Eureka Math

3rd Grade
Module 1
Lesson 16

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Directions for customizing presentations are available on the next slide.

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- ➤ Click on the "pop-out" button in the upper right hand corner to change the view.
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Screen A

"pop-out"

Screen B

ReadyGEN™ in Action

3rd Grade
Unit 3, Module A
Lesson 1

Gr3(2) U3MAL1 Sample Lesson.pptx

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EN™ in Action

rd Grade
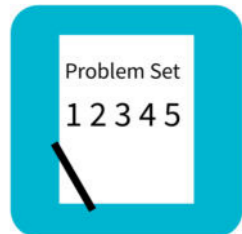Unit 3, Module A
Lesson 1

Icons

RDW — Read, Draw, Write

Learning Target

Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share
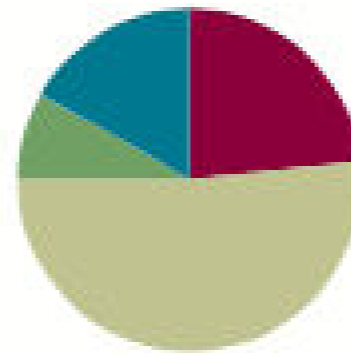
Whole Class

Individual

Partner

Small Group

Small Group Time

Lesson 16

Objective: Use the distributive property as a strategy to find related multiplication facts.
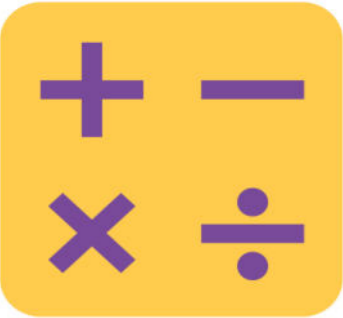
Suggested Lesson Structure

■ Fluency Practice	(14 minutes)	
■ Application Problem	(5 minutes)	
■ Concept Development	(31 minutes)	
■ Student Debrief	(10 minutes)	
Total Time	**(60 minutes)**	

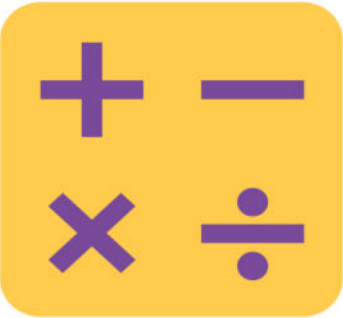I can use the distributive property as a strategy to find related multiplication facts.

Multiply by 4

7 x 4 =

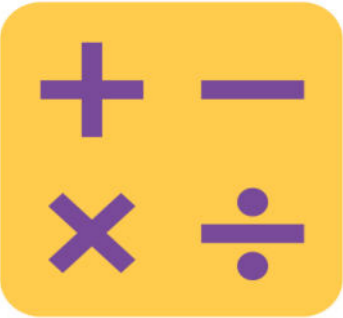4,____, ____, ____ , ____, ____, ____

7 fours is _____.

Let's skip count up by fours starting at 5 fours or 20.

Multiply by 4

Let's skip-count down to find the answer to 7 x 4.

Start at 10 fours or 40.

Pattern Sheet: Multiply by 4

Multiply.

4 x 1 = _____   4 x 2 = _____   4 x 3 = _____   4 x 4 = _____

4 x 5 = _____   4 x 6 = _____   4 x 7 = _____   4 x 8 = _____

4 x 9 = _____   4 x 10 = _____   4 x 6 = _____   4 x 7 = _____

4 x 6 = _____   4 x 8 = _____   4 x 6 = _____   4 x 9 = _____

4 x 6 = _____   4 x 10 = _____   4 x 6 = _____   4 x 7 = _____

4 x 6 = _____   4 x 7 = _____   4 x 8 = _____   4 x 7 = _____

4 x 9 = _____   4 x 7 = _____   4 x 10 = _____   4 x 7 = _____

4 x 8 = _____   4 x 6 = _____   4 x 8 = _____   4 x 7 = _____

4 x 8 = _____   4 x 9 = _____   4 x 8 = _____   4 x 10 = _____

Group Counting

Let's count by twos.

