Eureka Math

3rd Grade
Module 7
Lesson 1

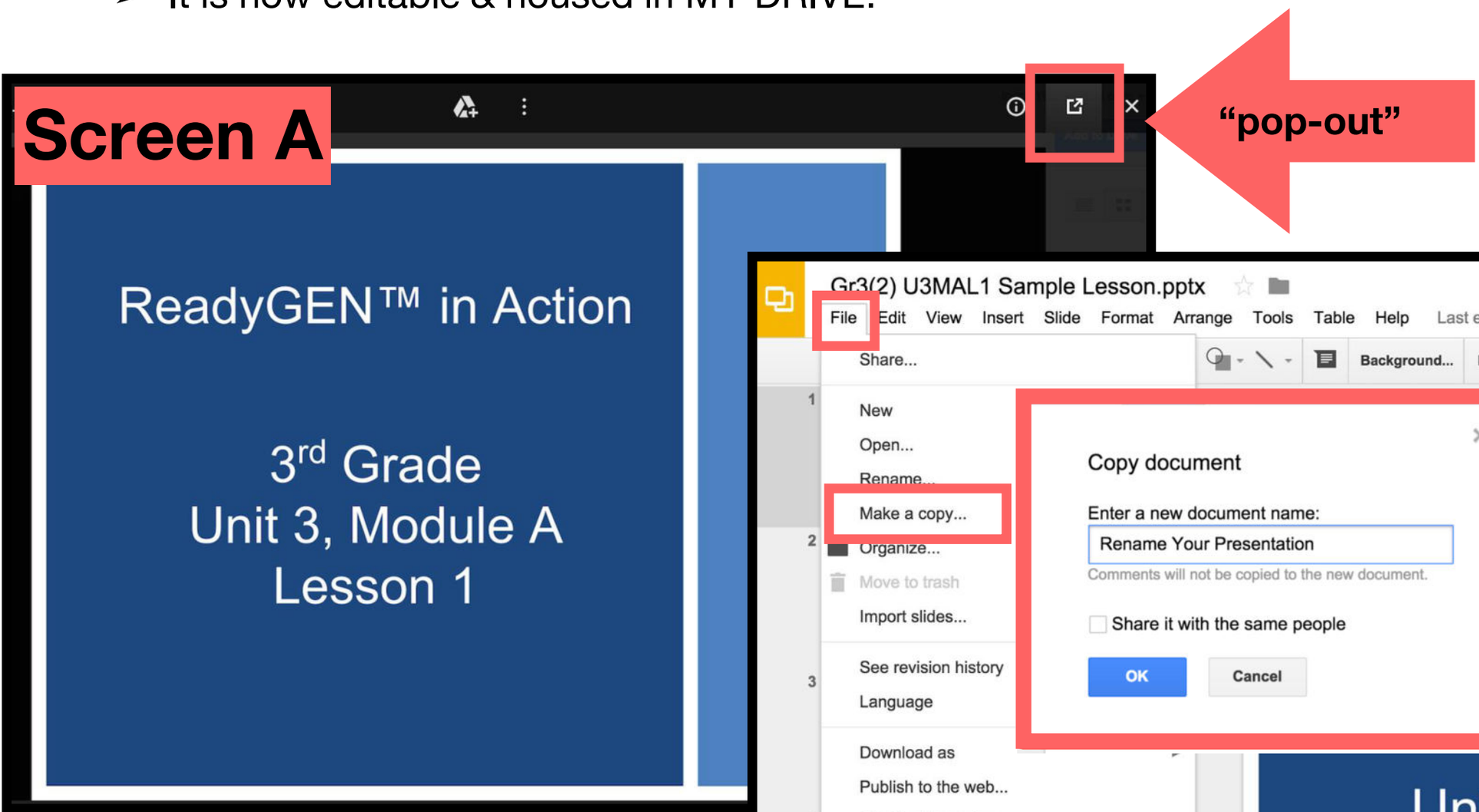
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

