

Eureka Math

4th Grade Module 3 Lesson 6

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.



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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.

The image shows a transition from a presentation viewer (Screen A) to an editor (Screen B). In Screen A, a blue slide titled 'ReadyGEN™ in Action' is shown. A red box highlights the 'pop-out' button in the top right corner of the browser window. A red arrow points from this button to Screen B. Screen B shows the Google Slides editor interface for 'Gr3(2) U3MAL1 Sample Lesson.pptx'. The 'File' menu is open, and 'Make a copy...' is highlighted. A 'Copy document' dialog box is open, showing the new name 'Rename Your Presentation' and 'OK' and 'Cancel' buttons. The background slide from Screen A is visible behind the editor interface.

Screen A

ReadyGEN™ in Action

3rd Grade
Unit 3, Module A
Lesson 1

“pop-out”

Screen B

Gr3(2) U3MAL1 Sample Lesson.pptx

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

Share...

New

Open...

Rename...

Make a copy...

Organize...

Move to trash

Import slides...

See revision history

Language

Download as

Publish to the web...

Email collaborators...

Email as attachment...

Page setup...

Print settings and preview

Print

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

ReadyGEN™ in Action

3rd Grade
Unit 3, Module A
Lesson 1

Icons



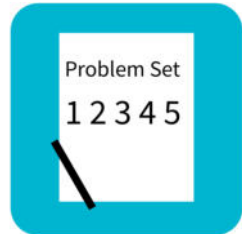
Read, Draw, Write



Learning Target



Personal White Board



Problem Set



Manipulatives Needed



Fluency



Think Pair Share



Whole Class



Individual



Partner



Small Group



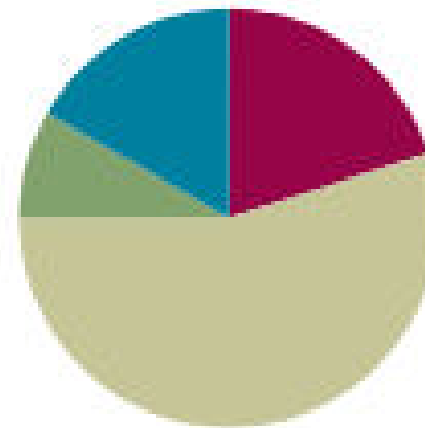
Small Group Time

Lesson 6

Objective: Multiply two-digit multiples of 10 by two-digit multiples of 10 with the area model.

Suggested Lesson Structure

■ Fluency Practice	(12 minutes)
■ Application Problem	(5 minutes)
■ Concept Development	(33 minutes)
■ Student Debrief	(10 minutes)
Total Time	(60 minutes)





**I can multiply two-digit
multiples of 10 by
two-digit multiples of 10
with the area model.**



Fluency Practice

Multiply Units

$$3 \times 2 = \underline{\quad}$$

**Say the multiplication sentence in
unit form.**



Fluency Practice

Multiply Units

$$30 \times 2 = \underline{\quad}$$

**Say the multiplication sentence
in **unit** form.**



Fluency Practice

Multiply Units

$$300 \times 2 = \underline{\quad}$$

**Say the multiplication sentence
in **unit** form.**

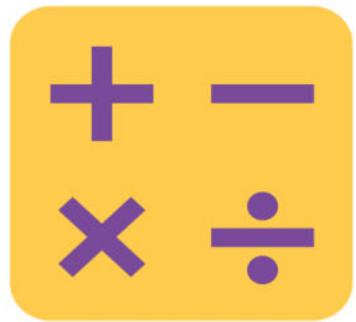


Fluency Practice

Multiply Units

$$3,000 \times 2 = \underline{\hspace{2cm}}$$

**Say the multiplication sentence
in **unit** form.**



Fluency Practice

Multiply Units

$$3,000 \times 3 = \underline{\hspace{2cm}}$$

**Say the multiplication sentence
in **unit** form.**



Fluency Practice

Multiply Units

$$30 \times 3 = \underline{\quad}$$

**Say the multiplication sentence
in **unit** form.**



Fluency Practice

Multiply Units

$$300 \times 5 = \underline{\hspace{2cm}}$$

**Say the multiplication sentence
in **unit** form.**



Fluency Practice

Multiply Units

$$70 \times 5 = \underline{\quad}$$

**Say the multiplication sentence
in **unit** form.**



Fluency Practice

Multiply Units

$$400 \times 8 = \underline{\hspace{2cm}}$$

**Say the multiplication sentence
in **unit** form.**



Fluency Practice

Multiply Units

$$40 \times 5 = \underline{\quad}$$

**Say the multiplication sentence
in **unit** form.**



Fluency Practice

Multiply Units

$$800 \times 5 = \underline{\hspace{2cm}}$$

**Say the multiplication sentence
in **unit** form.**



Fluency Practice

Take Out the 10, 100, or 1,000

I'll say a number.

