Eureka Math

3rd Grade
Module 7
Lesson 19

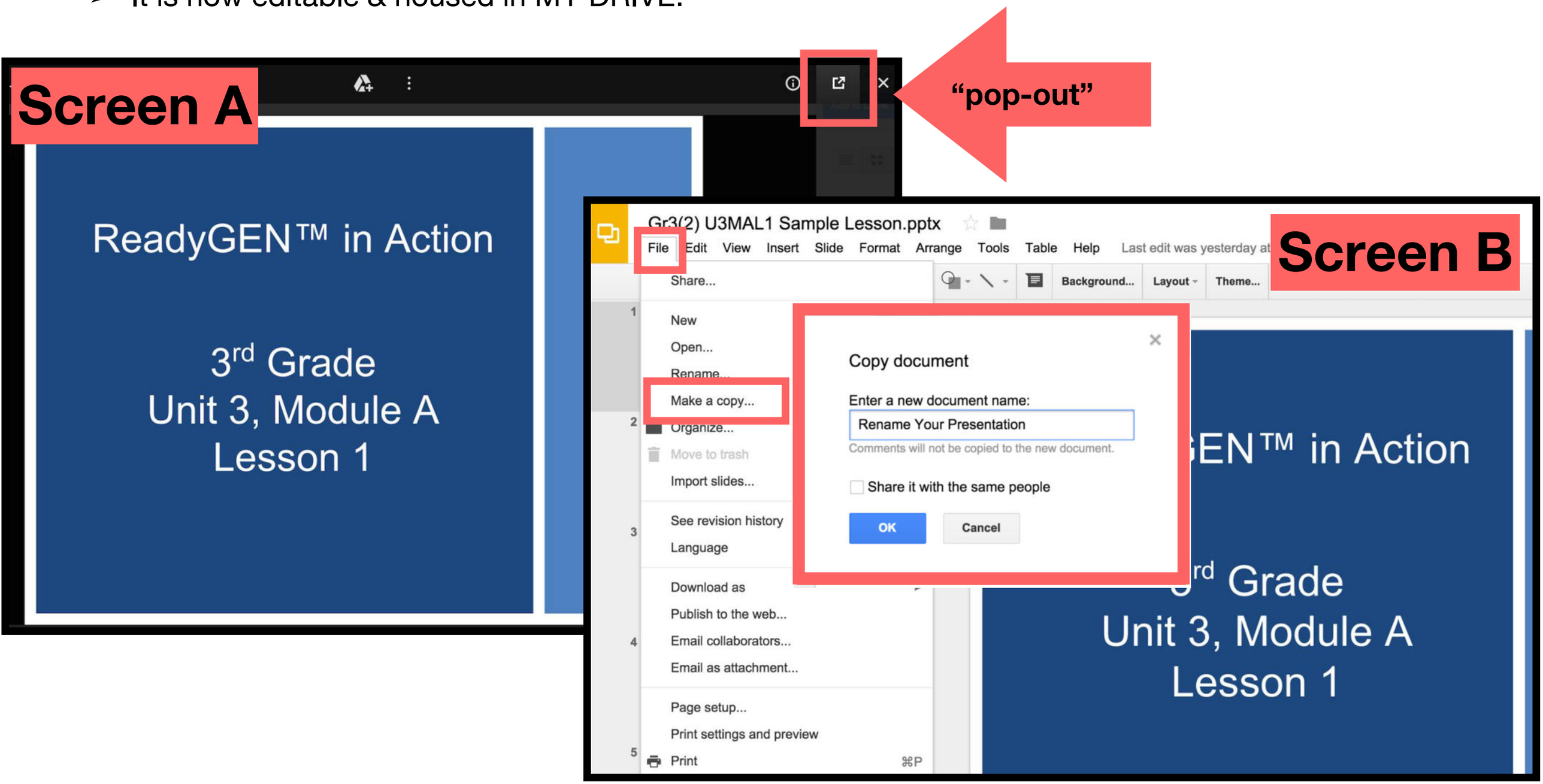
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

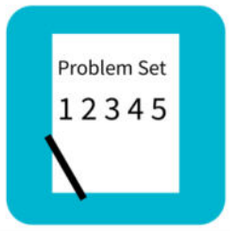


Icons

Read, Draw, Write

Learning Target

Personal White Board

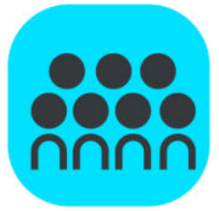


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

Small Group Time

Lesson 19

Objective: Use a line plot to record the number of rectangles constructed from a given number of unit squares.