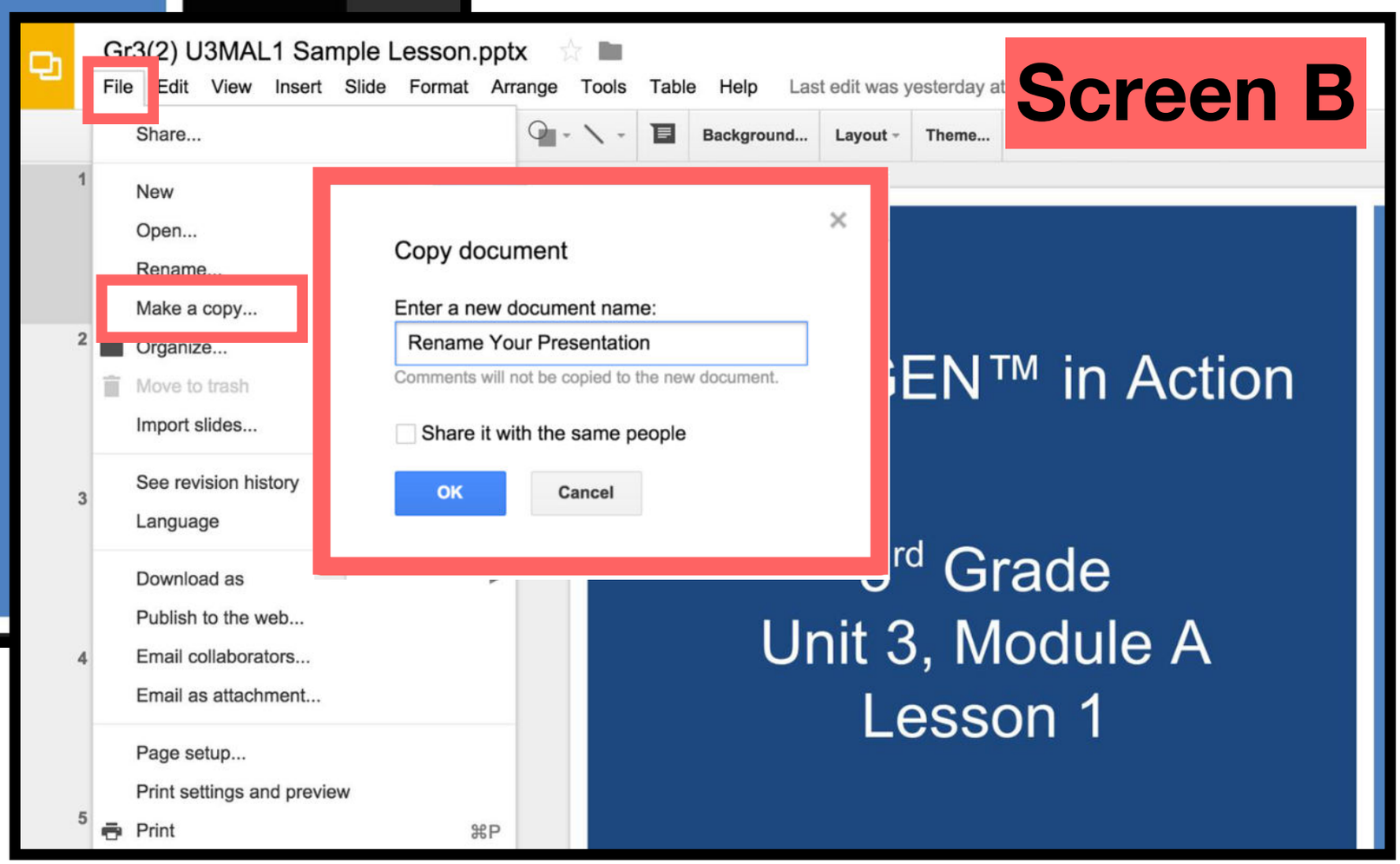
Directions for customizing presentations are available on the next slide.