**I want you to restate the number
as a multiplication sentence,
taking out the
10, 100, or 1,000.**



Fluency Practice

Take Out the 10, 100, or 1,000

20

(say 2 x 10)



Fluency Practice

Take Out the 10, 100, or 1,000

200



Fluency Practice

Take Out the 10, 100, or 1,000

2,000



Fluency Practice

Take Out the 10, 100, or 1,000

5,000



Fluency Practice

Take Out the 10, 100, or 1,000

30



Fluency Practice

Take Out the 10, 100, or 1,000

700



Fluency Practice

Take Out the 10, 100, or 1,000

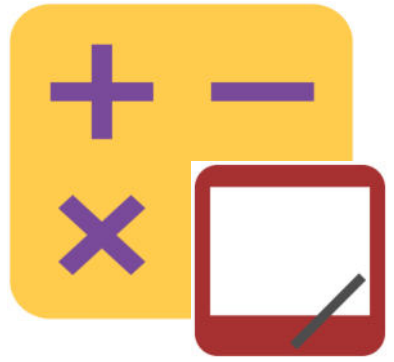
8,000



Fluency Practice

Take Out the 10, 100, or 1,000

90



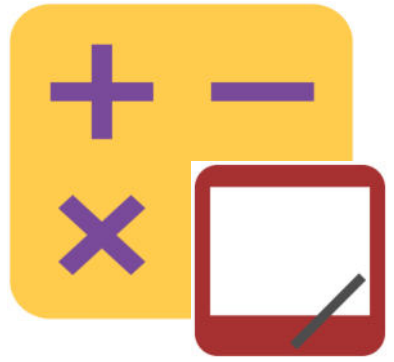
Fluency Practice

Multiply by Multiples of 10, 100, and 1,000

$$5 \times 300$$

Say the multiplication expression.

Rewrite the multiplication sentence, taking out the 100, and solve.



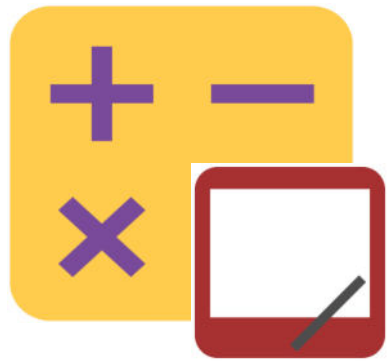
Fluency Practice

Multiply by Multiples of 10, 100, and 1,000

$$70 \times 3$$

Say the multiplication expression.

Rewrite the multiplication sentence, taking out the 10, and solve.



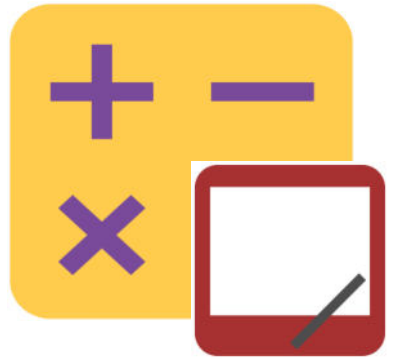
Fluency Practice

Multiply by Multiples of 10, 100, and 1,000

$$8 \times 4,000$$

Say the multiplication expression.

Rewrite the multiplication sentence, taking out the 1,000, and solve.



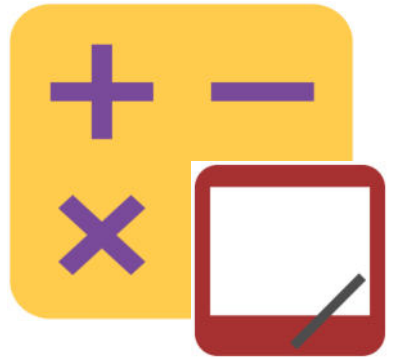
Fluency Practice

Multiply by Multiples of 10, 100, and 1,000

$$6 \times 200$$

Say the multiplication expression.

