. 25 degrees
c. 90 degrees
d. 35 degrees


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## Review of Mid-Module Assessment

8. How many quarter turns does this picture need in order to be upright?
a. 1 quarter turn
b. 2 quarter turns
c. 3 quarter turns
d. 4 quarter turns


## PART TWO: OPEN RESPONSE

9. Use the clock to answer the following:
a. Using the first clock, what kind of angle is formed by the clock hands at 6:00?
b. Using the $2^{\text {nd }}$ clock, draw the hands on the clock if the minute hand were to move 90 degrees to the right. What time would it be?
c. How many 90 degree turns will the hand make between $6: 00$ and 7:00?


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## Review of Mid-Module Assessment

10. Use your protractor to measure the angle below. Classify the angle as right, acute or obtuse by circling the correct term. Explain how you.

This angle measures $\qquad$


Circle the classification:
Right
Acute
Obtuse
Explain how you know. $\qquad$
$\qquad$
11. Use the compass rose to answer the following.

a. Ms. Lewis faced west. She turned to her right and was facing east. How many quarter turns did she make? $\qquad$
b. How many degrees are in those turns? $\qquad$

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## Review of Mid-Module Assessment

12. Use the following instructions to draw a figure in box below.

- Use a straightedge, draw line. Label in KL.
- Use a straightedge, draw a line perpendicular to KL and label it PQ.
- Label a point B on line PQ.
- Label a point $A$ that is NOT on KL or PQ.
- Connect points $A$ and $B$ using a straightedge to form line segment $A B$.
$\square$


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## End of Module 4 Assessment

## Part 2: Open Response

Directions: Solve each question of the part 2 questions in the space provided below and then submit a photo of each on ed light.
13.
$\square$

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## End of Module 4 Assessment

Part 2: Open Response
14.

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## End of Module 4 Assessment

Part 2: Open Response
15.

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## $4^{\text {th }}$ Grade Math Remote Learning Packet

## Week 24



Dear Educator,
My signature is proof that I have reviewed my scholar's work and supported him to the best of my ability to complete all assignments.
(Parent Signature)
(Date)
Parents please note that all academic packets are also available on our website at www.brighterchoice.org under the heading "Remote Learning." All academic packets assignments are mandatory and must be completed by all scholars.


Name:
BCCS-B
LEQ: What is a unit fraction?
Objective: I can decompose fractions as a sum of unit fractions using tape diagrams.

Do Now

Draw a quadrilateral that has 4 equal sides, 4 right angles and 2 sets of parallel sides.

Name the shape: $\qquad$

Draw a shape that has 1 pair of parallel sides.
Name the shape: $\qquad$

Input
Problem 1: fold 1 of your strips paper into thirds and sixths.
Model
Thirds
Sixths

$\square$

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Input
Problem 2: Fold two strips of paper into fourths. Shade $\frac{7}{4}$. Write the number sentence created.

Model


Problem 3: Write decompositions of fractions represented by tape diagrams as number sentences


How many parts in the tape diagram above broken into? $\qquad$
The unit fraction is $\qquad$
What fraction of the tape diagram is shaded? $\qquad$
Number sentence: $\qquad$

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How many parts in the tape diagram above broken into? $\qquad$
The unit fraction is $\qquad$
What fraction of the tape diagram is shaded? $\qquad$
Number sentence: $\qquad$


How many parts in the tape diagram above broken into? $\qquad$
The unit fraction is $\qquad$
What fraction of the tape diagram is shaded? $\qquad$
Number sentence: $\qquad$
g.

h.


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

b.


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c.

d.


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## Exit Ticket-edlight

1. Complete the number bond, and write the number sentence to match the tape diagram.


## Homework

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

围

c.

b.

d.



Name: $\qquad$
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Week 24 Day 2 Date: $\qquad$ Howard Morehouse Hampton

LEQ: How can I represent non unit fractions as a multiplication problem?
Objective: I can decompose non-unit fractions and represent them as a whole number times a unit fraction using tape diagrams.

Do Now
Draw a number bond, and write the number sentence to match each tape diagram.


