Materials List

(S) Application Problems Sheet

(S) Personal white board

Eureka Math

3rd Grade
Module 3
Lesson 9

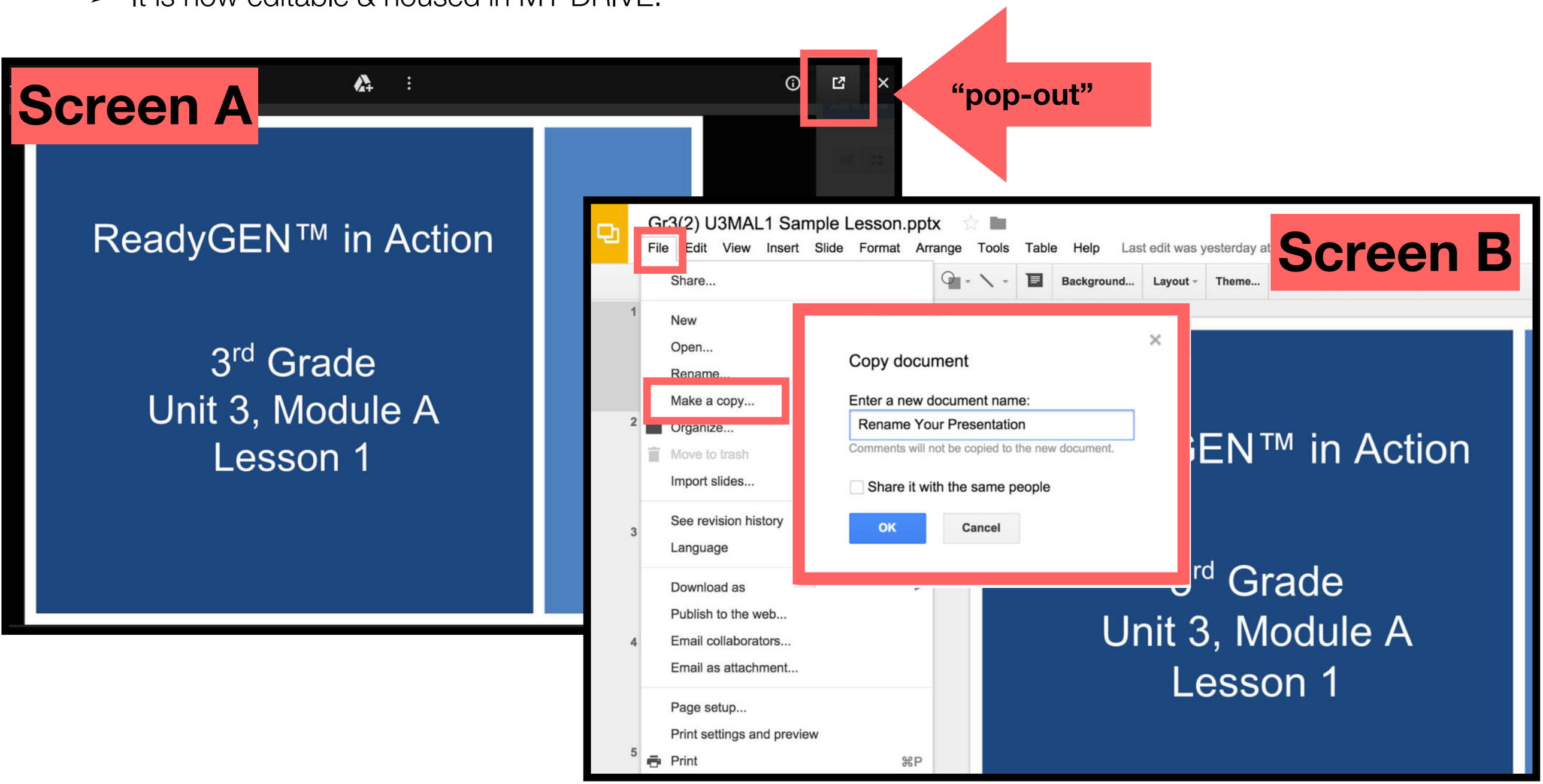
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

