Eureka Math

4th Grade
Module 3
Lesson 5

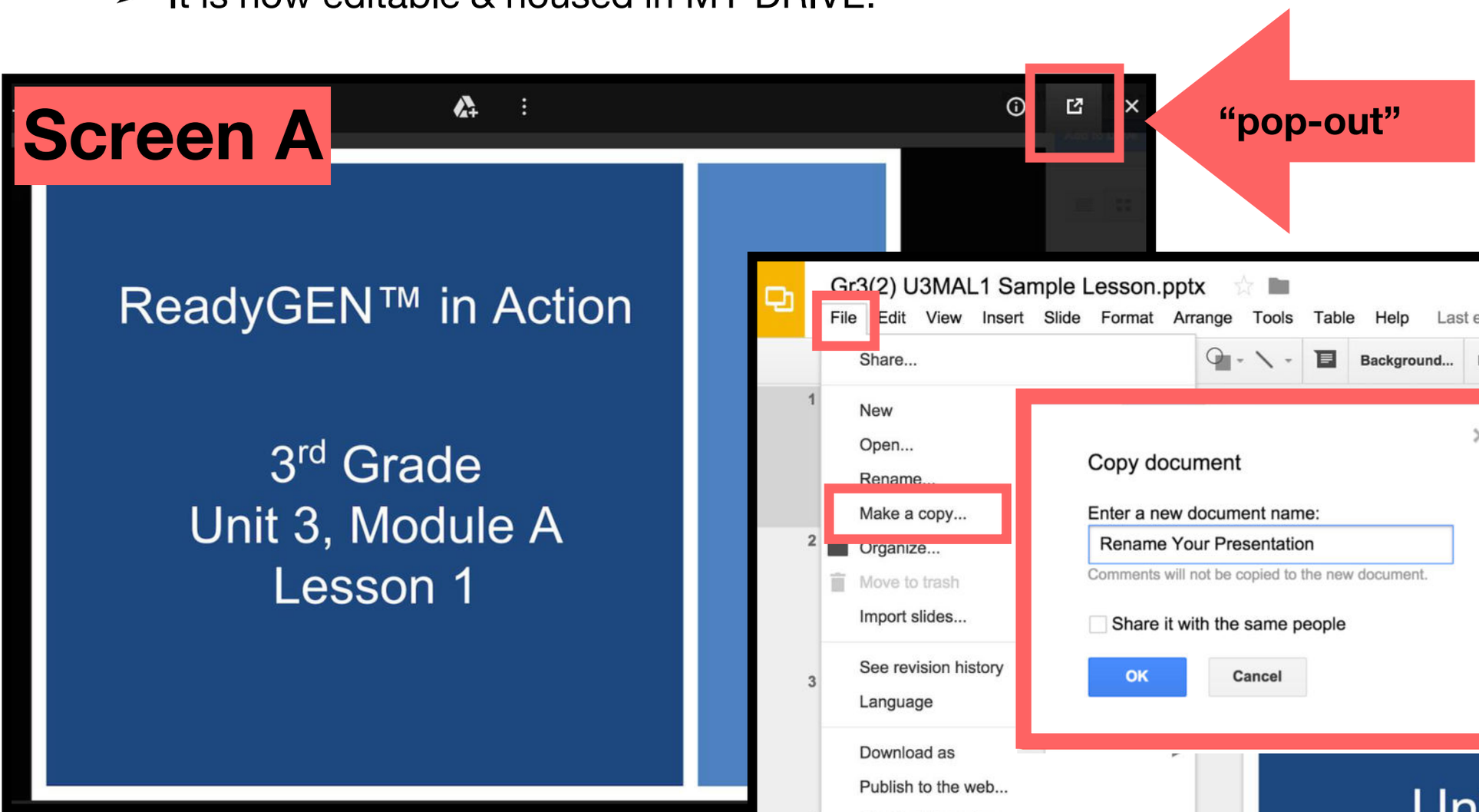
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

