

Eureka Math

2nd Grade Module 6 Lesson 7

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Directions for customizing presentations are available on the next slide.

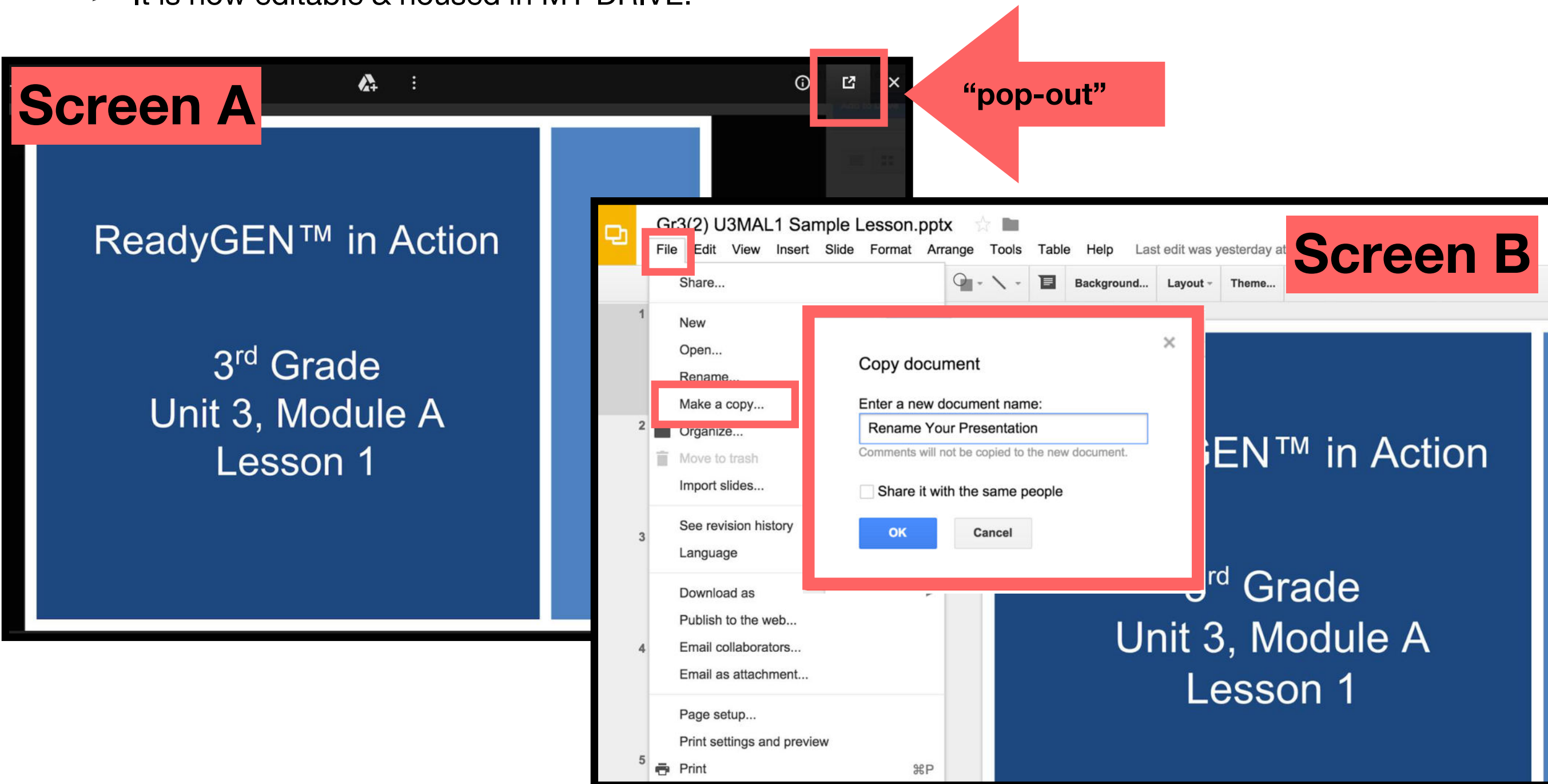


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Customize this Slideshow

Reflecting your Teaching Style and Learning Needs of Your Students

- When the Google Slides presentation is opened, it will look like Screen A.
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- 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