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

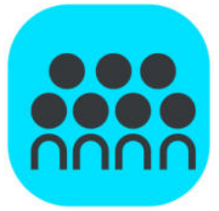
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

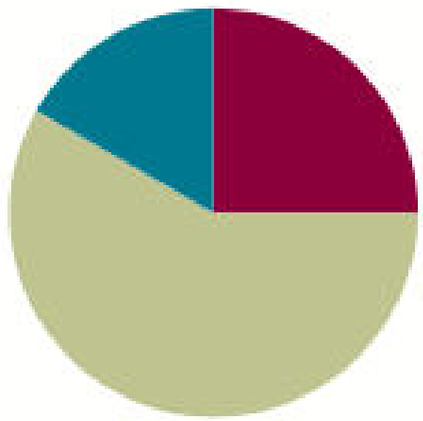
Small Group Time

Lesson 1

Objective: Solve word problems in varied contexts using a letter to represent the unknown.

Suggested Lesson Structure

Fluency Practice	(15 minutes)
Concept Development	(35 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



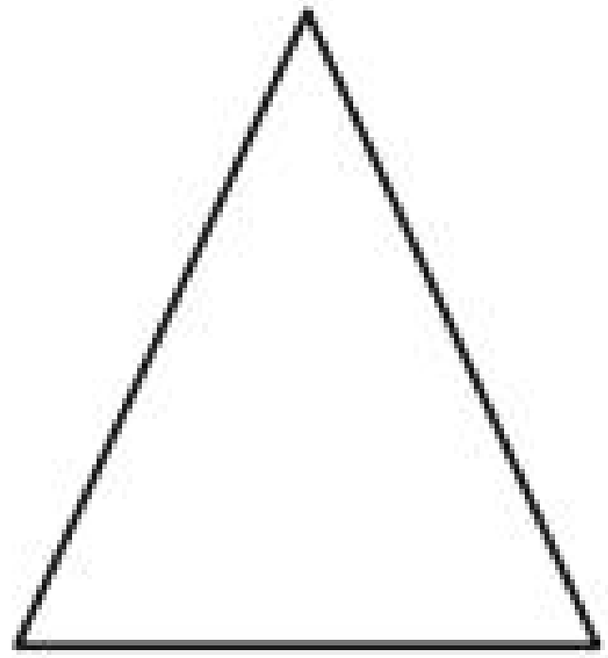
I can solve word problems in a variety of contexts.

I can use a letter to represent the unknown in equations.

Fluency Practice

Name the Shape (3 min.)

What’s the name of the shape?

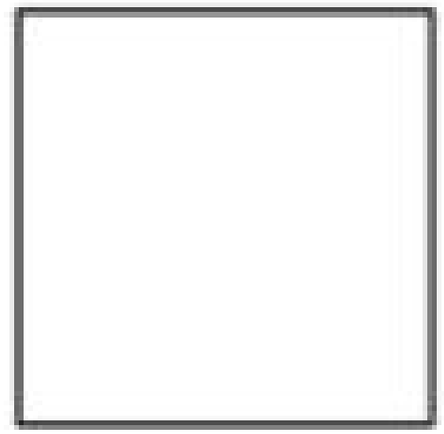


Fluency Practice

Name the Shape (3 min.)

What's one name for this shape?

How many sides does a square have?



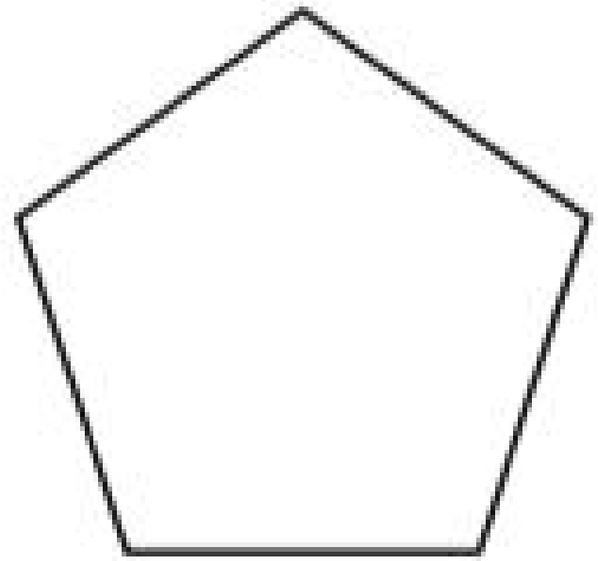
What's the name for all four-sided shapes?

