Eureka Math

3rd Grade
Module 1
Lesson 2

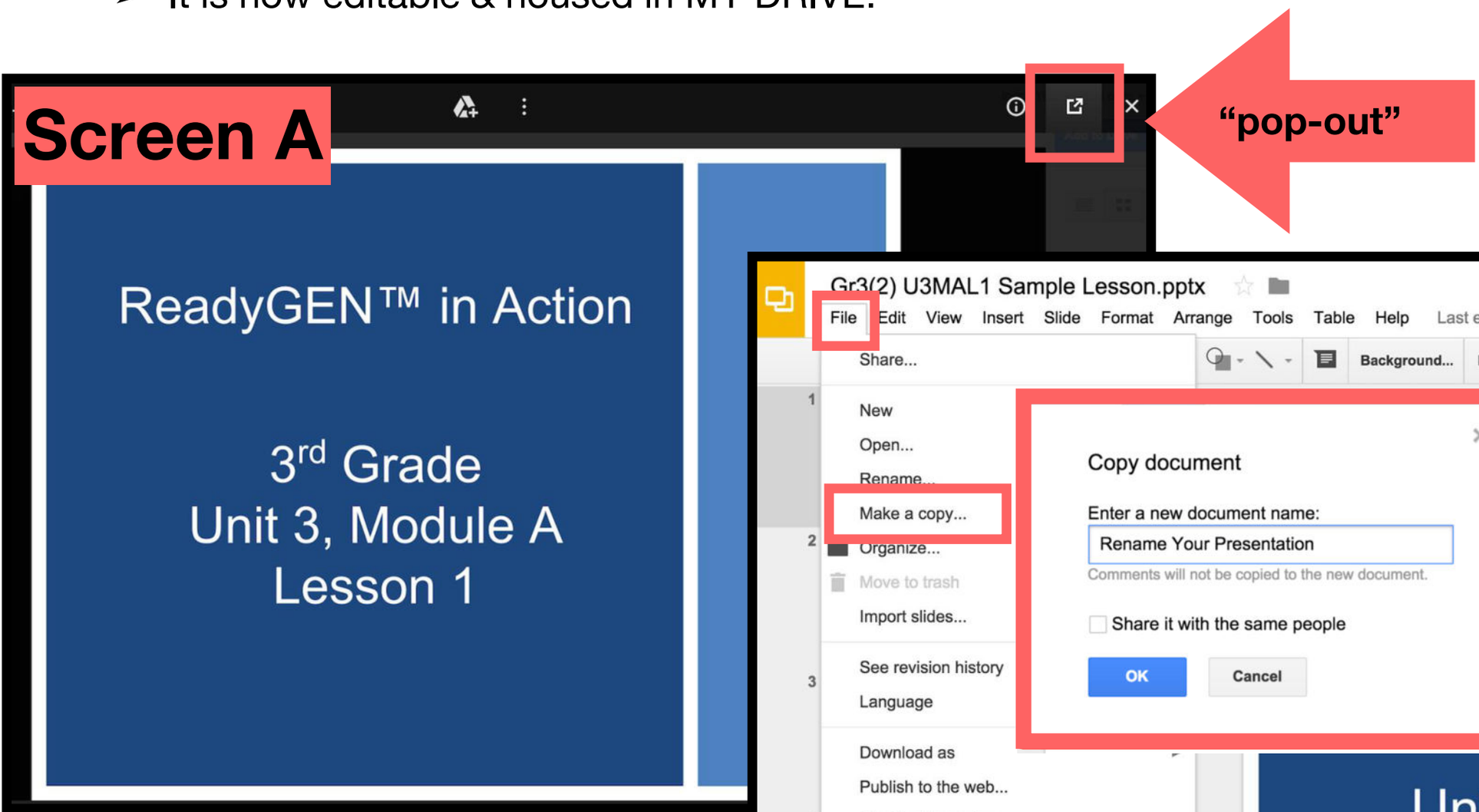
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

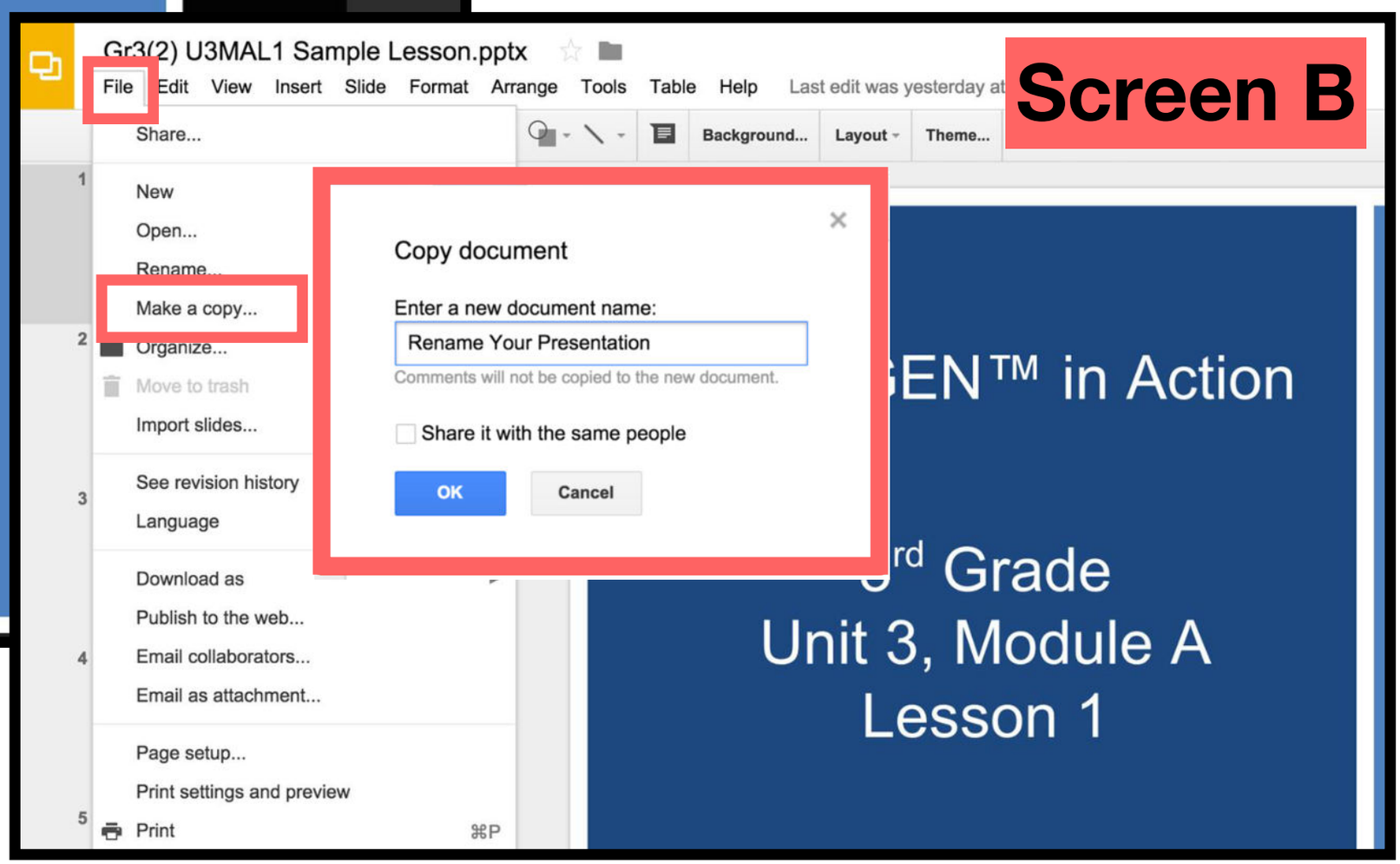
Directions for customizing presentations are available on the next slide.