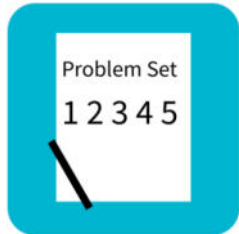
Read, Draw, Write



Learning Target



Personal White Board



Problem Set



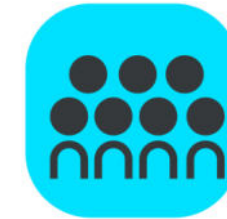
Manipulatives Needed



Fluency



Think Pair Share



Whole Class



Individual



Partner



Small Group



Small Group Time



Materials Needed:

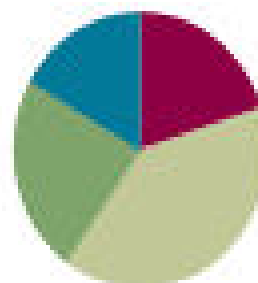
- (T) 10 dimes, 30 pennies, metal can or plastic container
- Sprint
- Personal White Board
- Counters or 30 lima beans

Lesson 7

Objective: Represent arrays and distinguish rows and columns using math drawings.

Suggested Lesson Structure

■ Fluency Practice	(12 minutes)
■ Concept Development	(24 minutes)
■ Application Problem	(14 minutes)
■ Student Debrief	(10 minutes)
Total Time	(60 minutes)

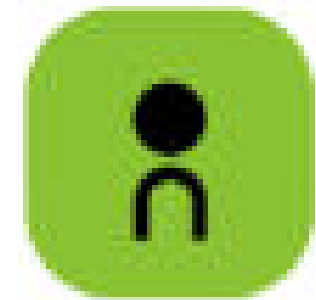




Represent arrays and distinguish rows and columns using math drawings.



Coin Drop



What coin is this?
Listen carefully as I drop coins in
my can. Count along in your mind.



Sprint

A

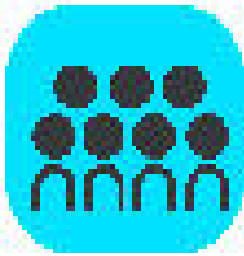
Sums to the Teens

Number Correct: _____

1.	$9 + 2 =$	
2.	$9 + 3 =$	
3.	$9 + 4 =$	
4.	$9 + 7 =$	
5.	$7 + 9 =$	
6.	$10 + 1 =$	
7.	$10 + 2 =$	
8.	$10 + 3 =$	
9.	$10 + 8 =$	
10.	$8 + 10 =$	
11.	$8 + 3 =$	
12.	$8 + 4 =$	
13.	$8 + 5 =$	

23.	$4 + 7 =$	
24.	$4 + 8 =$	
25.	$5 + 6 =$	
26.	$5 + 7 =$	
27.	$3 + 8 =$	
28.	$3 + 9 =$	
29.	$2 + 9 =$	
30.	$5 + 10 =$	
31.	$5 + 8 =$	
32.	$9 + 6 =$	
33.	$6 + 9 =$	
34.	$7 + 6 =$	
35.	$6 + 7 =$	

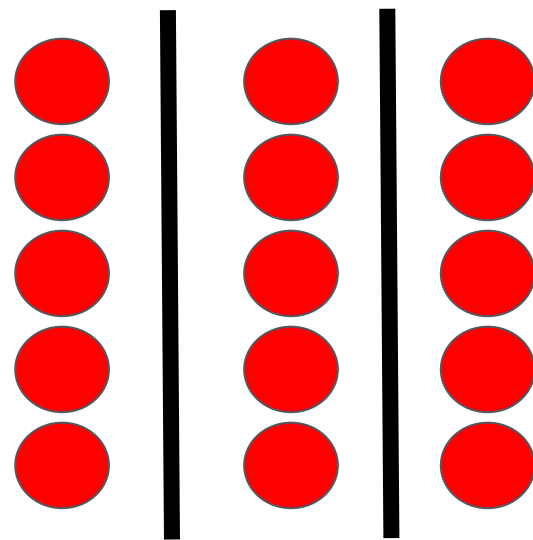
Concept Development



In our last lesson, we composed arrays with objects. Let's review together. With your partner and your counters, show me 3 groups of 5 on each of your personal white boards. Let's say that for right now, a group is a column.

