Name:_____

College:_____

4th Grade Math

Week of: 3/15-3/19

Spelman College®

1867 HOWARD UNIVERSITY

Monday

Date: March 15

Learning Target: I can use the area model and multiplication to show the equivalence of two fractions.
Standards: 4.NF.1, 4.NF.3

Do Now:

Which comparison is true?

A $\frac{2}{3} = \frac{8}{12}$

B $\frac{4}{9} = \frac{8}{9}$

C $\frac{3}{4} > \frac{9}{10}$

D $\frac{2}{4} > \frac{2}{3}$

Concept Development

Model an equivalent fraction for $\frac{4}{7}$ using an area model.

Let's Work Together!

Problem 1: Determine that multiplying the numerator and denominator by n results in an equivalent fraction.

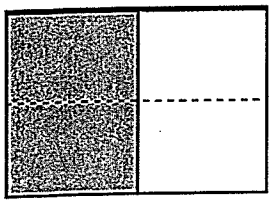
Problem 2: Given an area model, determine an equivalent fraction for the area selected.

You Try!

Each rectangle represents 1.

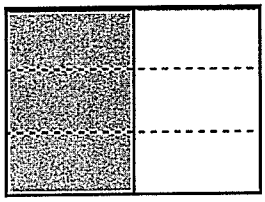
1. The shaded unit fractions have been decomposed into smaller units. Express the equivalent fractions in a number sentence using multiplication. The first one has been done for you.

a.

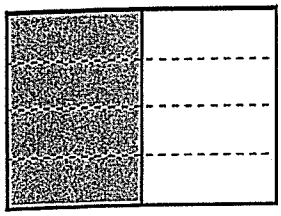


$$\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$$

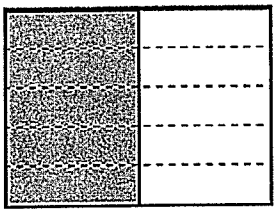
b.



c.



d.



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

a.

b.

c.

EXIT TICKET

Name:_____	**Date:**_____
BCCSG	**Howard / Spelman**

Learning Target: **Use the area model and multiplication to show the equivalence of two fractions.**
Standards: 4.NF.1, 4.NF.3

Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

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

a.

b.

Grade:

Tuesday

Date: March 16

Learning Target: **Use the area model and multiplication to show the equivalence of two fractions.**
Standards: 4.NF.1, 4.NF.3

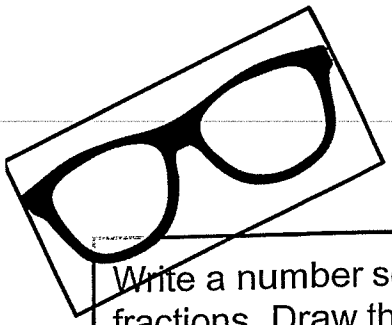
Do Now:

How does the value of the digit 3 in the number 63,297 compare to the value of the digit 3 in the number 60,325? Be sure to include what you know about place value in your answer.

Explain your answer.

Concept Development

Saisha gives some of her chocolate bar, pictured below, to her younger brother Lucas. He says, "Thanks for $\frac{3}{12}$ of the bar." Saisha responds, "No. I gave you $\frac{1}{4}$ of the bar." Explain why both Lucas and Saisha are correct.



Watch Me!

Write a number sentence using multiplication to show the equivalence of two fractions. Draw the corresponding area model.

$\frac{3}{5}$

Let's Work Together!

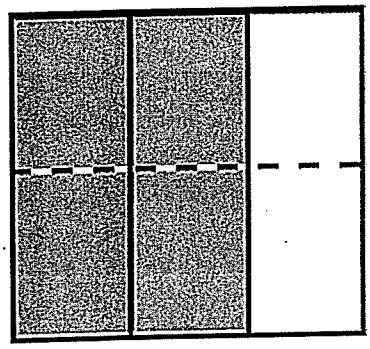
Use multiplication and an area model to determine if this statement is true or false.