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.



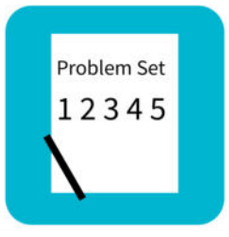


Icons

Read, Draw, Write

Learning Target

Personal White Board

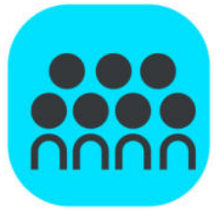


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

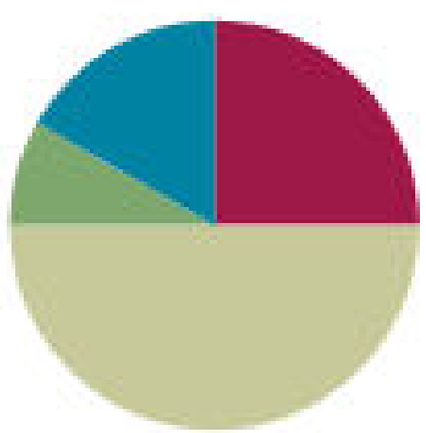
Small Group Time

Lesson 2

Objective: Relate multiplication to the array model.

Suggested Lesson Structure

Fluency Practice	(15 minutes)
Application Problem	(5 minutes)
Concept Development	(30 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



I can relate multiplication to the array model.

Sprint: Add and Subtract by 2

Put your name on side A.

Hold your pencil in the air to show you are ready.

When your teacher says, “Go”, begin solving.

Keep working to solve as many problems as you can.

When your teacher says, “Stop”, stop answering problems and hold your pencil in the air.

A

Number Correct: _____

Add or Subtract Using 2

1.	0 + 2 =		23.	2 + 4 =	
2.	2 + 2 =		24.	2 + 6 =	
3.	4 + 2 =		25.	2 + 8 =	
4.	6 + 2 =		26.	2 + 10 =	

Sprint: Add and Subtract by 2

Listen and check your work as your teacher reads the correct answers.

Count how many problems you answered correctly and write them in the circle.

Follow the same steps for side B. On side B, try to solve more problems than you did on side A.

B

Number Correct: _____

Improvement: _____

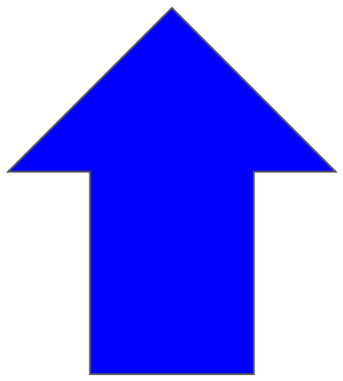
Add or Subtract Using 2

1.	2 + 0 =		23.	4 + 2 =	
2.	2 + 2 =		24.	6 + 2 =	
3.	2 + 4 =		25.	8 + 2 =	
4.	2 + 6 =		26.	10 + 2 =	

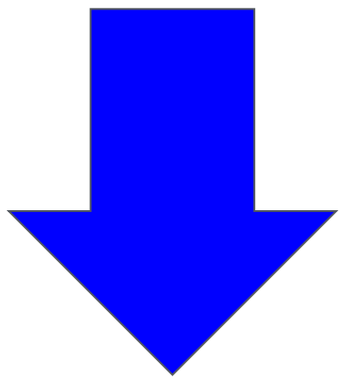
Group Counting

Let’s count to 18 forward and backward**.** I want you to **whisper, whisper and then speak** the numbers**.**

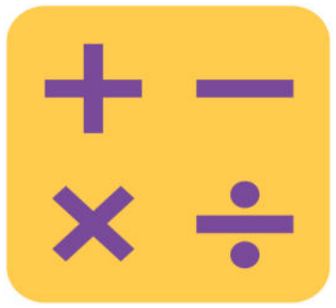
Watch my fingers to know whether or not to count up or count down. A closed hand means to stop.



Count up



Count down

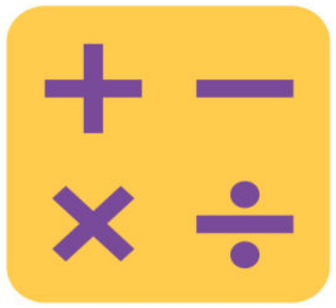


Group Counting

Let’s count to 18 forward and backward again**.** This time, **think** of every number instead of whispering.

Group Counting

What did we just count by? Turn and talk to your partner.

