Eureka Math

3rd Grade
Module 1
Lesson 4

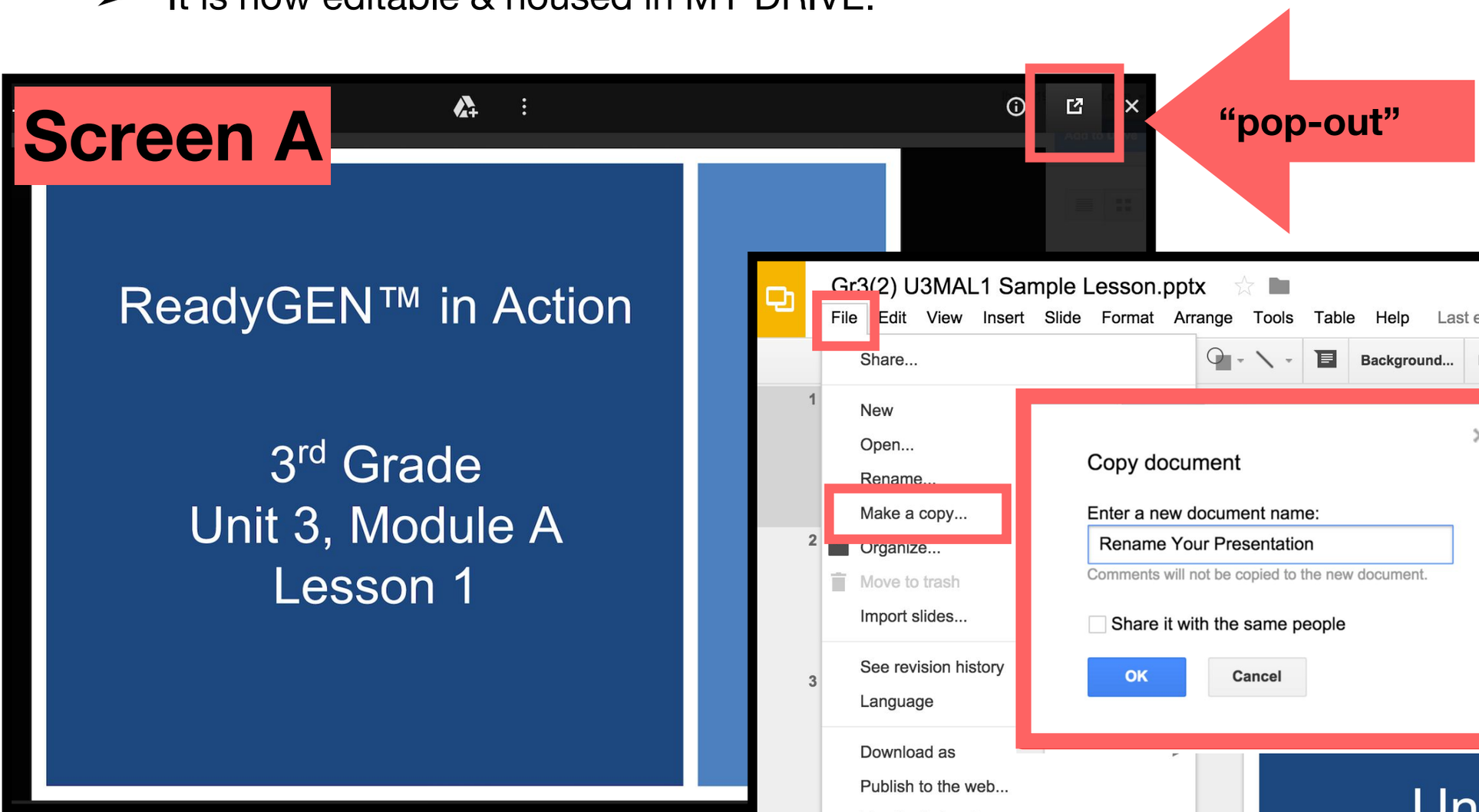
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

