Eureka Math

3rd Grade
Module 1
Lesson 11

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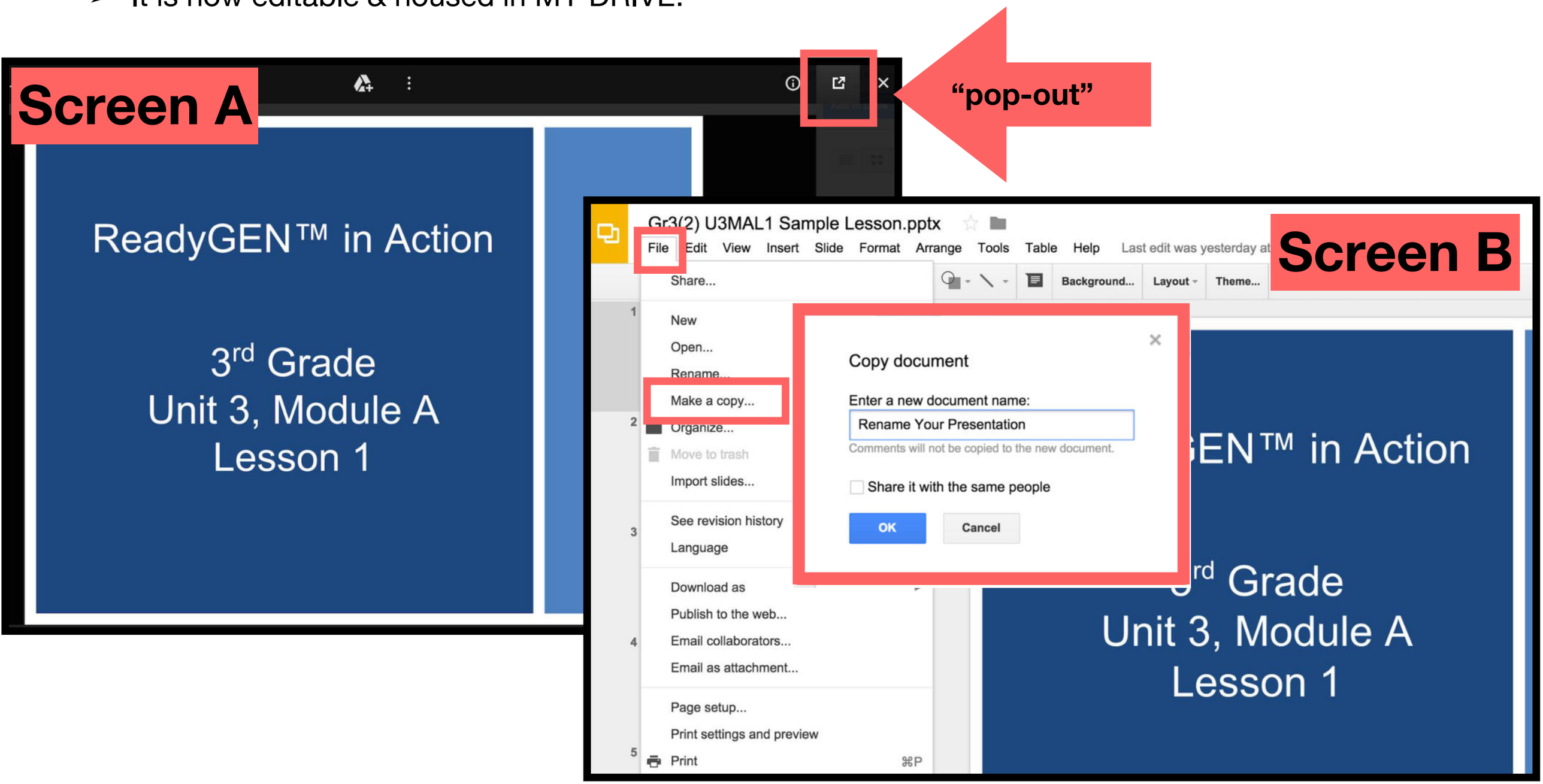
Directions for customizing presentations are available on the next slide.

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.