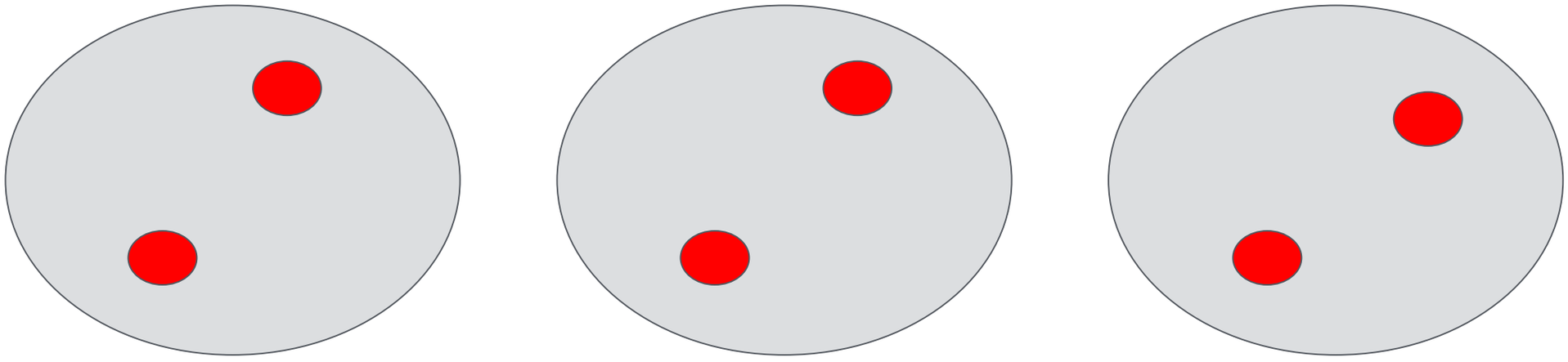


Group Counting

Let’s count by **threes**

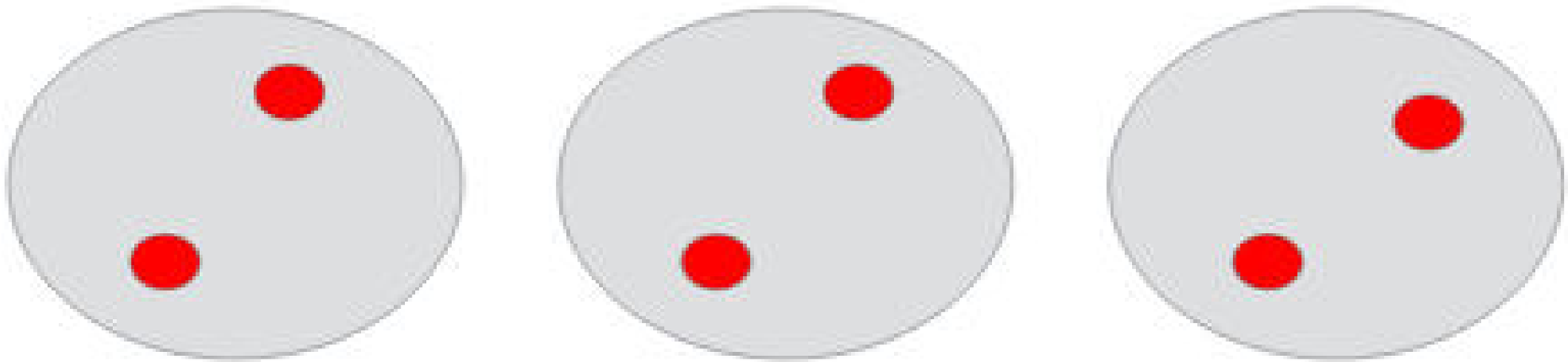
Add Equal Groups

How many groups are circled?



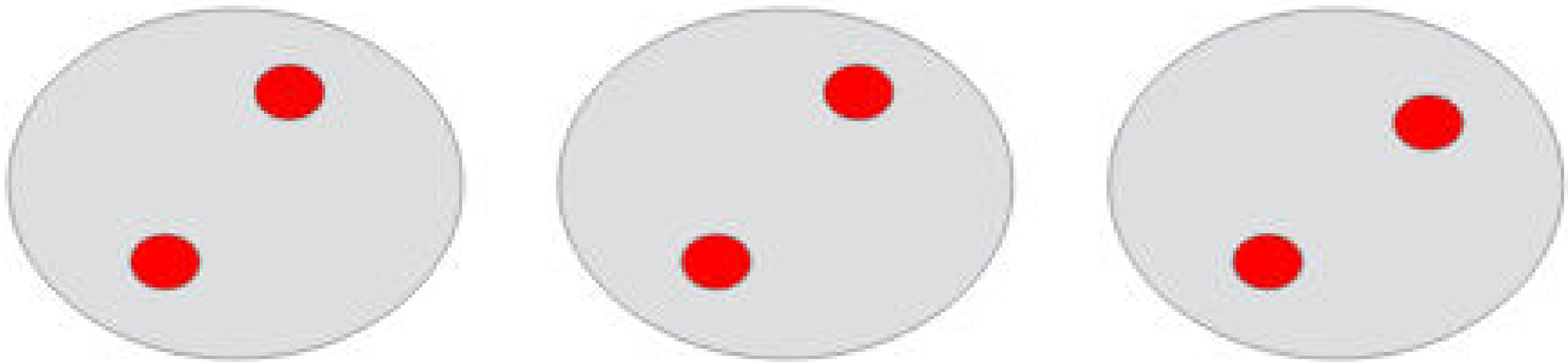
Add to Multiply

How many in each group?