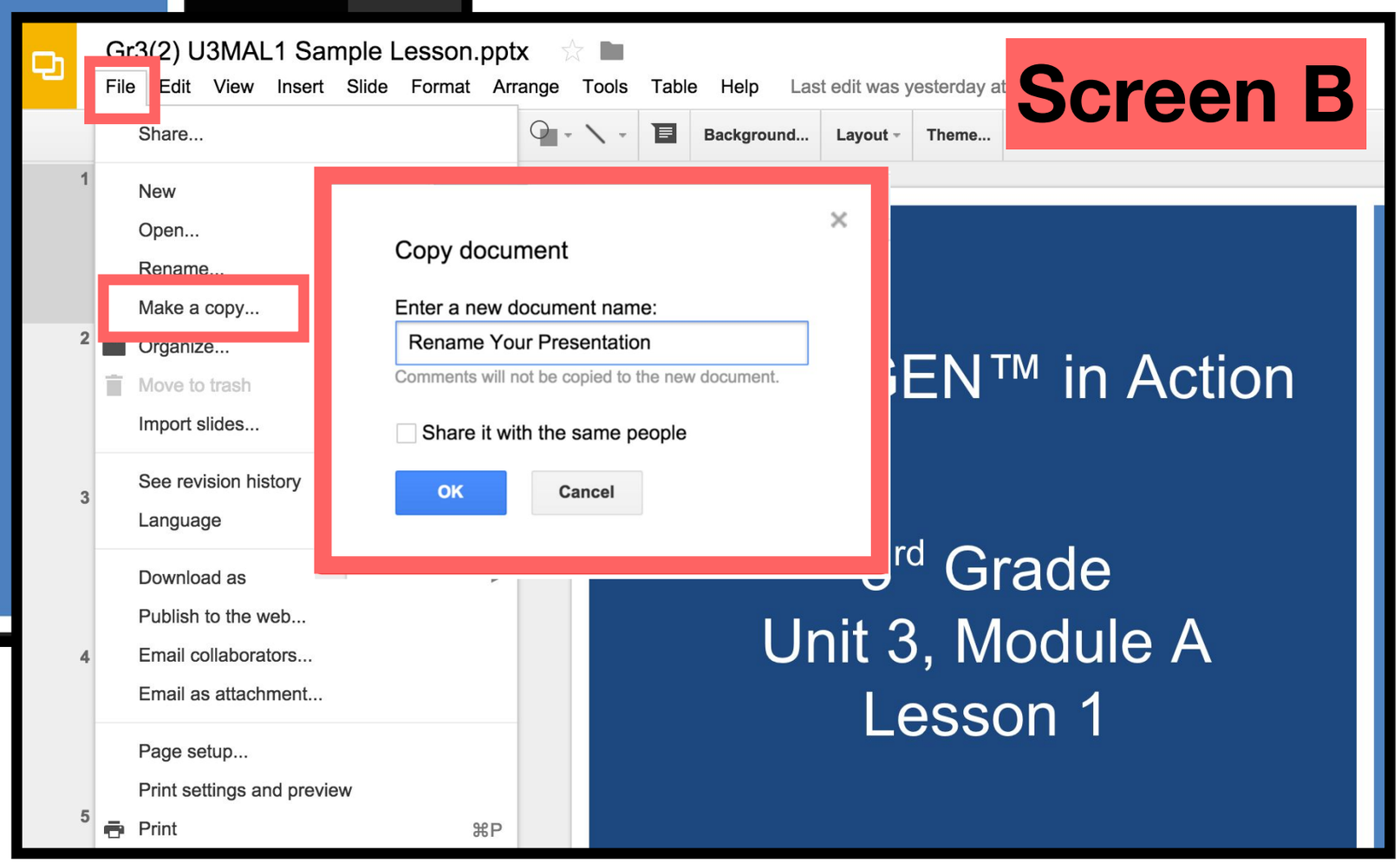
Directions for customizing presentations are available on the next slide.

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.