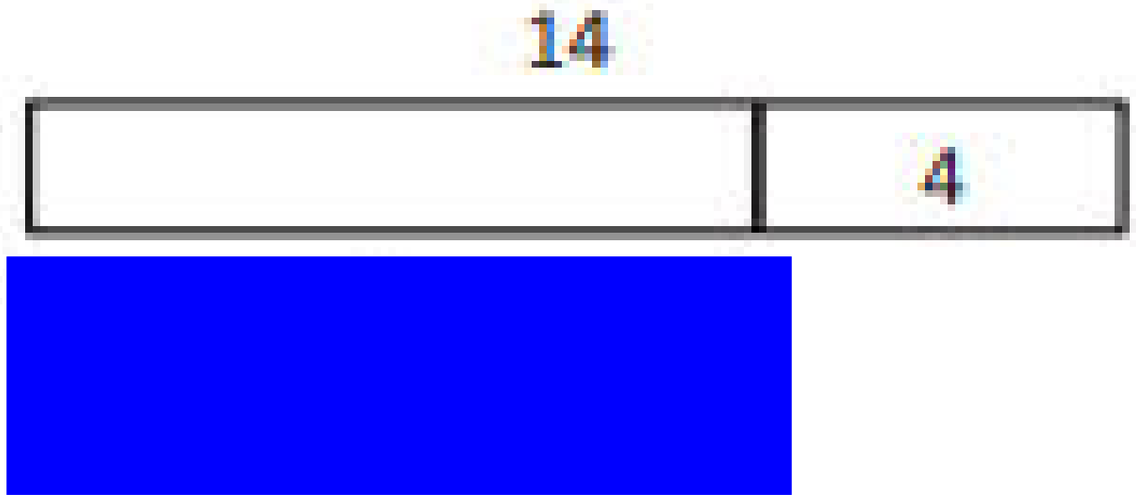
Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(8 minutes)
Concept Development	(30 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**

I can use a line plot to record the number of rectangles constructed from a given number of square units.

Fluency Practice

Draw Tape Diagrams (6 minutes)



What is the value of the whole?

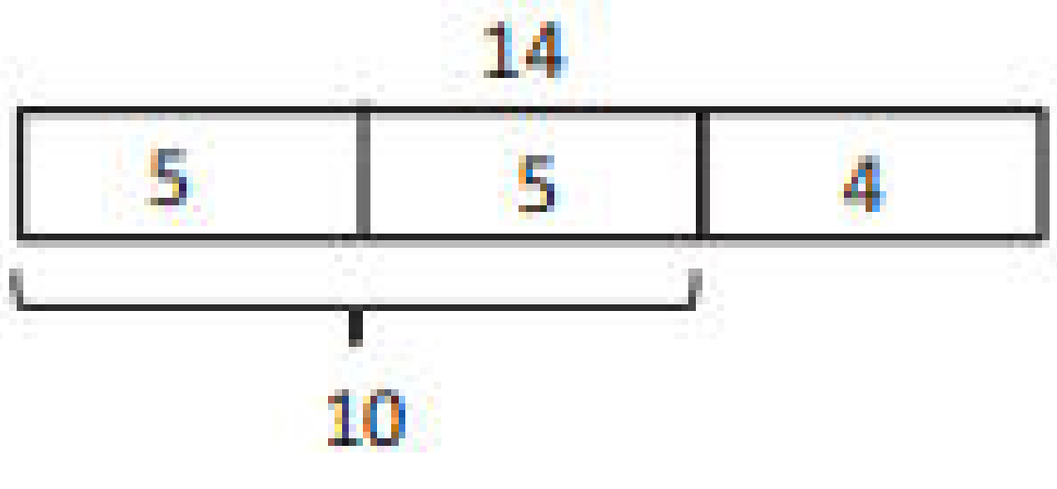
14

What's the value of the unknown part?