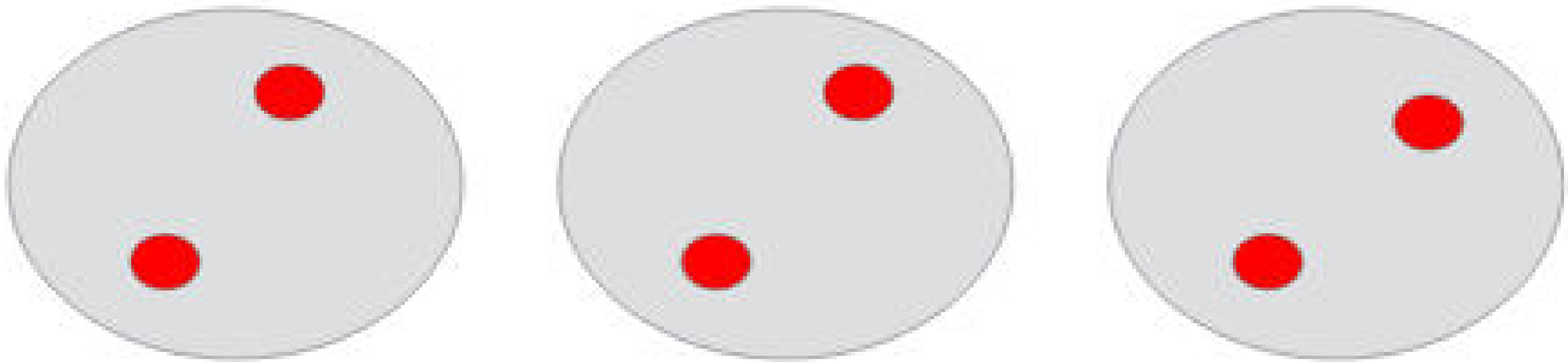
Add to Multiply

Write this as an addition sentence.



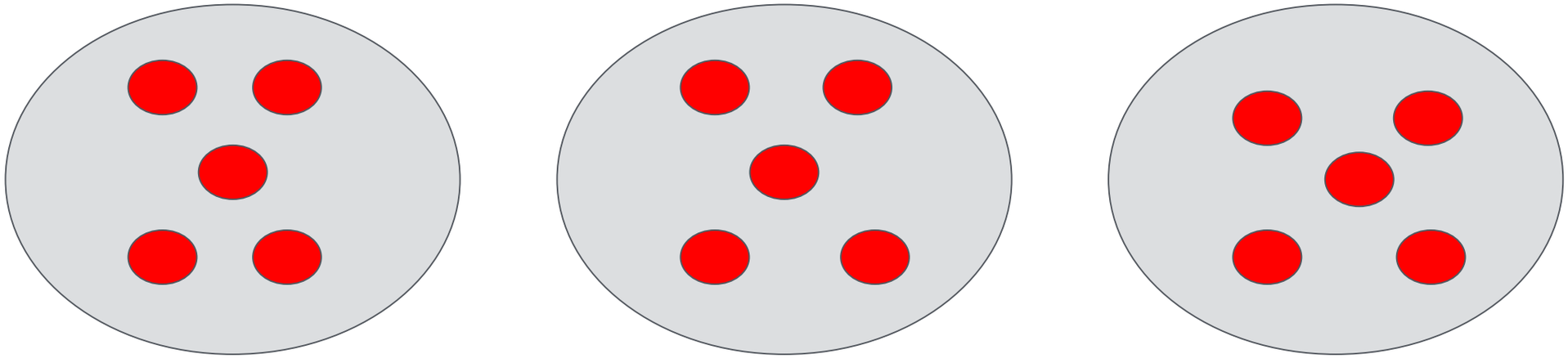
Add to Multiply

Write a multiplication sentence for 3 *twos equals* 6.



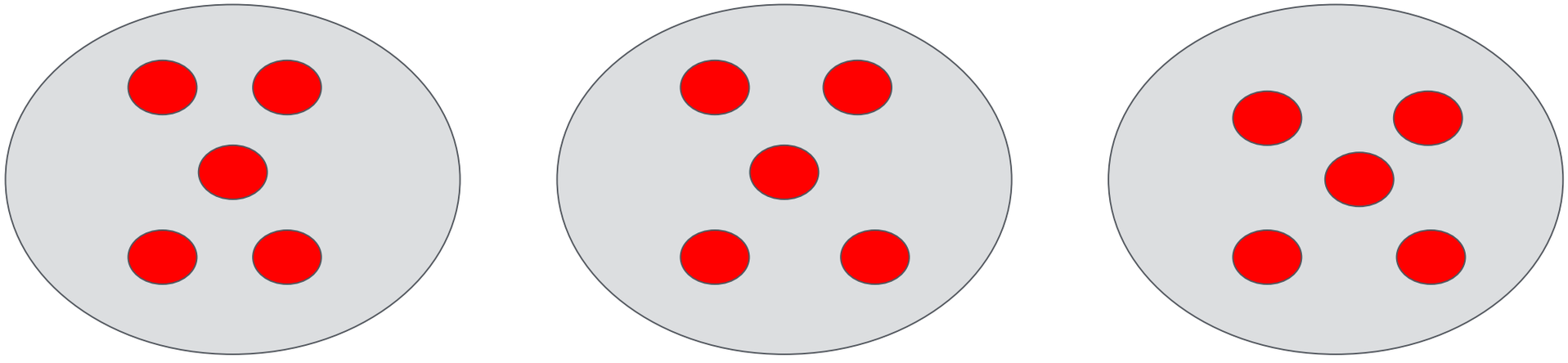
Add to Multiply

How many groups are circled?



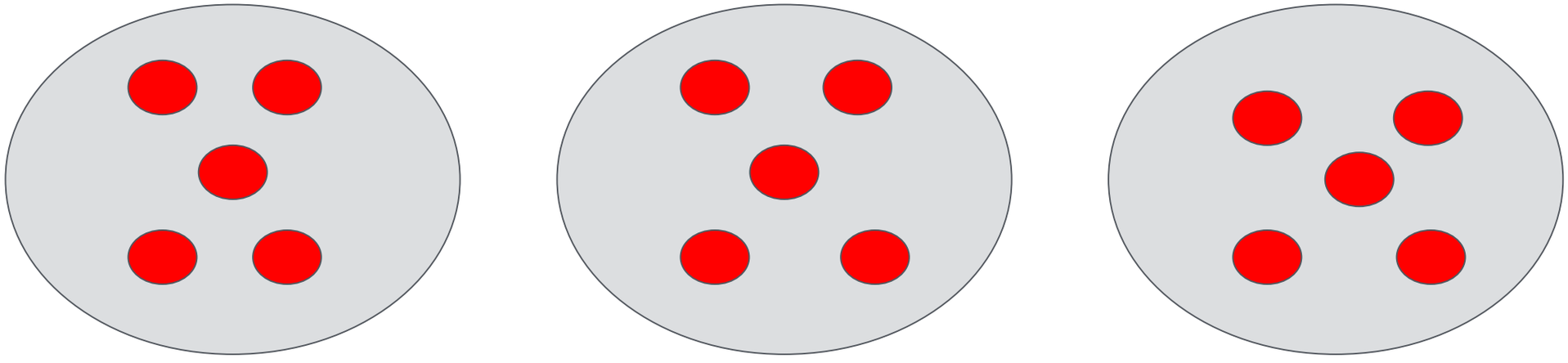
Add to Multiply

How many are there in each group?



