Eureka Math

4th Grade
Module 5
Lesson 15

At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this project!

Directions for customizing presentations are available on the next slide.

Icons

Read, Draw, Write

Learning Target

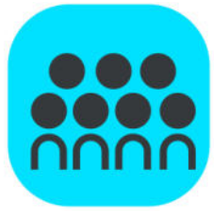
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

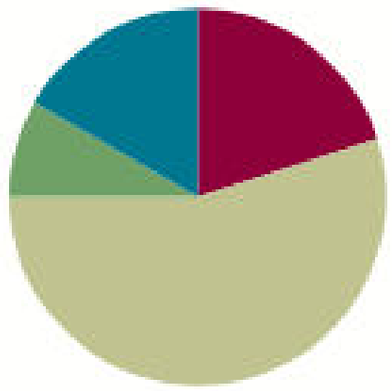
Small Group Time

Lesson 15

Objective: Find common units or number of units to compare two fractions.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(5 minutes)
Concept Development	(33 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



Find common units or number of units to compare two fractions.

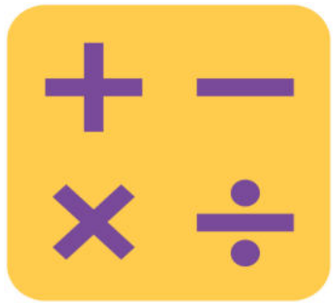
Count by...

Count by ones to 4, starting at 0.

Count by fourths to 4 fourths. Start at 0 fourths.

What is another name for 4 fourths?

What is another name for 2 fourths?



Equivalent fractions

½= ---x --- = 2/

Compare fractions

1/2____3/4

1/2____3/8

1/4____3/8

5/6____1/3

Application Problem

Jamal ran $\frac{2}{3}$ mile. Ming ran $\frac{2}{4}$ mile. Laina ran $\frac{7}{12}$ mile. Who ran the farthest? What do you think is the easiest way to determine the answer to this question? Talk with a partner about your ideas.

Compare w/ unrelated units

¾ and ⅘
Draw two almost square that are the same size.
Partition the left area model into fourths by drawing vertical lines. Show ¾
Partition the second right area model into fifths by drawing horizontal lines. Show ⅘.
Do we have like denominators (units)
Watch how I make like units.
What is the NEW unit for 3/4 fractions?
Now you decompose ⅘ with the unit of twentieths.

Compare improper fractions

5/3 and 7/4
Both these fractions are greater than one. Use a number bond to express as the sum of a whole and a fraction.

Since the whole is the same we can JUST compare the fractions ⅔ and ¾.
Draw area models once again to help.

Compare with an area model

⅘ and ¾

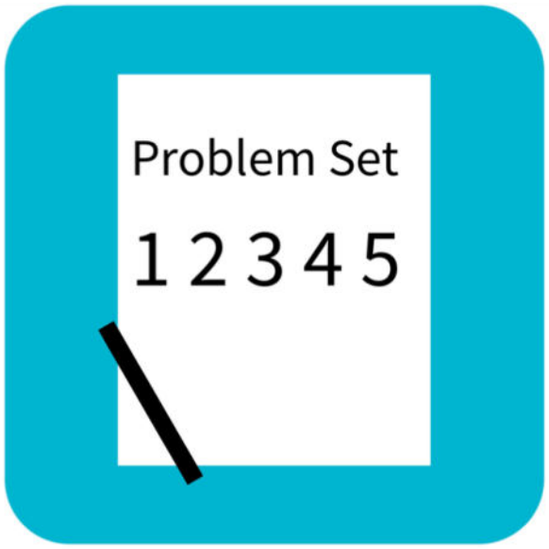
What is the common unit?

Use multiplication to show ⅘ is the same as 16/20

Do the same process with ¾.

Try this one with your partner

⅗ and 8/12



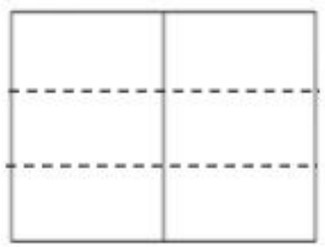
Problem Set

Name _____ Date _____

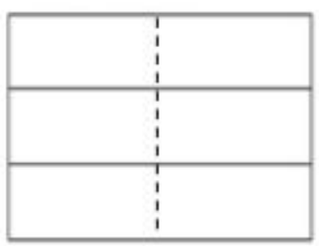
1. Draw an area model for each pair of fractions, and use it to compare the two fractions by writing >, <, or = on the line. The first two have been partially done for you. Each rectangle represents 1.

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

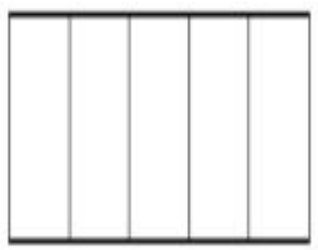
$\frac{1\times3}{2\times3} = \frac{3}{6}$



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



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



Debrief

- In Problem 2, did you need to use multiplication for every part? Why or why not? When is multiplication not needed, even with different denominators?
- In Problem 2(b), did everyone use forty-eighths? Did anyone use twenty-fourths?
- In Problem 3, how did you compare the fractions? Why?
- Do we always need to multiply the denominators to make like units?
- If fractions are hard to compare, we can always get like units by multiplying denominators—a method that always works. Why is it sometimes not the best way to compare fractions?
- What new or significant math vocabulary did we use today to communicate precisely?
- How did the Application Problem connect to today's lesson?

Exit Ticket

Name _____ Date _____

Draw an area model for each pair of fractions, and use it to compare the two fractions by writing >, <, or = on the line.

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