Quadrilateral

Fluency Practice

Name the Shape (3 min.)

How many sides does this shape have?



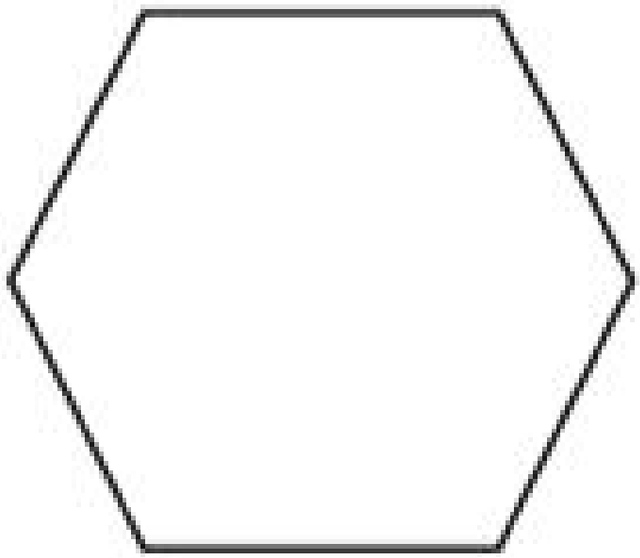
What's the name for all five-sided figures?

Pentagon

Fluency Practice

Name the Shape (3 min.)

How many sides does this shape have?



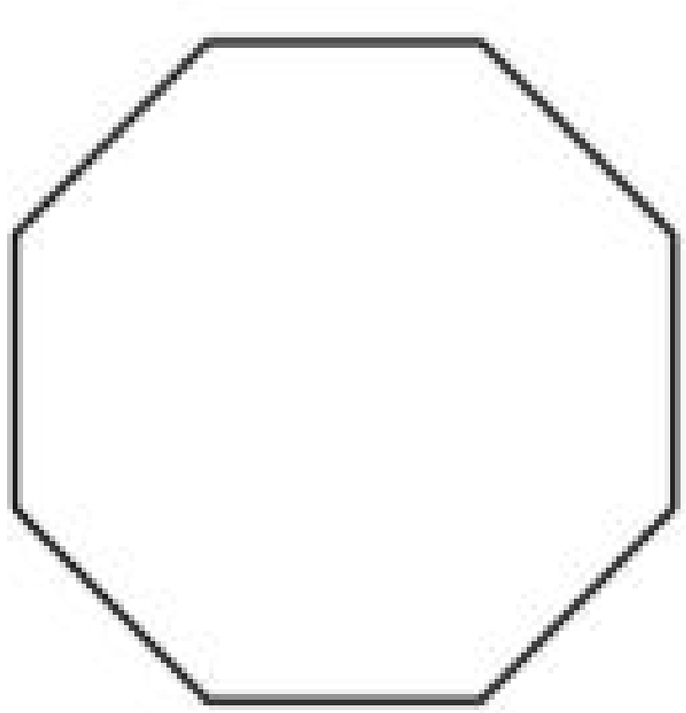
What’s the name for all six-sided figures?

Hexagon

Fluency Practice

Name the Shape (3 min.)

How many sides does this shape have?



What's the name for all eight-sided figures?

Octagon

Fluency Practice

Multiply by 3 (8 min.)

$5 \times 3 = n$

Let’s skip-count up by threes to find the answer.

3, 6, 9, 12, 15

$5 \times 3 = 15$

Fluency Practice

Multiply by 3 (8 min.)

3 × 3 = ?

Let’s skip-count up by threes again.

3, 6, 9

Let’s see how we can skip-count down to find the answer, too. Start at 15 with 5 fingers, 1 for each three.

15 (5 fingers), 12 (4 fingers), 9 (3 fingers).

Fluency Practice

Multiply by 3 (8 min.)

$3 \times 4 = \ ?$

Let’s skip-count up by threes again.