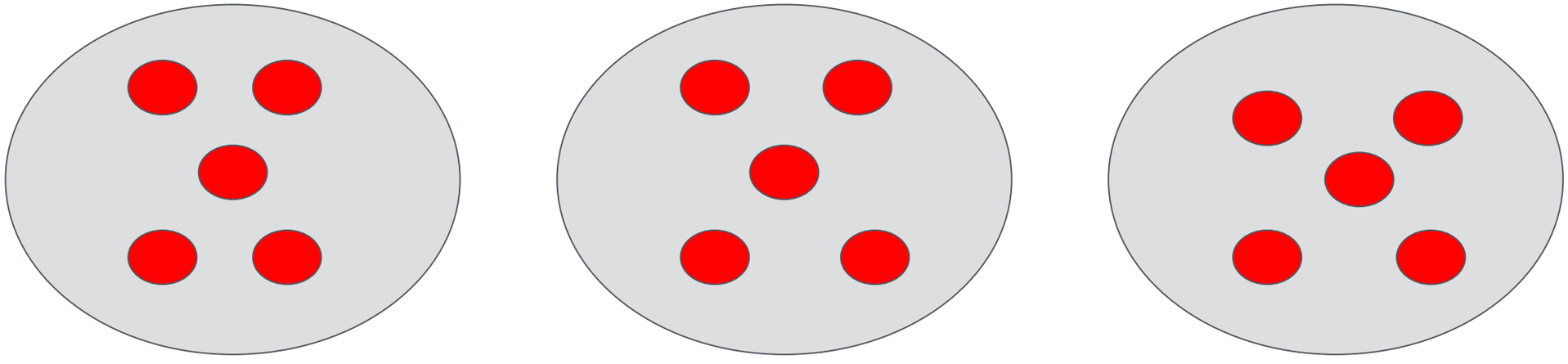
Add to Multiply

Write this as an addition sentence.



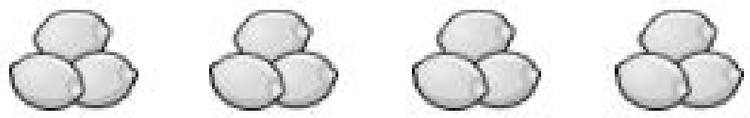
Add to Multiply

Write a multiplication sentence representing 3 *fives* *equals* 15.



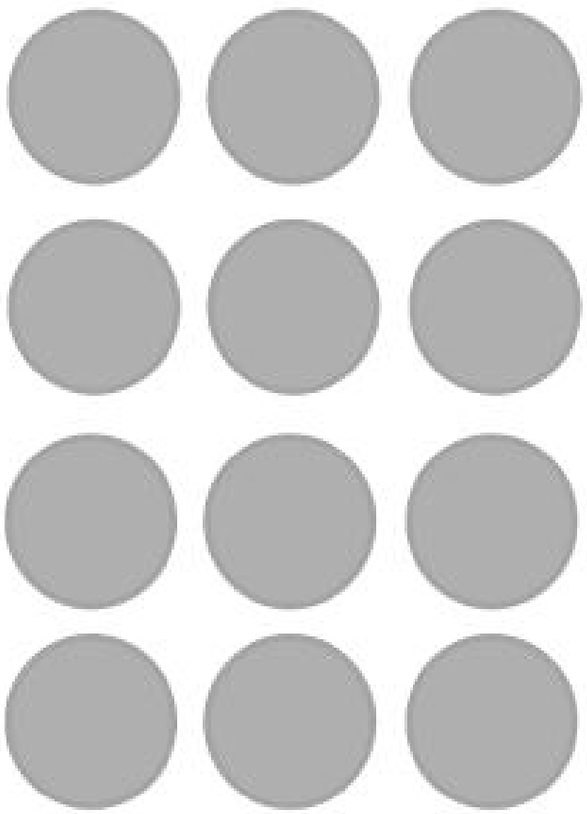
Application Problem

Jordan uses 3 lemons to make 1 pitcher of lemonade. He makes 4 pitchers. How many lemons does he use altogether? Use the RDW process to show your solution.



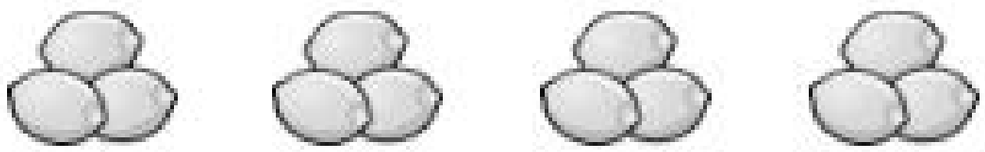
Relate equal groups to arrays

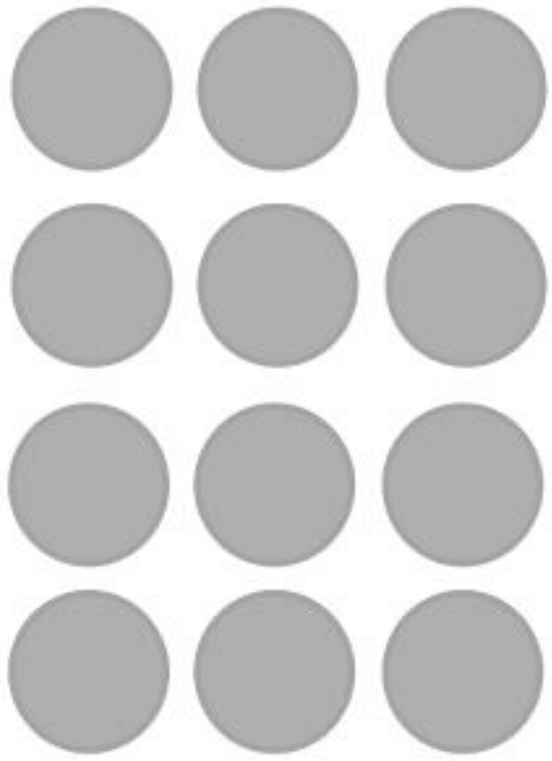
Look back at Jordan's lemons. Compare the way his lemons are organized with the groups of 3 circles on your template.



