Eureka Math

2nd Grade
Module 6
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!

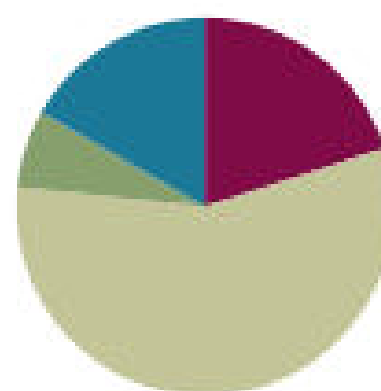Directions for customizing presentations are available on the next slide.

Lesson 6

Objective: Decompose arrays into rows and columns, and relate to repeated addition.

Suggested Lesson Structure

■ Fluency Practice   (12 minutes)
■ Application Problem   (4 minutes)
■ Concept Development   (34 minutes)
■ Student Debrief   (10 minutes)
  Total Time   **(60 minutes)**

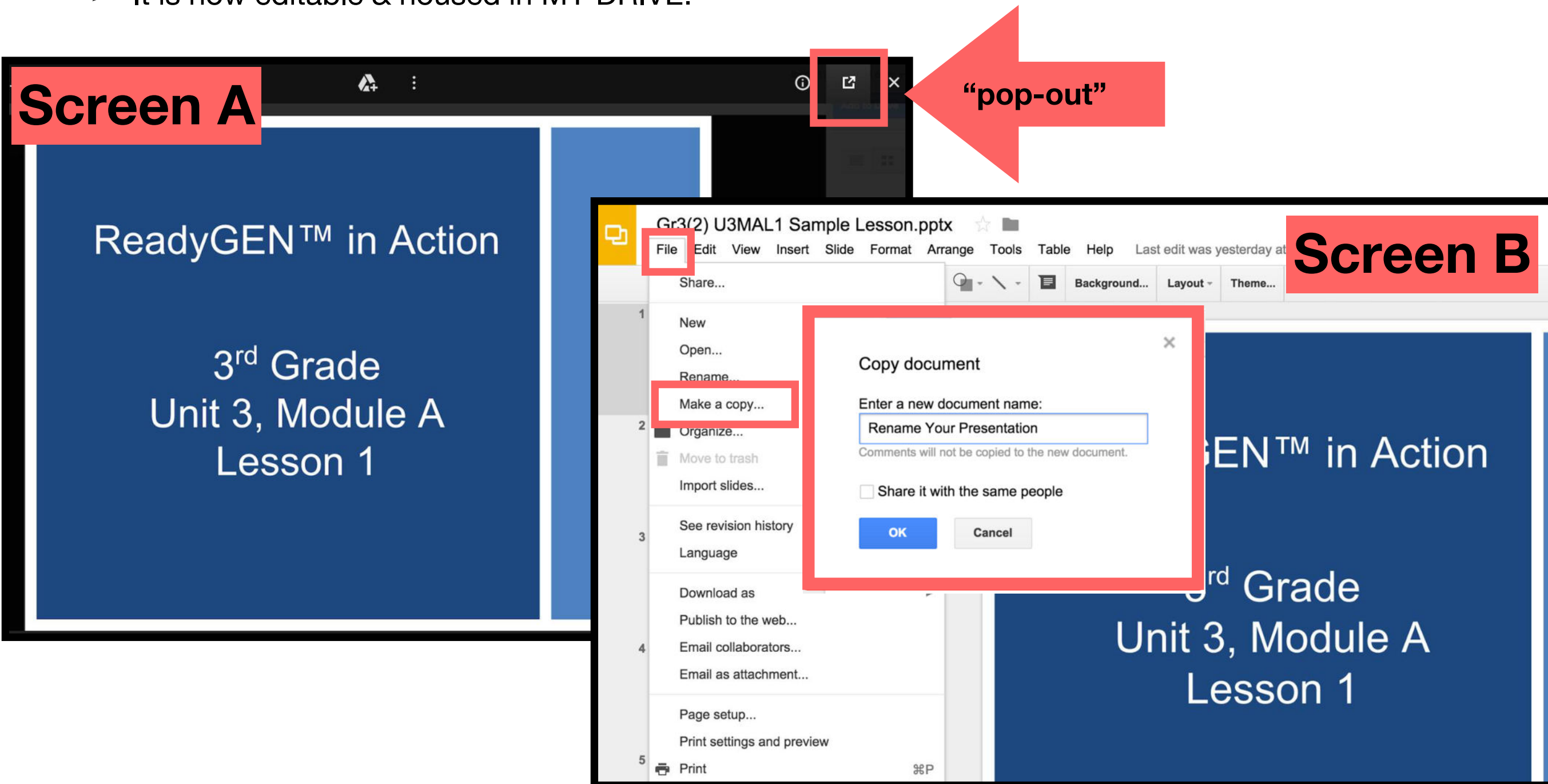## Fluency Practice (12 minutes)