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

You Try!

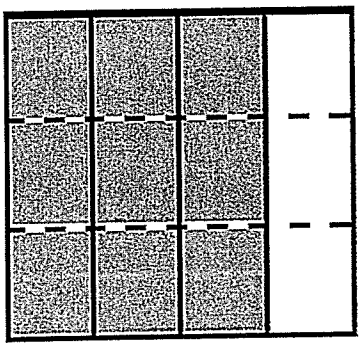
1. The shaded fractions have been decomposed into smaller units. Express the equivalent fractions in a number sentence using multiplication. The first one has been done for you.

a.

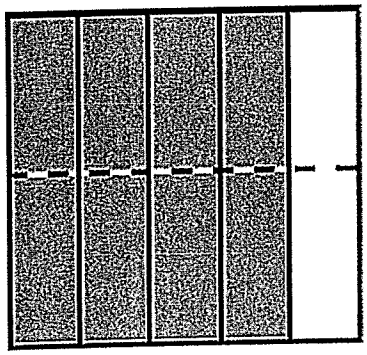


$$\frac{2}{3} = \frac{2 \times 2}{3 \times 2} = \frac{4}{6}$$

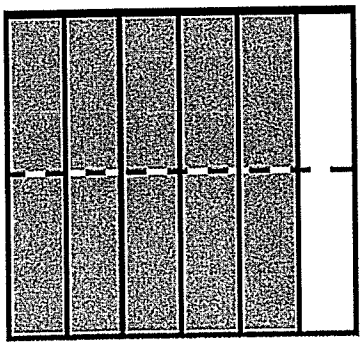
b.



c.

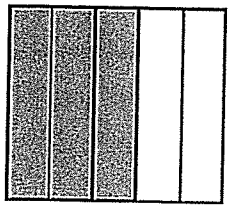


d.

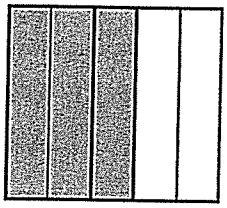


2. Decompose the shaded fractions into smaller units, as given below. Express the equivalent fractions in a number sentence using multiplication.

   a. Decompose into tenths.



   b. Decompose into fifteenths.



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

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

   b. $\frac{2}{3} = \frac{8}{12}$

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

   d. $\frac{4}{6} = \frac{8}{12}$

4. Use multiplication to create an equivalent fraction for each fraction below.

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

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

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

   d. $\frac{10}{8}$

EXIT TICKET

Name:_____ **Date:**_____

BCCSG **Howard / Spelman**

<u>Learning Target:</u> Use an area model and multiplication to determine the equivalence of two fractions.

<u>Standards</u>: 4.NF.1, 4.NF.3

Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

1. Use multiplication to create an equivalent fraction for the fraction below.

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

2. Determine if the following is a true number sentence. If needed, correct the statement by changing the right-hand side of the number sentence.

$$\frac{3}{4} = \frac{9}{8}$$

Grade:

Wednesday

Date: March 17

Learning Target: **Use an area model and division to show the equivalence of two fractions.**
Standards: **4.NF.1,**

Do Now:

Mr. Fuller wants to put fencing around his rectangular-shaped yard. The width of the yard is 55 feet and the length is 75 feet. How many feet of fencing does Mr. Fuller need?

A 130

B 260

C 3,905

D 4,125

Concept Development

Problem 1: Simplify $\frac{6}{12}$ by composing larger fractional units using division.

Let's Work Together!

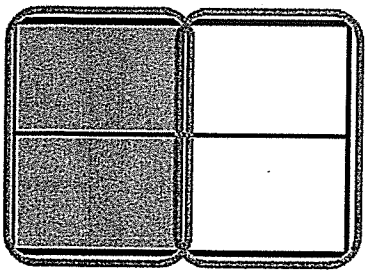
Problem 2: Simplify both $\frac{2}{8}$ and $\frac{3}{12}$ as $\frac{1}{4}$ by composing larger fractional units.

You Try!

