Eureka Math

4th Grade
Module 5
Lesson 2

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

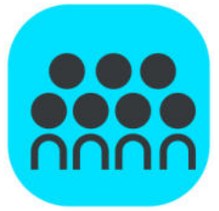
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

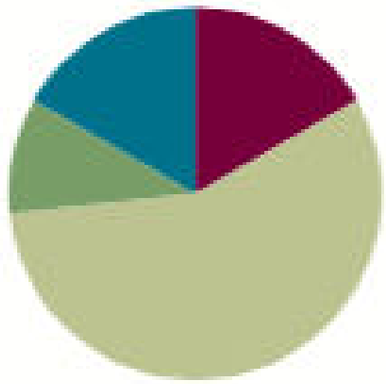
Small Group Time

Lesson 2

Objective: Decompose fractions as a sum of unit fractions using tape diagrams.

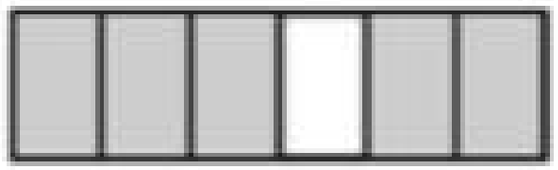
Suggested Lesson Structure

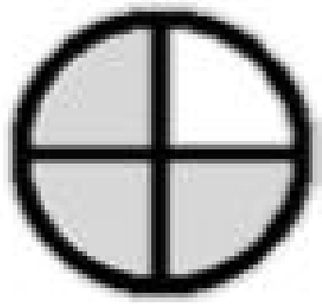
Fluency Practice	(10 minutes)
Application Problem	(6 minutes)
Concept Development	(34 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**

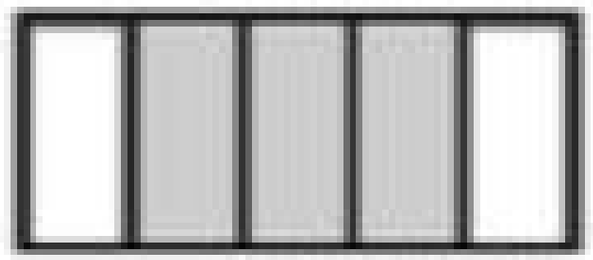


Decompose fractions as a sum of a unit fraction using tape diagrams.

Add fractions







- What part of the first circle is shaded?
- Write the fraction down.
- What part is not shaded?
- Write that fraction down.
- When we add those two fractions together, what do we get?

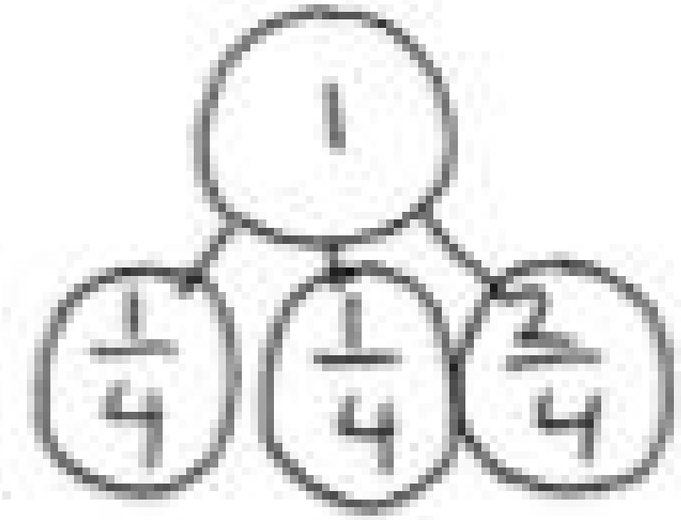
RDW

Application Problem

Mrs. Salcido cut a small birthday cake into 6 equal pieces for 6 children. One child was not hungry, so she gave the birthday boy the extra piece. Draw a tape diagram to show much cake each of the five children received.

Decompose 1 whole

- What does this number bond show?
- Fold your paper to show the whole as fourths.
- Work with your partner and see if there is another number sentence we could write.



