Eureka Math

3rd Grade
Module 7
Lesson 14

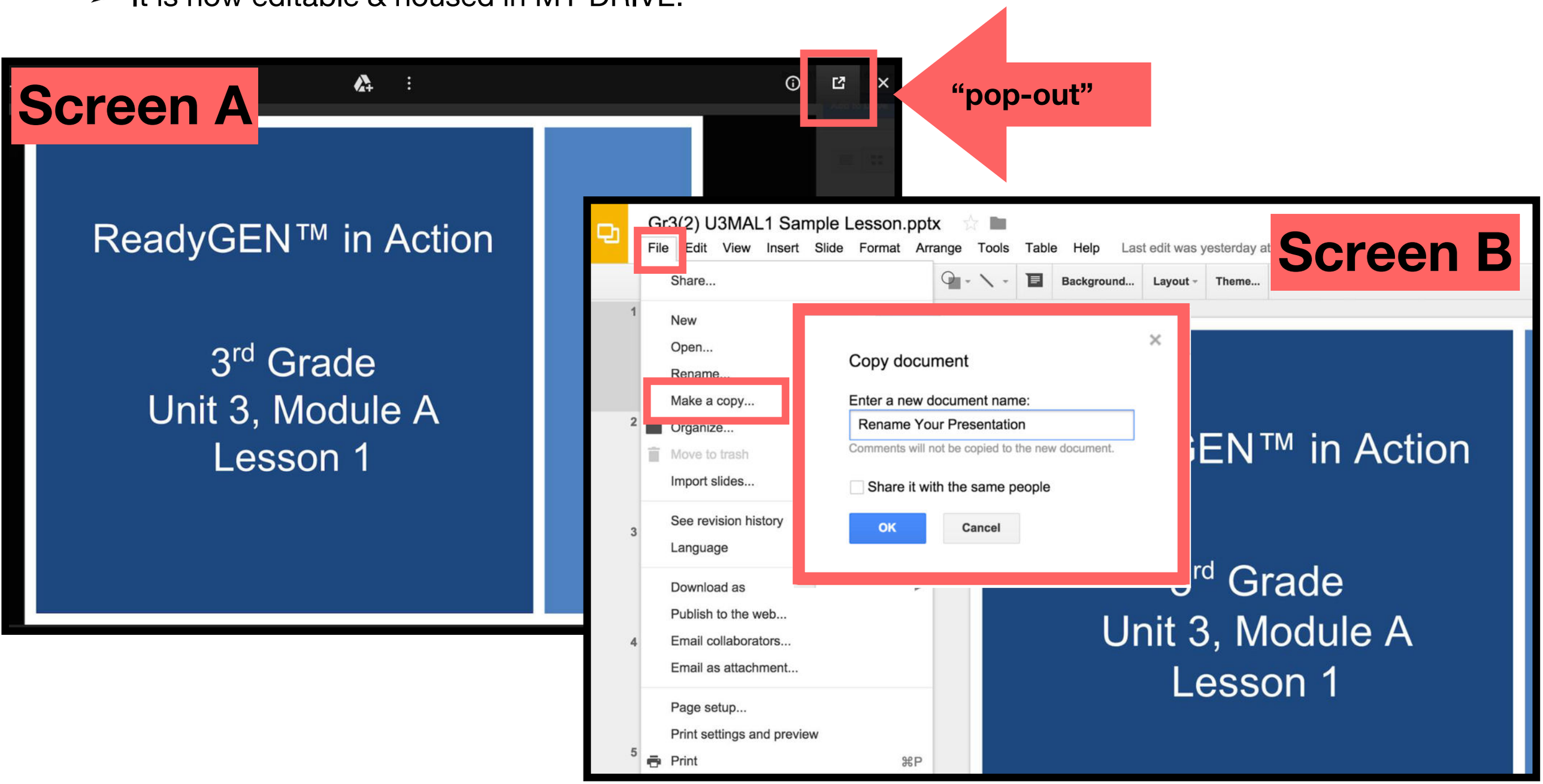
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

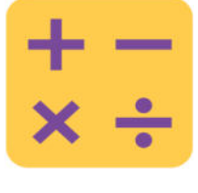
Read, Draw, Write

Learning Target

Personal White Board

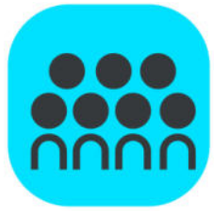
Problem Set

Manipulatives Needed



Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

Small Group Time

I can determine the perimeter of regular polygons and rectangles when whole number measurements are unknown.