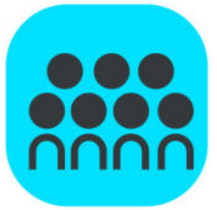
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

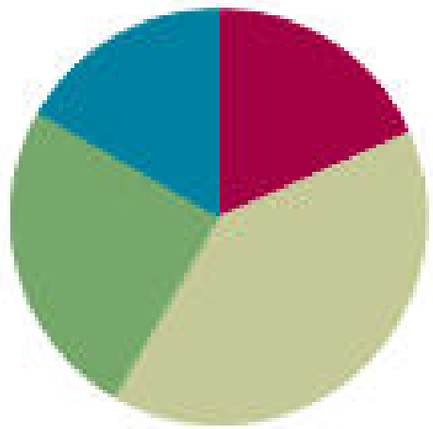
Small Group Time

Lesson 9

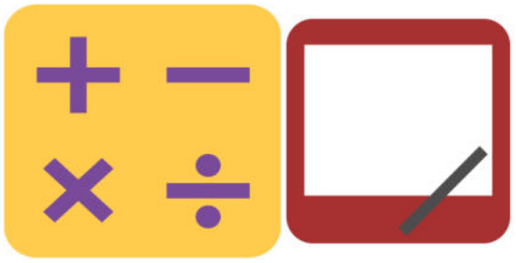
Objective: Model the associative property as a strategy to multiply.

Suggested Lesson Structure

Fluency Practice	(11 minutes)
Application Problems	(15 minutes)
Concept Development	(24 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



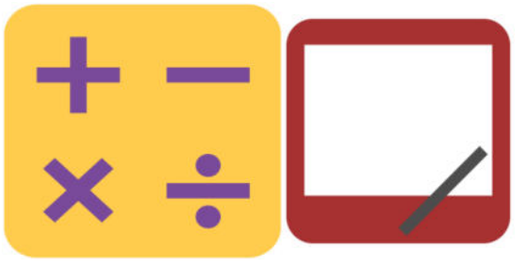
I can model the associative property as a strategy to multiply.



Divide by 6 and 7

Write a × 6 = 12

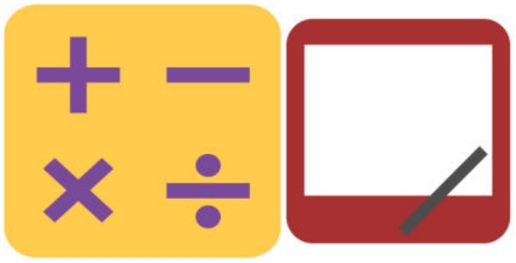
On your personal white board, write the value of a.



Divide by 6 and 7

Write a × 6 = 30

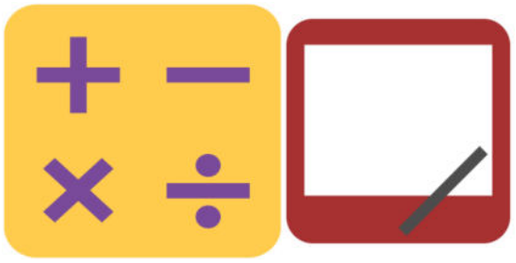
On your personal white board, write the value of a.



Divide by 6 and 7

Write b × 6 = 24

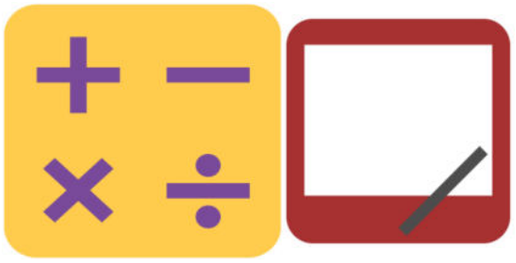
On your personal white board, write the value of b.