Rewrite the multiplication sentence, taking out the 100, and solve.



Fluency Practice

Multiply by Multiples of 10, 100, and 1,000

$$50 \times 8$$

Say the multiplication expression.

Rewrite the multiplication sentence, taking out the 10, and solve.



Application Problem

**There are 400 children at Park Elementary School.
Park High School has 4 times as many students.**



How many students in all attend both schools?

**Lane High School has 5 times as many students
as Park Elementary.**

**How many more students attend
Lane High School than Park High School?**

Concept Development

Materials

-  (T) **Thousands place value chart**
-  (S) **Personal white boards, thousands place value chart (template)**



Concept Development

$$30 \times 20$$

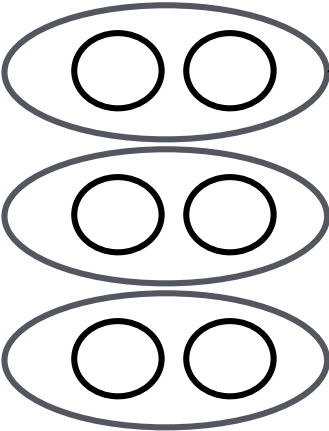
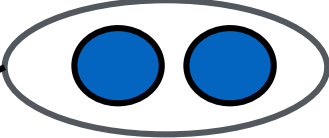
**Here we are multiplying a two-digit number
by another two-digit number.**

**What are some other ways we could express
 30×20 ?**



Concept Development

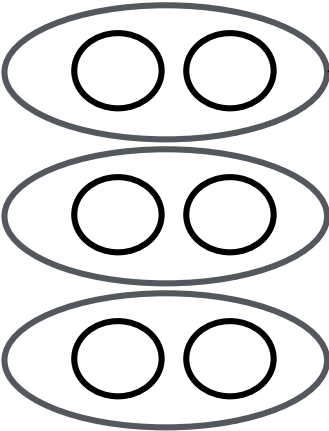
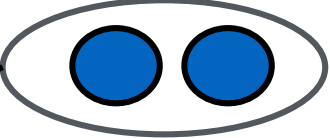
Let's use $10 \times 20 \times 3$ in a place value chart to help us solve 30×20

hundreds	tens	ones
<p data-bbox="834 1277 976 1344">$\times 10$</p> 		



Concept Development

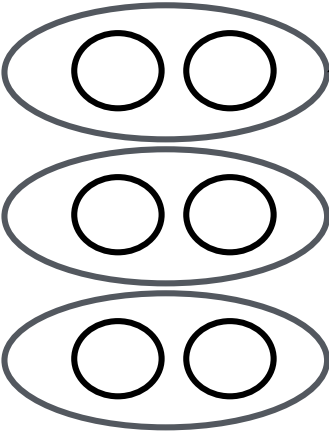
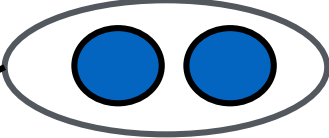
What is 2 tens times 10?

hundreds	tens	ones
<p data-bbox="834 1277 976 1344">X 10</p> 		



Concept Development

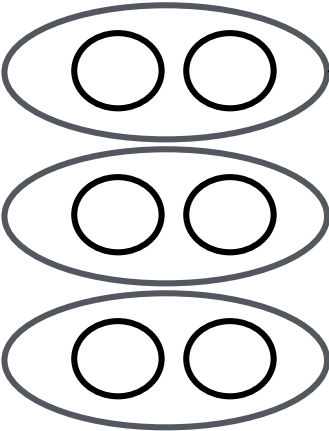
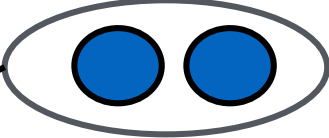
So, the value of 10×20 is...?

hundreds	tens	ones
<p data-bbox="834 1277 971 1344">X 10</p> 		



Concept Development

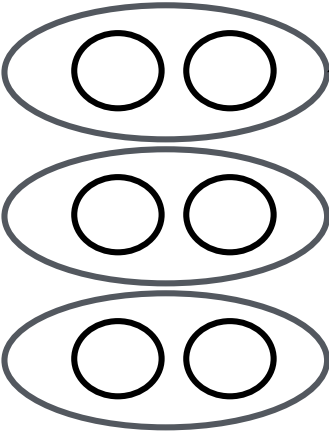
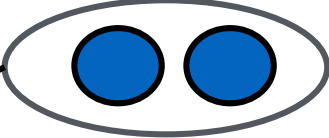
And, then 200×3 ?

hundreds	tens	ones
<p data-bbox="834 1277 976 1344">X 10</p> 		



Concept Development

$10 \times 20 \times 3$ is...?

hundreds	tens	ones
<p data-bbox="834 1277 971 1344">X10</p> 		



Concept Development



**With your partner,
represent one of the following
on your place value chart:**

$10 \times 30 \times 2$ as 10 groups of 30 times 2.