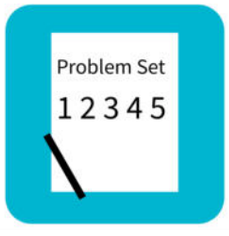


Icons

Read, Draw, Write

Learning Target

Personal White Board

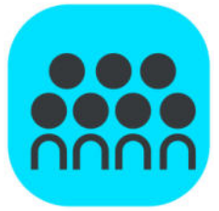


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

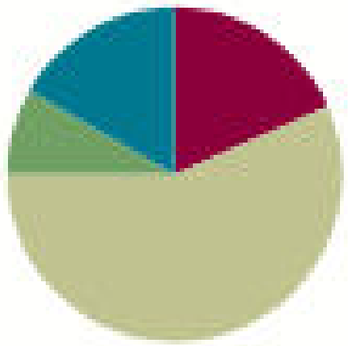
Small Group Time

Lesson 11

Objective: Model division as the unknown factor in multiplication using arrays and tape diagrams.

Suggested Lesson Structure

Fluency Practice	(11 minutes)
Application Problem	(5 minutes)
Concept Development	(34 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



I can model division as the unknown factor in multiplication using arrays and tape diagrams.

Multiply by 3

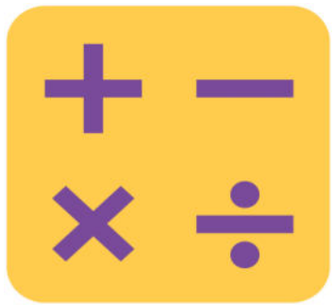
5 x 3 =

Let’s skip count by by threes to solve.

Group Counting

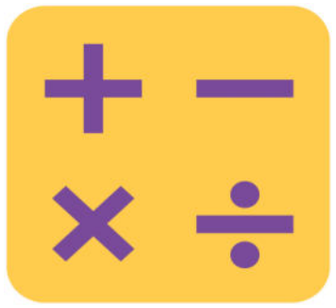
3, 6, 9, 12, 15

Let’s count down to find the answer to 4 x 3 =



Group Counting

Let’s count by twos.



Group Counting

Let’s count by fours.

3 Pattern Sheet

Multiply.

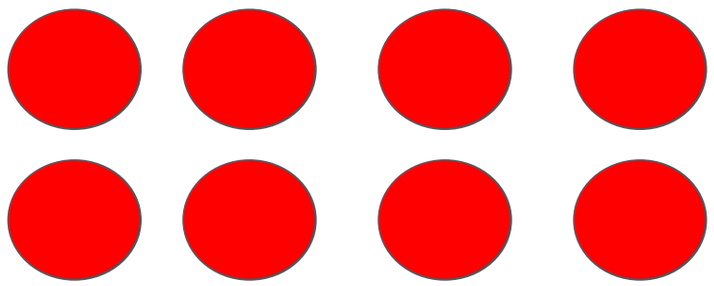
3 x 1 = _____	3 x 2 = _____	3 x 3 = _____	3 x 4 = _____
3 x 5 = _____	3 x 1 = _____	3 x 2 = _____	3 x 1 = _____
3 x 3 = _____	3 x 1 = _____	3 x 4 = _____	3 x 1 = _____
3 x 5 = _____	3 x 1 = _____	3 x 2 = _____	3 x 3 = _____
3 x 2 = _____	3 x 4 = _____	3 x 2 = _____	3 x 5 = _____
3 x 2 = _____	3 x 1 =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

Application Problem

Rosie puts 2 lemon slices in each cup of iced tea. She uses a total of 8 slices. How many cups of iced tea does Rosie make?

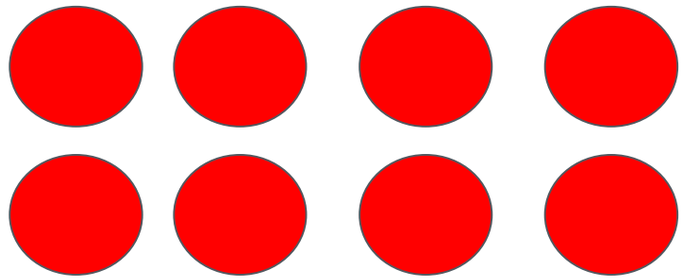
Concept Development

Rosie puts 2 lemon slices in each cup of iced tea. She uses a total of 8 slices. How many cups of iced tea does Rosie make?