Divide by 6 and 7

Write c × 6 = 36

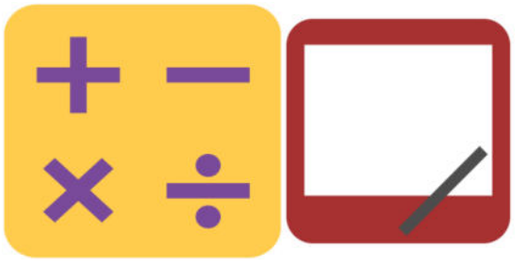
On your personal white board, write the value of c.



Divide by 6 and 7

Write d × 6 = 60

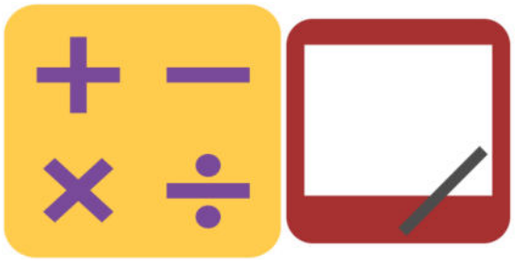
On your personal white board, write the value of d.



Divide by 6 and 7

Write e × 6 = 54

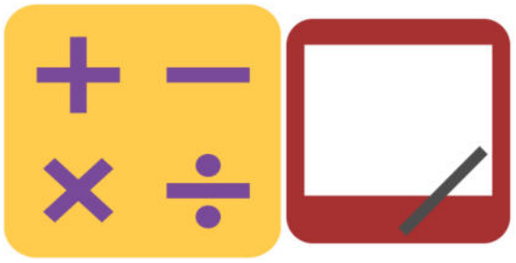
On your personal white board, write the value of e.



Divide by 6 and 7

Write f × 7 = 35

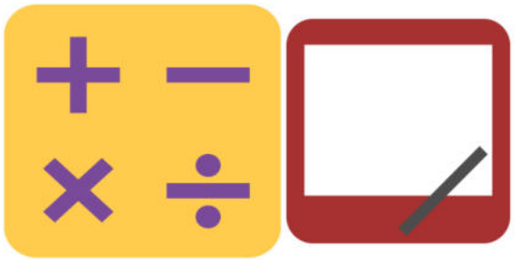
On your personal white board, write the value of f.



Divide by 6 and 7

Write g × 7 = 28

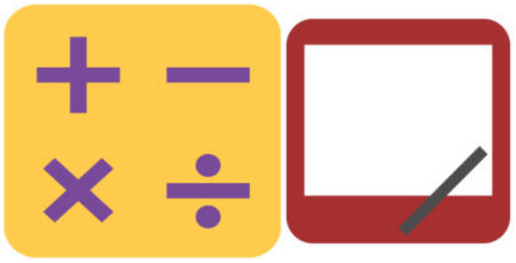
On your personal white board, write the value of g.



Divide by 6 and 7

Write h × 7 = 42

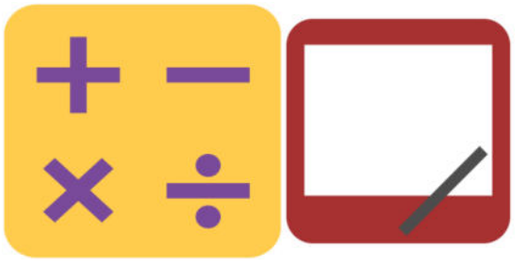
On your personal white board, write the value of h.



Divide by 6 and 7

Write $j \times 7 = 70$

On your personal white board, write the value of j.



Divide by 6 and 7

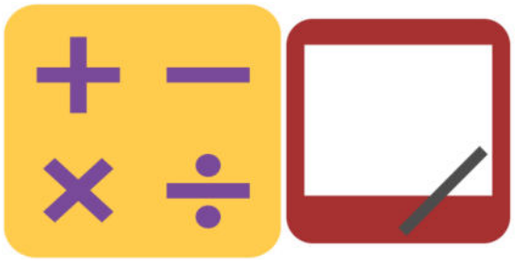
Write k × 7 = 56

On your personal white board, write the value of k.