Relate equal groups to arrays

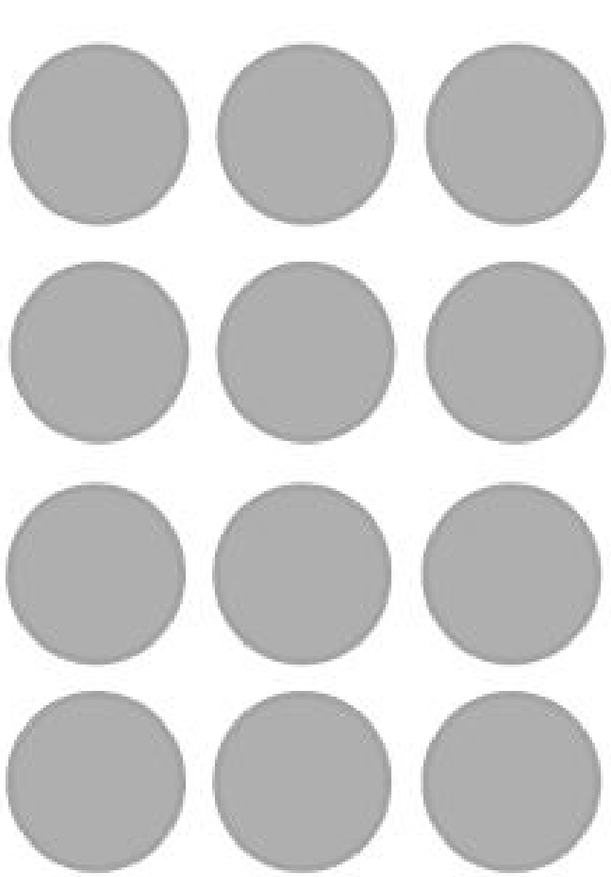
Many students are noticing straight lines on the template. Let's call a straight line going across a **row**. Use your blank paper to cover all but the top row.





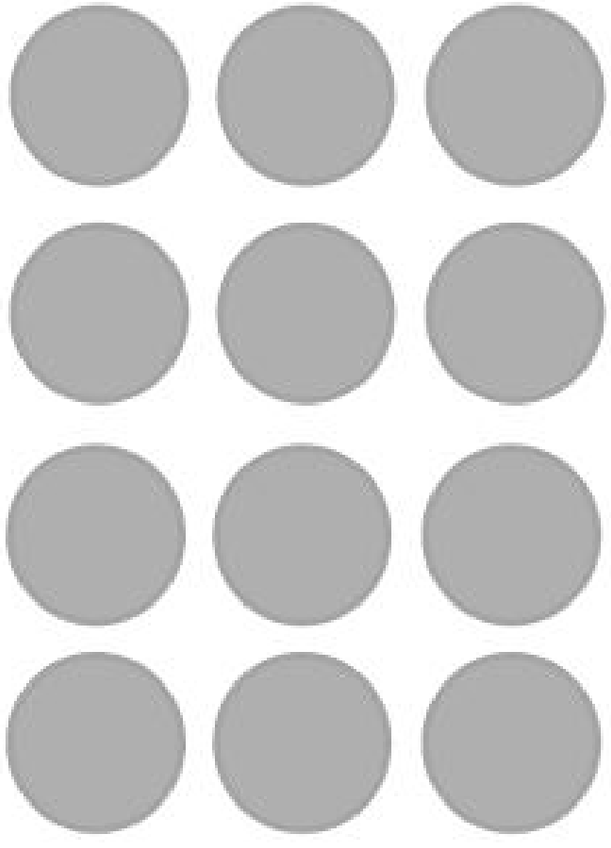
Relate equal groups to arrays

Uncover 1 row at a time in the picture. As you uncover each row, write the new total number of circles to the right of it.



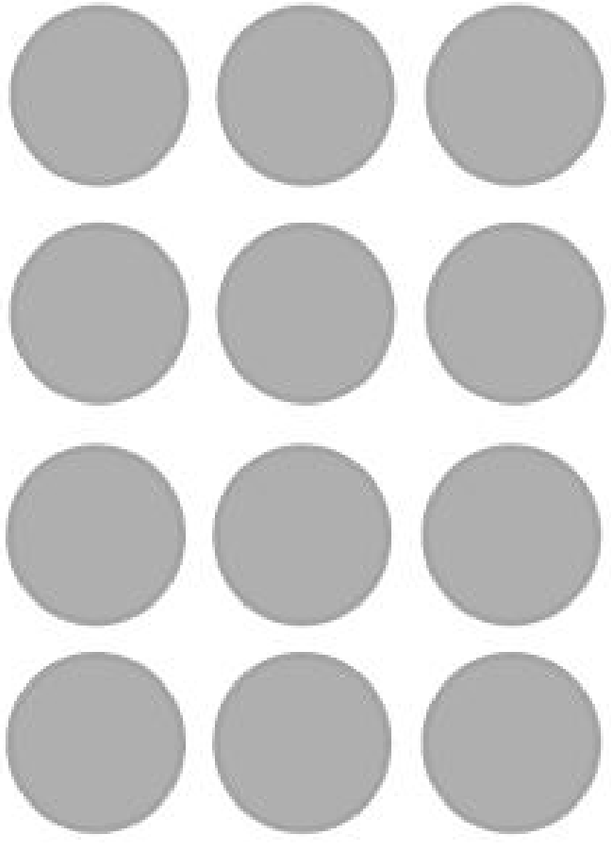
Relate equal groups to arrays

At the signal, say the total number of circles you counted.