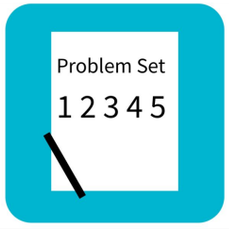


Icons

Read, Draw, Write

Learning Target

Personal White Board



Problem Set

Manipulatives Needed

Fluency

Think Pair Share

Whole Class

Individual

Partner

Small Group

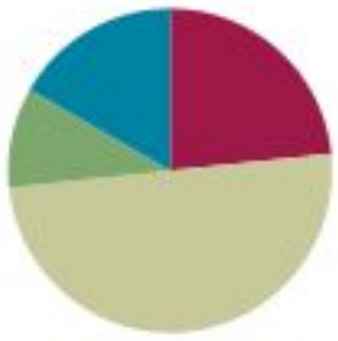
Small Group Time

Lesson 4

Objective: Understand the meaning of the unknown as the size of the group in division.

Suggested Lesson Structure

Fluency Practice	(14 minutes)
Application Problem	(6 minutes)
Concept Development	(30 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



I can understand the meaning of the unknown as the size of the group in division.

Sprint: Repeated Addition as Multiplication

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: _____

Repeated Addition as Multiplication

1.	5 + 5 + 5 =		23.	3 + 3 + 3 + 3 =	
2.	3 × 5 =		24.	4 × 3 =	
3.	5 × 3 =		25.	3 × 4 =	
4.	2 + 2 + 2 =		26.	3 + 3 + 3 =	

Sprint: Repeated Addition as Multiplication

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: _____

Repeated Addition as Multiplication

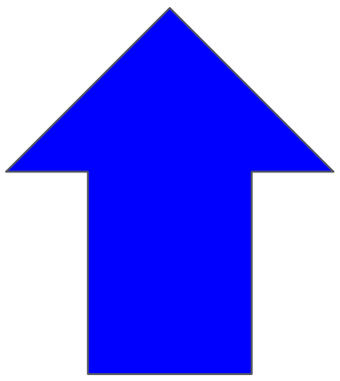
1.	2 + 2 + 2 =	
2.	3 × 2 =	
3.	2 × 3 =	
4.	5 + 5 + 5 =	

23.	4 + 4 + 4 =	
24.	3 × 4 =	
25.	4 × 3 =	
26.	4 + 4 + 4 + 4 =	

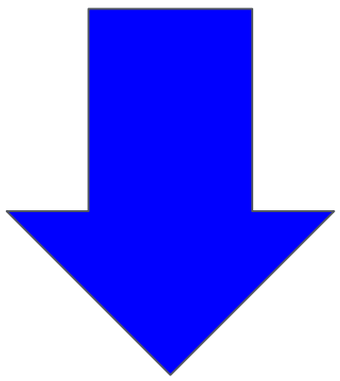
Group Counting

Let’s count by **twos**.

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



Count up

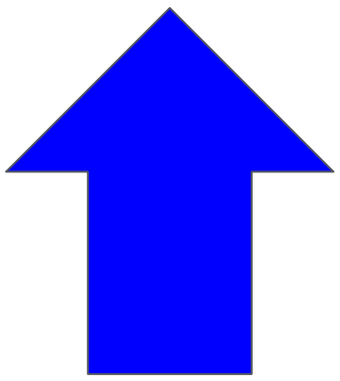


Count down

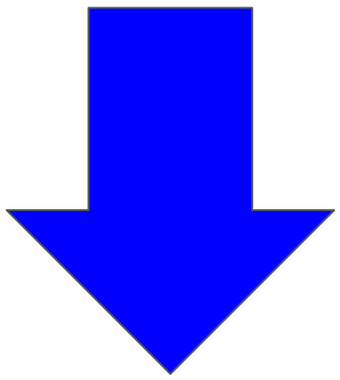
Group Counting

Let’s count by **threes**.