Each rectangle represents 1.

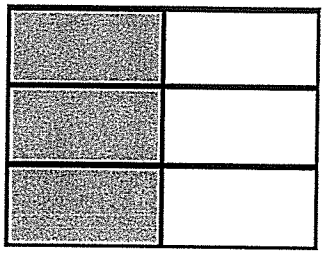
1. Compose the shaded fractions into larger fractional units. Express the equivalent fractions in a number sentence using division. The first one has been done for you.

a.

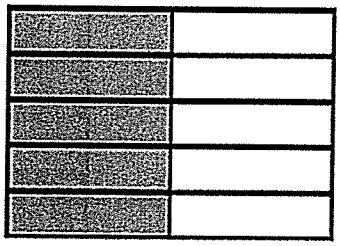


$$\frac{2}{4} = \frac{2 \div 2}{4 \div 2} = \frac{1}{2}$$

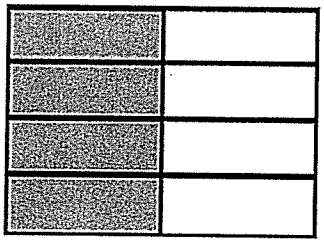
b.



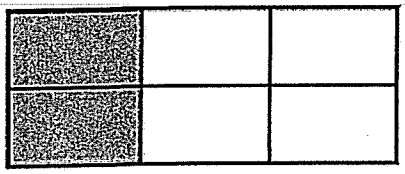
c.

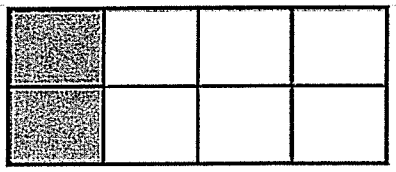


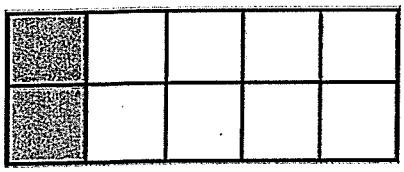
d.

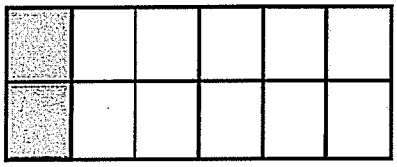


2. Compose the shaded fractions into larger fractional units. Express the equivalent fractions in a number sentence using division.

a. 

b. 

c. 

d. 

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

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

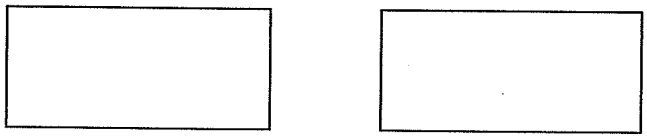
EXIT TICKET

Name:_____ **Date:**_____
BCCSG **Howard / Spelman**

<u>Learning Target:</u> Use an area model and division to show the equivalence of two fractions.
<u>Standards:</u> 4.NF.1, 4.NF.3

Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

a. In the first area model, show 2 sixths. In the second area model, show 4 twelfths. Show how both fractions can be composed, or renamed, as the same unit fraction.



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

Grade:

Thursday

Date: March 18

Learning Target: **Use the area model and division to show the equivalence of two fractions.**
Standards: **4.NF.1, 4.NF.3**

Do Now:

Which diagram below appears to show a pair of perpendicular lines?

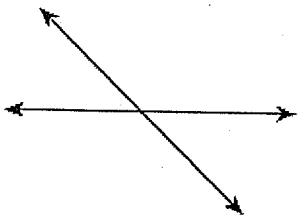


Diagram A

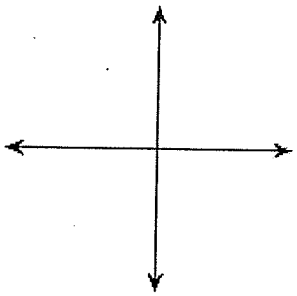


Diagram B

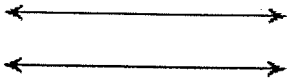


Diagram C

Explain your answer.