Input
https://www.youtube.com/watch?v=VTuOsTFYnms
Problem 1: Express a non-unit fraction less than 1 as a whole number times a unit fraction using a tape diagram.

## $2 / 1611 / 1 / 1111 / 1 / 112$.

What fraction is represented by the tape diagram above? $\qquad$
3 fourths decomposed into unit fractions is $\qquad$
Multiplication sentence: $\qquad$

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Problem 2: Determine the non-unit fraction greater than 1 that is represented by a tape diagram, and then write the fraction as a whole number times a unit fraction.


What unit fraction is modeled by the tape diagram above? $\qquad$
What non-unit fraction is being modeled above? $\qquad$
Repeated addition number sentence: $\qquad$
Multiplication number sentence: $\qquad$

Problem 3: Express a non-unit fraction greater than 1 as a whole number times a unit fraction using a tape diagram.


What non unit fraction is being modeled by the tape diagram above? $\qquad$
Write this fraction as a whole number $x$ a unit fraction: $\qquad$

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


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

b.

c.

d.


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Draw a tape diagram, and record the given fraction's decomposition into unit fractions as a multiplication sentence.
a. $\frac{4}{5}$
b. $\frac{5}{8}$
c. $\frac{7}{9}$
d. $\frac{7}{4}$

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Exit Ticket

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

b.

2. Draw a tape diagram, and record the given fraction's decomposition into unit fractions as a multiplication sentence.
$\frac{6}{9}$

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Homework

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


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

b.

c.

2. Draw a tape diagram, and record the given fraction's decomposition into unit fractions as a multiplication sentence.
a. $\frac{3}{5}$


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LEQ: How can I show fraction equivalency in tape diagram?
Objective: I can decompose fractions into sums of smaller unit fractions using tape diagrams.

Do Now
Mrs. Beach prepared copies for 4 reading groups. She made 6 copies for each group. How many copies did Mrs. Beach make?
a. Draw a tape diagram.
b. Write both an addition and a multiplication sentence to solve. Discuss with a partner why you are able to add or multiply to solve this problem.
c. What fraction of the copies is needed for 3 groups? To show that, shade the tape diagram.


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Input
Problem 1: Use tape diagrams to represent the decomposition of $\frac{1}{3}$ as the sum of unit fractions.
Draw a tape diagram to show thirds and shade 1 third.

Decompose each third in half, how many pieces are there now? $\qquad$
What unit fraction is being modeled in the tape diagram now? $\qquad$
How many sixths are shaded? $\qquad$
What can we say about 1 third and 2 sixths?

Let's write that as a number sentence: $\qquad$

Using the same tape diagram above, decompose each sixth into 2 equal parts.
How many parts are there now? $\qquad$
What fraction does each piece represent? $\qquad$
How many twelfths are there in 1 sixth? $\qquad$
Write that as a number sentence: $\qquad$

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Input
Problem 2: Use tape diagrams to represent the decomposition of 1 fifth and 2 fifths as the sum of smaller unit fractions.

- Draw a tape diagram and shade 1 fifth.
- Decompose each fifth into 3 equal parts. How many parts are there now?
- What unit fraction does each piece represent? $\qquad$
- Write an addition sentence to show how many fifteenths equal 1 fifth.
- What can we say about 1 fifth and 3 fifteenths?

| Tape diagram | Number bond |
| :--- | :--- |
|  |  |

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


## Application Problem

A recipe calls for $\frac{3}{4}$ cup of milk. Saisha only has a $\frac{1}{4}$-cup measuring cup. If she doubles the recipe, how many times will she need to fill the $\frac{1}{4}$ cup with milk? Draw a tape diagram, and record as a multiplication sentence.

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## Exit Ticket

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

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

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

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Homework

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

b.