3, 6, 9, 12

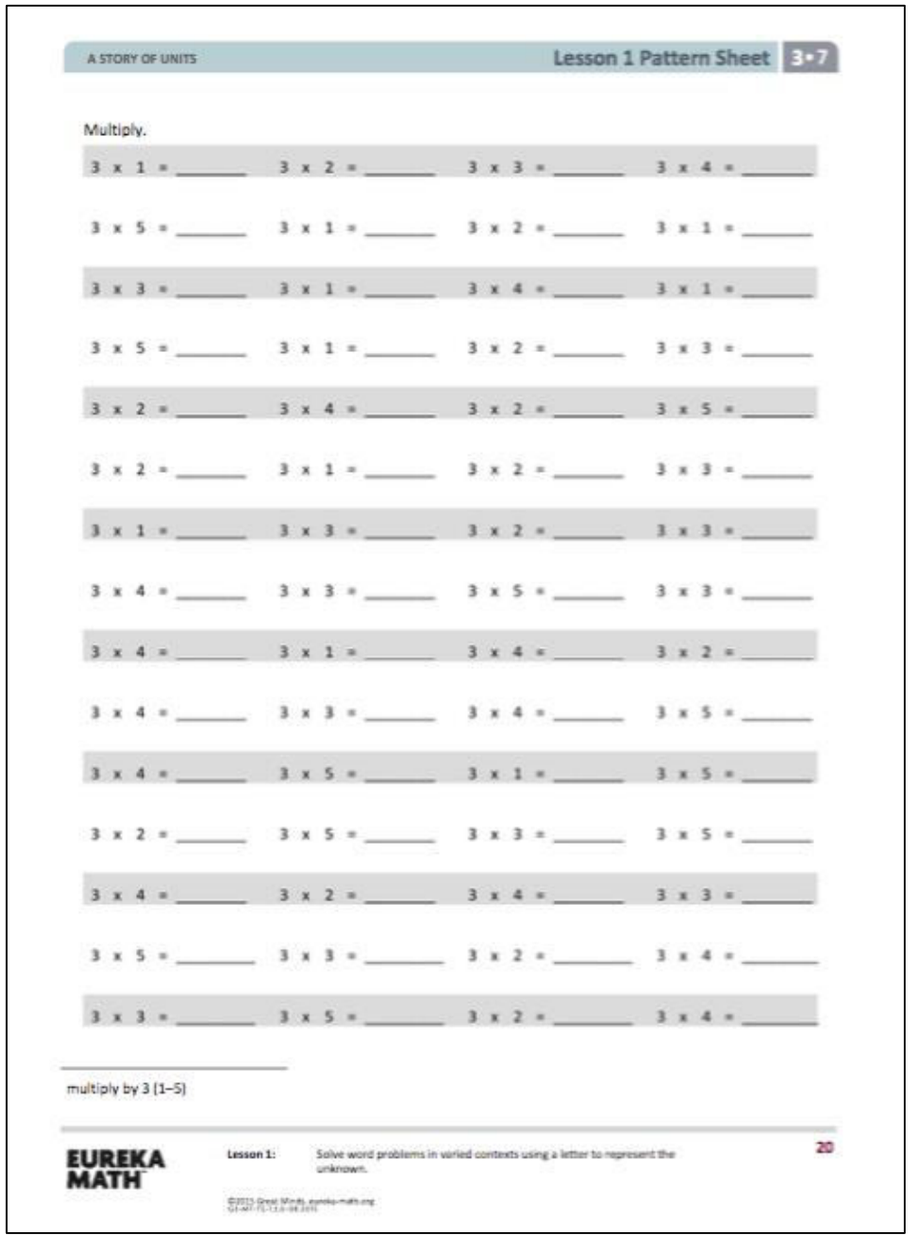
Let’s see how we can skip-count down to find the answer, too. Start at 15 with 5 fingers, 1 for each three.

15 (5 fingers), 12 (4 fingers).

Fluency Practice

Multiply by 4 (8 minutes)

Let's practice multiplying by 3. Be sure to work left to right across the page.



A STORY OF UNITS — Lesson 1 Pattern Sheet — 3•7

Multiply.