Concept Development

Nuri spent 9/12 of his money on a book and the rest of his money on a pencil.

a. Express how much of his money he spent on the pencil in fourths.

b. Nuri started with $1. How much did he spend on the pencil?

Let's Work Together!

Problem 1: Simplify a fraction by drawing to find a common factor, and relate it to division.

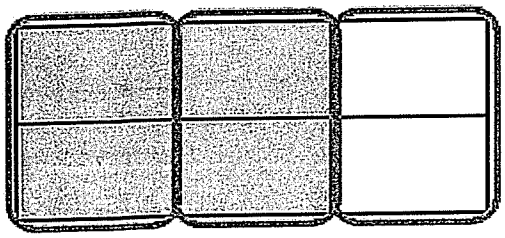
Problem 2: Draw an area model of a number sentence that shows the simplification of a fraction.

You Try!

Each rectangle represents 1.

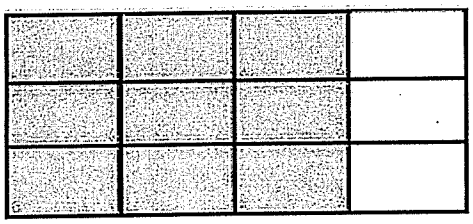
1. Compose the shaded fraction into larger fractional units. Express the equivalent fractions in a number sentence using division. The first one has been done for you.

a.

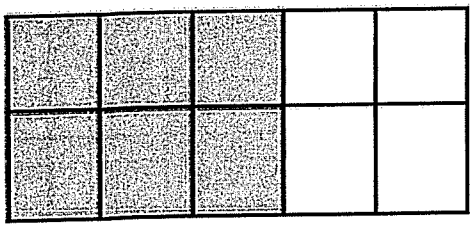


$$\frac{4}{6} = \frac{4 \div 2}{6 \div 2} = \frac{2}{3}$$

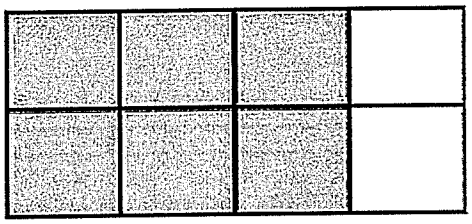
b.



c.

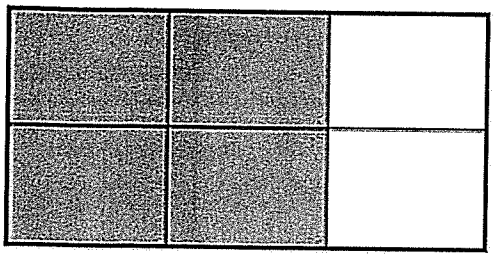


d.

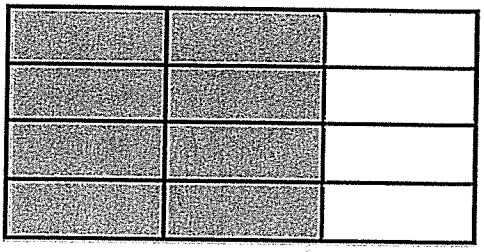


2. Compose the shaded fractions into larger fractional units. Express the equivalent fractions in a number sentence using division.

a.



b.



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

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

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

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

a. $\frac{4}{8}$

b. $\frac{12}{16}$

c. $\frac{12}{20}$

d. $\frac{16}{20}$

EXIT TICKET

Name:_____ **Date:**_____
BCCSG **Howard / Spelman**

Learning Target: Use an area model and division to show the equivalence of two fractions.
Standards: 4.NF.1, 4.NF.3

Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

Draw an area model to show why the fractions are equivalent. Show the equivalence in a number sentence using division.