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



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LEQ: How can I show equivalent fractions using area models?
Objective I can decompose fractions using area models to show equivalence.
Do Now

| 1. | $\frac{1}{3}+\frac{1}{3}=$ |  |
| :---: | :---: | :---: |
| 2. | $2 \times \frac{1}{3}=$ |  |
| 3. | $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}=$ |  |
| 4. | $3 \times \frac{1}{4}=$ |  |
| 5. | $\frac{1}{5}+\frac{1}{5}=$ |  |
| 6. | $2 \times \frac{1}{5}=$ |  |
| 7. | $\frac{1}{5}+\frac{1}{5}+\frac{1}{5}=$ |  |
| 8. | $3 \times \frac{1}{5}=$ |  |
| 9. | $\begin{gathered} \frac{1}{5}+\frac{1}{5}+\frac{1}{5}+ \\ \frac{1}{5}= \end{gathered}$ |  |
| 10. | $4 \times \frac{1}{5}=$ |  |
| 11. | $\frac{1}{10}+\frac{1}{10}+\frac{1}{10}=$ |  |
| 12. | $3 \times \frac{1}{10}=$ |  |
| 13. | $\frac{1}{8}+\frac{1}{8}+\frac{1}{8}=$ |  |
| 14. | $3 \times \frac{1}{8}=$ |  |
| 15. | $\frac{1}{2}+\frac{1}{2}=$ |  |
| 16. | $2 \times \frac{1}{2}=$ |  |
| 17. | $\frac{1}{3}+\frac{1}{3}+\frac{1}{3}=$ |  |
| 18. | $3 \times \frac{1}{3}=$ |  |


| 23. | $\begin{gathered} \frac{1}{3}+\frac{1}{3}+\frac{1}{3}+ \\ \frac{1}{3}= \end{gathered}$ |  |
| :---: | :---: | :---: |
| 24. | $4 \times \frac{1}{3}=$ |  |
| 25. | $\frac{5}{6}=$ | $\underline{-} \times \frac{1}{6}$ |
| 26. | $\frac{5}{6}=$ | $5 \times-$ |
| 27. | $\frac{5}{8}=$ | $5 \times-$ |
| 28. | $\frac{5}{8}=$ | $-\times \frac{1}{8}$ |
| 29. | $\frac{7}{8}=$ | $7 \times-$ |
| 30. | $\frac{7}{10}=$ | $7 \times-$ |
| 31. | $\frac{7}{8}=$ | $-\times \frac{1}{8}$ |
| 32. | $\frac{7}{10}=$ | $\underline{-} \times \frac{1}{10}$ |
| 33. | $\frac{6}{6}=$ | $6 \times-$ |
| 34. | 1 = | $6 \times-$ |
| 35. | $\frac{8}{8}=$ | $\underline{-} \times \frac{1}{8}$ |
| 36. | 1 = | $-\times \frac{1}{8}$ |
| 37. | $9 \times \frac{1}{10}=$ |  |
| 38. | $7 \times \frac{1}{5}=$ |  |
| 39. | $1=$ | $3 \times-$ |
| 40. | $7 \times \frac{1}{12}=$ |  |

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| 1. | $\frac{1}{5}+\frac{1}{5}=$ |  |
| :---: | :---: | :---: |
| 2. | $2 \times \frac{1}{5}=$ |  |
| 3. | $\frac{1}{3}+\frac{1}{3}=$ |  |
| 4. | $2 \times \frac{1}{3}=$ |  |
| 5. | $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}=$ |  |
| 6. | $3 \times \frac{1}{4}=$ |  |
| 7. | $\frac{1}{5}+\frac{1}{5}+\frac{1}{5}=$ |  |
| 8. | $3 \times \frac{1}{5}=$ |  |
| 9. | $\frac{1}{5}+\frac{1}{5}+\frac{1}{5}+\frac{1}{5}=$ |  |
| 10. | $4 \times \frac{1}{5}=$ |  |
| 11. | $\frac{1}{8}+\frac{1}{8}+\frac{1}{8}=$ |  |
| 12. | $3 \times \frac{1}{8}=$ |  |
| 13. | $\frac{1}{10}+\frac{1}{10}+\frac{1}{10}=$ |  |
| 14. | $3 \times \frac{1}{10}=$ |  |
| 15. | $\frac{1}{3}+\frac{1}{3}+\frac{1}{3}=$ |  |
| 16. | $3 \times \frac{1}{3}=$ |  |
| 17. | $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}=$ |  |
| 18. | $4 \times \frac{1}{4}=$ |  |
| 19. | $\frac{1}{2}+\frac{1}{2}=$ |  |
| 20. | $2 \times \frac{1}{2}=$ |  |
| 21. | $\frac{1}{3}+\frac{1}{3}+\frac{1}{3}+\frac{1}{3}=$ |  |
| 22. | $4 \times \frac{1}{3}=$ |  |