10

Fluency Practice

6 minutes

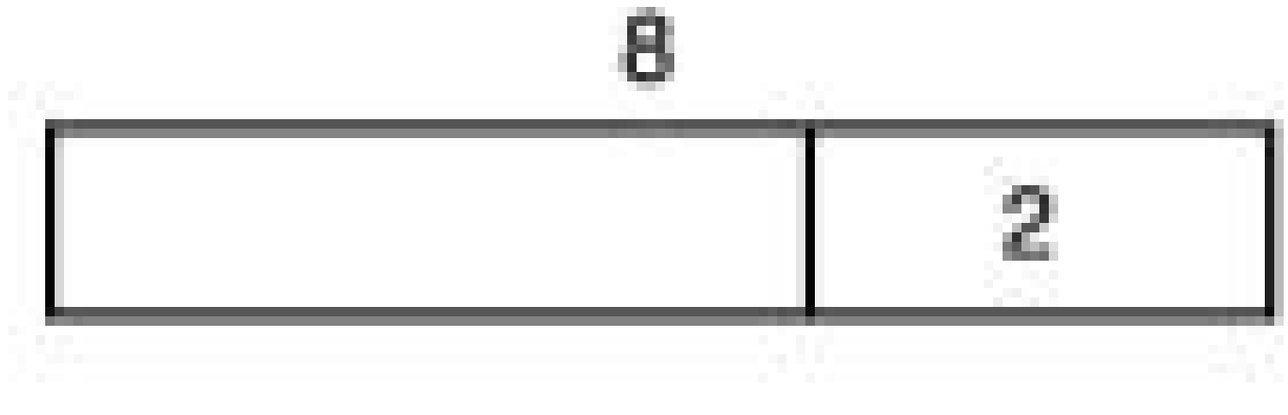


- Partition the unit of 10 into 2 equal parts. Write the value of each unknown unit as a division sentence.

10 ÷ 2 = 5

Fluency Practice

6 minutes



What is the value of the whole?

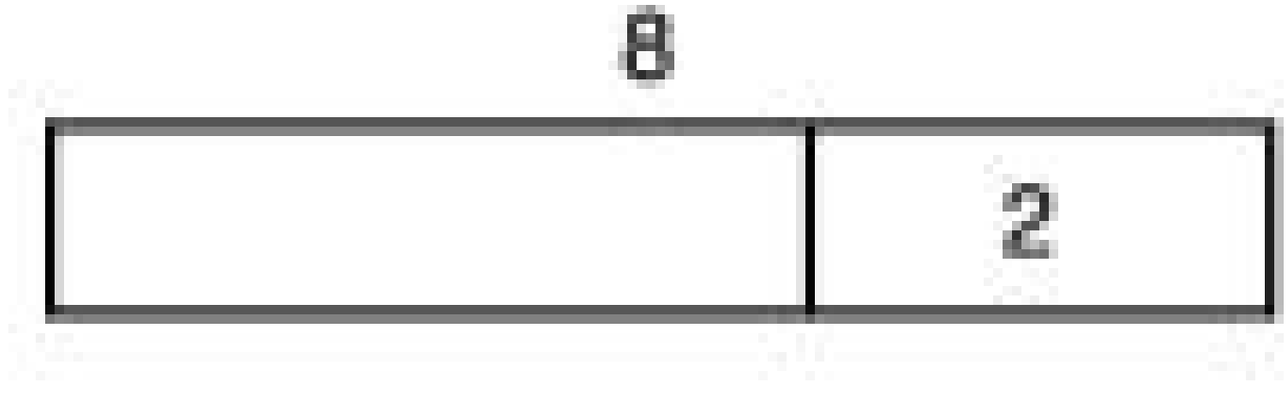
8

What’s the value of the unknown part?

