Eureka Math

4th Grade
Module 5
Lesson 36

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!

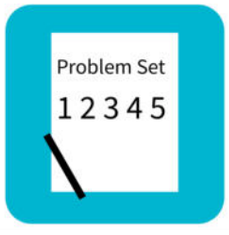
Directions for customizing presentations are available on the next slide.

Icons

Read, Draw, Write

Learning Target

Personal White Board

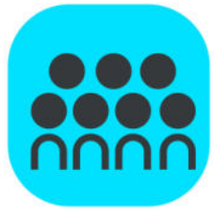


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

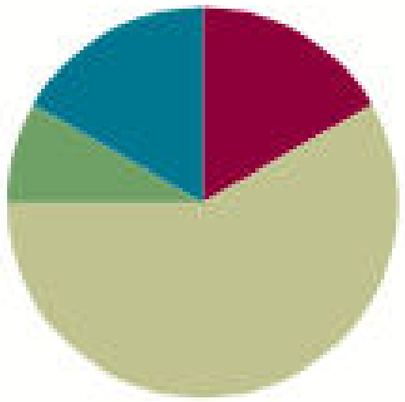
Small Group Time

Lesson 36

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	(10 minutes)
Application Problem	(5 minutes)
Concept Development	(35 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**

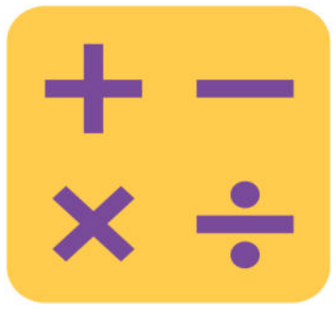


I can use the associative property and visual models to solve problems.

Add and subtract

676 thousands 696 ones + 153 thousands 884 ones=

300 thousands- 134 thousands 759 ones=



Count by...

Count by threes to 30, starting at 0

Cont by three tenths to 30 tenths starting at 0 tenths

When we get to a whole number say the whole number.

Example 10 tenths say 1 whole!

X fractions

Show the following problems on a number line.

4 x ⅔

3 x ⅔

4 x ⅖

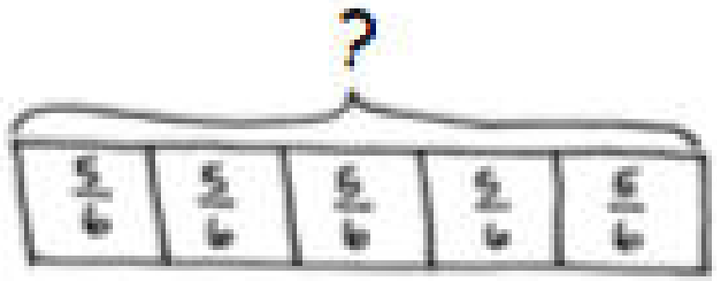
5 x ⅗

Application Problem

Rhonda exercised for $\frac{5}{6}$ hour every day for 5 days. How many total hours did Rhonda exercise?

Multiply fractions as repeated +

Let's look back at the tape diagram you drew for the application problem.



Write a multiplication sentence to match.
Which problem is more efficient? Why?
How do we solve 5 x ⅚ using the associative property?

Associative property to solve

6 x ⅜

Say it in unit form!

6x (3 eighths)

Let’s use the associative property to solve.

(6x3) eighths.

What do we get?

18 eighths!

Associative property to solve

6 x ⅜

Say it in unit form!

6x (3 eighths)

Let’s use the associative property to solve.

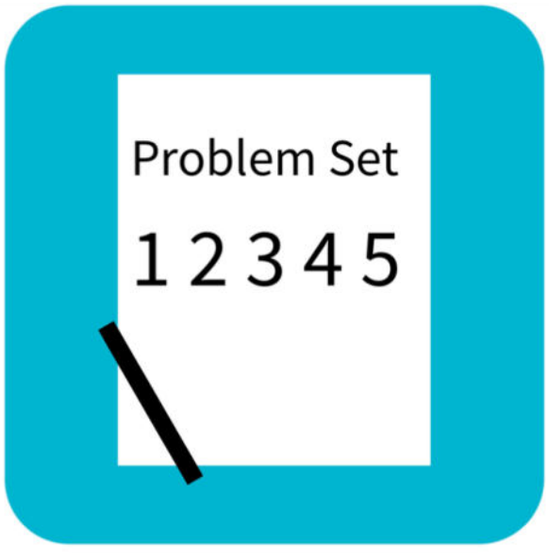
(6x3) eighths.

What do we get?

18 eighths!

Associative property to solve

The serving size for cereal is $\frac{2}{3}$ cup. Each of 27 students in health class measured out one serving to eat for breakfast. If a box of cereal contained 16 cups, how many boxes of cereal were needed?



Problem Set

Name _____ Date _____

1. Draw a tape diagram to represent $\frac{3}{4}+\frac{3}{4}+\frac{3}{4}+\frac{3}{4}$.

2. Draw a tape diagram to represent $\frac{7}{12}+\frac{7}{12}+\frac{7}{12}$.

Debrief

- Problem 4(d) is a good example of how multiplication is more efficient than repeated addition. Explain.
- Explain to your partner the method that you used to solve Problem 4(a–d).
- What was challenging about Problem 4(d)?
- Problem 4(b) results in a fraction greater than 1 with a large numerator. Watch as the fraction is renamed before multiplying. Discuss what you see with your partner. How does this method simplify the work done after the product is found?

$$12 \times \frac{3}{4} = \frac{\overset{3}{\cancel{12}} \times 3}{\cancel{4}_1} = \frac{3 \times 3}{1} = \frac{9}{1} = 9$$

- Try solving Problem 4(c) using a method similar to the one used above. (Note: Simplification is not a requirement in Grade 4 standards.)

Exit Ticket

Name _____ Date _____

Solve using any method.

1. $7 \times \frac{3}{4}$