- Making the Next Hundred Drill **2.NBT.5, 2.NBT.7**   (4 minutes)
- Grade 2 Core Fluency Practice Sets **2.OA.2**   (5 minutes)
- Happy Counting by Tens: Crossing 100 **2.NBT.2**   (3 minutes)

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.

"pop-out"

Screen A

ReadyGEN™ in Action

3rd Grade
Unit 3, Module A
Lesson 1

Screen B

Gr3(2) U3MAL1 Sample Lesson.pptx

File Edit View Insert Slide Format Arrange Tools Table Help   Last edit was yesterday at

Share...   Background... Layout ▾ Theme...

1
New
Open...
Rename...
Make a copy...
2
Organize...
🗑 Move to trash
Import slides...

3
See revision history
Language

Download as
Publish to the web...
4
Email collaborators...
Email as attachment...

Page setup...
Print settings and preview
5 🖨 Print   ⌘P

Copy document   ✕

Enter a new document name:

Rename Your Presentation

Comments will not be copied to the new document.

☐ Share it with the same people

OK   Cancel

GEN™ in Action

3rd Grade
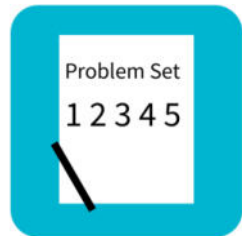Unit 3, Module A
Lesson 1

Icons

RDW   Read, Draw, Write

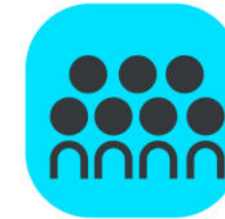Learning Target

Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share

Whole Class

Individual

Partner

Small Group

Small Group Time

I can decompose arrays into rows and columns, and relate to repeated addition.

Materials Needed:

Fluency-Materials: (S) Core Fluency Practice Sets (Lesson 1 Core Fluency Practice Sets)

Concept Development:
- (S) Personal white board, math journal or paper

Note: During Topic B and for the remainder of the year, each day's fluency activity includes an opportunity for review and mastery of the sums and differences with totals through 20 by means of the Core Fluency Practice Sets or Sprints. Practice Sets, along with details about the process, are provided in Lesson 1.

Making the Next Hundred Drill

170

Let's find the missing part to make the next hundred.
What is the next hundred? **200**

If I say "170," you say the missing number needed to make 200. Ready? 170 ANSWER: **30**

Tell me the addition sentence. **170 + 30 = 200.**

Making the Next Hundred Drill

190

What is the next hundred? **200**

What is the missing number to make 200? **10**

Tell me the addition sentence. **190 + 10 = 200**

Making the Next Hundred Drill

160

What is the next hundred? **200**

What is the missing number to make 200? **40**

Tell me the addition sentence. **160 + 40 = 200**

Making the Next Hundred Drill

260

What is the next hundred? **300**

What is the missing number to make 300? **40**

Tell me the addition sentence. **260 + 40 = 300**

Core Fluency Practice Set

Name _____ Date _____

1.	10 + 3 =	21.	7 + 9 =
2.	10 + 6 =	22.	4 + 8 =
3.	10 + 4 =	23.	5 + 9 =
4.	5 + 10 =	24.	8 + 6 =
5.	8 + 10 =	25.	7 + 5 =
6.	10 + 9 =	26.	5 + 8 =
7.	12 + 2 =	27.	8 + 3 =
8.	13 + 4 =	28.	9 + 8 =
9.	16 + 3 =	29.	6 + 5 =
10.	2 + 17 =	30.	7 + 6 =
11.	5 + 14 =	31.	4 + 6 =
12.	7 + 12 =	32.	8 + 7 =
13.	16 + 3 =	33.	7 + 7 =
14.	11 + 5 =	34.	8 + 6 =
15.	9 + 2 =	35.	6 + 9 =
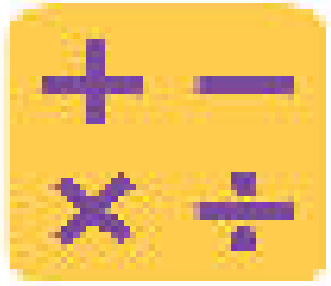
Happy Counting by Tens

This time, let's play Happy Counting, skip-counting by tens!