$2 \times 30 \times 10$ as 2 groups of 30 times 10.

$3 \times 20 \times 10$ as 3 groups of 20 times 10.

Concept Development

When we multiply a two-digit number by another two-digit number, there are many equivalent ways to express it as a product.

Decomposing our multiplication problem into more units can help us solve.



Concept Development

**Let's model 40×20
as an area.**

**Tell your partner
what 40×20 is.**



Concept Development

**What is 20 in unit
form?**



Concept Development

**What is 4 tens
times 2 tens?**



Concept Development

**Let's prove how we can
multiply the units.**

**Draw a 40 by 20 rectangle
on your personal white
board.**

**Partition the horizontal side
into 2 tens and the vertical
side into 4 tens. Label each
side.**

**What is the area of one
square?**



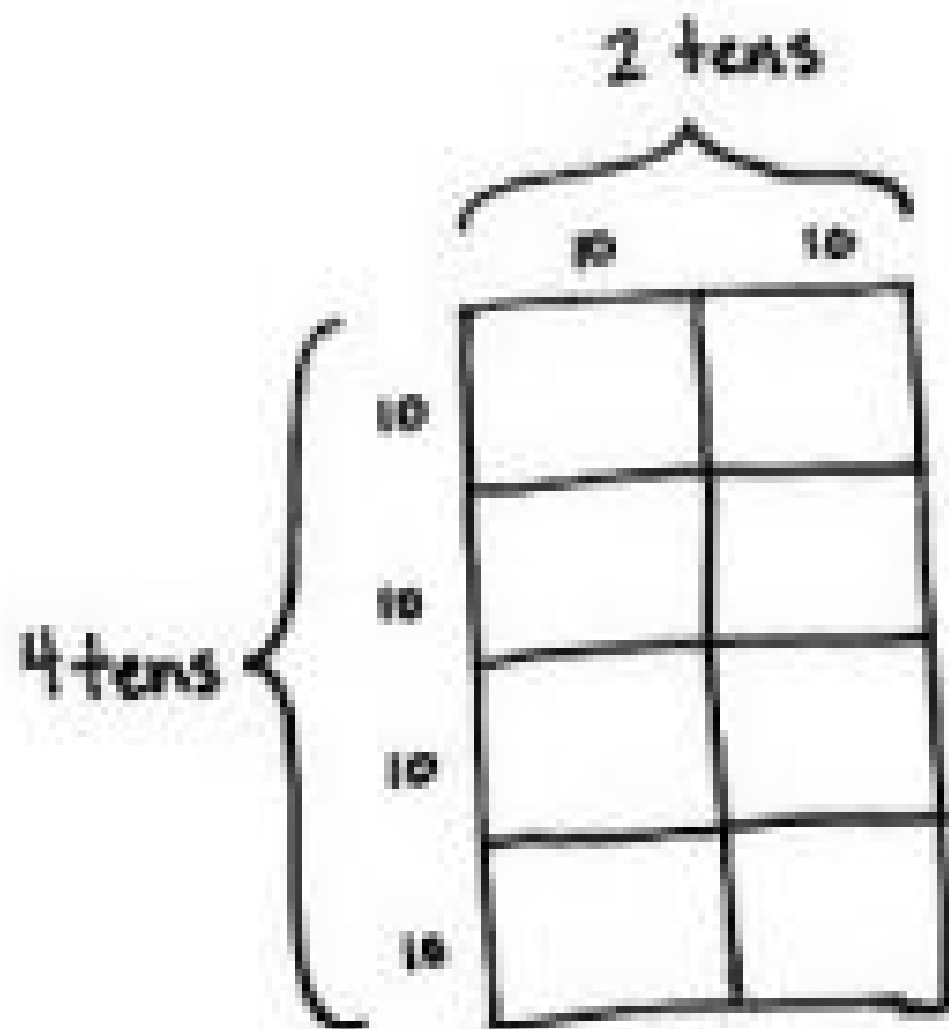
Concept Development

Let's prove how we can multiply the units.