Fluency Practice

Multiply by 8

7 × 8 = x

Let’s skip-count up by threes. I’ll raise a finger for each three.

8, 16, 24, 32, 40, 48, 56.

Let’s skip-count by threes starting at 40. Why is 40 a good place to start?

40 (5 fingers), 48 (6 fingers), 56 (7 fingers).

Fluency Practice

Multiply by 8

7 x 8 = x

Let’s see how we can skip-count down to find the answer, too. Start at 80 with 10 fingers, 1 for each eight.

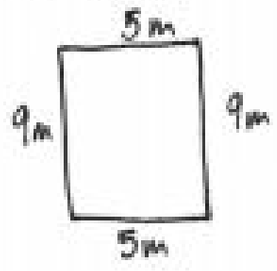
80 (10 fingers), 72 (9 fingers), 64 (8 fingers), 56 (7 fingers).

7 x 8 = 56

Application Problem

A rectangular sheep pen measures 5 meters long and 9 meters wide. The perimeter of the cow pen is double the perimeter of the sheep pen. What is the perimeter of the cow pen?

Sheep pen:



P= 5m + 5m + 9m + 9m
= 10m + 18m
= 28m

Cow pen:

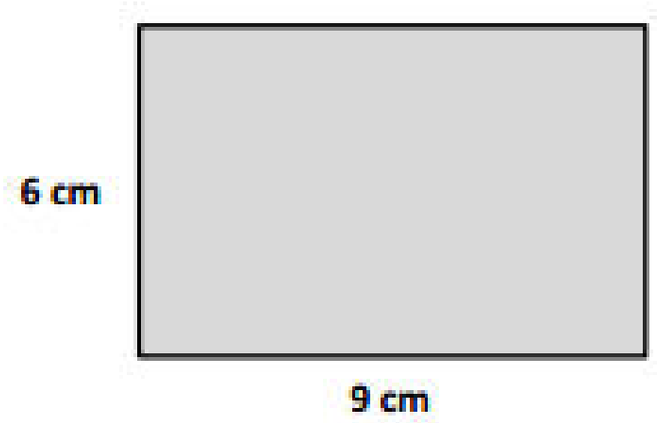
P= 28m + 28m
= 56m

The perimeter of the cow pen is 56 meters.

Concept Development

Problem 1: Find the perimeter of rectangles with unknown side lengths.

This shape is a rectangle. Use the given side lengths and what you know about rectangles to label the unknown side lengths.



Check your work against mine, and make changes if you need to.

9 cm + 6 cm + 9 cm + 6 cm = 30 cm

What is the perimeter of the rectangle?

30 centimeters!

Talk to a partner. What strategy did you use to add the side lengths? How did you figure out the unknown lengths?

Concept Development

Problem 1: Find the perimeter of rectangles with unknown side lengths.

This shape is a rectangle. Use the given side lengths and what you know about rectangles to label the unknown side lengths.

Check your work against mine, and make changes if you need to.

8 in. + 10 in. + 8 in. + 10 in. = 36 in.

What is the perimeter of the rectangle?

36 inches!

Concept Development

Problem 1: Find the perimeter of rectangles with unknown side lengths.

This shape is a rectangle. Use the given side lengths and what you know about rectangles to label the unknown side lengths.

Check your work against mine, and make changes if you need to.

14 in. + 36 in. + 14 in. + 36 in. = 100 in.

What is the perimeter of the rectangle?