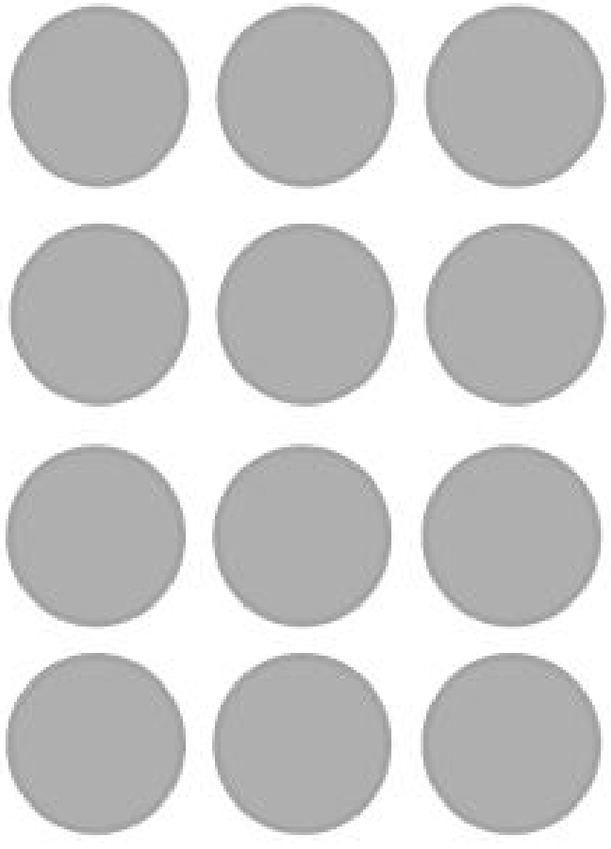
Relate equal groups to arrays

Take 10 seconds to find how many rows of 3 you counted. At the signal, say how many.



Relate equal groups to arrays

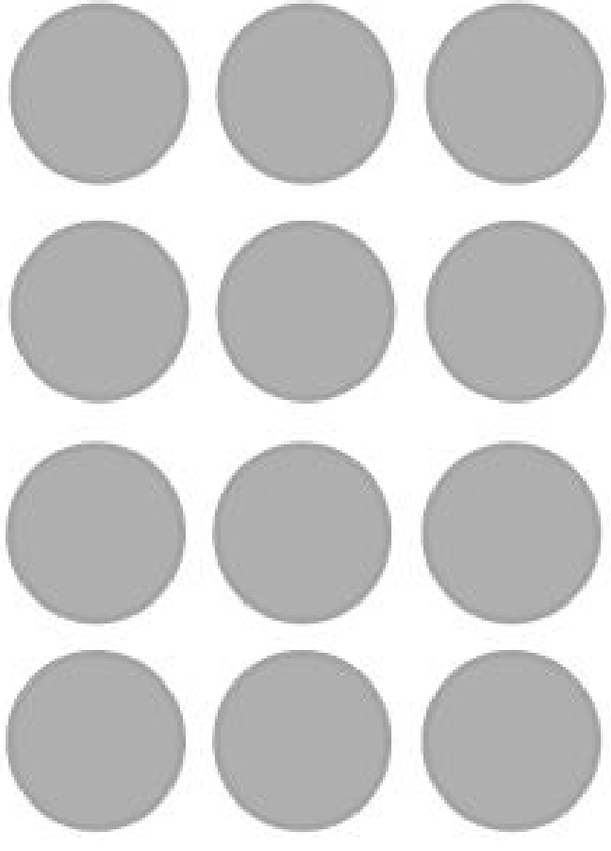
True or false: 10 rows of 3 circles equals 30 circles?



Relate equal groups to arrays

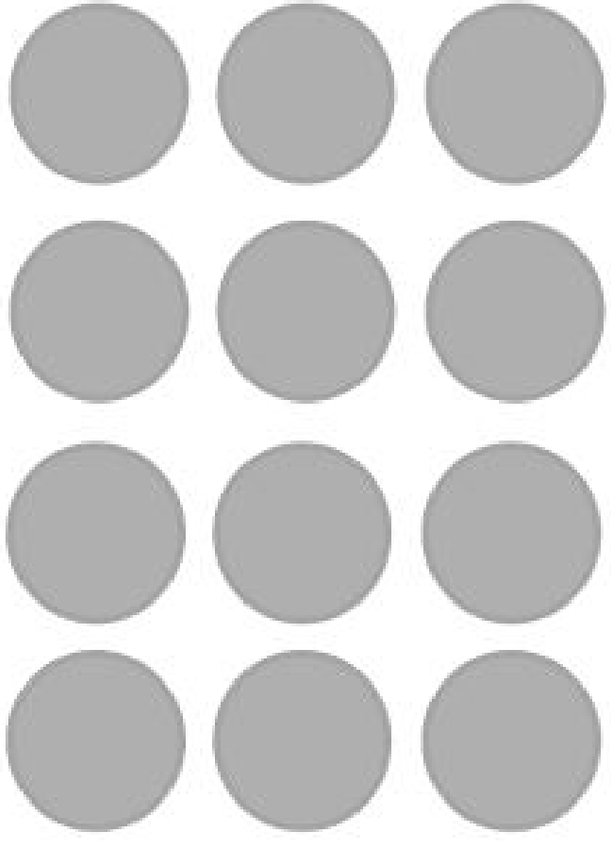
Use the picture on your template to talk with your partner about why this equation is true.

10 x 3 = 30



Relate equal groups to arrays

We call this type of organized picture an **array**.