6

Fluency Practice

6 minutes



- Partition the unit of 8 into 2 equal parts. Write the value of each unknown unit as a division sentence.

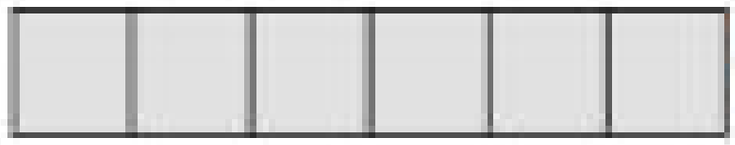
8 ÷ 2 = 4

Fluency Practice

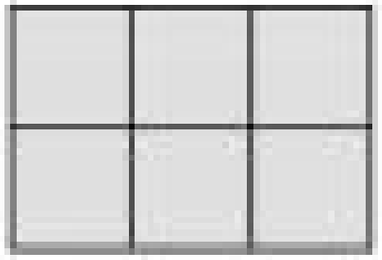
Find the Perimeter (6 minutes)

Materials: (S) Grid Paper

- Shade rectangles that have an area of 6 square units. Next to each rectangle, write the perimeter.



P = 14 units



P = 10 units

Fluency Practice

Find the Perimeter (6 minutes)

Materials: (S) Grid Paper

- Shade rectangles that have an area of 8 square units. Next to each rectangle, write the perimeter.

*You may continue with 12 square units.

Application Problem

(8 minutes)

Marci says, “If a rectangle has a greater area than another rectangle, it must have a larger perimeter.” Do you agree or disagree? Show an example to prove your thinking.

Application Problem

(8 minutes)

Rectangle A

A = 2 cm x 6 cm
A = 12 sq cm

P = 2 cm + 2 cm + 6 cm + 6 cm
P = 4 cm + 12 cm
P = 16 cm

Rectangle B

A = 1 cm x 10 cm
A = 10 sq cm

P = 1 cm + 1 cm + 10 cm + 10 cm
P = 2 cm + 20 cm
P = 22 cm

I disagree with Marci. Rectangle A's area is greater than Rectangle B's area. But, Rectangle B has a greater perimeter than Rectangle A.

Concept Development

(35 minutes)

Materials: (S) **Square Tiles & Problem Set**

- Part 1: Use unit square tiles to make rectangles with a given number of unit squares. **Let's look at the completed chart for 12.**

-Why doesn't the chart list a 12 by 1 rectangle?

They are really the same rectangle, just turned.

-How do we know the chart shows all the rectangles that we can make with our 12 square units?

We can list all the multiplication facts that make 12

- **Work with a partner to complete Problem 1**

Concept Development

(35 minutes)

****Before doing problem 2 go over the answers to #1***

Part 2: Create a line plot to display how many rectangles can be made with a given number of unit squares.

Let's record our data on the line plot in Problem 2. What symbol will we use to represent a rectangle on our line plot? How do you know?

We'll use an X. I know because the key says an X equals 1 rectangle.