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



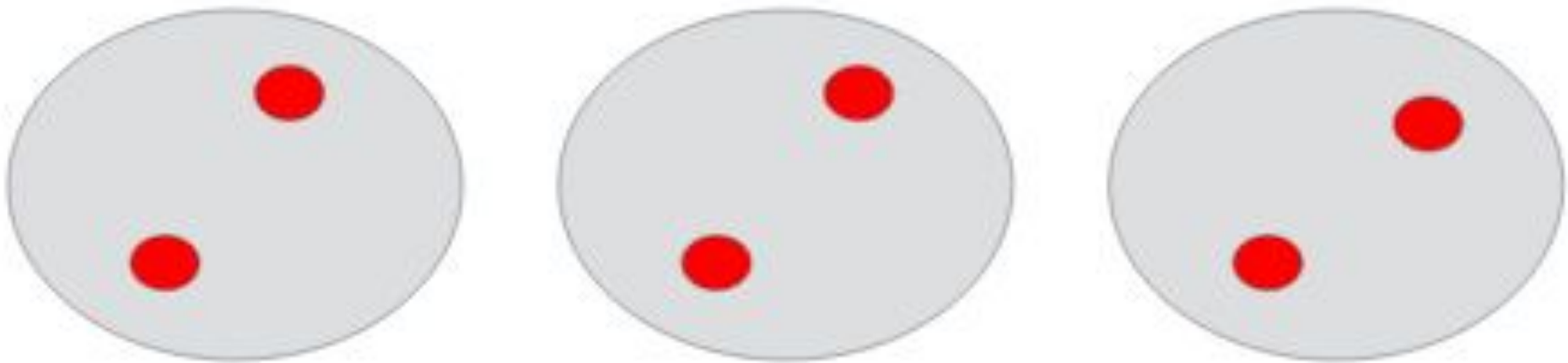
Count up



Count down

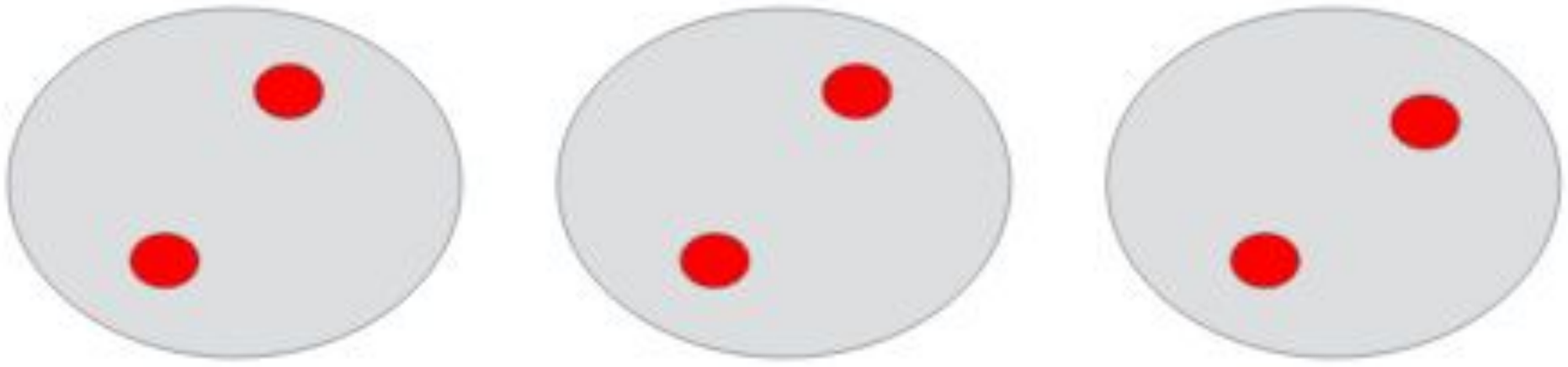
Array Multiplication

Say the repeated addition equation.



Array Multiplication

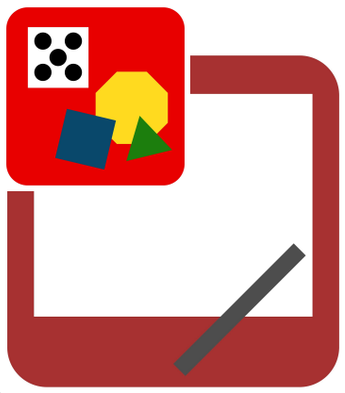
On your personal white boards, complete the multiplication equation.



3 x _____ = _____

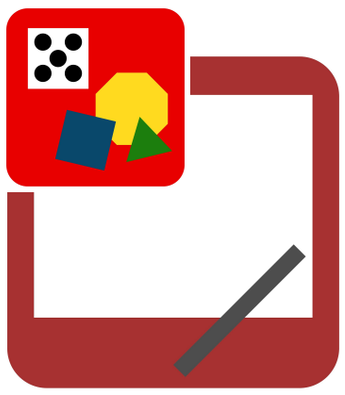
Application Problem

The student council holds a meeting in Mr. Chang's classroom. They arrange the chairs in 3 rows of 5. How many chairs are used in all. Use the RDW process.