Relate equal groups to arrays

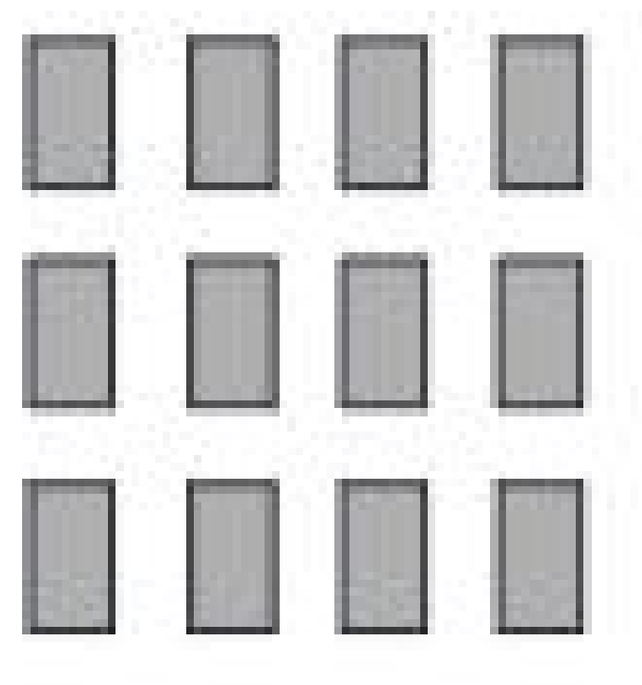
Take a look at this array. At the signal, tell how many rectangles are in the top row.

Relate equal groups to arrays

The size of 1 row is 4 rectangles. Each row of 4 can also be called a group of 4. At the signal, tell how many groups of 4 are in the array.

Relate equal groups to arrays

To write this as an equation, we first write the **number of groups**.



Relate equal groups to arrays

3 x _____ = _____

Next, we write the **size of groups**. How many rectangles are in each group?

Relate equal groups to arrays

3 x 4 = _____

Skip-count to find the number of rectangles in the array.

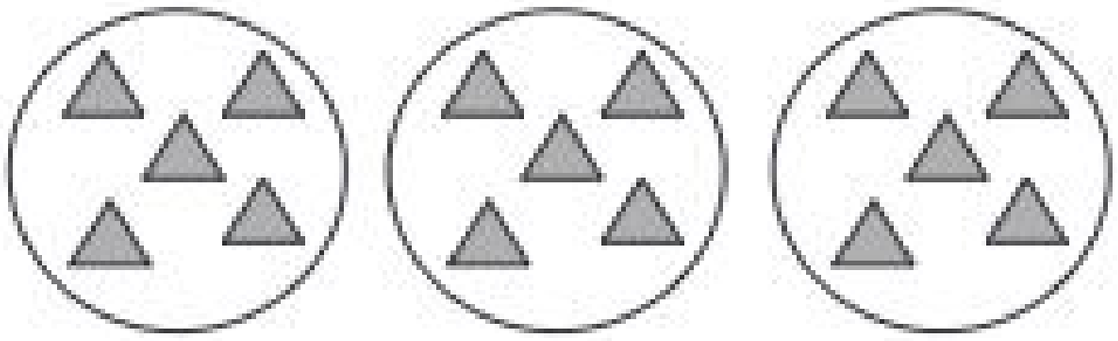
Relate equal groups to arrays

3 x 4 = 12

We just found the answer to the multiplication equation that represents the array.

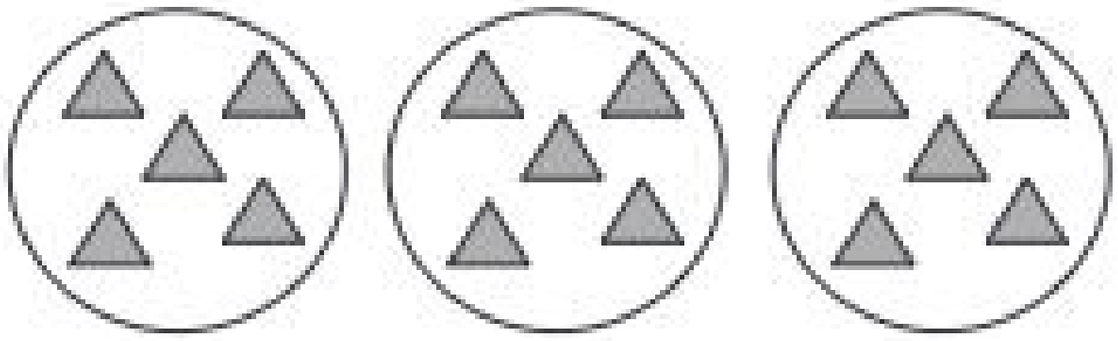
Redraw equal groups as arrays

The drawing shows 3 equal groups of 5. On your personal white board, re-draw the picture as an array with 3 rows of 5.



Redraw equal groups as arrays

Write a multiplication expression to describe your array. Remember, an expression is different from an equation because it doesn't have an equal sign.



Redraw equal groups as arrays

Skip-count to find the answer to the expression.

3 x 5

Redraw equal groups as arrays

With your partner, compare my drawing with your array. Which is easier to count? Why?

3 x 5

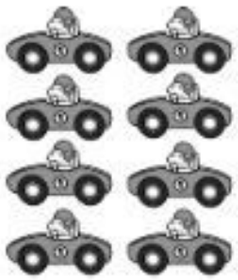
Problem Set

1 2 3 4 5

Problem Set

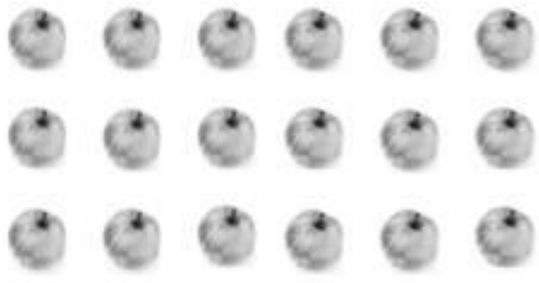
Name _____ Date _____

Use the arrays below to answer each set of questions.

1. 

a. How many rows of cars are there? _____

b. How many cars are there in each row? _____

2. 

a. What is the number of rows? _____

b. What is the number of objects in each row? _____

Debrief

In Problems 5 and 6, how do the arrays represent equal groups?

Compare Problems 5 and 7.

Compare equal groups in scattered configurations and arrays.

Review new vocabulary: r**ow, array, number of groups**, and **size of groups**.

Notice arrays around the room and possible think of arrays in real world situations.

Exit Ticket

Name _____ Date _____

1. 

a. There are 4 rows of stars. How many stars are in each row? _____

b. Write a multiplication equation to describe the array. _____

2. Judy collects seashells. She arranges them in 3 rows of 6. Draw Judy's array to show how many seashells she has altogether. Then, write a multiplication equation to describe the array.