Eureka Math

4th Grade
Module 5
Lesson 35

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!

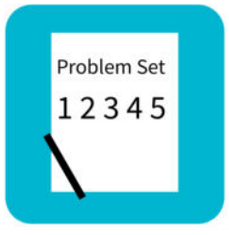
Directions for customizing presentations are available on the next slide.

Icons

Read, Draw, Write

Learning Target

Personal White Board

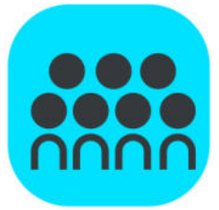


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

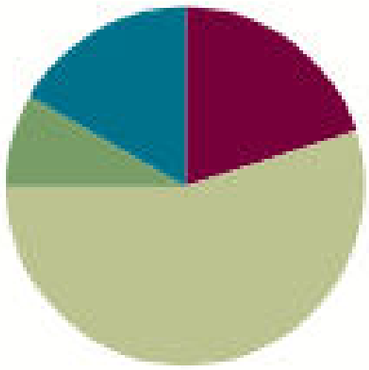
Small Group Time

Lesson 35

Objective: Represent the multiplication of n times a/b as $(n \times a)/b$ using the associative property and visual models.

Suggested Lesson Structure

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



I can use the associative property and visual models to solve problems.

Add and subtract

676 thousands 696 ones + 153 thousands 884 ones=

300 thousands- 134 thousands 759 ones=

Count by...

Count by threes to 15, starting at 0

Cont by three fifths to 15 fifths starting at 0 fifths

When we get to a whole number say the whole number.
Example 5 fifths say 1!

+ / - mixed numbers

5 5/10 + 3 2/10=

2 ³⁄₅ + 2 ²⁄₅=

10 7/10- 5 4/10=

6 ³⁄₈ - 2 ⁷⁄₈=

Application Problem

Mary Beth is knitting scarves that are 1 meter long. If she knits 54 centimeters of a scarf each night for 3 nights, how many scarves will she complete? How much more does she need to knit to complete another scarf?

Associative property to solve

What multiplication sentences could we write to show 4 COPIES of 3 centimeters?

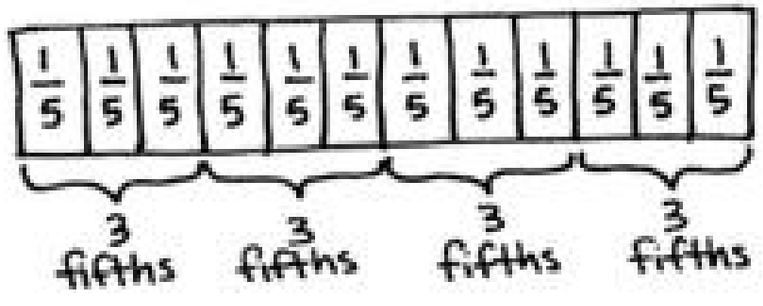
4x (3 centimeters), the parentheses show that 3 is telling the number of centimeters in one group.

We can move the parentheses to show how many centimeters are in all. Show me where you would move them.

(3x4) centimeters, how many centimeters do we have?

Associative property to solve

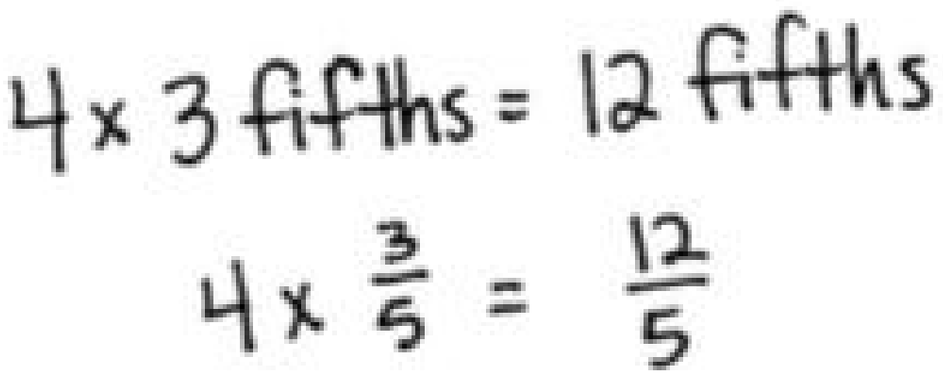
We can use the same process to solve, 4 copies of 3 fifths.
What number sentence would we wright to show this?
4 x (3 fifths)
We could use the associative property to help us solve.
We can move the parentheses like this (4x3) fifths.
What do we get when we solve this?
12 fifths
Here is a tape diagram that matches our work



Associative property to solve

4 x ⅗

Say this in unit form.



Discuss with your group if these number sentences are true

4 x (3 x ⅕)
We can move the parentheses in this problem too!
Watch how I do it
(4x3) x ⅕.
We then multiply 4x3 and 12, then multiply 12 x ⅕ and 12/5!

Associative property to solve

5 x ¾

I can think of this problem as (5x3) fourths or (5x3)/4.

How does this help me solve the problem?

What is the answer to 5 x ¾

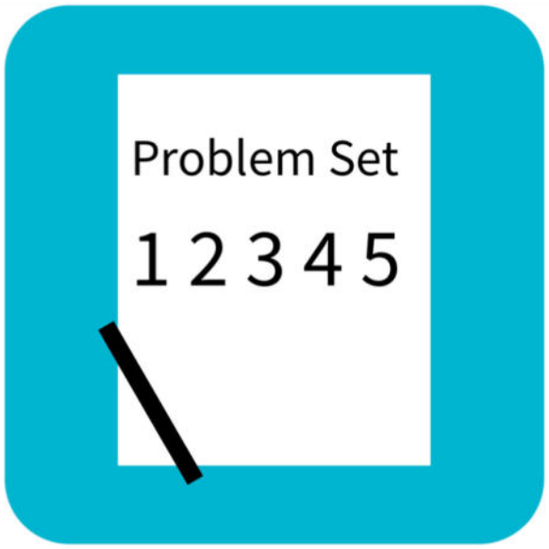
Associative property to solve

5 x ¾

I can think of this problem as (5x3) fourths or (5x3)/4.

How does this help me solve the problem?

What is the answer to 5 x ¾?



Problem Set

Name _____ Date _____

1. Draw and label a tape diagram to show the following are true.
   a. 8 fifths = 4 × (2 fifths) = (4 × 2) fifths

Debrief

- How do the tape diagrams that you drew in Problems 1(a) and 1(b) help with the understanding that there are different ways to express fractions?
- How did you record your solutions to Problem 3(a–f)?
- Look at your answers for Problem 3(c) and 3(d). Convert each answer to a mixed number. What do you notice? How are the expressions in Problem 3(c) and 3(d) similar?
- How does moving the parentheses change the meaning of the expression? Use the tape diagrams in Problem 1 to help you explain.

- Explain to a partner how you solved Problem 4.
- What significant math vocabulary did we use today to communicate precisely?
- How does the Application Problem relate to today's Concept Development?

Exit Ticket

Name _____ Date _____

1. Solve using unit form.

$5 \times \frac{2}{3}$