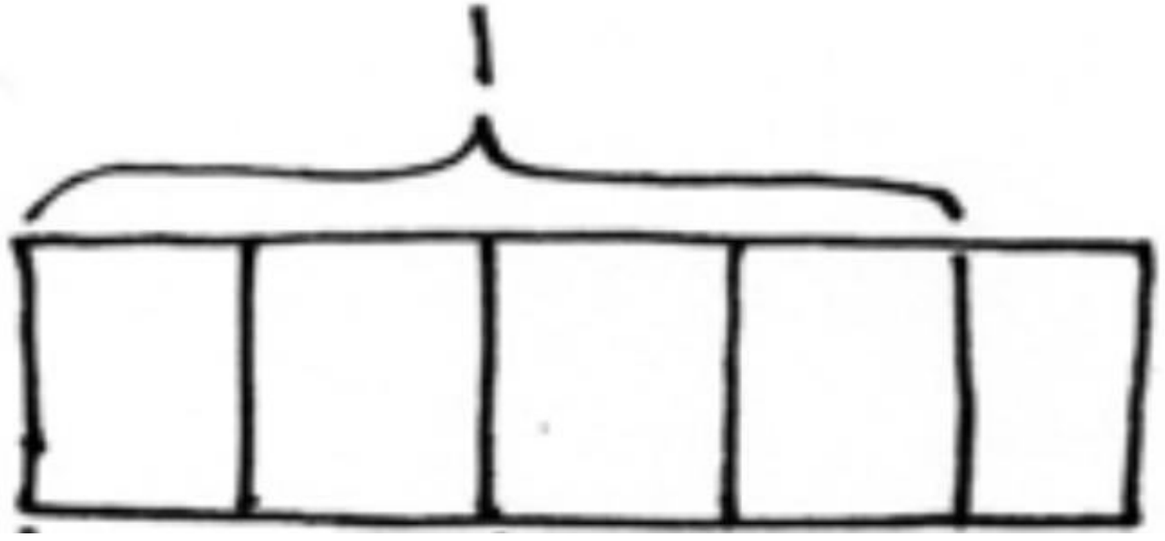
Paper activity

See page 5.A.18

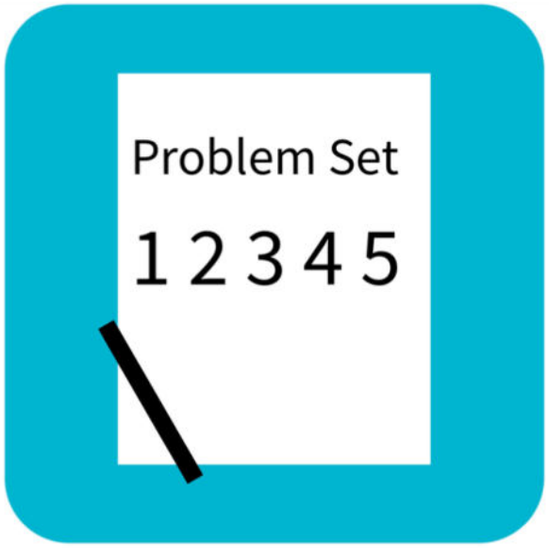
Decompose a fraction

Work with a partner to decompose 5 sixths as a sum in as many possible ways as you can.

Decompose using a tape diagram



- Let’s look at this tape diagram.
- What is the whole?
- How many parts is it split into?
- What does the shaded part represent?
- What is the UNIT fraction?
- Decompose the tape diagram into a sum of unit fractions.
- Decompose the tape diagram 3 other ways.

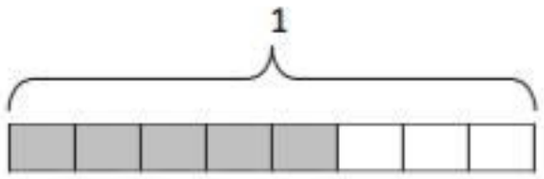


Problem Set

Name _____ Date _____

1. Step 1: Draw and shade a tape diagram of the given fraction.
   Step 2: Record the decomposition as a sum of unit fractions.
   Step 3: Record the decomposition of the fraction two more ways.
   (The first one has been done for you.)

a. $\frac{5}{8}$



$\frac{5}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ $\frac{5}{8} = \frac{2}{8} + \frac{2}{8} + \frac{1}{8}$ $\frac{5}{8} = \frac{2}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$

Debrief

- Look at your answers for Problems 1(b) and 1(c). Problem 1(c) is a fraction greater than 1, but it has fewer ways to be decomposed. Why is that?
- In Problem 1(a), which was completed for you, the first number sentence was decomposed into the sum of unit fractions. The second number sentence bonded some of these unit fractions. Which ones? ($\frac{2}{8}$ bonded $\frac{1}{8}+\frac{1}{8}$.) Draw parentheses around the unit fractions in the first number sentence that match the second number sentence. Do the same for Problems 1(b) and 1(c). (Answers will vary.)

  $\frac{5}{8}=\left(\frac{1}{8}+\frac{1}{8}\right)+\left(\frac{1}{8}+\frac{1}{8}\right)+\frac{1}{8}$. → $\frac{5}{8}=\frac{2}{8}+\frac{2}{8}+\frac{1}{8}$.
- Give examples of when you decomposed numbers in earlier grades.
- How did the Application Problem connect to today's lesson?

Exit Ticket

Name _____ Date _____

Step 1: Draw and shade a tape diagram of the given fraction.

Step 2: Record the decomposition of the fraction in three different ways using number sentences.

$\frac{4}{7}$