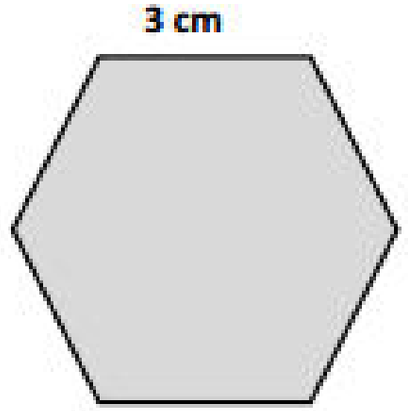
100 inches!

Talk to a partner. What strategy did you use to add the larger side measurements together accurately?

Concept Development

Problem 2: Find the perimeter of regular polygons with one side length given.

This shape is a regular hexagon. Talk to a partner. How can the labeled side length help you find the unknown side lengths?



That's right, since you know one side and because you know that it's a regular hexagon, you can find all the other side lengths because all the sides are equal! If one side is 3 cm, then all the other sides are 3 cm!

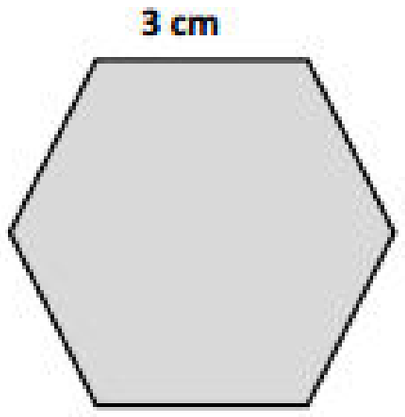
Sketch on your personal whiteboard, and label the unknown side lengths. Then write an addition sentence to find the perimeter of the shape.

3 cm + 3 cm + 3 cm + 3 cm + 3 cm + 3 cm = 18 cm

Concept Development

Problem 2: Find the perimeter of regular polygons with one side length given.

Talk to a partner. Can you write the addition sentence as a multiplication sentence?



Yes! Since all sides are equal, and it is a repeated addition sentence, we can also write it as a multiplication sentence.

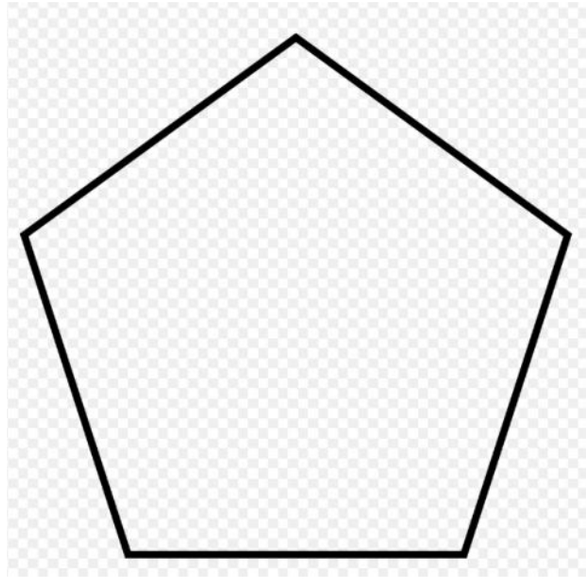
On your personal whiteboard write a multiplication sentence to find the perimeter of the shape.

3 cm x 6 = 18 cm

Concept Development

Problem 2: Find the perimeter of regular polygons with one side length given.

This shape is a regular pentagon.



Sketch it on your personal whiteboard, and label the unknown side lengths. Then write a repeated addition sentence to find the perimeter of the shape.

7 in. + 7 in. + 7 in. + 7in. + 7 in. = 35 in.