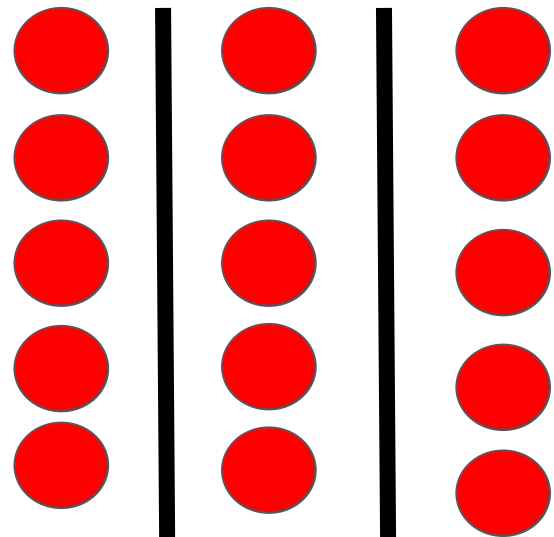
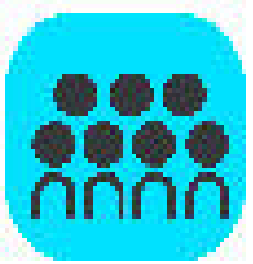
Remind your partner, should the column be vertical or horizontal?

Count with your partner to make each column.



Now add lines between each column. These lines will help keep our array organized. They also help us see each column as a group, or unit, of 5

Concept Development



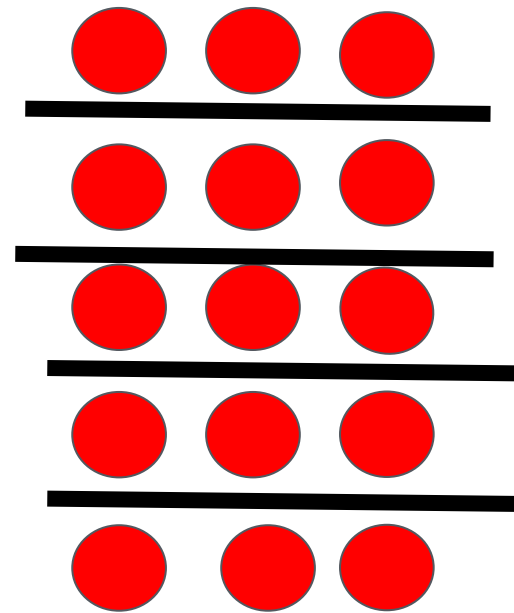
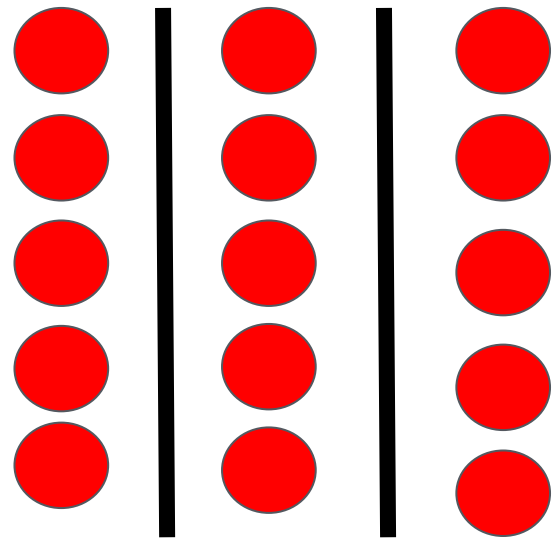
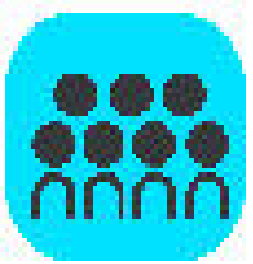
How many beans in each column?

What repeated addition sentence can we use to find the total?

Now partner A, change your array to show 5 rows of three.

Don't forget to add lines between the rows.

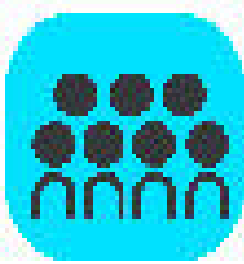
Concept Development



Turn and talk with your partner: How do these arrays look similar, and how are they different?

Now partner A, erase your lines between the columns, and redraw them to show the rows.

Concept Development



If we want to show 3 rows of 5, what do we do first?

Should we make a row first or organize the counters into equal groups of 3?

Remind me, should the row be vertical or horizontal?

With your partner, create an array using the same counters.

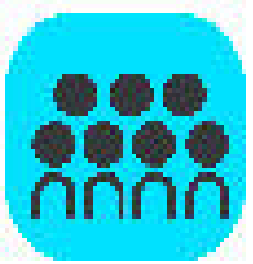
Make 3 rows of 5. Then draw lines between your rows to keep them organized.

How many rows did you make?

How many counters in each row?

So, each row is also a group, or unit of ...?

Concept Development



Say the repeated addition sentence.