Watch my fingers to know whether to count up or down. A closed hand means stop. (Show signals while explaining.)

Let's count by tens, starting at 90. Ready?

Try it for 30 seconds with your partner, starting at 180. Partner B, you are the teacher today.

Sam is organizing her greeting cards. She has 8 red cards and 8 blue cards. She puts the red cards in 2 columns and the blue ones in 2 columns to make an array.

a. Draw a picture of Sam's greeting cards in the array.

b. Write a statement about Sam's array.

R	B	R	B
R	B	R	B
R	B	R	B
R	B	R	B
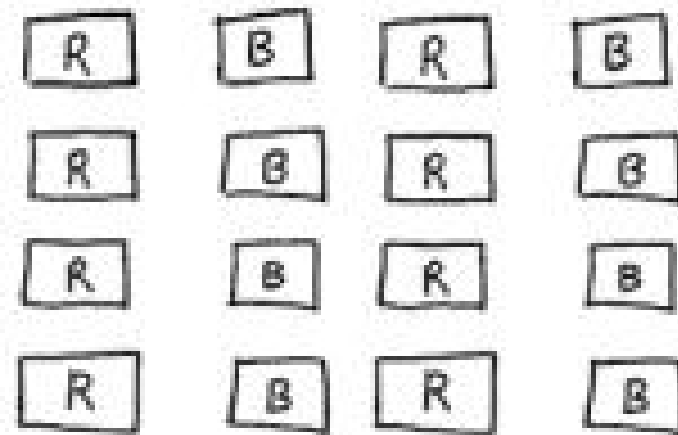
$4 + 4 + 4 + 4 = 16$

Sam has 16 cards.
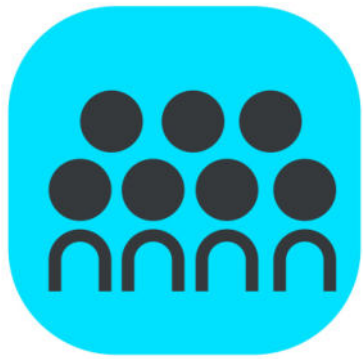
CONCEPT DEVELOPMENT

Materials: (T) 24 beans or other counters, 21 1 inch tiles, ruler
(S) Per pair: 21- 1 inch tiles, 24 beans or other counters,
Whiteboard, ruler
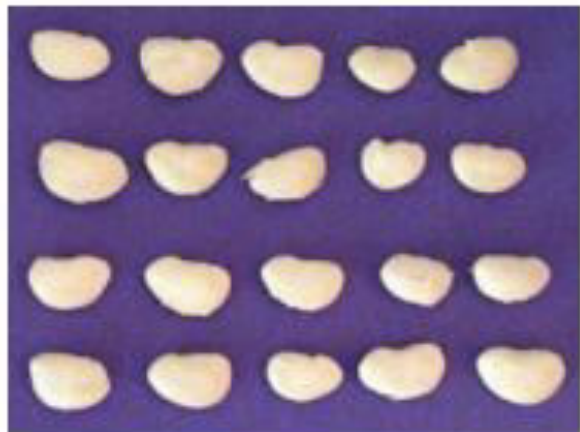
How many rows do you see?

Are the rows equal?

For right now, let's call a row a group. How many equal groups are there?

How many beans are in each group?

I'm going to pull this array apart so we can clearly see our 4 rows.
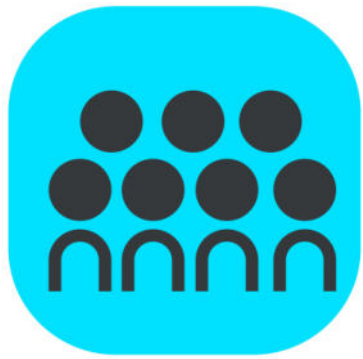
CONCEPT DEVELOPMENT
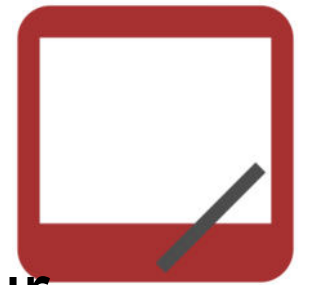
There are 5 beans in the first row. With your marker, write 5 to the right of the row.