Draw a 40 by 20 rectangle on your personal white board. Partition the horizontal side into 2 tens and the vertical side into 4 tens. Label each side.

Label each side.

What is the area of one square?

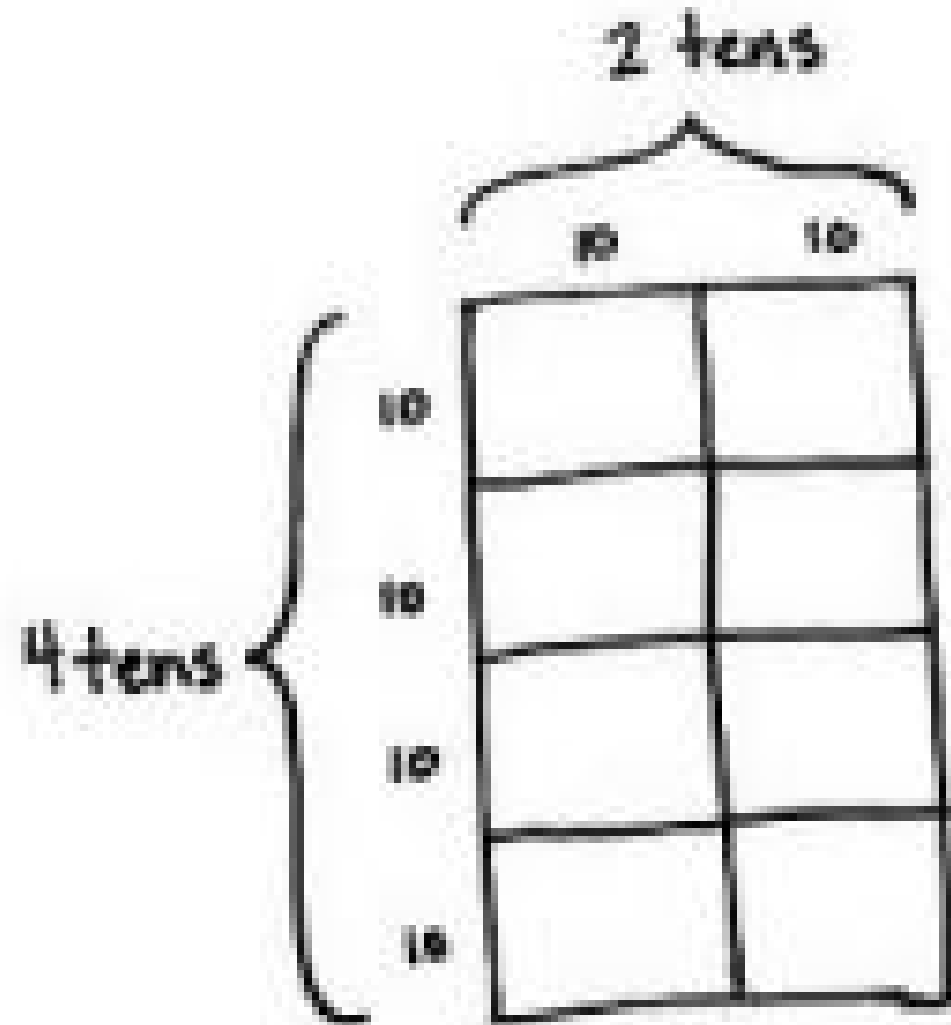


$$4 \text{ tens} \times 2 \text{ tens} = 8 \text{ hundreds}$$



Concept Development

**Say a
multiplication
sentence
for how many