3 x 1 = _____	3 x 2 = _____	3 x 3 = _____	3 x 4 = _____
3 x 5 = _____	3 x 1 = _____	3 x 2 = _____	3 x 1 = _____
3 x 3 = _____	3 x 1 = _____	3 x 4 = _____	3 x 1 = _____
3 x 5 = _____	3 x 1 = _____	3 x 2 = _____	3 x 3 = _____
3 x 2 = _____	3 x 4 = _____	3 x 2 = _____	3 x 5 = _____
3 x 2 = _____	3 x 1 = _____	3 x 2 = _____	3 x 3 = _____
3 x 1 = _____	3 x 3 = _____	3 x 2 = _____	3 x 3 = _____
3 x 4 = _____	3 x 3 = _____	3 x 5 = _____	3 x 3 = _____
3 x 4 = _____	3 x 1 = _____	3 x 4 = _____	3 x 2 = _____
3 x 4 = _____	3 x 3 = _____	3 x 4 = _____	3 x 5 = _____
3 x 4 = _____	3 x 5 = _____	3 x 1 = _____	3 x 5 = _____
3 x 2 = _____	3 x 5 = _____	3 x 3 = _____	3 x 5 = _____
3 x 4 = _____	3 x 2 = _____	3 x 4 = _____	3 x 3 = _____
3 x 5 = _____	3 x 3 = _____	3 x 2 = _____	3 x 4 = _____
3 x 3 = _____	3 x 5 = _____	3 x 2 = _____	3 x 4 = _____

multiply by 3 (1–5)

EUREKA MATH — Lesson 1: Solve word problems in varied contexts using a letter to represent the unknown. — 20

Fluency Practice

Equivalent Counting with Units of 2 (4 minutes)

Count to 10 as I write. Please do not count faster than I can write.

(Write as students count.)

1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

Count to 10 twos. (Write as students count.)

1 two, 2 twos, 3 twos, 4 twos, 5 twos, 6 twos, 7 twos, 8 twos, 9 twos, 10 twos.

Fluency Practice

Equivalent Counting with Units of 3 (4 minutes)

1	2	3	4	5	6	7	8	9	10
1 two	2 twos	3 twos	4 twos	5 twos	6 twos	7 twos	8 twos	9 twos	10 twos
2	4	6	8	10	12	14	16	18	20
1 two	4	3 twos	8	5 twos	12	7 twos	16	9 twos	20
2	2 twos	6	4 twos	10	6 twos	14	8 twos	18	10 twos

Concept Development

The sign below shows information about hayrides at the orchard.

Lena's family buys 2 adult tickets and 2 child tickets for the hayride. How much does it cost Lena's family to go on the hayride?

Take 15 seconds to visualize the action, and then tell your partner the scene it describes.

Concept Development

Lena's family buys 2 adult tickets and 2 child tickets for the hayride. How much does it cost Lena's family to go on the hayride?

Reread the question to yourself. Then, use your own words to tell your partner what it's asking.

Concept Development

It wants to know how much money Lena's family spends on hayride tickets.

Notice the information provided to help you answer the question. What do you see?

Lena's family buys 2 adult tickets and 2 child tickets for the hayride. How much does it cost Lena's family to go on the hayride?

Concept Development

Did you see….

- The problem says that there are four people in Lena's family.
- Two adults and two kids.
- There's a chart, too. It tells the different prices of tickets and also when the hayrides leave.

Think about the Read-Draw-Write process. What question should we ask ourselves next?

What can I draw?

Concept Development

Reread the problem, and think about your answer to that question.

Show your thinking on your personal white board.

As you label your drawing, use a letter to represent the unknown.

Concept Development

How did you show your thinking?