Concept Development

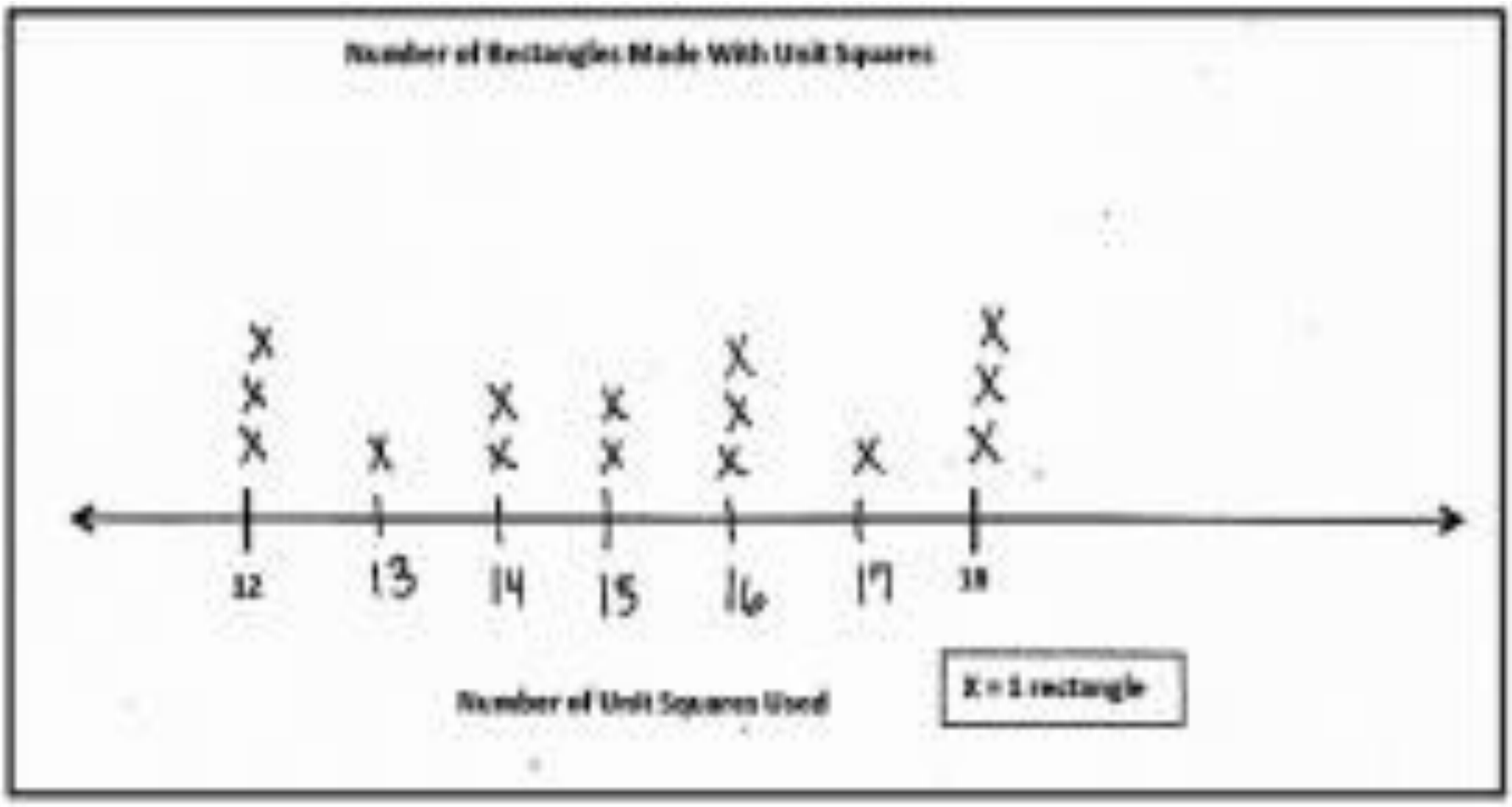
(35 minutes)

2. Create a line plot with the data you collected in Problem 1.

Number of Rectangles Made with Unit Squares

Concept Development

(35 minutes)



Debrief

Any combination of the questions below may be used to lead the discussion.

- For which number of unit squares in Problem 1 can a square be drawn? How do you know? Can you brainstorm other numbers of unit squares from which a square can be drawn? Can you think of other numbers of unit squares, like 13 and 17, that only have one possible rectangle? How did you come up with them?

- Can you think of a number of unit squares that would allow us to make four rectangles? What's the smallest number for which this is true?
- How is the number of unit squares used to make a rectangle related to the rectangle's area? How do you know?

Exit Ticket (3 minutes)

Name _____ Date _____

Use unit square tiles to make rectangles for the given number of unit squares. Complete the chart to show how many rectangles you made for the given number of unit squares. You might not use all the spaces in the chart.

Number of unit squares = **20**

Number of rectangles I made: ____

Width	Length