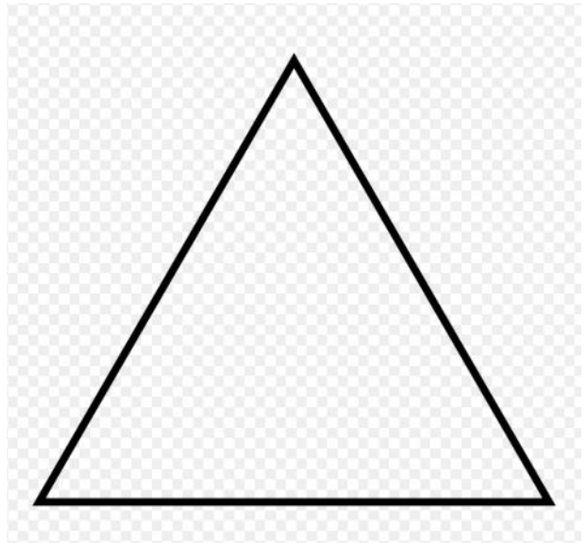
Now write a multiplication sentence to find the perimeter of the shape.

7 in. x 5 = 35 in.

Concept Development

Problem 2: Find the perimeter of regular polygons with one side length given.

This shape is a regular triangle.



17 cm.

Sketch it on your personal whiteboard, and label the unknown side lengths. Then write a repeated addition sentence to find the perimeter of the shape.

17 cm. + 17 cm. + 17 cm. = 51 cm.

Now write a multiplication sentence to find the perimeter of the shape.

17 cm. x 3 = 51 cm.

How could you use a break apart multiplication strategy to help you solve 17 x 3?

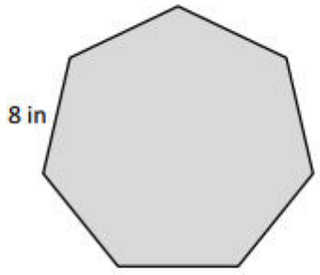
10 x 3 = 30
7 x 3 = 21
30 + 21 = 51 cm

Problem Set

Name _____ Date _____

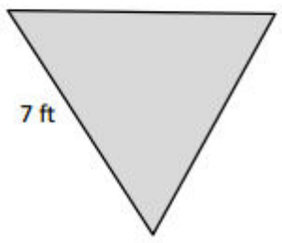
1. Label the unknown side lengths of the regular shapes below. Then, find the perimeter of each shape.

a.



Perimeter = _____ in

b.

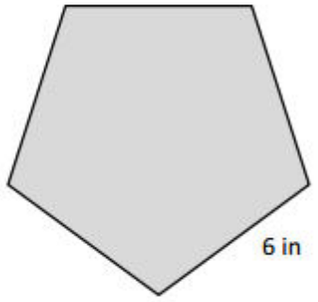


Perimeter = _____ ft

c.

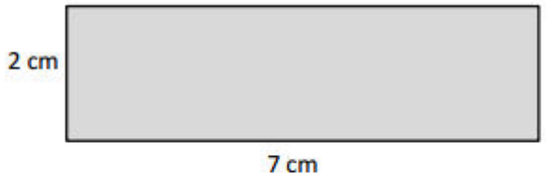
Perimeter = _____ m

d.



Perimeter = _____ in

2. Label the unknown side lengths of the rectangle below. Then, find the perimeter of the rectangle.



Perimeter = _____ cm

Debrief

- Compare your work for Problem 1 with a partner's work. Did you add or multiply to find the perimeters? Why?
- How was finding the perimeter in Problem 2 different from finding the perimeters in Problem 1?
- Tell your partner an addition and a multiplication equation for Problem 3. How are the equations related? How do they represent the perimeter of the octagon?

- Tell your partner an addition and a multiplication equation for Problem 3. How are the equations related? How do they represent the perimeter of the octagon?

- What strategy did you use to add the side lengths in Problem 4? Explain your strategy choice to a partner.
- Share your answers to Problem 5. Whose strategy is more efficient, Giles's or Xander's? Why?
- Explain to a partner how to find the perimeter of a regular shape given the name or picture of the shape and a side length.

Exit Ticket

Name _____ Date _____

Travis traces a regular pentagon on his paper. Each side measures 7 centimeters. He also traces a regular hexagon on his paper. Each side of the hexagon measures 5 centimeters. Which shape has a greater perimeter? Show your work.