Eureka Math

4th Grade
Module 3
Lesson 33

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!

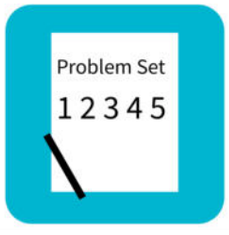
Directions for customizing presentations are available on the next slide.

Icons

Read, Draw, Write

Learning Target

Personal White Board

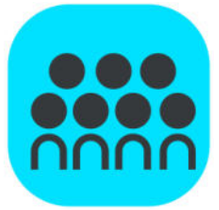


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

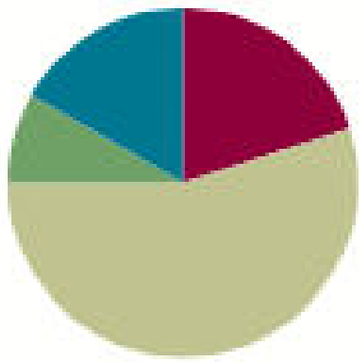
Small Group Time

Lesson 33

Objective: Explain the connection of the area model of division to the long division algorithm for three- and four-digit dividends.

Suggested Lesson Structure

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



Explain the connection of the area model of division to the long division algorithm for three and four digit dividends.

Quadrilaterals

Display quadrilateral template

You will need to know these questions since the template will be projected.

Group Counting

Count forward and backward, occasionally changing the direction of the count.

Sixes to 60

Sevens to 70

Eights to 80

Nines to 90

Multiply Units

3x3=___ Say it in unit form.

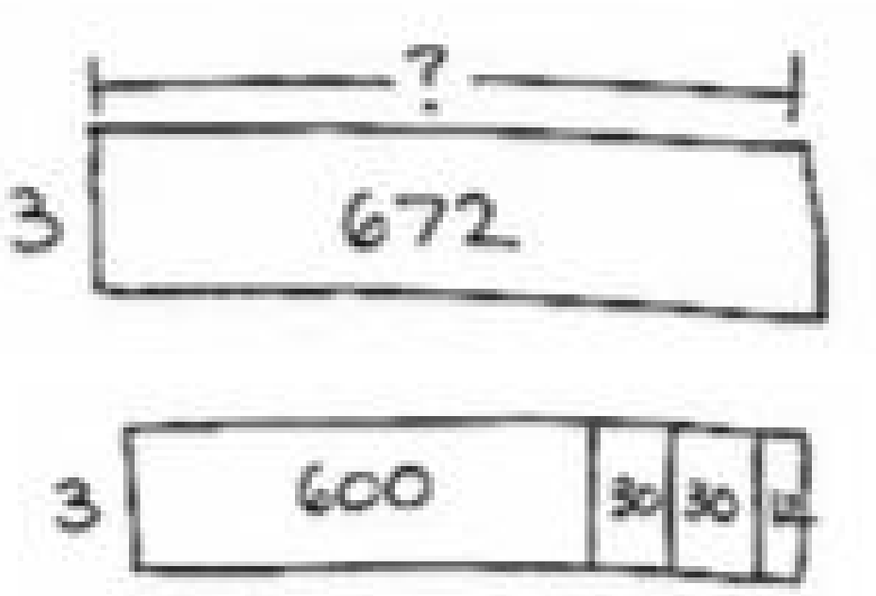
30x3=___ Say it in unit form.