of the squares
there are.**



$$4 \text{ tens} \times 2 \text{ tens} = 8 \text{ hundreds}$$



Concept Development

Tell your partner
how this
rectangle shows

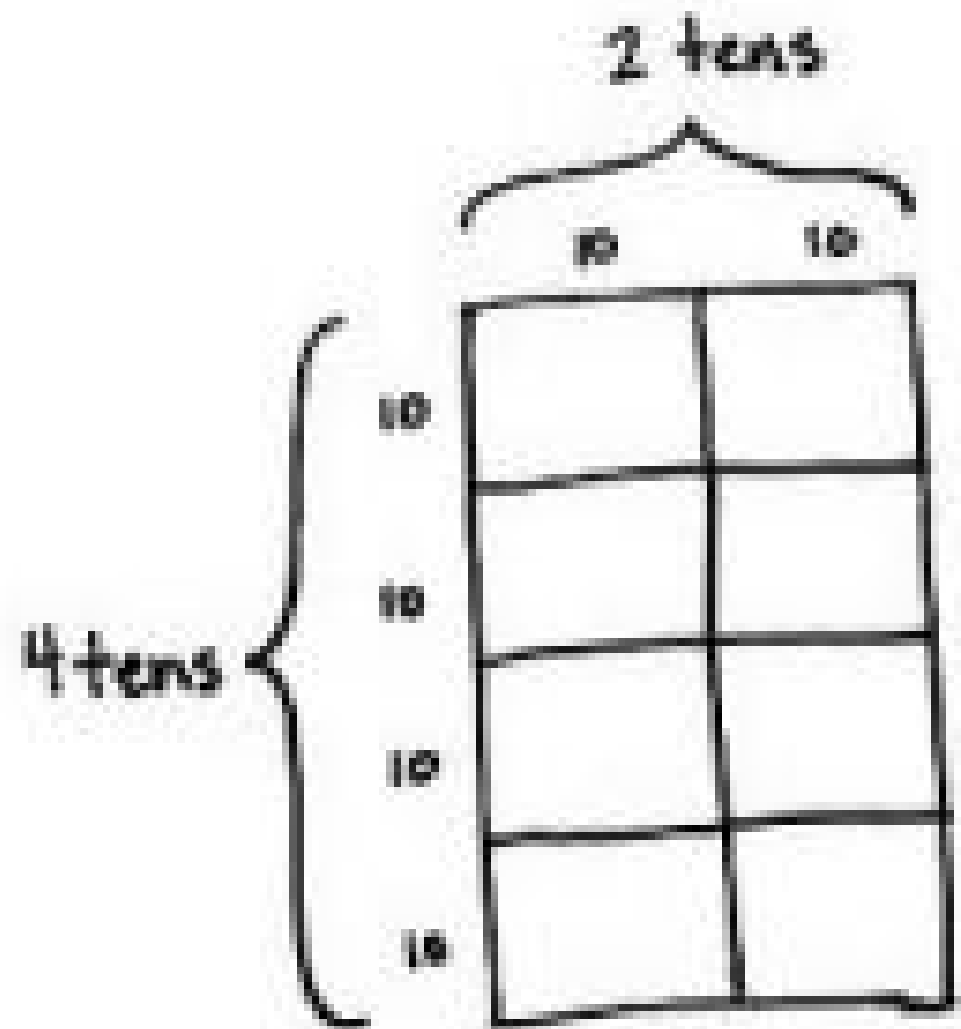
4 tens

times

2 tens

equals

8 hundreds.



$$4 \text{ tens} \times 2 \text{ tens} = 8 \text{ hundreds}$$

Concept Development

50 x 40

Name 50 x 40 in *unit* form.



