Eureka Math

4th Grade
Module 5
Lesson 14

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!

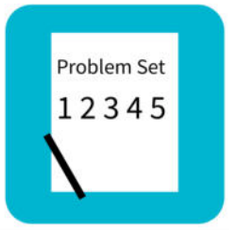
Directions for customizing presentations are available on the next slide.

Icons

Read, Draw, Write

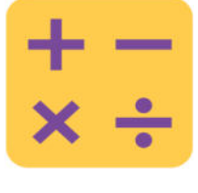
Learning Target

Personal White Board



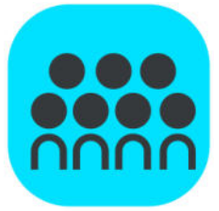
Problem Set

Manipulatives Needed



Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

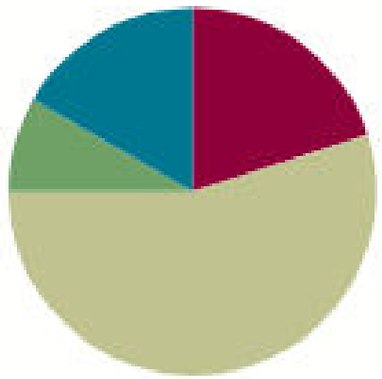
Small Group Time

Lesson 14

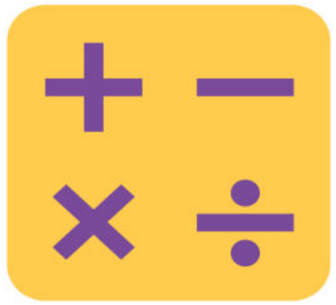
Objective: Find common units or number of units to compare two fractions.

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 fractions.



+ and -

Put the following numbers into standard form and solve

458 thousands 397 ones + 281 thousand 563 ones

Compare fractions

Let’s plot ⅞ on a number line and compare it ½.

What about ½ and ¾?

RDW

Application Problem

Compare $\frac{4}{5}$, $\frac{3}{4}$, and $\frac{9}{10}$ using <, >, or =. Explain your reasoning using a benchmark.

Reason to compare fractions

What is greater 1 apple or 3 apples?
1 apple < 3 apples
Which is greater 1 fourth or 3 fourths?
1 fourth < 3 fourths
What do you notice about these two examples?
Why was it so easy to compare these examples?

Reason to compare fractions

Which is great 1 fourth or 1 fifth?
1 fourth > 1 fifth, how do you know? Explain your thinking.
What about 2 fourths and 2 sixths?
2 fourths > 2 sixths

What do you notice between these two examples?

Reason to compare fractions

What is greater 2 inches or 2 feet?
2 inches < 2 feet
What is greater 2 fourths or 2 sixths?
2 fourths > 2 sixths
We can look at the numerators to help us compare. Fourths is greater because it is the larger unit. We can think the greater the denominator, the smaller the fractional unit.

Use this new thinking and compare 5/7 and 5/12.
Could we use a model to help our thinking?

Compare with related numerators

2/8 and 4/10.
Can we compare these fractions easily?
Let's draw a tape to show each fraction.
What numerator are we going to change the 2 or 4? Why.
How are we going to change 2/8 into a numerator that is a 4?
Now that both fractions have a numerator that is the same use your new thinking to compare
4/16 and 4/10.

Compare with related denominators

7/10 and 3/5.
Can we compare these fractions easily?
Let’s draw a tape to show each fraction.
What denominator are we going to change the tenths or fifths?
Why.
How are we going to change 3/5 into a denominator that is in tenths?
Now that both fractions have the same denominator we can easily compare 7/10 and 3/5.

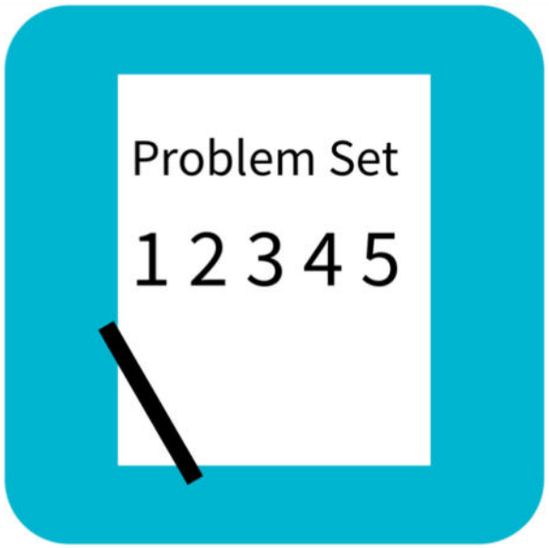
We can also model this problem on a number line.

Reason to compare fractions

Think about what we learned today about compare fractions. What strategy would you use to compare ⅘ and 4/7? Why.

What about 8/10 and 4/6?

Now try 5/12 and 2/3



Problem Set

Name _____ Date _____

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

Debrief

- Why were the fractions in Problem 1 easier to compare than in Problem 2?
- Problems 5(a), 5(d), and 5(f) can be compared using different types of reasoning. Explain the reasoning you used for each.
- How can you determine whether you can make common numerators or **common denominators** when comparing fractions?
- How are tape diagrams and number lines helpful in comparing fractions?
- What new (or significant) math vocabulary did we use today to communicate precisely?

Exit Ticket

Name _____ Date _____

1. Draw tape diagrams to compare the following fractions:

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