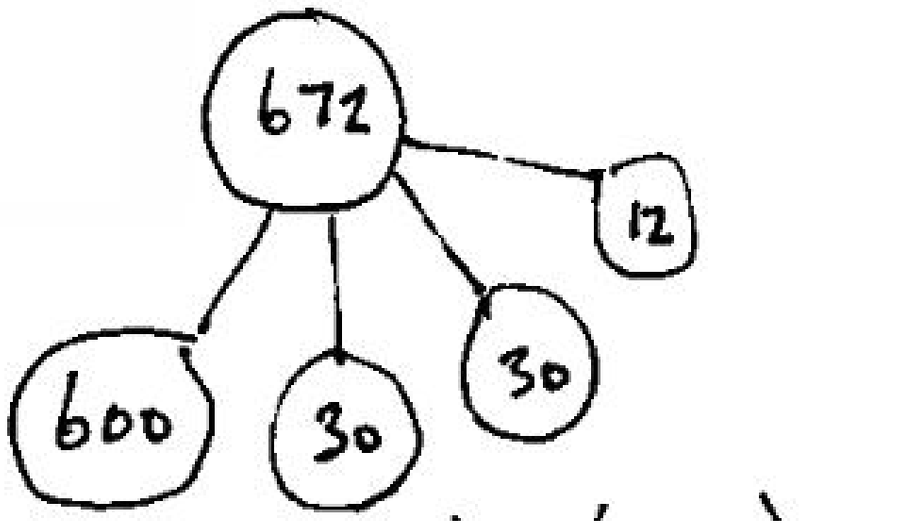
Application Problem

Write an equation to find the unkown length of each rectangle. Then, find the sum of the two unkown lengths.

Draw a rectangular with an area model of 672 square inches and a width of 3 inches.

Draw a new rectangular area model with same area directly below, but partitioned to easily do mental math.





$(600 \div 3) + (30 \div 3) + (30 \div 3) + (12 \div 3)$

$200 + 10 + 10 + 4$

$= 224$

Draw a number bond to match the whole and parts of your rectangles.

672 ÷ 3

Work with a partner and find the unknown side using the area model.

539 ÷ 2

Complete in you small group.

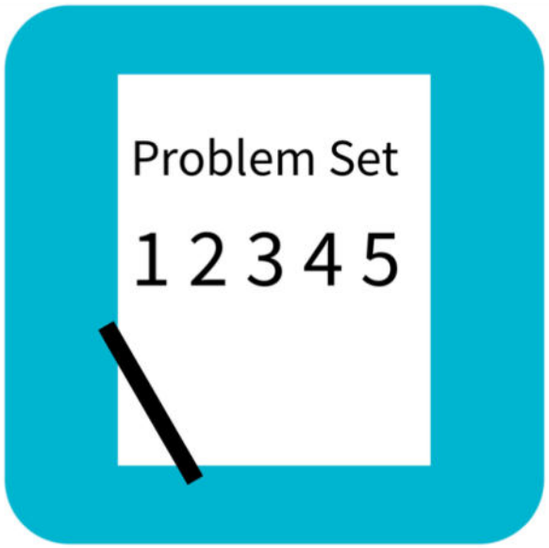
1,216 ÷ 4

Complete with a partner.

438 ÷ 5

Complete independently.

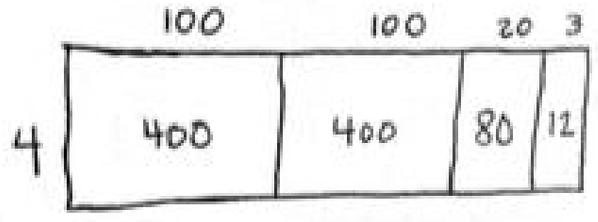
539 ÷ 2



Problem Set

Name _____ Date _____

1. Ursula solved the following division problem by drawing an area model.



a. What division problem did she solve?

b. Show a number bond to represent Ursula's area model, and represent the total length using the distributive property.

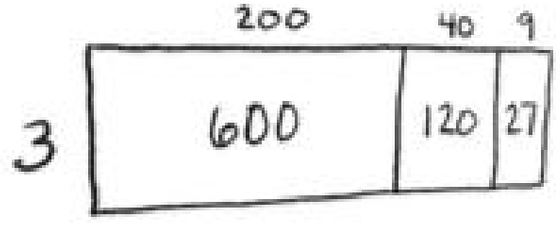
Debrief

- In Problem 1, is there another way Ursula could have represented the division problem with an area model? Would your number bond in 1(b) need revision if the area model changed?
- Compare your area model in Problem 2(a) to your partner's. Is it easier to solve the area model separating it into 2 parts, 3 parts, 4 parts, etc.?
- How do you decide how many parts are needed when building the area model for division?
- How are area models, number bonds, and the long division algorithm connected? Is there a correct order in which to use them to solve division problems?

Exit Ticket

Name _____ Date _____

1. Anna solved the following division problem by drawing an area model.



a. What division problem did she solve?

b. Show a number bond to represent Anna's area model, and represent the total length using the distributive property.