Concept Development

50 x 40

**With your partner,
draw a rectangle to represent
5 tens times 4 tens.**

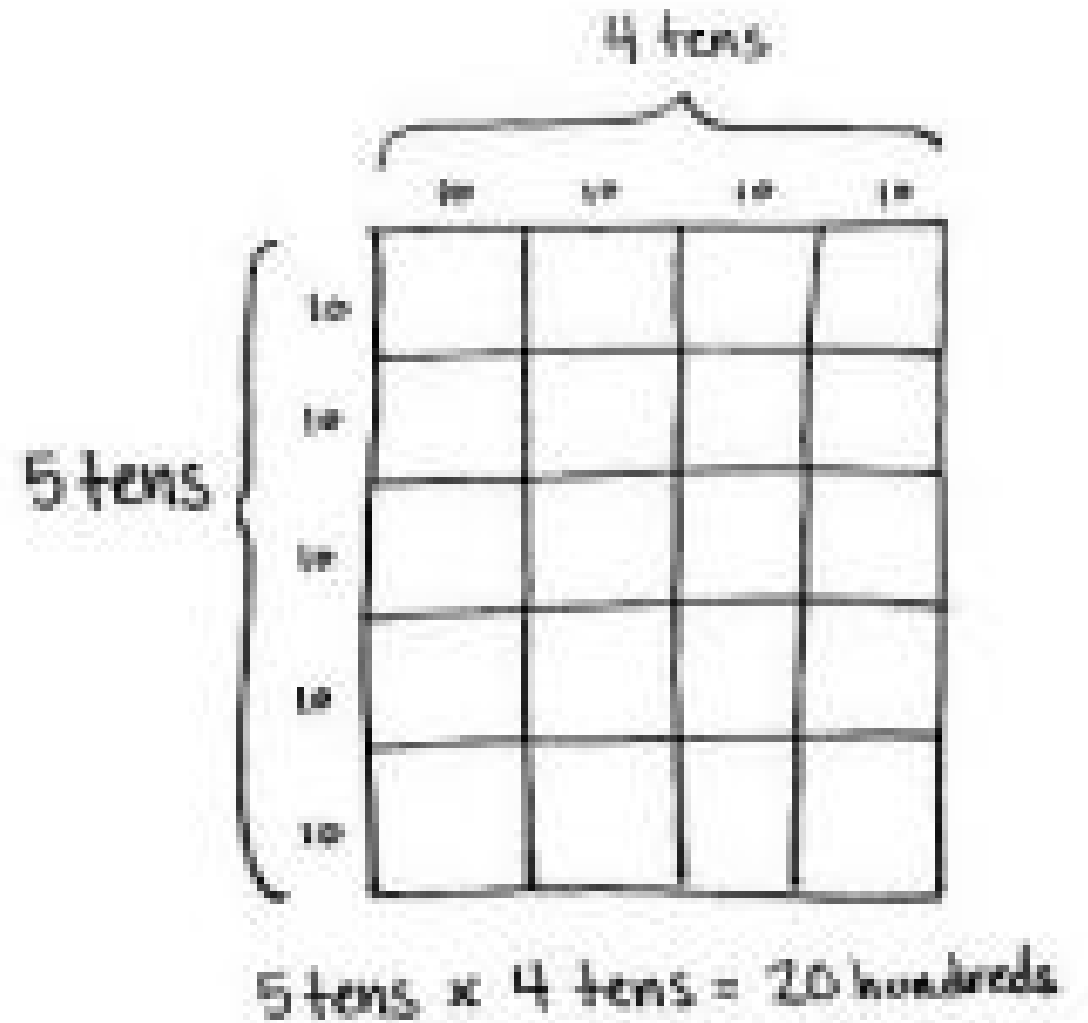


Concept Development

50 x 40

**With your partner,
draw a rectangle to
represent**

5 tens times 4 tens.