There are 5 in the second row. I'm going to write a 5 there too. 5 + 5 is…?

Add 5 more for the third row. Let's write another 5. 10 + 5 is…?

Now let's add 5 more for the last row and label it with 5.   15 + 5 is…?

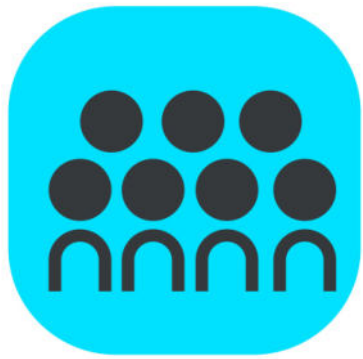Look at all these fives!

What repeated addition equation can we write underneath to show the total number of beans?

Equation: **5 + 5 + 5 + 5= 20**
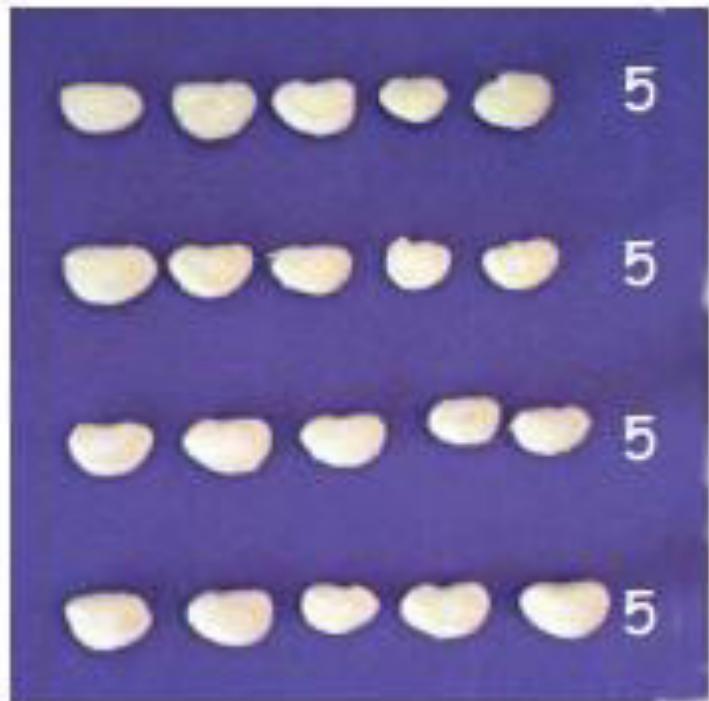
CONCEPT DEVELOPMENT

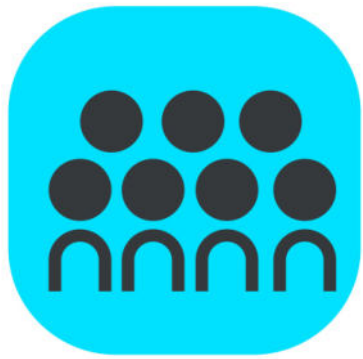**5 + 5 + 5 + 5= 20**

How many addends do you see? **4**

So, there are 4 fives, and 5 + 5 + 5 + 5 equals 20.

 I'm going to push the beans back together so there is no space between each row.