Group Counting

Eights to 80

Nines to 90

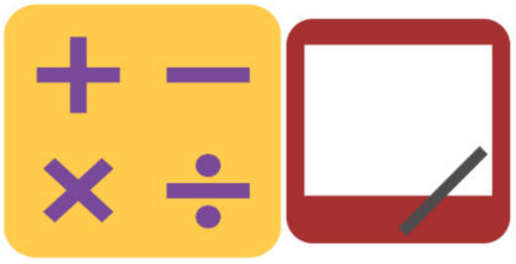


Write In the Parentheses

Write 10 – 5 + 3 = 8

On your board, copy the equation.

Then, insert parentheses to make the statement true

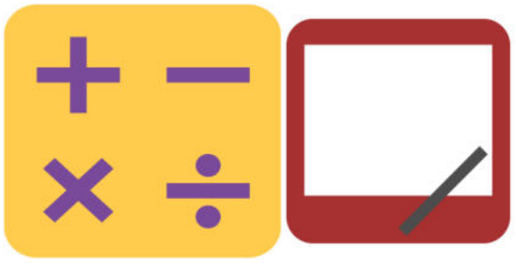


Write In the Parentheses

Write 10 – 5 + 3 = 2

On your board, copy the equation.

Then, insert parentheses to make the statement true

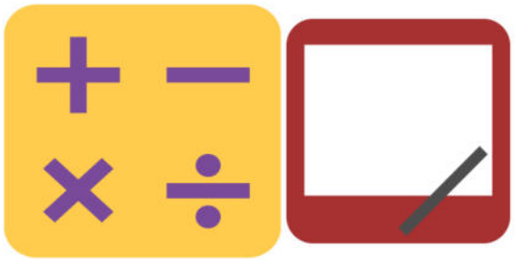


Write In the Parentheses

Write 10 = 20 – 7 + 3

On your board, copy the equation.

Then, insert parentheses to make the statement true

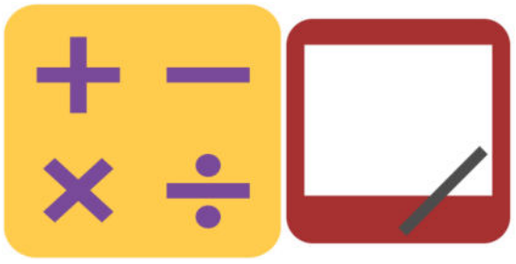


Write In the Parentheses

Write 16 = 20 – 7 + 3

On your board, copy the equation.

Then, insert parentheses to make the statement true

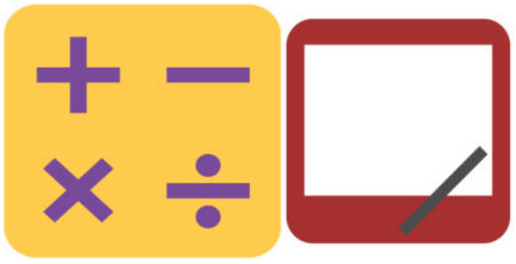


Write In the Parentheses

Write 8 + 2 × 4 = 40

On your board, copy the equation.

Then, insert parentheses to make the statement true



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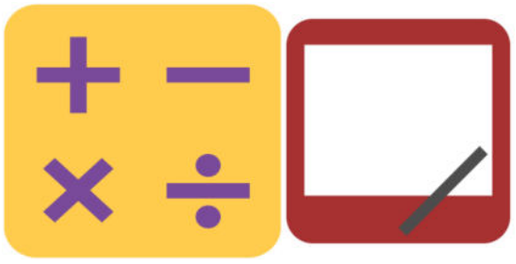
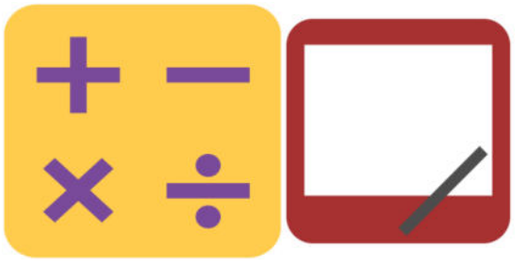


Write In the Parentheses

Write 12 = 12 ÷ 2 × 2

On your board, copy the equation.

