Eureka Math

3rd Grade
Module 7
Lesson 21

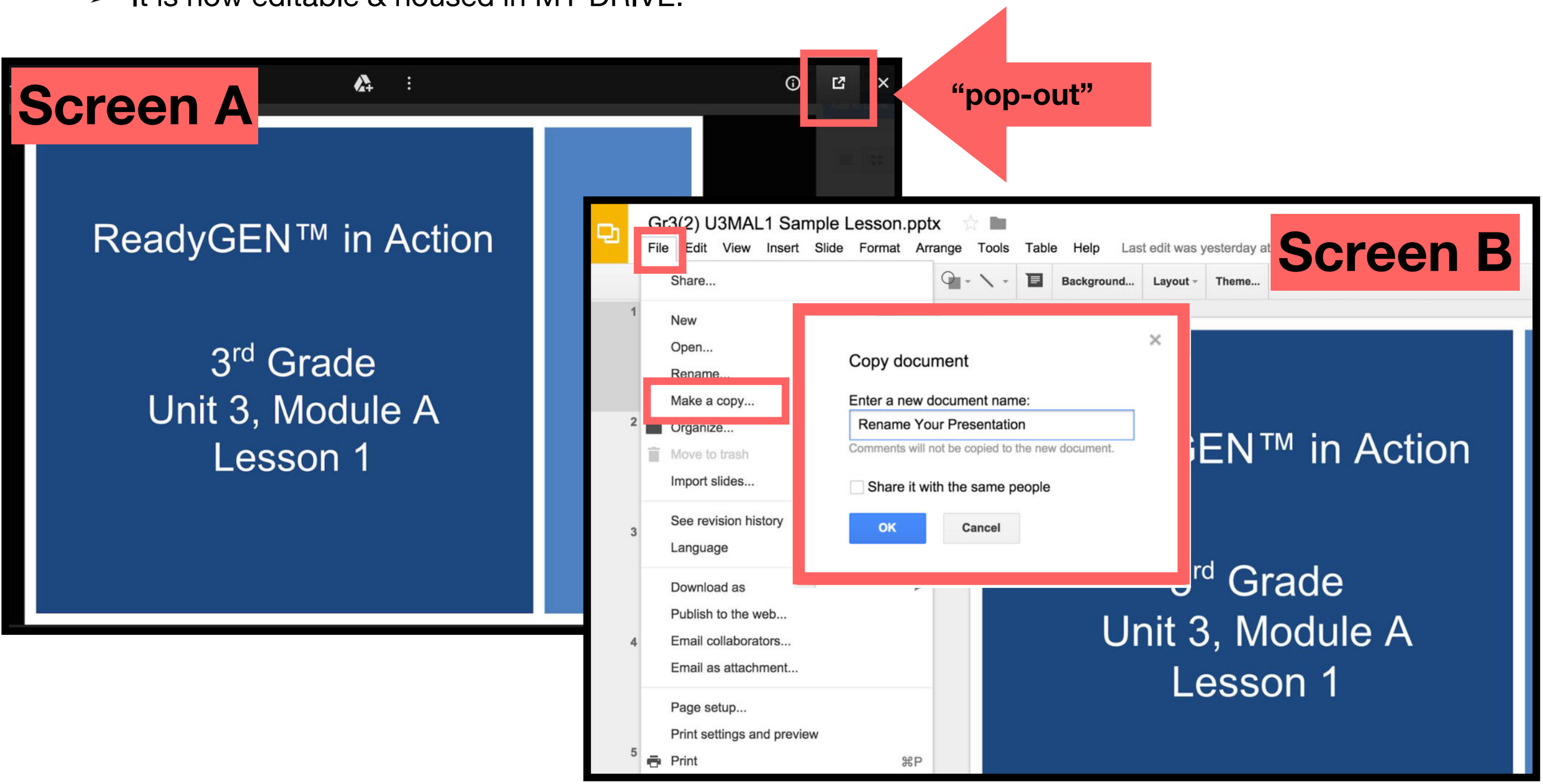
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this project!

Directions for customizing presentations are available on the next slide.

