Eureka Math

4th Grade
Module 5
Lesson 21

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

RDW — Read, Draw, Write

Learning Target

Personal White Board

Problem Set — 1 2 3 4 5

Manipulatives Needed

Fluency

Think Pair Share
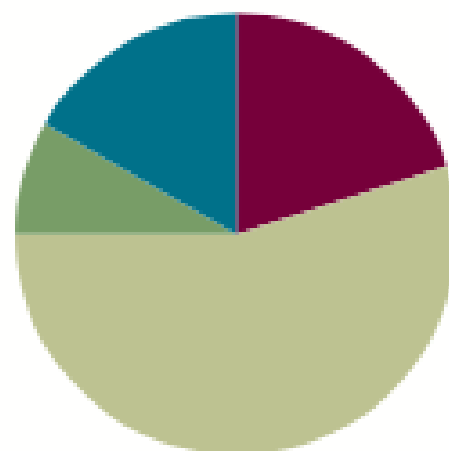
Whole Class

Individual

Partner

Small Group

Small Group Time

Lesson 21

Objective: Use visual models to add two fractions with related units using the denominators 2, 3, 4, 5, 6, 8, 10, and 12.

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 to add two fractions with related units.

Sprint!!

+ fractions

5/10 + 3/10 + 1/10 =

⅔ + ⅓ + ⅔=

What did you get?

Can we leave it this way?

What must we do?!?!

Application Problem

Two-fifths liter of chemical A was added to $\frac{7}{10}$ liter of chemical B to make chemical C. How many liters of chemical C are there?

Add unit fractions with related denominators

⅜ + ¾ =

Can we add these right now? Why?

We need to rename one of the units.

Which one are we going to rename eights or fourths.

Let's use a tape diagram to show this.

Now that we changed 3/4 into 6/8 we can add 3/8 to it.

What did you get?

Can we leave it that way?

What must we do?!?!

Add unit fractions with related denominators w/ a number line

½ + ⅞

Will the sum be greater than 1?

Draw a number line with endpoints of 0 and 2

Split the number line to halves and plot ½.

Can we easily add ⅞?

What do we need to do the number line?

Now can we add ⅞ easily?

What answer did you get after you added ⅞?

11/8

Can we leave it that way?

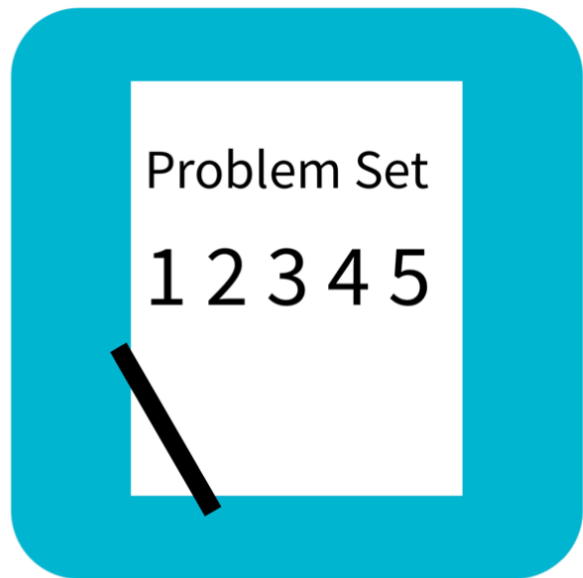What must we do??

Add unit fractions with related denominators w/ multiplication

¾ + 6/8

Which unit are we going to rename fourths or eighths?
Let's use multiplication to rename fourths as eighths.
¾ x 2/2 = 6/8.
Now that they are in the same unit, let's add them
What did you get?

12/8
Can we leave it this way?
What must we do!?!?!?

Name _____ Date _____

1. Draw a tape diagram to represent each addend. Decompose one of the tape diagrams to make like units. Then, write a complete number sentence. Use a number bond to write each sum as a mixed number.

a. $\frac{3}{4} + \frac{1}{2}$

b. $\frac{2}{3} + \frac{3}{6}$

Debrief

- What was the complexity of the Problem Set for today's lesson (Lesson 21) as compared to yesterday's Problem Set (Lesson 20)?

- How do number bonds help to show fractions as mixed numbers?

- What benefit can you see in expressing a fraction as a mixed number or a mixed number as a fraction?

- Compare Problems 1(a) and 2(a). Which strategy worked better for you? Explain.

- How did the Application Problem connect to today's lesson?

Exit Ticket

Name _____   Date _____

Solve. Write a complete number sentence. Use a number bond to write each sum as a mixed number. Use a model if needed.

1. $\frac{1}{4} + \frac{7}{8}$