 Using your lima beans, work with your partner to make an array with 5 columns of 4 beans on your personal white board.
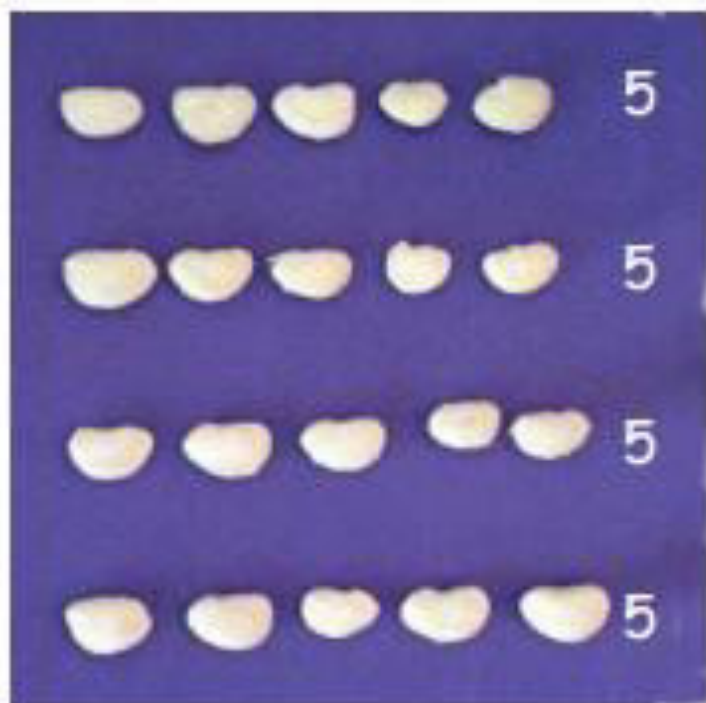
CONCEPT DEVELOPMENT

Watch now as I use my ruler to add space between each column. (Using the ruler, separate the columns so there are about 2 inches between each one, as students do the same.)
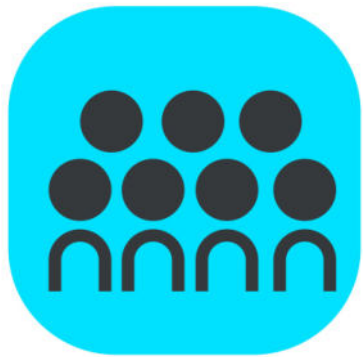

How many columns do you see? Are the columns equal?

Now, let's say a column is a group. How many equal groups are there?

Let's count the number in each group.

CONCEPT DEVELOPMENT

Can we make this into a repeated addition equation to find the total number of beans?
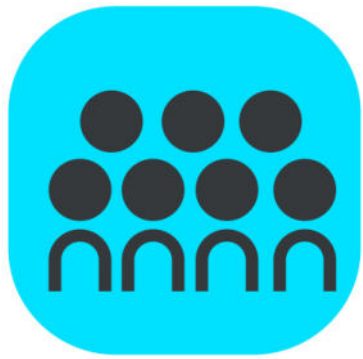

T: Let's count to find the total.
 4 + 4 is…?
Add 4 more.
Add 4 more.
And the last 4.

 Do we have the same total number of beans as before?
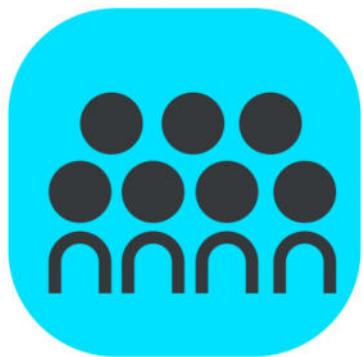
CONCEPT DEVELOPMENT

I'm going to add one more column of 4 beans to our array.

How many columns do we have now?

Turn and talk: How many beans do we have now? How do you know?

Let's try another. With your partner, create an array with 3 rows of 6 tiles.

CONCEPT DEVELOPMENT

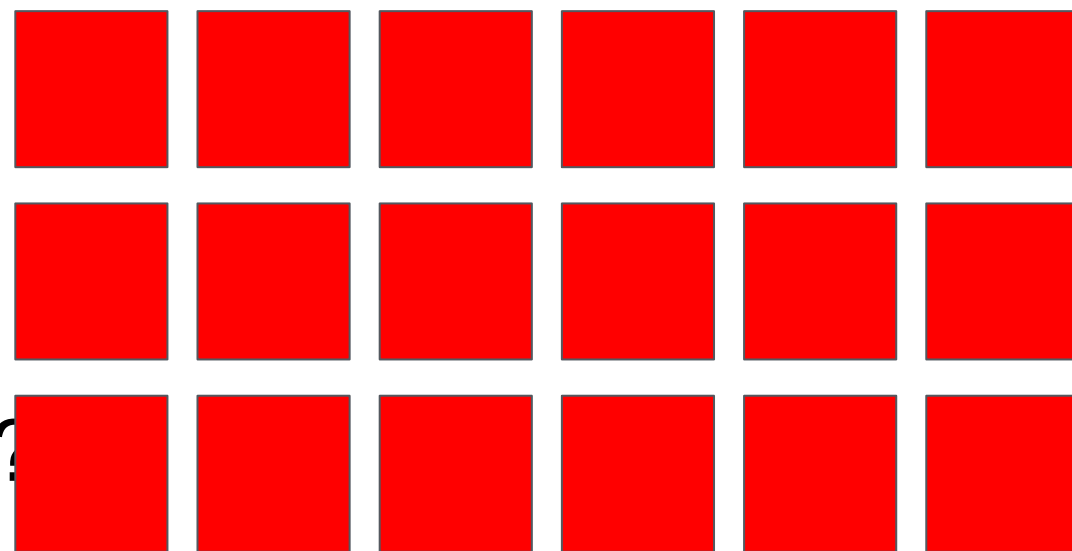How many equal groups of 6 do you see?