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

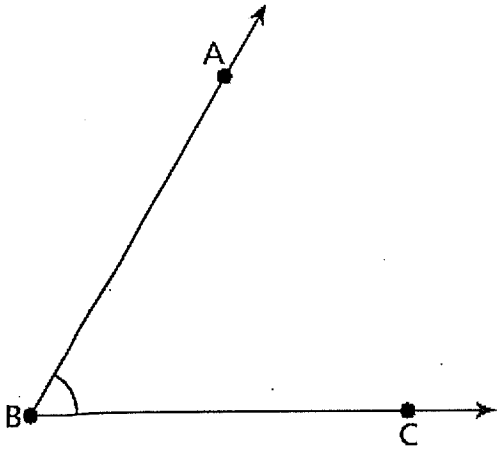
Friday

Date: March 19

Learning Target: **Explain fraction equivalence using a tape diagram and a number line and relate that to the use of multiplication and division.**
Standards: 4.NF.1 4.NF.4

Do Now:

What is the measure of angle ABC?



A 60°

B 70°

C 110°

D 120°

Concept Development

Kelly was baking bread but could only find her $\frac{1}{8}$-cup measuring cup. She needs $\frac{1}{4}$ cup sugar, $\frac{3}{4}$ cup whole wheat flour, and $\frac{1}{2}$ cup all-purpose flour. How many $\frac{1}{8}$ cups will she need for each ingredient?

Let's Work Together!

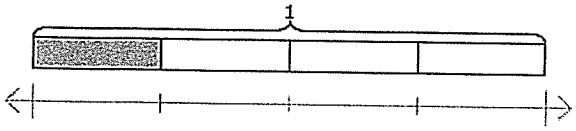
Problem 1: Use a tape diagram and number line to find equivalent fractions for halves, fourths, and eighths.

Problem 2: Use a number line, multiplication, and division to decompose and compose fractions.

You Try!

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

a.



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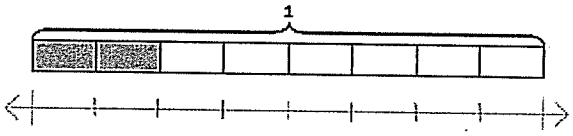

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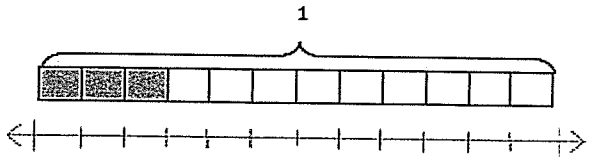


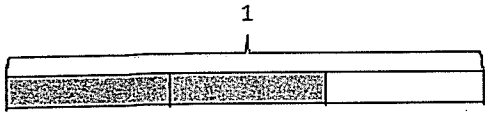
2. Write number sentences using multiplication to show:

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

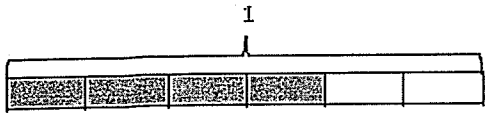
   b. The fraction represented in 1(a) is equivalent to the fraction represented in 1(c).

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

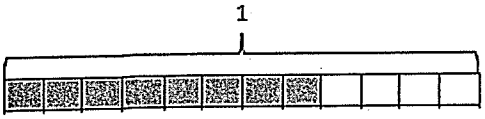
   a.



   b.



   c.



4. Write number sentences using division to show:

   a. The fraction represented in 3(a) is equivalent to the fraction represented in 3(b).

   b. The fraction represented in 3(a) is equivalent to the fraction represented in 3(c).

EXIT TICKET

Name:_____ **Date:**_____
BCCSG **Howard / Spelman**

Learning Target: Explain fraction equivalence using a tape diagram and a number line and relate that to the use of multiplication and division.
Standards: 4.NF.1 4.NF.4

Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

1. Partition a number line from 0 to 1 into sixths. Decompose $\frac{2}{6}$ into 4 equal lengths.

2. Write a number sentence using multiplication to show what fraction represented on the number line is equivalent to $\frac{2}{6}$.

3. Write a number sentence using division to show what fraction represented on the number line is equivalent to $\frac{2}{6}$.