Let's count by threes.
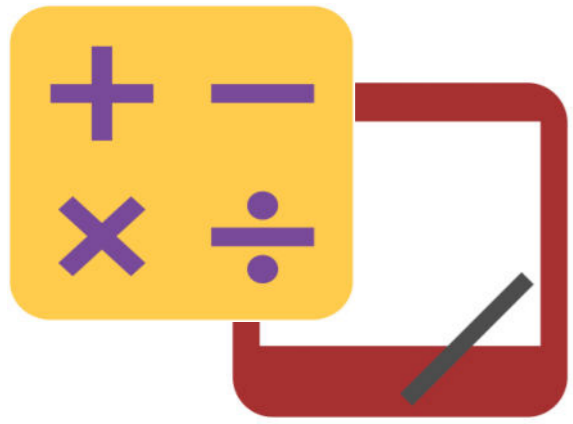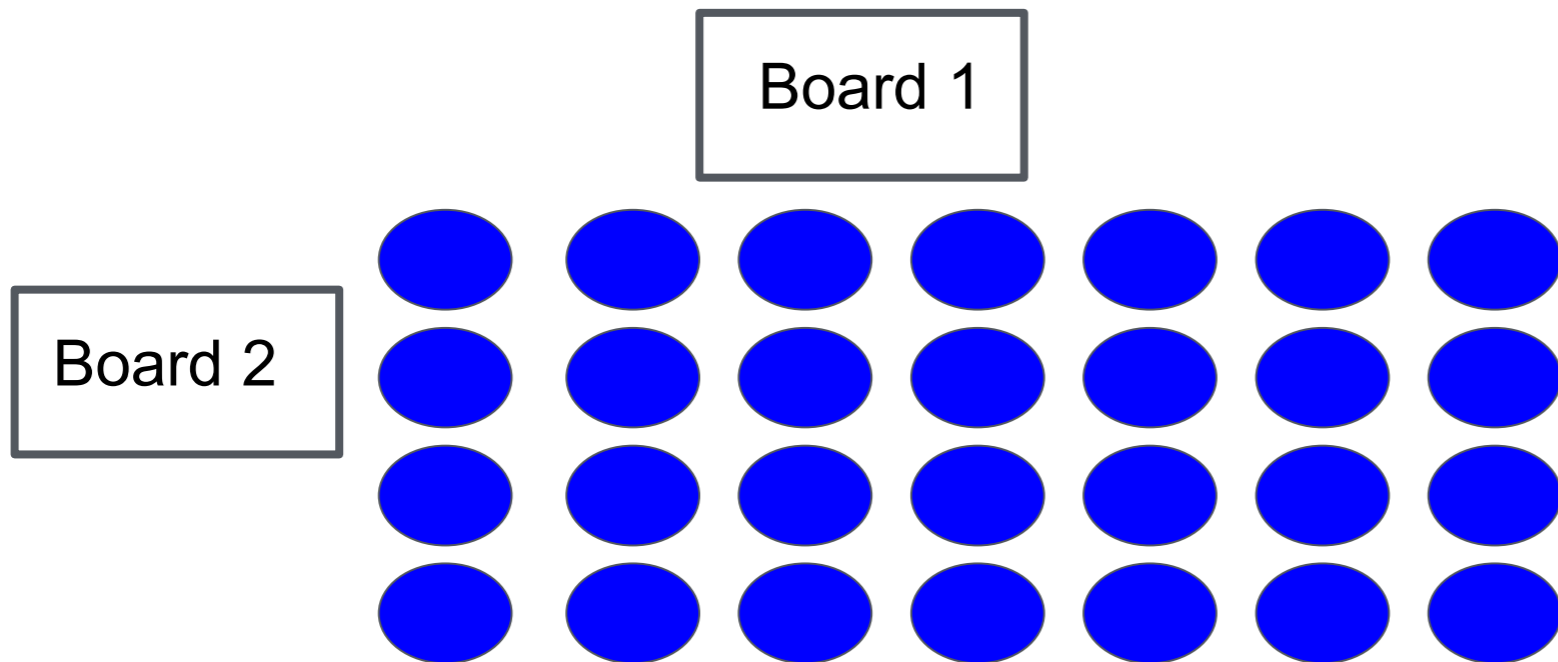
Read Tape Diagram

?