Concept Development

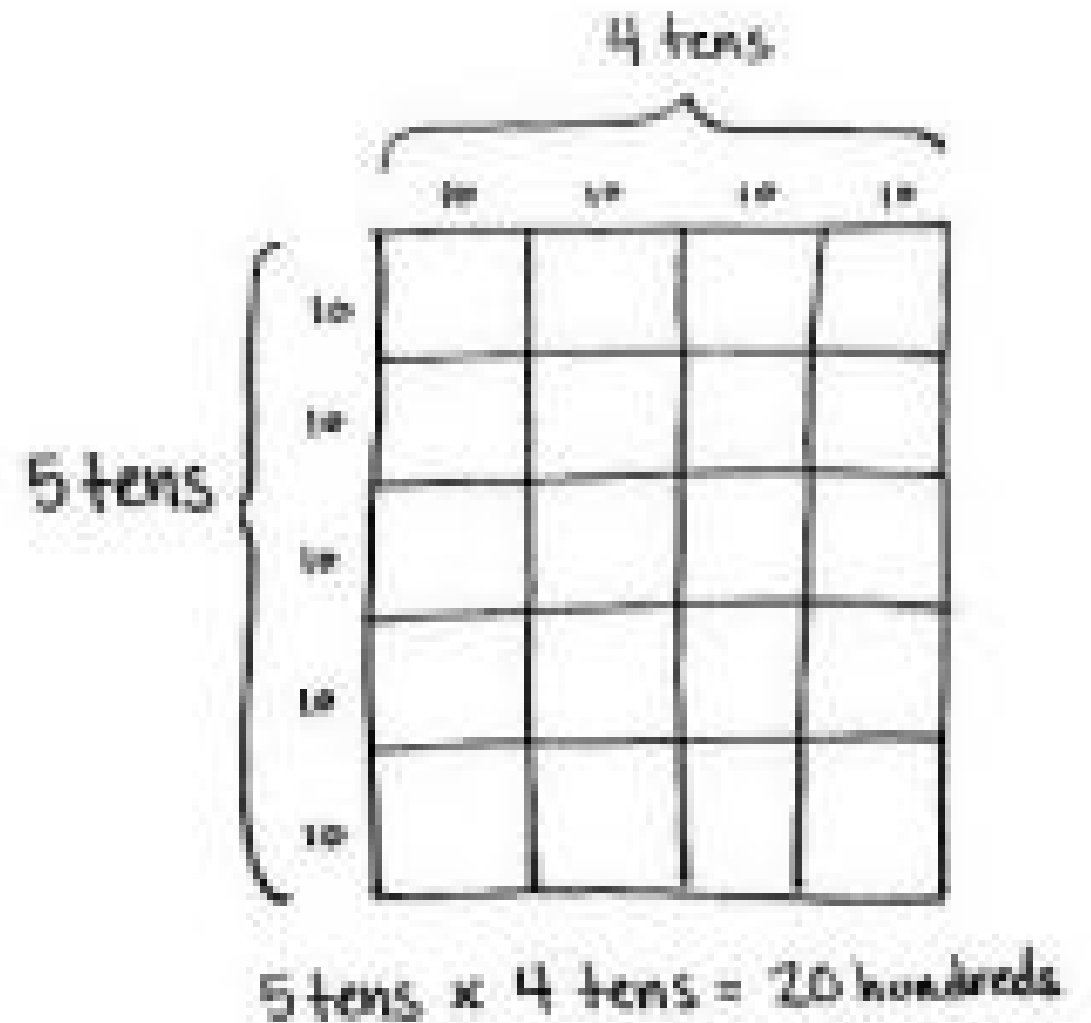
$$\underline{50 \times 40}$$

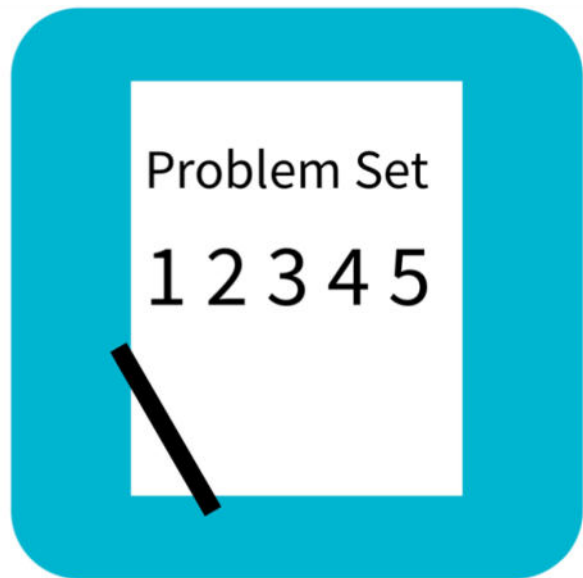
$$5 \times 4 = 20 \text{ (or 2 tens)}$$

$$10 \times 10 = 100$$

$$20 \times 100 = 2000$$

(or 2 tens)





Problem Set

Name _____

Date _____

Represent the following problem by drawing disks in the place value chart.

1. To solve 20×40 , think

$$(2 \text{ tens} \times 4) \times 10 = \underline{\hspace{2cm}}$$

$$20 \times (4 \times 10) = \underline{\hspace{2cm}}$$

$$20 \times 40 = \underline{\hspace{2cm}}$$

hundreds	tens	ones

2. Draw an area model to represent 20×40 .

Debrief

What patterns did you notice while solving Problem 1?

Explain to your partner how to solve the problem 80×50 from Problem 10. What does the answer have to do with thousands when the units in 80 and 50 are 8 tens and 5 tens?

To solve $4 \times 10 \times 2 \times 10$, you can multiply 4×2 to get 8, then multiply 10×10 to get 100, then multiply the 8 times 100. Is it always possible to rearrange numbers like this when multiplying?

Talk to your partner about how you solved Problem 2. Can you come up with a different way to solve this problem?

Exit Ticket

Name _____

Date _____

Represent the following problem by drawing disks in the place value chart.

1. To solve 20×30 , think

$$(2 \text{ tens} \times 3) \times 10 = \underline{\hspace{2cm}}$$

$$20 \times (3 \times 10) = \underline{\hspace{2cm}}$$

$$20 \times 30 = \underline{\hspace{2cm}}$$

hundreds	tens	ones

2. Draw an area model to represent 20×30 .