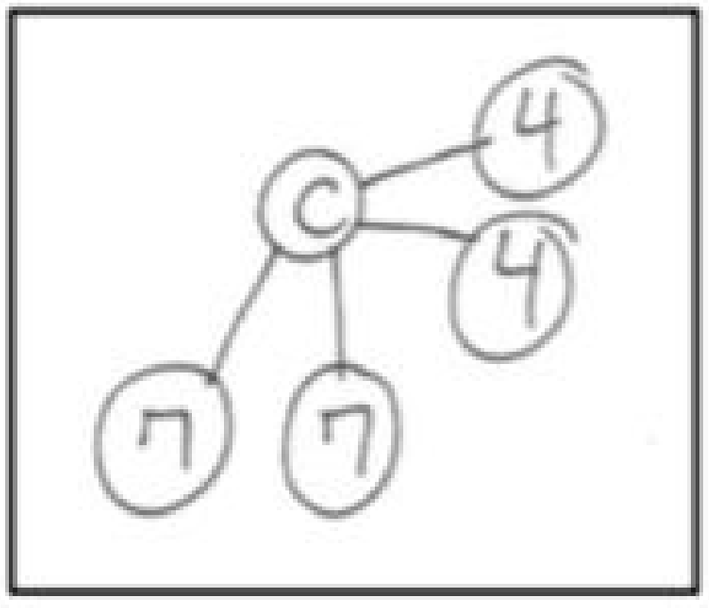
Tell your partner how your drawing represents the problem. Be sure to discuss your labels, too.

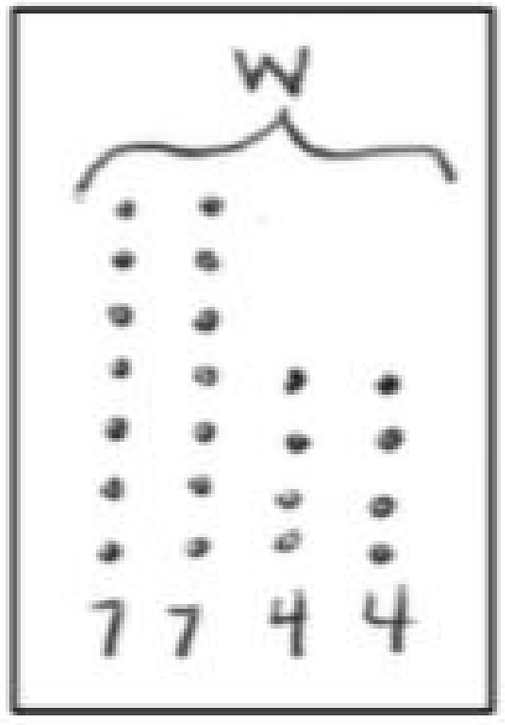
Concept Development

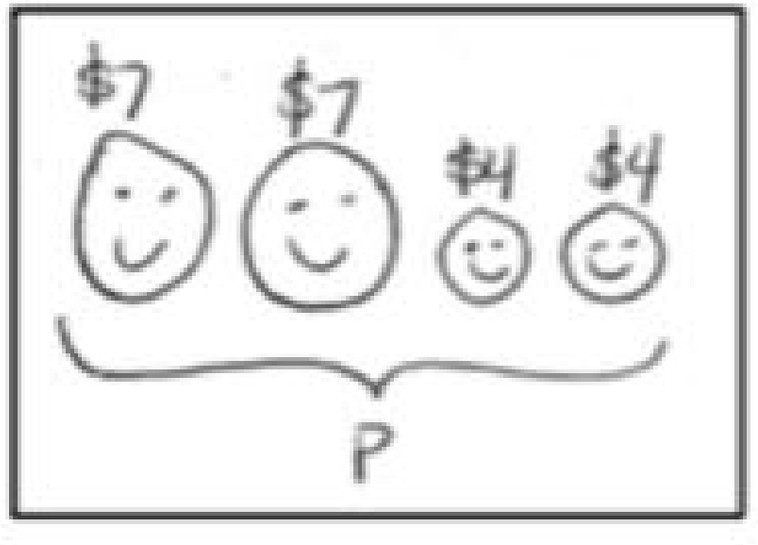
Circulate and identify two or three students with different models to share their explanations with the class. Encourage the class to question the presenter if the explanation is incomplete or clarification is needed. Ask students to discuss the usefulness of the various models presented by their classmates.

Concept Development

Here are some possible models.