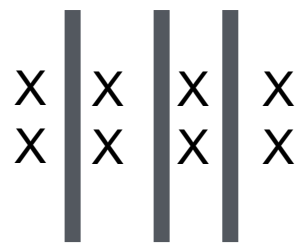
What was the total for 3 rows of 5 counters?

So, how are 3 columns of 5 and 3 rows of 5 related?

This time let's draw our arrays?

If we want to make an array of 4 columns of 2, what should we do first?

Draw it with me on your board?

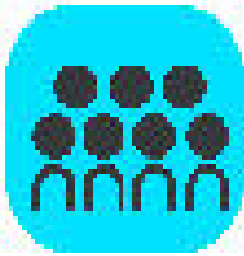


Turn and talk how can we finish the array from here?

What do the vertical lines remind us of?

What repeated addition sentence can we use to find the total?

Concept Development



Now, let's switch like we did before. Show me 4 rows of 2 X's. Write an equation to find the total.

What was the total for 4 columns of 2 X's?

What is the total for 4 rows of 2 X's?

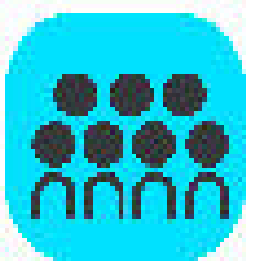
This time, you will draw your array without my help.

Draw an array with 3 columns of 4 X's. Don't forget your vertical lines and repeated addition sentence.

What would happen if you added one more column of 4?

Add another column of 4 to your array, and show your new equation.

Concept Development



What would happen if we erased two columns of 4? Go ahead and try that. Don't forget the equation!

Explain to your partner what happened.

Let's read our new repeated addition sentence together including the total.

Name _____ Date _____

1. a. One row of an array is drawn below. Complete the array with X's to make 3 rows of 4. Draw horizontal lines to separate the rows.

X X X X

- b. Draw an array with X's that has 3 columns of 4. Draw vertical lines to separate the columns. Fill in the blanks.

$$\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$3 \text{ rows of } 4 = \underline{\quad}$$

$$3 \text{ columns of } 4 = \underline{\quad}$$

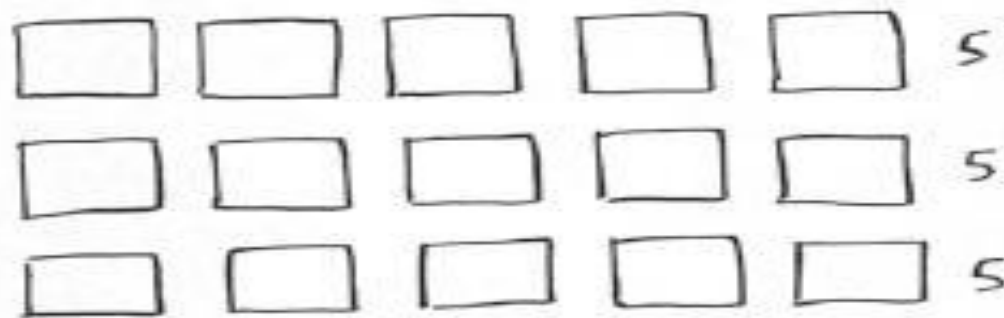
2. a. Draw an array of X's with 5 columns of three.



Application Problem

Bobby puts 3 rows of tile in his kitchen to make a design. He lays 5 tiles in each row.

- Draw a picture of Bobby's tiles.
- Write a repeated addition equation to solve for the total number of tiles Bobby used.



$$5 + 5 + 5 = 15$$

Bobby used 15 tiles total.



Debrief

In Problems 1(a) and (b), how do the vertical and horizontal lines help us?

For Problems 2(a) and (b), compare your array drawings. How are they similar and different? Why did you write the same equation for both arrays?

For Problem 3, share your array drawing with a partner. Which lines did you draw within the array: vertical or horizontal? Why? How many X's were in each group? Why is it important to know this?



Debrief

For Problem 4, share your new array with a partner. How did your drawing and equation change when you added 1 more row?

For Problem 5, share your new array with a partner. How did your drawing and equation change when you removed 1 column? How many were in each group then? How did you group the X's to write a repeated addition equation (i.e., by groups of 2 or 5)?



Exit Ticket

A STORY OF UNITS

Lesson 7 Exit Ticket

2•6

Name _____ Date _____

Use horizontal or vertical lines to separate the rows or columns.

1. Draw an array of X's with 3 rows of 5.

$$\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$3 \text{ rows of } 5 = \underline{\quad}$$