Eureka Math

4th Grade
Module 5
Lesson 16

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!

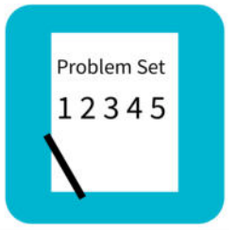
Directions for customizing presentations are available on the next slide.

Icons

Read, Draw, Write

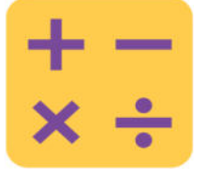
Learning Target

Personal White Board



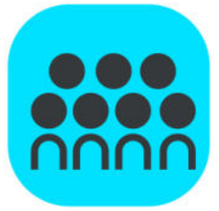
Problem Set

Manipulatives Needed



Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

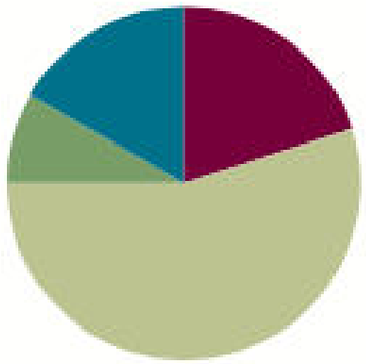
Small Group Time

Lesson 16

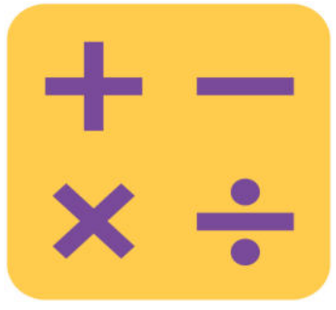
Objective: Use visual models to add and subtract two fractions with the same units.

Suggested Lesson Structure

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



Use visuals models to add and subtract two fractions with the same unit.



Count by...

Count by ones to 8, starting at 0.

Count by eighths to 8 eighths. Start at 0 eighths.

What is another name for 8 eighths?

Compare Fractions

Draw 2 area models.

Show ½ on one and ⅖ on the other

Compare these fractions by creating common units.

RDW

Application Problem

Keisha ran $\frac{5}{6}$ mile in the morning and $\frac{2}{3}$ mile in the afternoon. Did Keisha run farther in the morning or in the afternoon? Solve independently. Share your solution with your partner. Did your partner solve the problem in the same way or a different way? Explain.

Subtracting using a number line

5-4
Say the number sentence in unit form with the answer
Say the number sentence but the unit is now dogs
Say the number sentence but the unit is meters
Say the number sentence but the unit is sixths
Why can we subtract those so easily?
Now let's subtract on a number line. Draw a number line with the endpoints 0 and 1.
Partition the number line into sixths.
Start at ⅚ and move backwards 4/6. Where did you stop?
That is your answer. ⅚ - 4/6 ⅙

Subtracting using a number line

7/6 - 2/6=_____

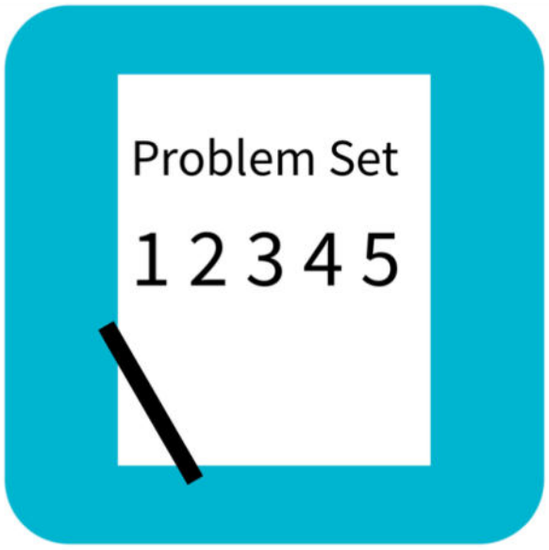
Let's solve this problem on a number line.
What are our endpoints going to be? How do you know?
Draw and label your number line.
Put a point at 7/6.
Now move backwards (subtract) 2/6.
Where did you stop?
That is your answer!!

Decompose a difference as greater than 1

10 sixths- 2 sixths
Solve in UNIT form
What did you get?
When we get an answer that is GREATER than 1 we MUST decompose our answer.
What model could we use to HELP us decompose 8/6?
Decompose 8/6 as a whole number with fractional pieces.

Find the sum using unit form

Let’s take a look at our number line we used to solve ⅚-4/6.
Point to ⅙, let’s add 4/6. Count by ⅙ as we add.
What is 1 sixth + 4 sixths?
Let’s show this on the number line!



Problem Set

Name _____ Date _____

1. Solve.

   a. 3 fifths – 1 fifth = _____

   b. 5 fifths – 3 fifths = _____

   c. 3 halves – 2 halves = _____

   d. 6 fourths – 3 fourths = _____

Debrief

- How do Problems 1(a–d), 4(a), and 4(b) help you understand how to subtract or add fractions?
- In Problems 3 and 6 on the Problem Set, how do the number bonds help to decompose the fraction into a **mixed number**?
- Why would we want to name a fraction greater than 1 using a mixed number?
- How is the number line helpful in showing how we can subtract and add fractions with like units?
- How are number bonds helpful in showing how we can rename fractions greater than 1 as 1 whole and a fraction?
- How would you describe to a friend how to subtract and add fractions with like units?

Exit Ticket

Name _____ Date _____

1. Solve. Use a number bond to decompose the difference. Record your final answer as a mixed number.

$\frac{16}{9} - \frac{5}{9}$