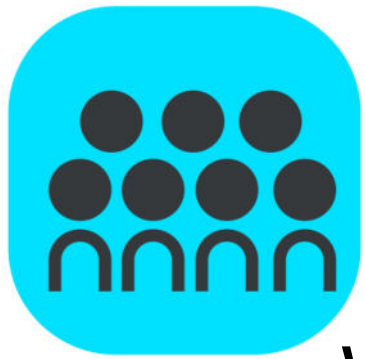Turn and talk: What repeated addition equation would you use to find the total?

How many groups, or addends, are there?

So, there are 3 sixes! And if you add them, 6 + 6 + 6, you have 18.

Turn and talk: How many columns do you see, and how many tiles are in each column?

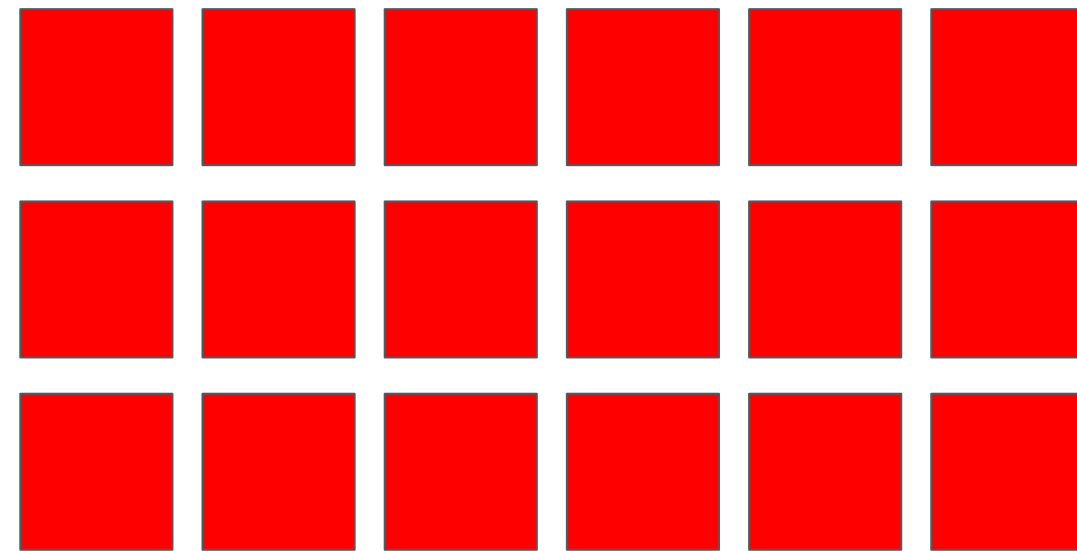What repeated addition equation would you use to find the total?
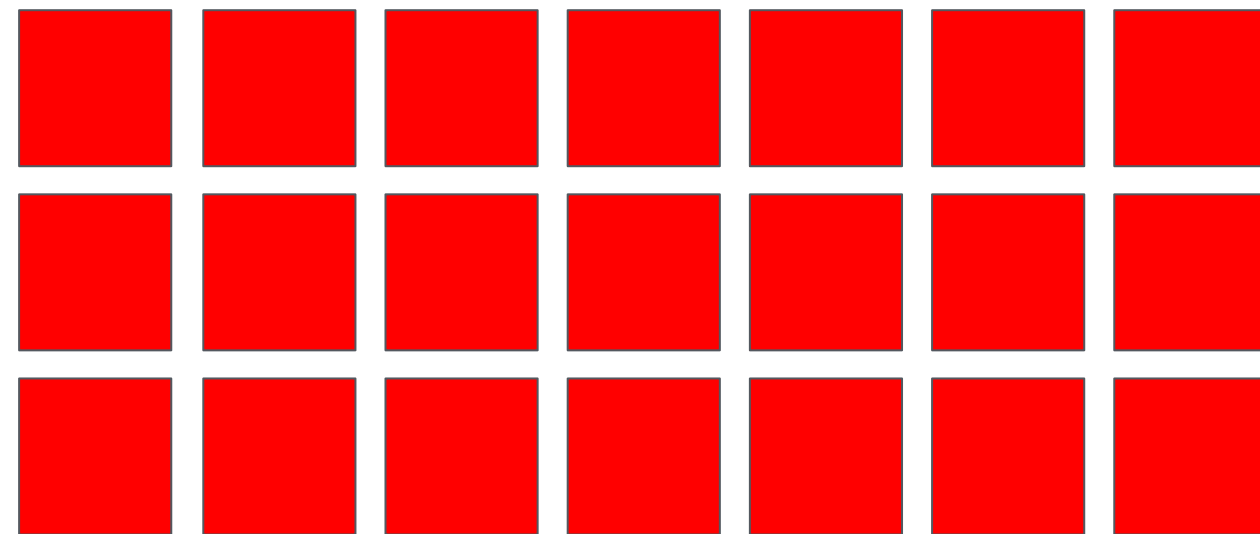
CONCEPT DEVELOPMENT