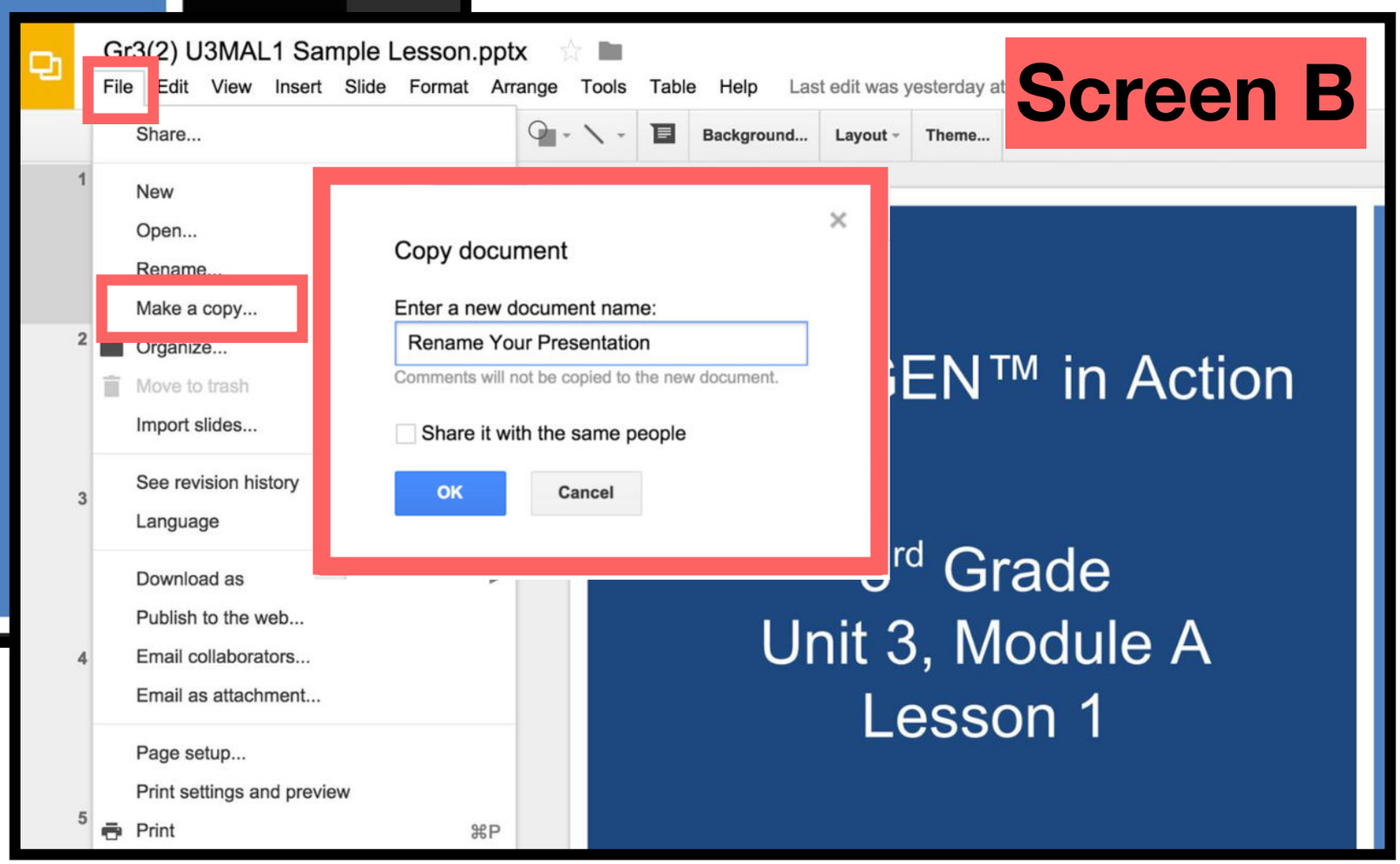
Directions for customizing presentations are available on the next slide.

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

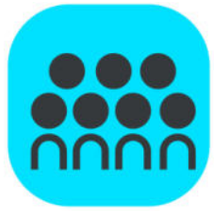
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

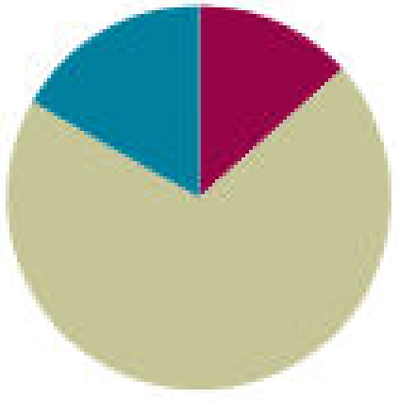
Small Group Time

Lesson 5

Objective: Multiply multiples of 10, 100, and 1,000 by single digits, recognizing patterns.

Suggested Lesson Structure

Fluency Practice	(8 minutes)
Concept Development	(42 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



I can multiply multiples of 10, 100, and 1,000 by single digits, recognizing patterns.