Then, insert parentheses to make the statement true

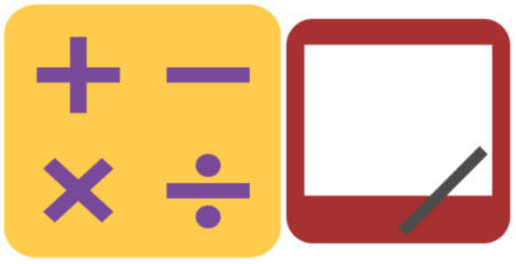


Write In the Parentheses

Write 3 = 12 ÷ 2 × 2

On your board, copy the equation.

Then, insert parentheses to make the statement true

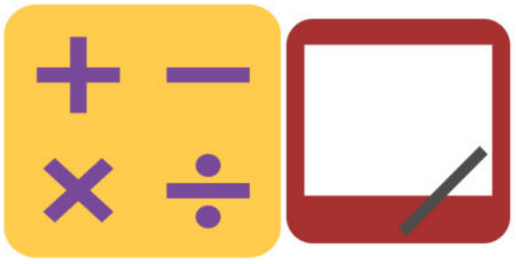


Write In the Parentheses

Write $10 = 35 - 5 \times 5$

On your board, copy the equation.

Then, insert parentheses to make the statement true



Write In the Parentheses

Write 20 – 10 ÷ 5 = 2

On your board, copy the equation.

Then, insert parentheses to make the statement true

Application Problem

Name _____ Date _____

Solve the following pairs of problems. Circle the pairs where both problems have the same answer.

1. a. $7 + (6 + 4)$

   b. $(7 + 6) + 4$

2. a. $(3 \times 2) \times 4$

   b. $3 \times (2 \times 4)$

3. a. $(2 \times 1) \times 5$

   b. $2 \times (1 \times 5)$

5. a. $(3 + 2) \times 5$

   b. $3 + (2 \times 5)$

6. a. $(8 \div 2) \times 2$

   b. $8 \div (2 \times 2)$

7. a. $(9 - 5) + 3$

   b. $9 - (5 + 3)$

Concept Development

Write 16 × 3 =

This could be difficult to solve, work with your partner to list factors that have a product of 16. Write them on your personal white board.

4, 8, and 2 are much friendlier factors than 16.

Factors

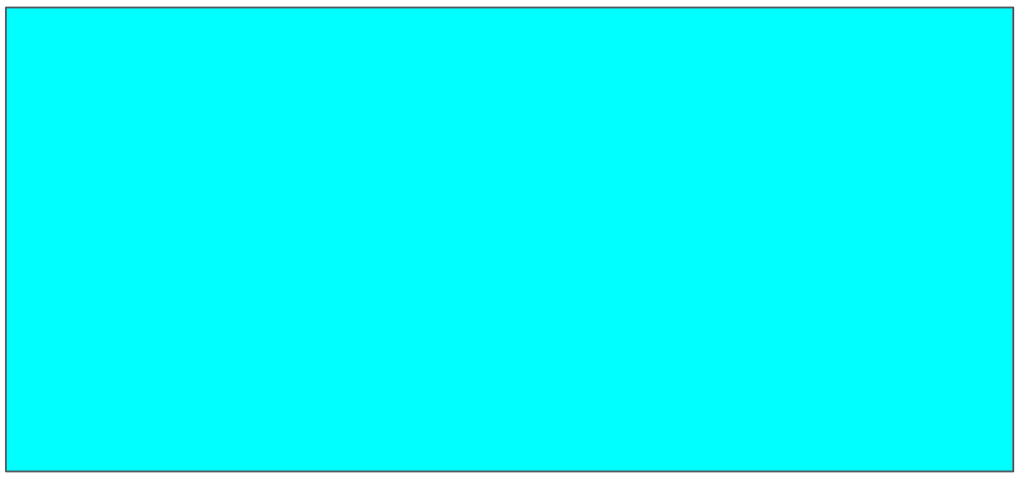
4 x 4 = 16

8 x 2 = 16

Concept Development

$(8 \times 2) \times 3$

Why do you think I put 8×2 in parentheses?