Customize this Slideshow

Reflecting your Teaching Style and Learning Needs of Your Students

- ➢ When the Google Slides presentation is opened, it will look like Screen A.
- ➢ Click on the “pop-out” button in the upper right hand corner to change the view.
- ➢ The view now looks like Screen B.
- ➢ Within Google Slides (not Chrome), choose FILE.
- ➢ Choose MAKE A COPY and rename your presentation.
- ➢ Google Slides will open your renamed presentation.
- ➢ It is now editable & housed in MY DRIVE.



Icons

Read, Draw, Write

Learning Target

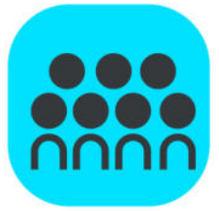
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

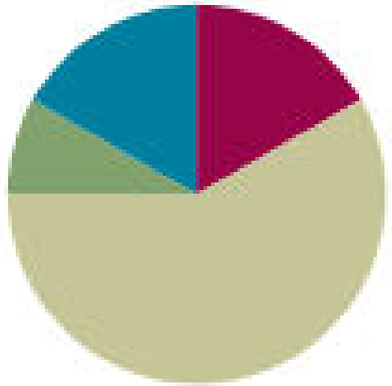
Small Group Time

Lesson 21

Objective: Construct rectangles with a given perimeter using unit squares and determine their areas.

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 construct rectangles with a given perimeter using unit squares and determine their areas.

Fluency Practice

Multiply or Divide by 3 (10 minutes)

Number Correct: _____

A

Multiply or Divide by 3

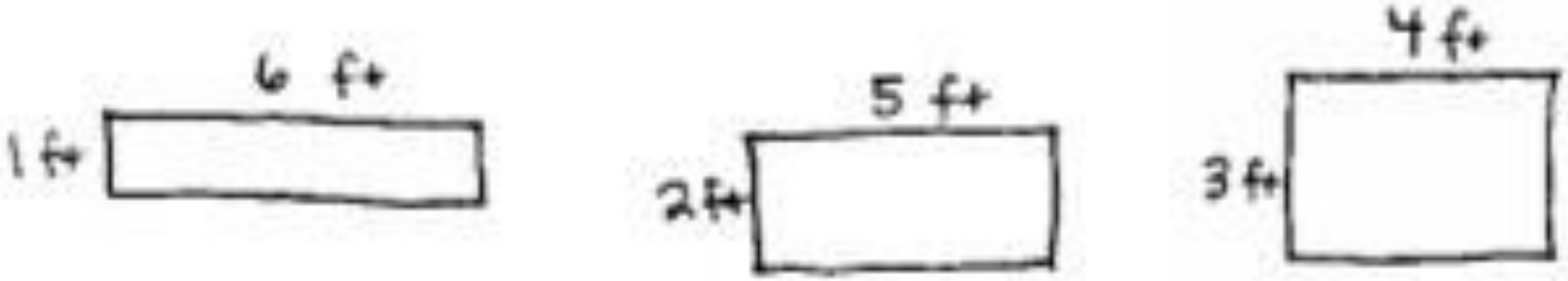
1.	2 × 3 =	
2.	3 × 3 =	
3.	4 × 3 =	
4.	5 × 3 =	
5.	1 × 3 =	
6.	6 ÷ 3 =	

23.	___ × 3 = 30	
24.	___ × 3 = 6	
25.	___ × 3 = 9	
26.	30 ÷ 3 =	
27.	15 ÷ 3 =	
28.	3 ÷ 3 =	

Application Problem

Mrs. Zeck will use 14 feet of tape to mark a rectangle on the gym wall. Draw several rectangles that Mrs. Zeck could make with her tape. Label the width and length of each rectangle.

Application Problem



$14 \div 2 = 7$

$1 + 6 = 7$ $\quad w = 1, \ l = 6$

$2 + 5 = 7$ $\quad w = 2, \ l = 5$

$3 + 4 = 7$ $\quad w = 3, \ l = 4$

Concept Development

On your centimeter grid paper, shade and label as many rectangles as you can with a perimeter of 16 centimeters.

Start by finding half of the perimeter. What is half of the perimeter?