What repeated addition equation would you use to find the total?

3 + 3 + 3 + 3 + 3 + 3 = 18. We made an array with 3 rows of 6 and 6 columns of 3, and the total was the same!

How many tiles are there now, and how do you know?

Name _____   Date _____
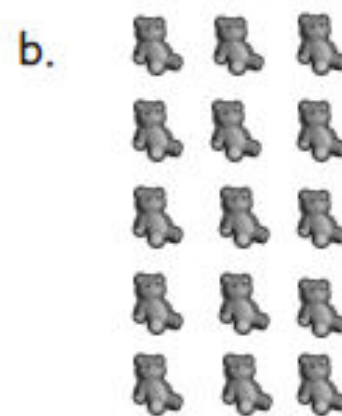
1. Complete each missing part describing each array.

Circle rows.   Circle columns.

a.

5 rows of _____ = _____

____ + ____ + ____ + ____ + ____ = _____

b.

3 columns of _____ = _____

_____ + _____ + _____ = _____

Circle rows.   Circle columns.

c.

d.
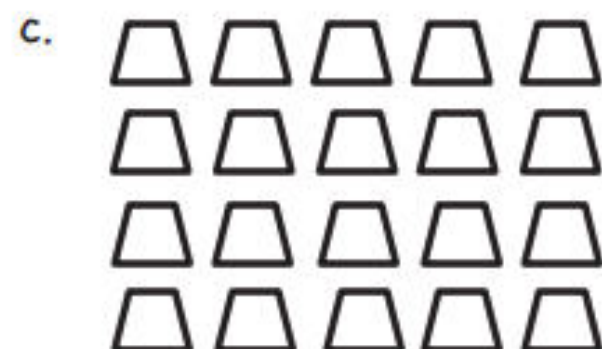
🗨 Debrief

For Problems 1(a) and (b), describe the arrays. Discuss how each repeated addition equation, or number sentence, matches the array.

For Problems 1(c) and (d), describe the arrays. How many shapes are in each row or column? How does this match the repeated addition equation?

For Problem 2, describe two different ways to break apart, or decompose, the 3 by 4 array using rows or columns. How is decomposing arrays similar to decomposing numbers?

Debrief

For Problem 2(d), how would adding one more row change the repeated addition equation?

For Problem 3(a), did you write the repeated addition equation in terms of rows or columns? Why didn't it matter?

For Problem 3(d), how did removing one row change the repeated addition equation?

Name _____   Date _____

Use the array to answer the questions below.

a. _____ rows of _____ = _____

b. _____ columns of _____ = _____

c. _____ + _____ + _____ + _____ = _____

d. Add 1 more row. How many stars are there now? _____

e. Add 1 more column to the new array you made in (d). How many stars are there now? _____