Division as fair share, relate the answer to the unknown factor.

Yesterday, Mr. Ziegler bought a new pack of 18 markers. He shared them with me by dividing them into two equal groups. Now, I have a bunch of new markers for making our charts! Do you want to know how many he gave me?



Division as fair share, relate the answer to the unknown factor.

Yesterday, Mr. Ziegler bought a new pack of 18 markers. He shared them with me by dividing them into two equal groups. Now, I have a bunch of new markers for making our charts! Do you want to know how many he gave me?

What are we trying to find, the number of groups or the size of the group?

Division as fair share, relate the answer to the unknown factor.

Your 18 counters represent the markers. Divide your 18 markers into 2 equal groups by giving one to Mr. Z, one to me, one to Mr. Z, one to me.

Mr. Z

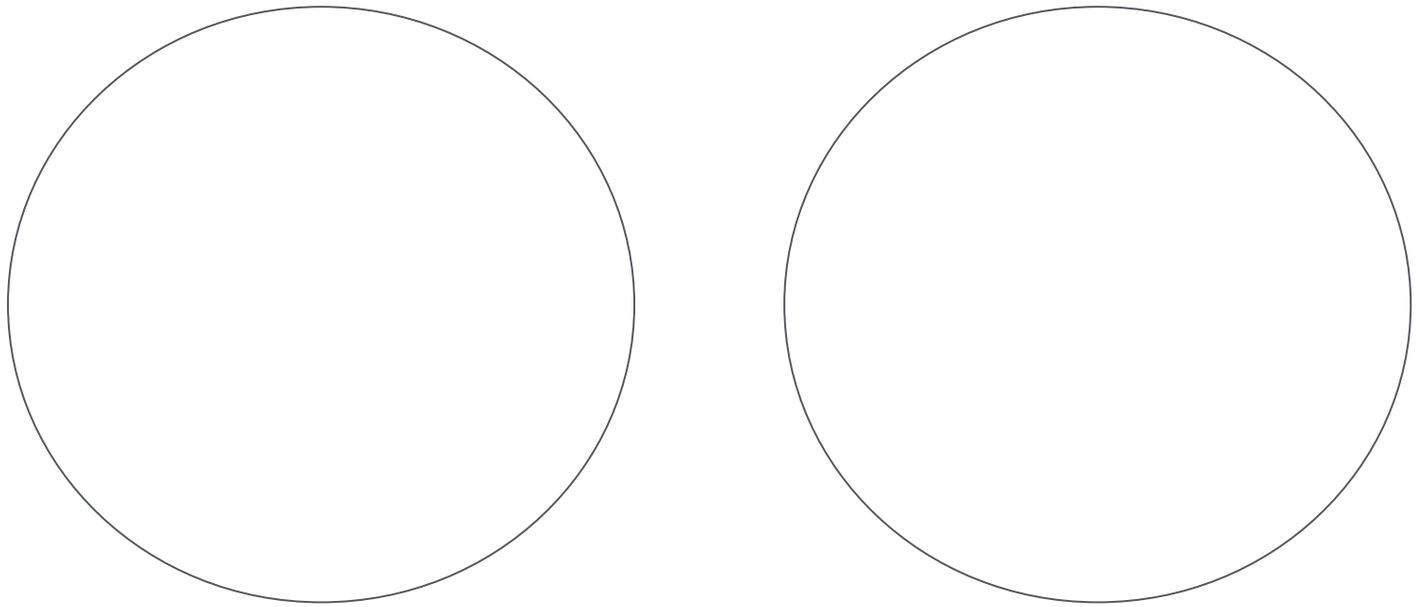
Me

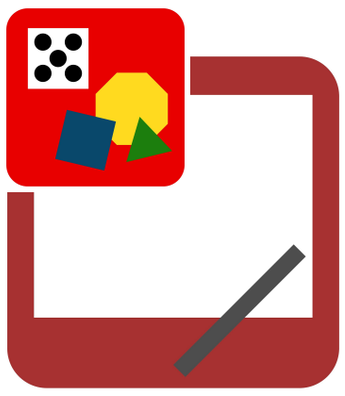
Division as fair share, relate the answer to the unknown factor.