Concept Development

What information is known, and what information is unknown in this problem?

Look back at your drawing. Think about what equations you can write based on your drawing to model the problem and solve.

Share your thinking with a partner.

Choose a strategy and solve.

Concept Development

What is the final step of our Read-Draw-Write process?

Write! Write a sentence with words to answer the problem.

Do that now. Reread the question to be sure your sentence accurately answers it.

Possible answer: It costs Lena’s family $22 to go on the hayride.

Concept Development

Look back at your work, and try to remember your thinking at each step of the way.

Explain your steps to your partner.

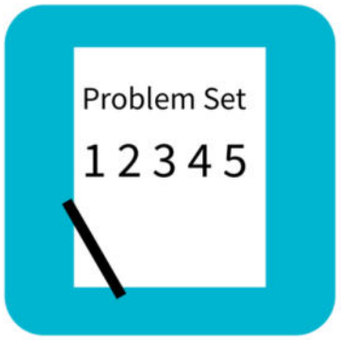
Suppose you tried this problem again. Would you try a different drawing? A different equation? Why or why not? Discuss with your partner.

Concept Development

Depending on lesson pacing and the needs of the class, guide students through another problem. Consider other methods of guidance, including the following: Have students read and draw the situation independently. Share and discuss more after they have completed their drawings.

Discuss the visualization of the story, and then release students to draw and label a model and write a matching equation. Share and discuss after they have finished their drawings and equations.

If another problem is selected, facilitate discussion that encourages students to think about more than one approach to a problem. Dialogue should broaden their perspectives and begin to engage them in critically considering their choices.



Problem Set

Name _____ Date _____

Lena's family visits Little Tree Apple Orchard. Use the RDW process to solve the problems about Lena's visit to the orchard. Use a letter to represent the unknown in each problem.

1. The sign below shows information about hayrides at the orchard.

Hayrides

Adult ticket $7

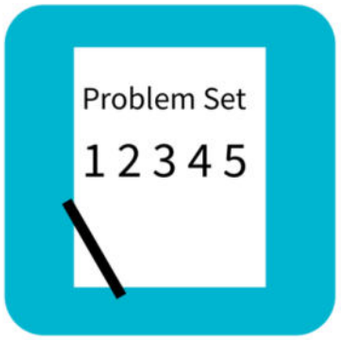
Child ticket $4

Leaves every 15 minutes starting at 11:00.

a. Lena's family buys 2 adult tickets and 2 child tickets for the hayride. How much does it cost Lena's family to go on the hayride?

b. Lena's mom pays for the tickets with $5 bills. She receives $3 in change. How many $5 bills does Lena's mom use to pay for the hayride?

c. Lena's family wants to go on the fourth hayride of the day. It's 11:38 now. How many minutes do they have to wait for the fourth hayride?



Problem Set

2. Lena picked 17 apples, and her brother picked 19. Lena's mom has a pie recipe that requires 9 apples. How many pies can Mom make with the apples that Lena and her brother picked?

3. Lena's dad gives the cashier $30 to pay for 6 liters of apple cider. The cashier gives him $6 in change. How much does each liter of apple cider cost?

4. The apple orchard has 152 apple trees. There are 88 trees with red apples. The rest of the trees have green apples. How many more trees have red apples than green apples?

Debrief

Invite students who used different drawings for the same problem to share their work. Facilitate a comparative discussion.

Did you try one of the drawing or equation ideas from our lesson today in another problem on the Problem Set? Which did you use? Why did you use it for that problem?

Debrief

What operations were needed to solve Problem 2?

What helped you figure that out?

Debrief

In Problems 2 and 3, division was used after either addition or subtraction. What equations did you write to show that? How can both operations be shown with a single equation?

Why do you think we spent so much time in our lesson today talking about different ways to draw and write equations for the same problem?

Exit Ticket (3 minutes)

Name _____ Date _____

Use the RDW process to solve the problem below. Use a letter to represent the unknown.

Sandra keeps her sticker collection in 7 albums. Each album has 40 stickers in it. She starts a new album that has 9 stickers in it. How many total stickers does she have in her collection?