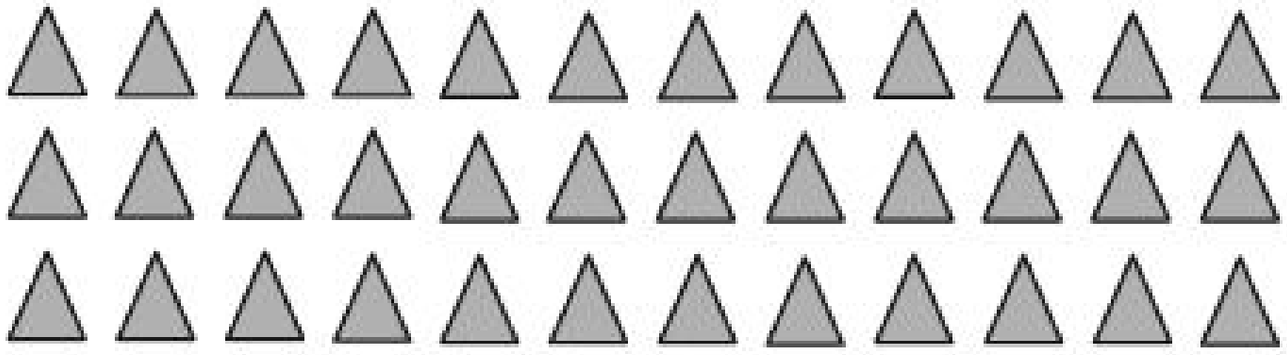
Concept Development

15 x 3 =

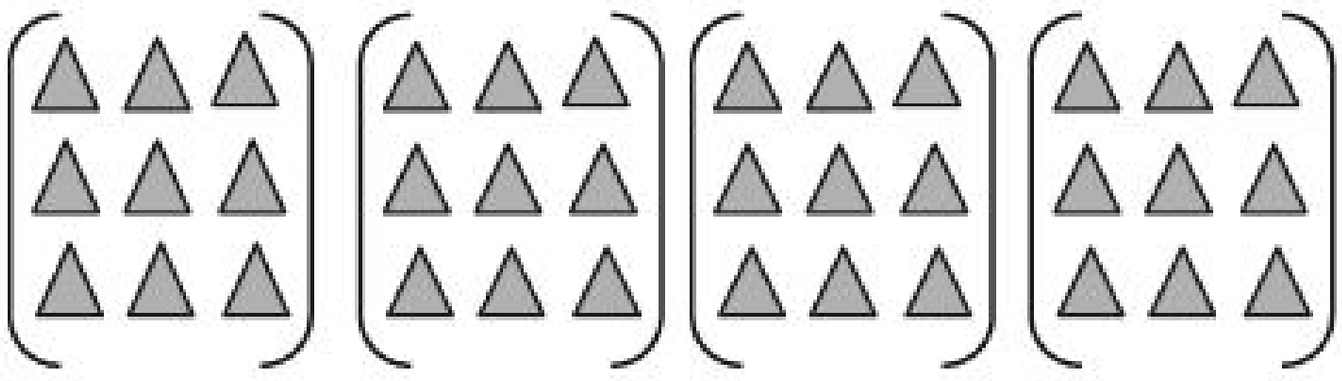
Problem Set

Name _____ Date _____

1. Use the array to complete the equation.



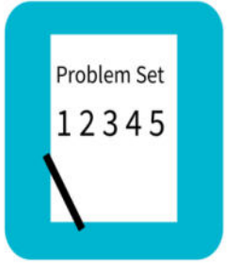
a. 3 × 12 = _____



b. (3 × 3) × 4

= _____ × 4

= _____



Student Debrief

Lesson Objective: Model the associative property as a strategy to multiply.

In Problem 1, how do the problems on the bottom simplify the problems on the top?

In Problem 3, how did Charlotte simplify?

How are the commutative property and this new strategy helpful for finding unknown, larger Facts?

How did the Application Problems relate to the lesson today?

Exit Ticket

Name _____ Date _____

Simplify to find the answer to 18 × 3. Show your work, and explain your strategy.