Using a complete sentence, tell how many counters there are in each group. Then, how many markers did Mr. Ziegler give me?

Mr. Z

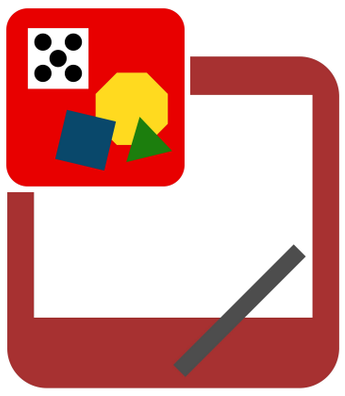
Me





Division as fair share, relate the answer to the unknown factor.

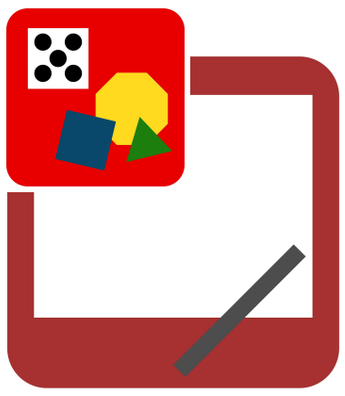
Let’s write a number sentence to show our work, starting from the beginning. What is our total number of counters?



Division as fair share, relate the answer to the unknown factor.

18

We divided our counters into how many equal groups?

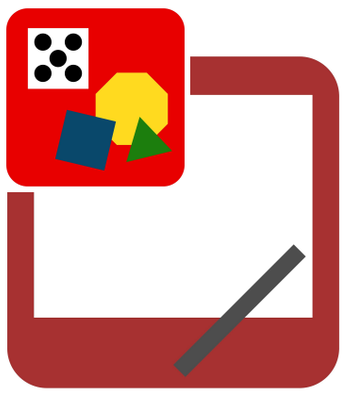


Division as fair share, relate the answer to the unknown factor.

$$18 \div 2$$

If 18 is our total and 2 represents our equal groups, then remind me, what does our **unknown** factor represent?

That is?



Division as fair share, relate the answer to the unknown factor.

$$18 \div 2 = 9$$

18 divided by 2 equals 9. This number sentence shows how Mr. Ziegler gave me...

Division as fair share, relate the answer to the unknown factor.

Suppose Mr. Ziegler had 15 markers and shared them fairly with 3 teachers.

What are we trying to find, the number of groups or the size of the group?

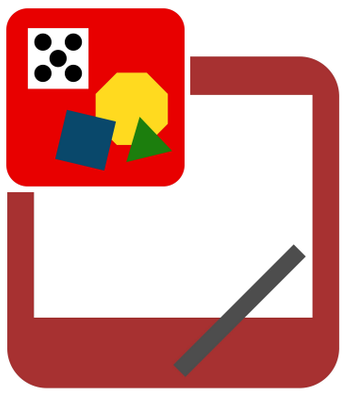
Division as fair share, relate the answer to the unknown factor.

Your 15 counters represent the markers. Divide your 15 markers into 3 equal groups by giving one to Teacher 1, one to Teacher 2, one to Teacher 3, etc.

Teacher 1

Teacher 2

Teacher 3



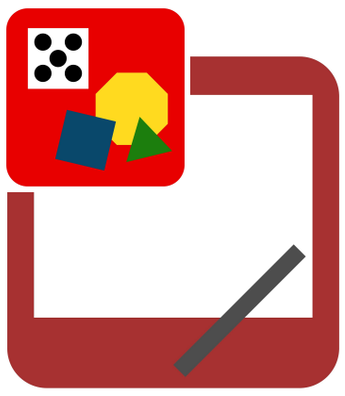
Division as fair share, relate the answer to the unknown factor.

Using a complete sentence, tell how many counters are in each group. Then, how many markers did he give me?