8

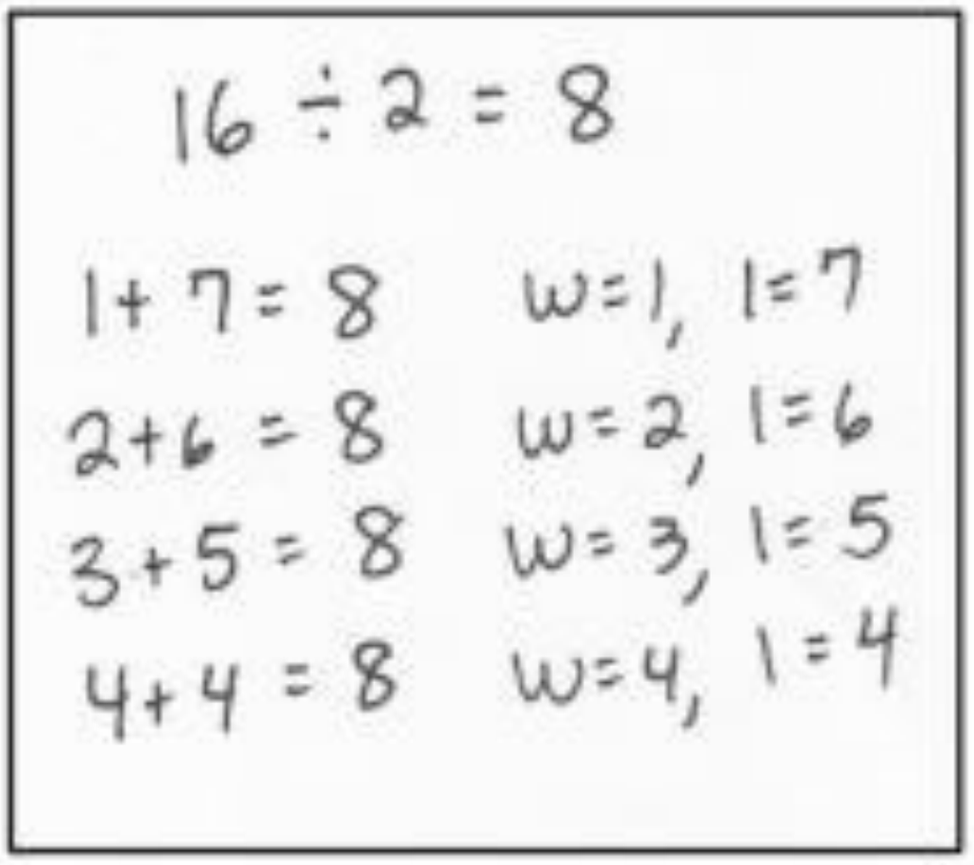
Now, let's write addition sentences that equal 8. The numbers in these addition sentences are the widths and lengths of the rectangles.

Work with a partner to find the widths and lengths for rectangles with a perimeter of 16 centimeters.

Concept Development

How many different rectangles did you find with a perimeter of 16 centimeters?

4 rectangles



Concept Development

Talk to a partner: Are any of your rectangles squares?

Yes

Which one?

The rectangle with a width of 4 and a length of 4 is a square because all the side lengths are equal.

Shade each rectangle on your centimeter grid paper, and label the side lengths. Darken the perimeters of the rectangles so they stand out on the grid.

Concept Development

How can you be sure that all of the rectangles have a perimeter of 16 centimeters?

Do you think the rectangles all have the same area? Why or why not?

Which rectangle do you think has the smallest area? The greatest area? Why?

Problem Set

Name _____ Date _____

1. On your centimeter grid paper, shade and label as many rectangles as you can with a perimeter of 16 centimeters.

   a. Sketch the rectangles below, and label the side lengths.

Debrief

- Compare the rectangles you drew on your grid paper for Problems 1 and 2. What patterns do you see in the side lengths?
- Look at the charts in Problem 3. Can a rectangle with a perimeter of 10 units have a greater area than a rectangle with a perimeter of 20 units? How do you know?
- Share your answers to Problem 4. Do you know for sure what Macy's and Gavin's rectangles look like? Why or why not?
- Look at the number of rectangles you made with the given perimeters in Problems 1, 2, and 3. Why do you think you can make more rectangles with some perimeters than with others?

Exit Ticket (3 minutes)

Name _____ Date _____

On the grid below, shade and label at least two different rectangles with a perimeter of 20 centimeters.