Reread the Application Problem, and tell your partner what the unknown represents.

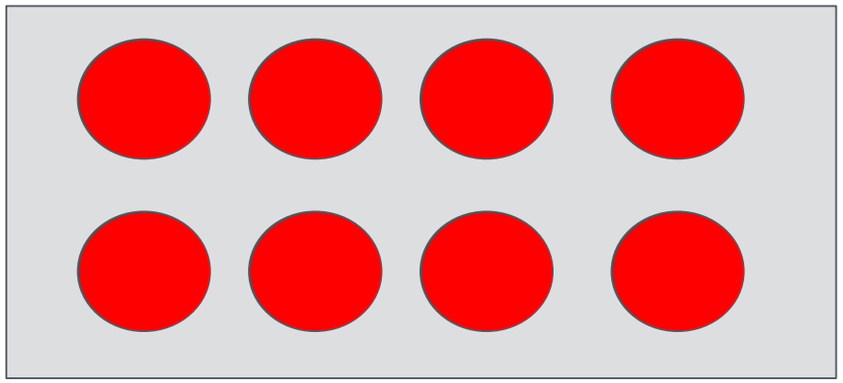
Modeling Division



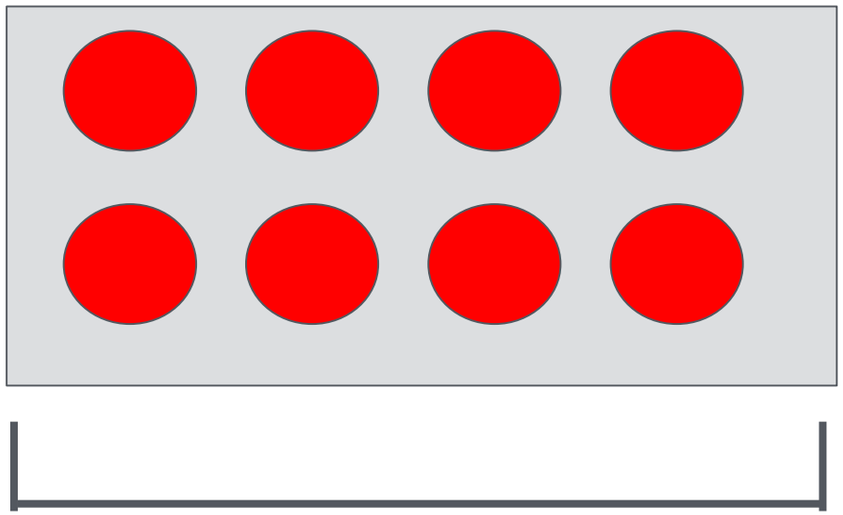
How might this array help us solve 8 ÷ 2 = 4?

Equal Groups

What is the total number of lemon slices?



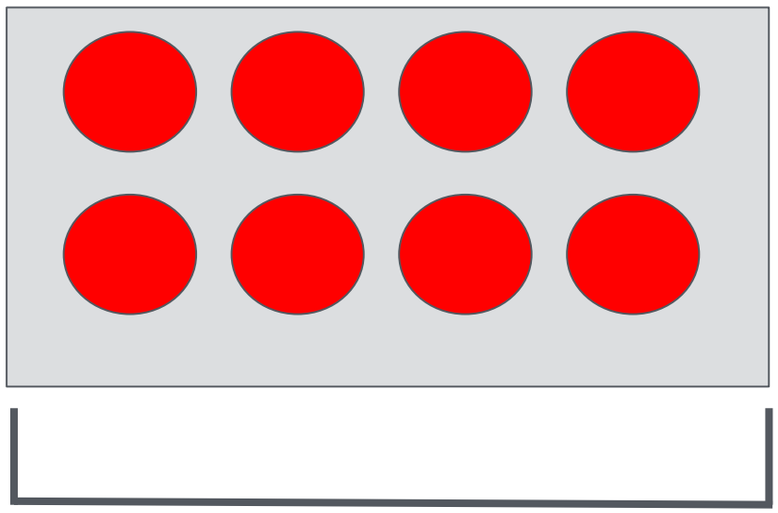
Arrays



8 lemon slices

The question asks how many cups of iced tea Rosie makes. Do the cups represent the number of groups or the number of lemon slices in each group?