Fluency Practice

Group Counting by Multiples of 10 and 100

Count by sevens

When I raise my hand, stop counting and we will convert to x10.

Fluency Practice

Group Counting by Multiples of 10 and 100

Count by eights

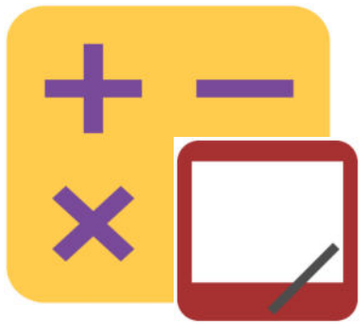
When I raise my hand, stop counting and we will convert to x100.

Fluency Practice

Group Counting by Multiples of 10 and 100

Count by nines

When I raise my hand, stop counting and we will convert to x100.

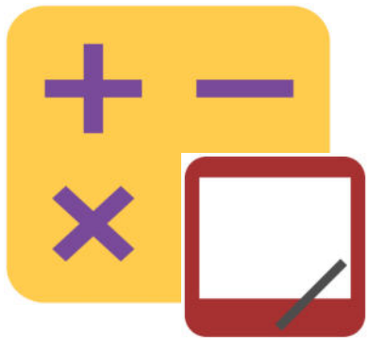


Fluency Practice

Multiply Units

3 x 2 = _____

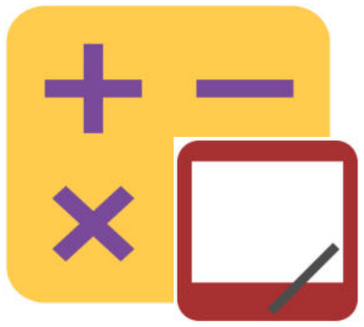
Say the multiplication sentence in unit form.



Fluency Practice

Multiply Units

On your personal white boards, write the answer in standard form.

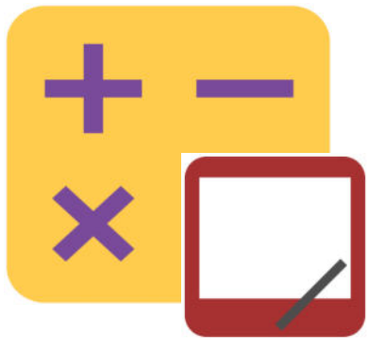


Fluency Practice

Multiply Units

30 x 2 = ____

Say the multiplication sentence in unit form.



Fluency Practice

Multiply Units

On your personal white boards, write the answer in standard form.

Fluency Practice

Multiply Units

Repeat this sequence for:

3 hundreds x 2

3 thousands x 2

Fluency Practice

Multiply Units

Repeat this sequence for:

5 ones x 3

5 tens x 3

5 hundreds x 3

Fluency Practice

Multiply Units

Repeat this sequence for:

5 thousands x 4

5 tens x 4

Fluency Practice

Multiply Units

Repeat this sequence for:

9 tens x 7

9 thousands x 7

Concept Development

Materials

(T) Thousands place value chart

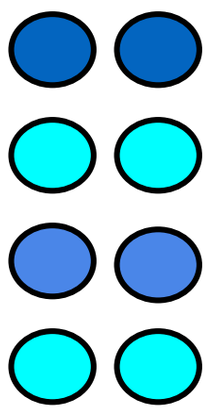
(S) Personal white boards, thousands place value chart (template)

Concept Development

2 ones x 4 **2 tens x 4** **2 hundreds x 4** **2 thousands x 4**

Show 2 ones x 4. **Circle each group of 2 ones.**

2 ones x 4 is…?

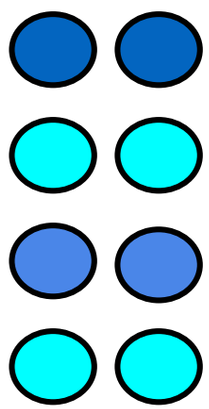
thousands	hundreds	tens	ones
			

Concept Development

2 ones x 4 **2 tens x 4** 2 hundreds x 4 2 thousands x 4

Show 2 tens x 4. Circle each group of 2 ones.

2 tens x 4 is . . . ?