Teacher 1

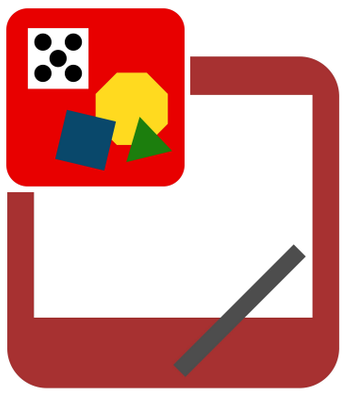
Teacher 2

Teacher 3



Division as fair share, relate the answer to the unknown factor.

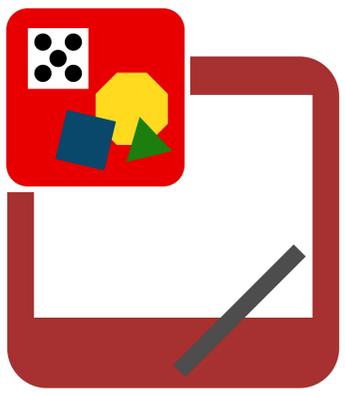
Let’s write a number sentence to show our work, starting from the beginning. What is our total number of counters?



Division as fair share, relate the answer to the unknown factor.

15

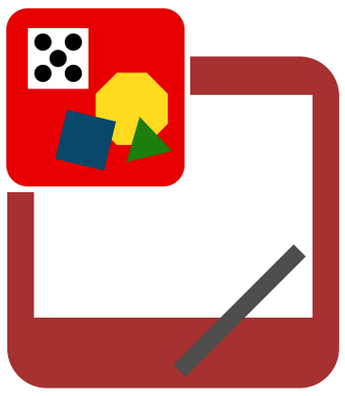
We divided our counters into how many equal groups?



Division as fair share, relate the answer to the unknown factor.

$$15 \div 3$$

If 15 is our total and 3 represents our equal groups, then remind me, what does our **unknown** factor represent?



Division as fair share, relate the answer to the unknown factor.

$$15 \div 3 = 5$$

15 divided by 3 equals 5. This number sentence shows how Mr. Ziegler gave me...

Analyze a picture to write a division sentence

This is how Diana arranges her star stickers.

What does 12 represent in the picture?

Analyze a picture to write a division sentence

This is how Diana arranges her star stickers.

What does 3 represent in the picture?

Analyze a picture to write a division sentence

This is how Diana arranges her star stickers.

What does 4 represent in the picture?

Analyze a picture to write a division sentence

This is how Diana arranges her star stickers.

Write a number sentence to represent Diana’s stickers where the answer represents the size of the group.

Analyze a picture to write a division sentence

This is how Diana arranges her star stickers.

$12 \div 3 = 4$ $12 \div 4 = 3$

What is the difference between these **division** sentences?

Analyze a picture to write a division sentence

This is how Diana arranges her star stickers.

$12 \div 3 = 4$ $\quad$ $12 \div 4 = 3$

If we're writing a division sentence where the answer represents the size of the group, which number sentence should we use?

Analyze equations for the meaning of the solution

$$8 \div 4 = \_\_\_\_$$

If 8 is the total and 4 is the number of groups, then what does the unknown factor represent?

Draw a picture on your personal white boards to go with my division equation. Use your picture to help you find the unknown factor, then complete the equation.

Analyze equations for the meaning of the solution

$$10 \div 2 = \_\_\_\_$$

If 10 is the total and 2 is the number of groups, then what does the unknown factor represent?

Draw a picture on your personal white boards to go with my division equation. Use your picture to help you find the unknown factor, then complete the equation.