Array to Tape Diagram



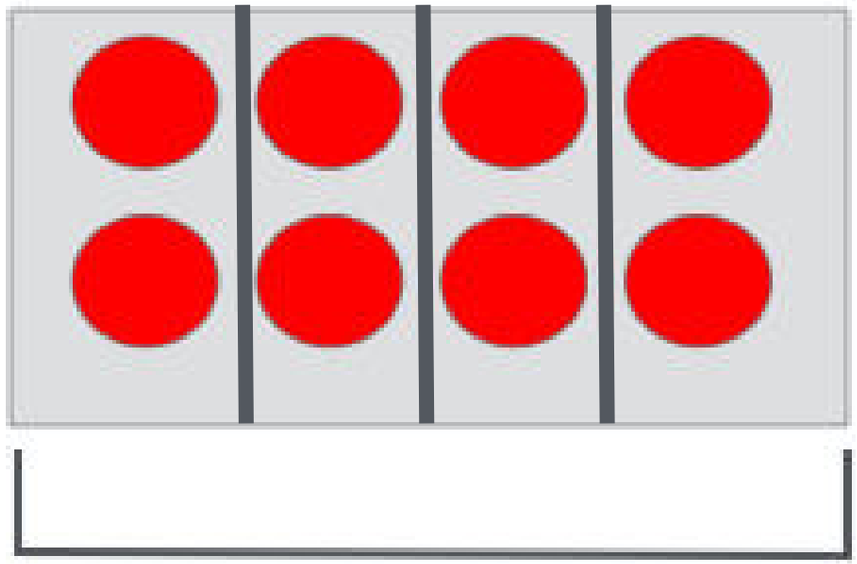
8 lemon slices

? cups

Watch how I show the number of slices in one cup.

Array to Tape Diagram

Where do we see the cups in our diagram?



8 lemon slices

? cups

Equal Groups

8 ÷ 2 = _____ and _____ x 2 = 8

Talk to your partner about how the tape diagram helps you see the unknown in both equations.

Use arrays to draw tape diagrams

Ms. Alves puts 21 papers in 7 piles. How many papers are in each pile?

What is the unknown?

Model the problem on your personal white board as an array where each column represents 1 pile.

Arrays to Tape Diagram

Work with a partner to model the problem as a tape diagram.

Modeling Division

Use the tape diagram to write multiplication and division equations that show the unknown.

Problem Set

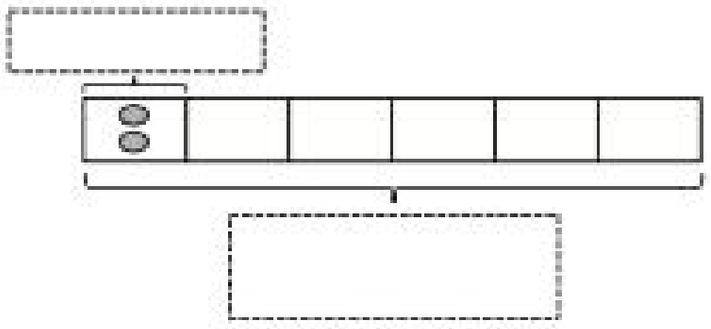
Name _____ Date _____

1. Mrs. Prescott has 12 oranges. She puts 2 oranges in each bag. How many bags does she have?

   a. Draw an array where each column shows a bag of oranges.

_____ ÷ 2 = _____

   b. Redraw the oranges in each bag as a unit in the tape diagram. The first unit is done for you. As you draw, label the diagram with known and unknown information from the problem.



Debrief

- Compare Problems 1 and 2. What does the unknown represent in each problem?

- Compare how Units are represented in tape diagrams and in arrays.

- How can each model represent both types of unknowns?

- Compare the way you solved the Application Problem with the tape diagram we learned today.

Exit Ticket

Name _____ Date _____

Ms. McCarty has 18 stickers. She puts 2 stickers on each homework paper and has no more left. How many homework papers does she have? Model the problem with both an array and a labeled tape diagram.