Say the addition sentence.

Say the multiplication sentence starting with the number of groups.

Application Problem

Ms. Williams draws the array below to show the class seating chart. She sees the students in 4 rows of 7 when she teaches at Board 1. Use the commutative property to show how Ms. Williams sees the class when she teaches at Board 2.
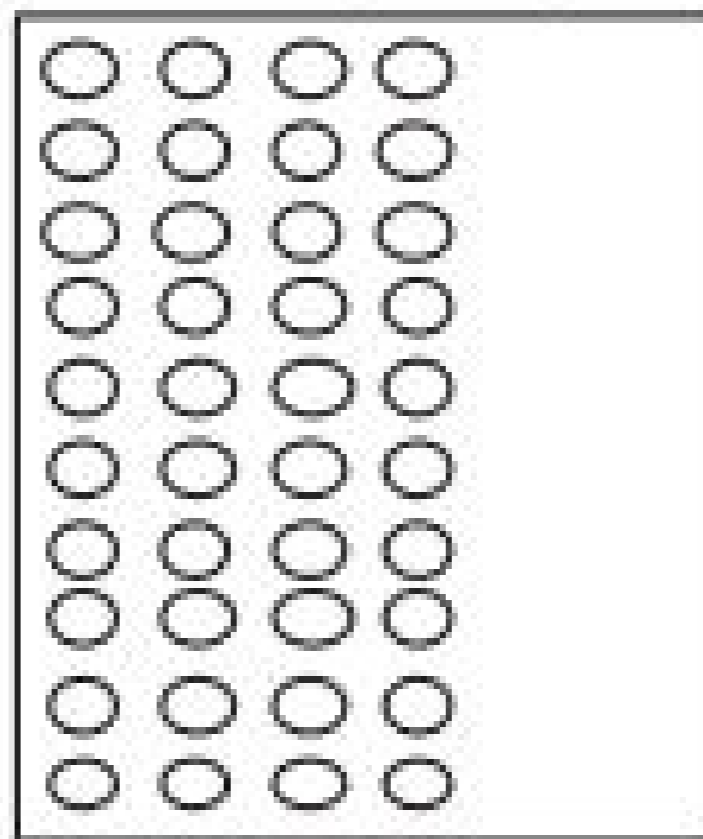
Concept Development

Problem 1: Model the 5 + n pattern as a strategy for multiplying using units of 4.
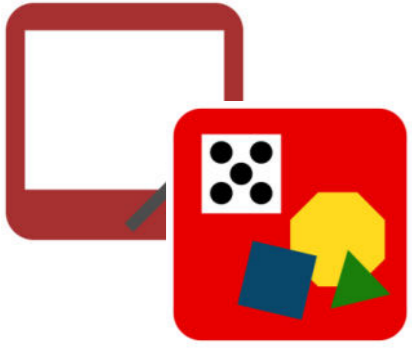