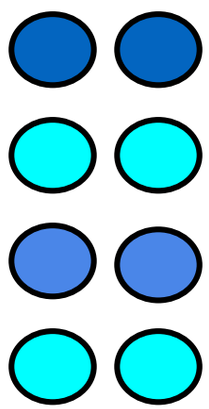
thousands	hundreds	tens	ones
			

Concept Development

2 ones x 4 **2 tens x 4** **2 hundreds x 4** **2 thousands x 4**

Show 2 hundreds x 4. **Circle each group of 2 ones.**

2 hundreds x 4 is . . . ?

thousands	hundreds	tens	ones
			

Concept Development

2 ones x 4 2 tens x 4 2 hundreds x 4 2 thousands x 4

What would happen if we multiplied 2 thousands x 4

Concept Development

Repeat the process with

30 x 3 **300 x 3** **3,000 x 3**

thousands	hundreds	tens	ones

Concept Development

With your partner,
solve these multiplication problems in unit form.

8 x 2 **8 x 20** **8 x 200** **8 x 2,000**

What do you notice?

Concept Development

What happens if we change the unit from
8 × 2 hundreds
to
8 hundreds × 2?

Does the answer change?

Concept Development

What happens if we change the unit from
8 × 2 hundreds
to
8 hundreds × 2?

Does the answer change?

Concept Development

Repeat the process with these numbers.

5 x 2

5 x 20

5 x 200

5 x 2,000

What do you notice?

Concept Development

Francisco played a video game and earned 60 points for every coin he collected. He collected 7 coins.

How many points did he earn for the coins that he collected?

Concept Development

Francisco also earned 200 points for every level he completed in the game. He completed 7 levels.

How many points did he earn for the levels that he completed?

Concept Development

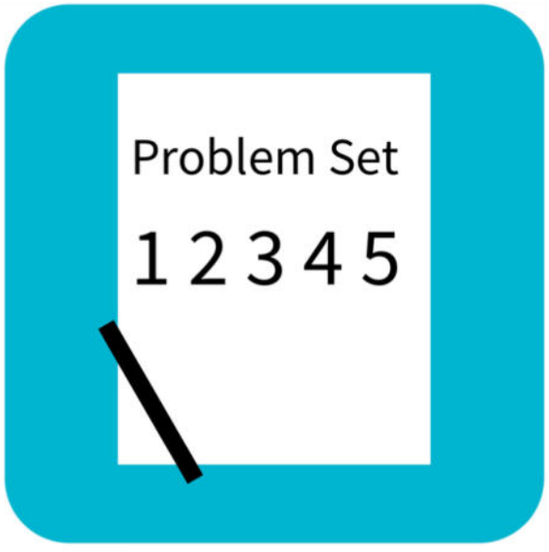
What was the total number of points that Francisco earned?

Concept Development

At a concert, there were 5,000 people in the audience. That was 1,000 times the number of performers.

How many performers were at the concert?

Write an equation to solve for how many performers were at the concert. Solve using a method of your choice.



Problem Set

Name _____ Date _____

Draw place value disks to represent the value of the following expressions.

1. $2 \times 3 =$ _____

2 times _____ ones is _____ ones.

thousands	hundreds	tens	ones

$$\begin{array}{r} 3 \\ \times \quad 2 \\ \hline \end{array}$$

2. $2 \times 30 =$ _____

2 times _____ tens is _____ .

thousands	hundreds	tens	ones

$$\begin{array}{r} 30 \\ \times \quad 2 \\ \hline \end{array}$$

Debrief

What pattern did you notice while solving Problems 1, 2, and 3?

Sometimes, we decompose using addition, such as saying 30 = 10 + 10 + 10, and sometimes we decompose using multiplication, such as saying 30 = 3 × 10. What are some possible decompositions of 24 using addition? Multiplication?

What did you notice about 5 × 2, 5 × 20, 5 × 200, and 5 × 2,000? (Note: Try to elicit that there is a "hidden" or "extra" zero because 5 × 2 ones is 1 ten, 5 × 2 tens is 10 tens, etc.)

Debrief

Explain to your partner how you solved for the Problems 5(i)–(l). Explain to your partner the value and importance of the number zero in the factor and the product.

What significant math vocabulary did we use today to communicate precisely?

How did the last lesson prepare you for this lesson?

Exit Ticket

Name _____ Date _____

Draw place value disks to represent the value of the following expressions.

1. 4 × 200 = _____

4 times _____ is _____.

thousands	hundreds	tens	ones

$$\begin{array}{r} 200 \\ \times \quad 4 \\ \hline \end{array}$$

2. 4 × 2,000 = _____

_____ times _____ is _____.

thousands	hundreds	tens	ones

$$\begin{array}{r} 2,000 \\ \times \quad 4 \\ \hline \end{array}$$