Unit 7 Module 1 Session 3
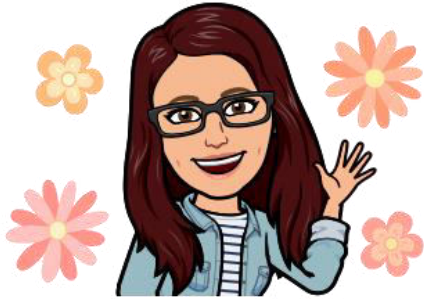## Problems and Operations
Multiplying By Eleven

Getting Ready–

- Base ten area pieces (1 set for each student pair, and 1 set for display)

- TM T6 Two-Step Warm Ups

- SB 225 Multiplication by Eleven

- Student Journals

- Multiply using the associative property

- Determine the correct equation to match the story problem using an unknown variable

Vocabulary

Equation

Multiply

Two-step story problem

Unknown quantity

Two-Step Warm-Ups

For each problem below:

- Tell what the problem is asking you to figure out.
- Write an equation for the problem. Use a letter to stand for the unknown quantity.
- Solve the problem.

1 Maria Jose has a sticker book with 8 pages. Each page holds 12 stickers. Right now, there are 54 stickers in her book. How many more stickers will the book still hold?

Let's look at our choices one at a time and solve them in our journals.

2 Micah collects baseball cards and puts them in a binder filled with pages that hold 9 cards each. His goal is to collect 270 cards by the end of the year. Right now, Micah has filled 11 pages in his book. How many more cards does he need to collect to meet his goal?

We will do number three in session 5

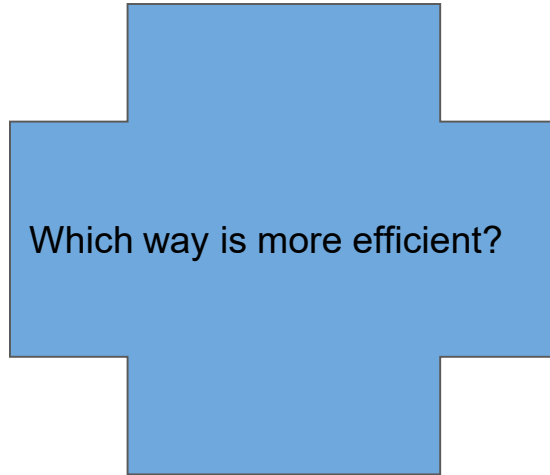Pass out base ten area pieces to each pair of students

Show me a 3x11 array using the base ten blocks.

Did anyone use all units to build 3x11?

Did anyone use 3 rods and 3 units?

Which way is more efficient?

Using our more efficient strategy, build a 4x11 array.

Now a 5x11 array.

How about a 10x11? Is there anything different you could do to solve this one?

If I asked you to do 11x11 and 12x11 could you use the 10x11?

Open Workbooks
to page 225 and
follow along

⟲ Multiplying by Eleven

1 Solve the problems below. Use your base ten area pieces to help if you want.

$3 \times 11 =$ ⬚ $11 \times 5 =$ ___ $7 \times 11 =$ ___

4	6	10	11	11	2
× 11	× 11	× 11	× 8	× 9	× 11
⬚	⬚	⬚	⬚	⬚	⬚

2 Zack used his base ten area pieces to build this picture of 3×11. Jon used his base ten area pieces to build it a different way.

Zack's Way	Jon's Way
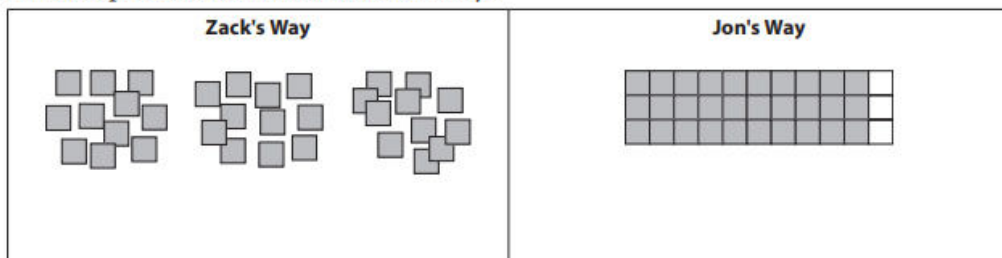
a Write an equation below the picture in each box to show the total number of units.

b Which way do you like better? Why?

3 Jenna is starting a sticker book. There are 5 rows of stickers on each page, and each row has 11 stickers. So far, she's filled 2 pages. How many stickers is that in all?

a Write an equation for this problem. Use a letter to stand for the unknown quantity.

b Solve the problem. Show all your work including numbers, words, or labeled sketches.

Work Places

5C Line 'Em Up

5D Division Capture

6A Tangram Polygons

6B Geoboard Polygons

6C Guess My Quadrilateral

6D Area or Perimeter

Daily Practice

SB 226 Multiplication, Division & perimeter practice