Fours Array Template
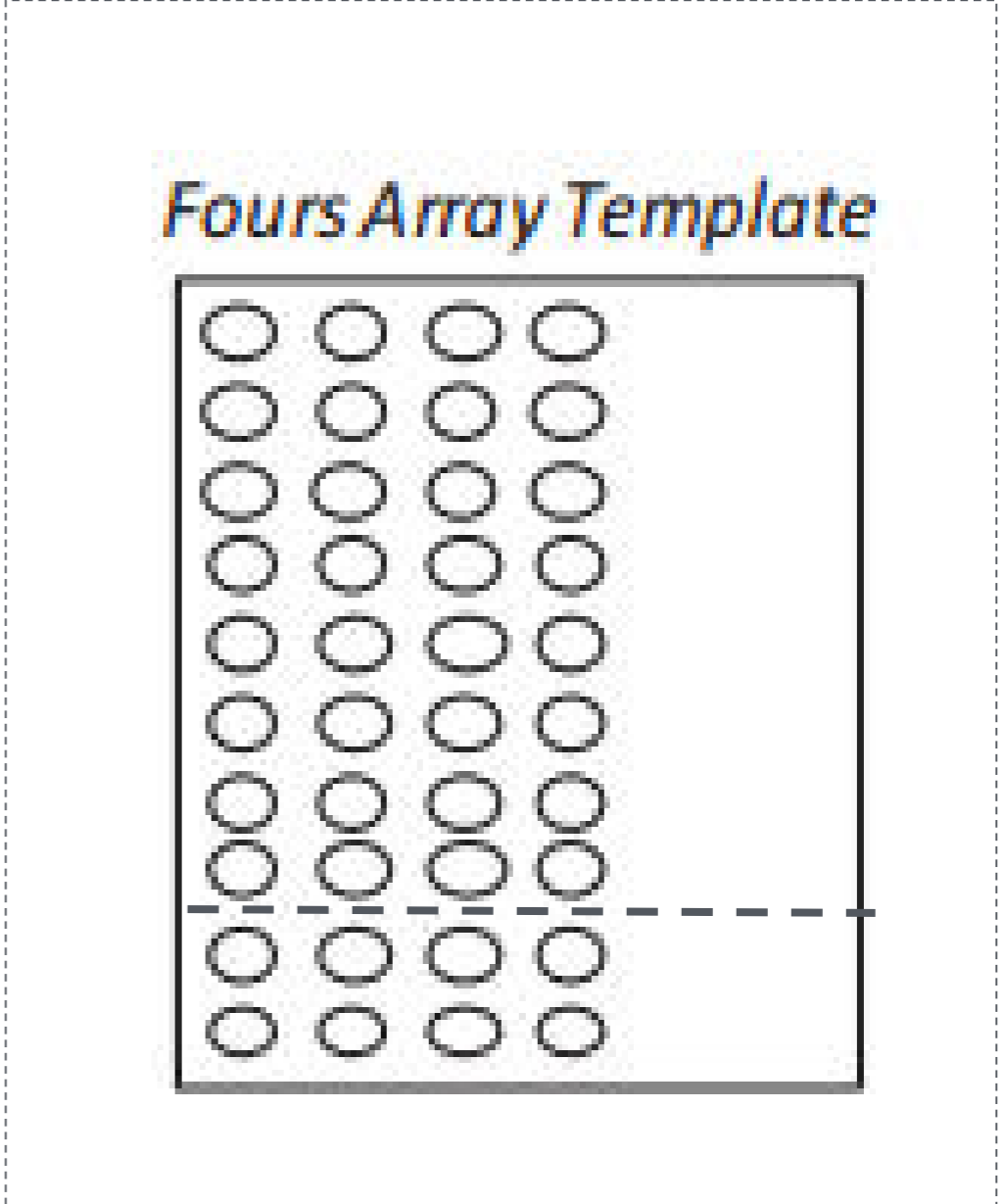
Repeat the process

5 x 4 and 2 x 4 to model 7 x 4

5 x 4 and 4 x 4 to model 9 x 4
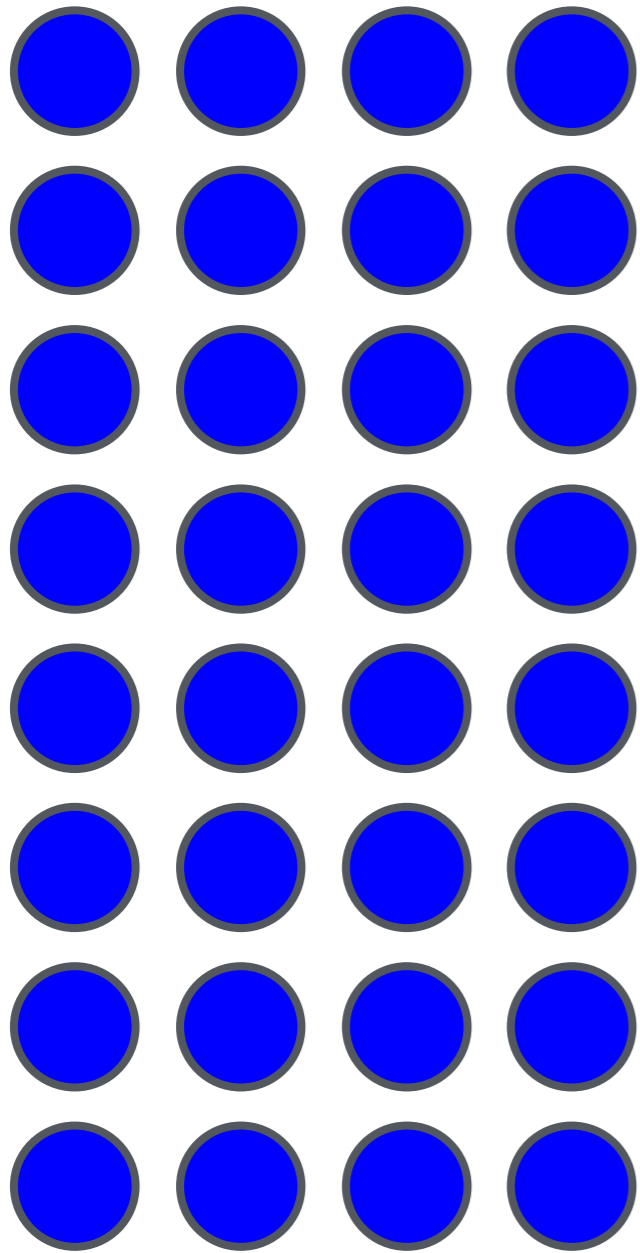
Concept Development

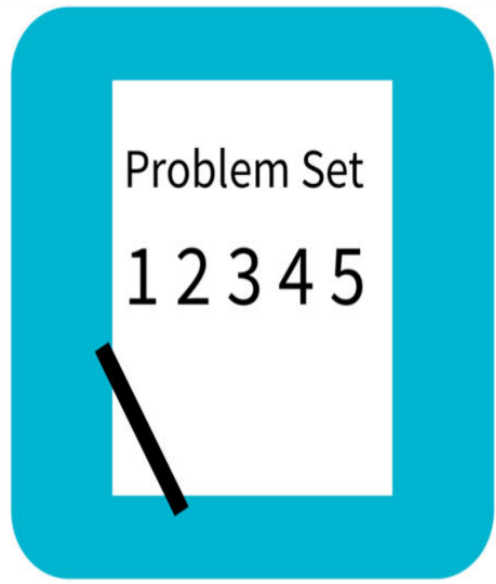Problem 2: Apply the 5 + n pattern to decompose and solve larger facts.

Let's fold our template so that only 8 rows of 4 are showing...

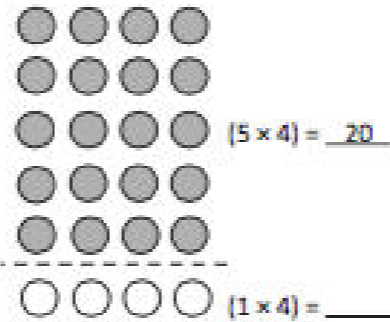**Fours Array Template**

What multiplication expression are we finding?