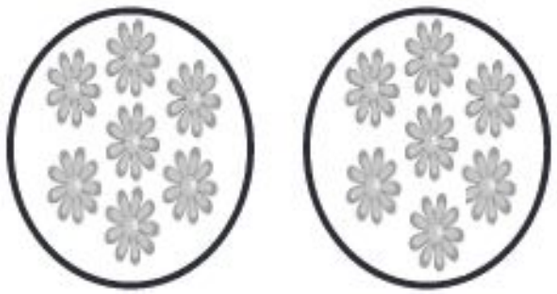
Problem Set

1 2 3 4 5

Problem Set

Name _____ Date _____

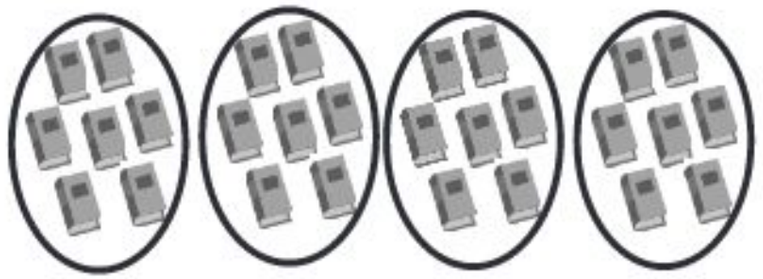
1.



14 flowers are divided into 2 equal groups.

There are _____ flowers in each group.

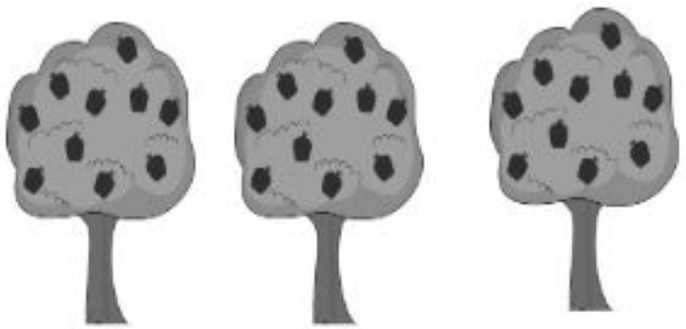
2.



28 books are divided into 4 equal groups.

There are _____ books in each group.

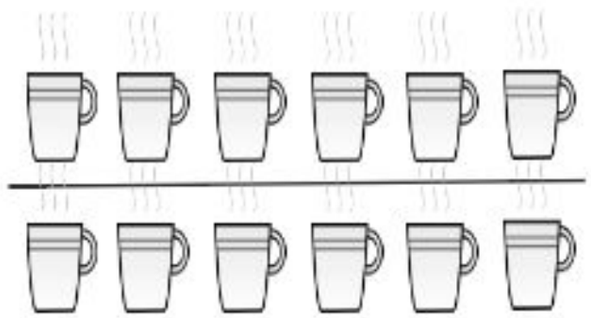
3.



30 apples are divided into _____ equal groups.

There are _____ apples in each group.

4.



_____ cups are divided into _____ equal groups.

There are _____ cups in each group.

12 ÷ 2 = _____

Debrief

Share your division sentences for Problem 9. Analyze the meaning of the factors.

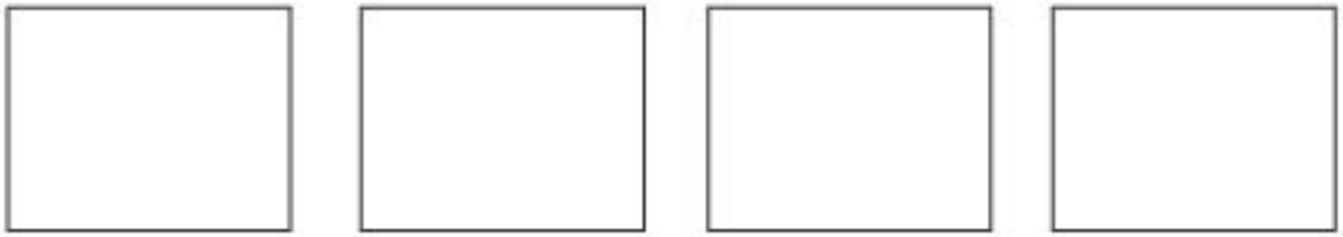
What are the similarities and differences between multiplication and **division**?

New vocabulary: *unknown factor* and *divided by*.

Exit Ticket

Name _____ Date _____

1. There are 16 glue sticks for the class. The teacher divides them into 4 equal groups. Draw the number of glue sticks in each group.



There are _____ glue sticks in each group.

16 ÷ _____ = _____

2. Draw a picture to show 15 ÷ 3. Then, fill in the blank to make a true division sentence.

15 ÷ 3 = _____