# Eureka Math

## 4th Grade
## Module 5
## Lesson 37

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!

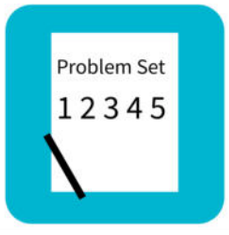
Directions for customizing presentations are available on the next slide.

# Icons


Read, Draw, Write

Learning Target

Personal White Board

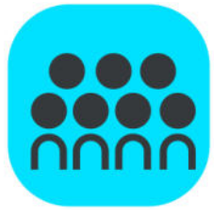



Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

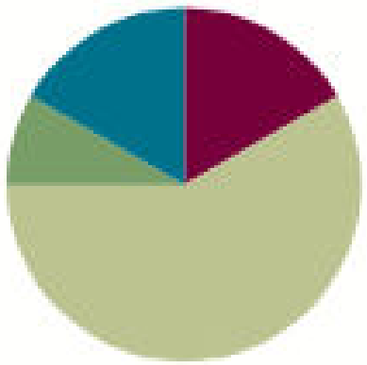
Small Group Time

# Lesson 37

Objective: Find the product of a whole number and a mixed number using the distributive property.

**Suggested Lesson Structure**

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

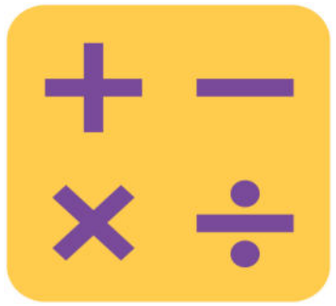


I can find the product of a whole number and a mixed number using the distributive property.

# Add and subtract

547 thousands 869 ones + 362 thousands 712 ones=

800 thousands- 352 thousands 049 ones=



# X fractions

Show the following problems on a number line.

2 x ⅖

3 x ⅜

4 x ⅔

5 x ¾

# Application Problem

The baker needs $\frac{5}{8}$ cup of raisins to make 1 batch of cookies. How many cups of raisins does he need to make 7 batches of cookies?

# Tape diagram to show a product

Let's draw a tape diagram together to show what 3 ⅕ would look like in TWO parts. (do this step on a white board)

There are two copies of 3 ⅕. We can record this as 2 x 3 ⅕.

How many parts are to this tape diagram?

Now, redraw this tape diagram where the 3s are next to each other and ⅕s are next to each other.

How many threes do we have? What about fifths?

We can write an expression to match this.

(2x3)+(2x⅕). We distributed the two to each part of 3 ⅕.

What is the answer to 2 x 3 ⅕?

# Tape diagram to show a product

Let’s repeat this with 6 x ⅖

Tape diagram:

Number Sentence:

# Identify the distributive property

Show 5 2/10 as an addition sentence on your white boards.

5 + 2/10

4 x 5 2/10= 4 x ( 5 + 2/10),  How many groups of 5 did you draw?
How many groups of tenths?
We can distribute our multiplication to both the fives and the tenths.
It will look like this (4x5) + (4 x 2/10)
Now we just have to do the math.  What is your answer?
Work with your partner and solve.

# Identify the distributive property

Try this one with your partner.

3 x 7 ¾

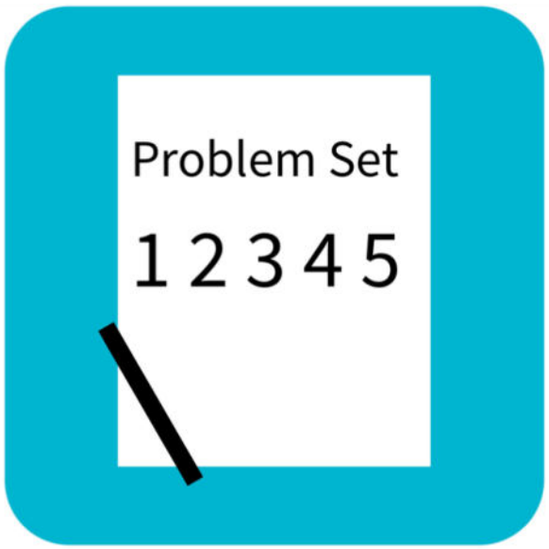
Now this one by yourself!!

5 x 3 ⅔

# Identify the distributive property

In April, Jenny ran in a marathon as part of a relay team. She ran $6\frac{55}{100}$ miles. In September, Jenny ran 4 times as far to complete a marathon on her own. How far did Jenny run in September?

Solve this problem with your partner. Use any strategy that you like!




# Problem Set



Name _____ Date _____

1. Draw tape diagrams to show two ways to represent 2 units of $4\frac{2}{3}$.

Write a multiplication expression to match each tape diagram.

# Debrief

- How could your tape diagram from Problem 1 help you solve Problem 2(b)? Explain your thinking.
- We can use the distributive property to show $3 \times 24$ as $(3 \times 2 \text{ tens}) + (3 \times 4 \text{ ones})$. Explain how this relates to solving $3 \times 2\frac{4}{10}$.
- Which strategy did you use to solve Problem 3? Why do you prefer this strategy?
- Problem 2(h) shows the expression $5\frac{6}{8} \times 4$ instead of $4 \times 5\frac{6}{8}$. Why are we able to write it either way and still get the same product?
- Look at differences in the solutions for Problem 3 of the Concept Development. In Solution 2, which step was not explicitly written? How did the student move from $4 \times 6\frac{55}{100}$ to $24 + \frac{220}{100}$ in one step? Discuss with a partner.
- Were you able to omit the step expressed in line 2 of Problem 2(a)? Explain.

# Exit Ticket



Name _____ Date _____

Multiply. Write each product as a mixed number.

1. $4 \times 5\frac{3}{8}$