Problem Set

Name _____ Date _____

1. Label the array. Then, fill in the blanks below to make true number sentences.
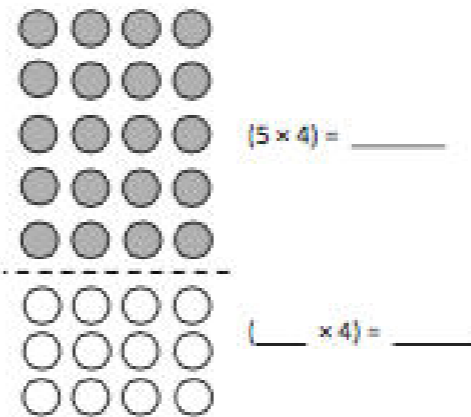
a. $6 \times 4 =$ _____
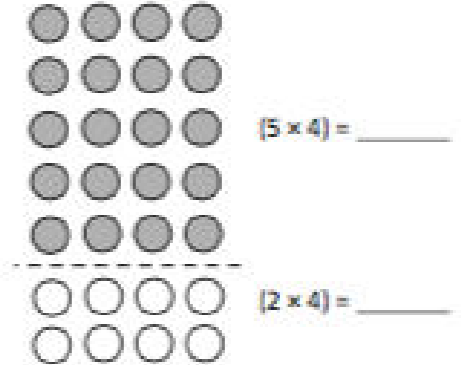
$(5 \times 4) =$ __20__

$(1 \times 4) =$ _____

$(6 \times 4) = (5 \times 4) + (1 \times 4)$

$= $ __20__ $+$ _____

$= $ _____

b. $7 \times 4 =$ _____

$(5 \times 4) =$ _____

$(2 \times 4) =$ _____

$(7 \times 4) = (5 \times 4) + (2 \times 4)$

$= $ _____ $+$ _____

$= $ __28__

c. $8 \times 4 =$ _____

$(5 \times 4) =$ _____

$(\rule{0.5cm}{0.15mm} \times 4) =$ _____

$(8 \times 4) = (5 \times 4) + (\rule{0.5cm}{0.15mm} \times 4)$

$= $ _____ $+$ _____

$= $ _____

d. $9 \times 4 =$ _____

$(5 \times 4) =$ _____

$(\rule{0.5cm}{0.15mm} \times 4) =$ _____

$(9 \times 4) = (5 \times 4) + (\rule{0.5cm}{0.15mm} \times 4)$

$= $ _____ $+$ _____

$= $ _____
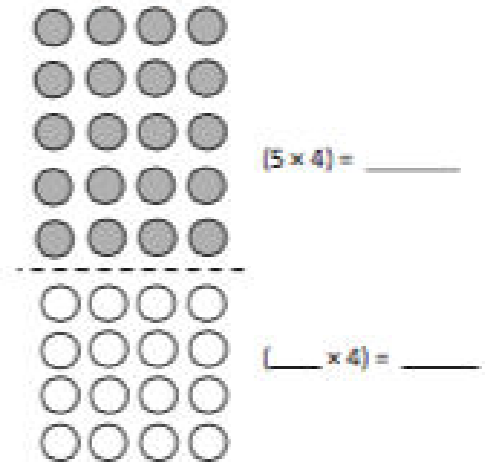
Debrief

Lesson Objective: Use the distributive property as a strategy to find related multiplication facts.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

Debrief

Any combination of the questions below may be used to lead the discussion.

- Review vocabulary term **distribute**.
- Explain how breaking apart or finding the products of two smaller arrays helps find the product of a larger array in Problem 1(d).
- Share strategies for solving Problem 2.
- Explain the following sequence:

$$(5 + 3) \times 4 =$$

$$(5 \times 4) + (3 \times 4) =$$

5 fours + 3 fours =

8 fours =

$$8 \times 4 =$$

- How does the sequence above show a number being distributed?
- Could the strategy we learned today change your approach to finding the total students in our Application Problem? Why or why not?
- Why would the strategy we learned today be helpful for solving an even larger fact like 15×4?

Exit Ticket

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help with assessing students' understanding of the concepts that were presented in today's lesson and planning more effectively for future lessons. The questions may be read aloud to the students.