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| 23. | $\frac{1}{2}+\frac{1}{2}+\frac{1}{2}=$ |  |
| :---: | :---: | :---: |
| 24. | $3 \times \frac{1}{2}=$ |  |
| 25. | $\frac{5}{6}=$ | $-\times \frac{1}{6}$ |
| 26. | $\frac{5}{6}=$ | $5 \times-$ |
| 27. | $\frac{5}{8}=$ | $5 \times-$ |
| 28. | $\frac{5}{8}=$ | $-\times \frac{1}{8}$ |
| 29. | $\frac{7}{8}=$ | $7 \times-$ |
| 30. | $\frac{7}{10}=$ | $7 \times-$ |
| 31. | $\frac{7}{8}=$ | $-\times \frac{1}{8}$ |
| 32. | $\frac{7}{10}=$ | $\ldots \times \frac{1}{10}$ |
| 33. | $\frac{8}{8}=$ | $8 \times-$ |
| 34. | $1=$ | $8 \times-$ |
| 35. | $\frac{6}{6}=$ | $-\times \frac{1}{6}$ |
| 36. | $1=$ | $-\times \frac{1}{6}$ |
| 37. | $5 \times \frac{1}{12}=$ |  |
| 38. | $6 \times \frac{1}{5}=$ |  |
| 39. | $1=$ | $4 \times-$ |
| 40. | $9 \times \frac{1}{10}=$ |  |
| 41. | $1=$ | $-\times \frac{1}{3}$ |
| 42. | $\frac{3}{4}=$ | $\frac{1}{4}+\frac{1}{4}+-$ |
| 43. | $3 \times \frac{1}{5}=$ | $-+\frac{1}{5}+\frac{1}{5}$ |
| 44. | $1=$ | $-+-+-+$ |

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Input
Problem 1: Use an area model to show that $\frac{3}{4}=\frac{6}{8}$.
Draw an area model to represent 3 fourths.

How can we decompose this model into eighths?

Write an addition sentence and multiplication to show that 3 fourths is equal to 6 eighths

Addition sentence:
Multiplication sentence: $\qquad$
Problem 2: Draw an area model to represent the equivalence of two fractions, and express the equivalence as the sum and product of unit fractions.

Draw an area model to show 2 thirds.
Decompose the model into twelfths. How many twelfths are equivalent to 2 thirds? $\qquad$

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Input
Write an addition and multiplication sentence that shows 2 thirds is equal to
$\qquad$ twelfths.

Addition: $\qquad$
Multiplication: $\qquad$
CFU
Each rectangle represents 1. Draw horizontal lines to decompose each rectangle into the fractional units as indicated. Use the model to give the shaded area as a sum and as a product of unit fractions.


Twelfths


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## Exit Ticket

1. The rectangle below represents 1. Draw horizontal lines to decompose the rectangle into eighths. Use the model to give the shaded area as a sum and as a product of unit fractions. Use parentheses to show the relationship between the number sentences.

2. Draw an area model to show the decomposition represented by the number sentence below.

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

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## Homework

Draw area models to show the decompositions represented by the number sentences below. Express each as a sum and product of unit fractions. Use parentheses to show the relationship between the number sentences.
a. $\frac{2}{3}=\frac{4}{6}$
b. $\frac{4}{5}=\frac{8}{10}$


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**Quiz Today**(google form)

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## Practice

Step 1: Draw an area model for a fraction with units of thirds, fourths, or fifths.
Step 2: Shade in more than one fractional unit.
Step 3: Partition the area model again to find an equivalent fraction
Step 4: Write the equivalent fractions as a number sentence

