

Eureka Math

4th 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.



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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 the Google Slides editor (Screen B). Screen A displays a blue slide with the text "ReadyGEN™ in Action" and "3rd Grade Unit 3, Module A Lesson 1". A red box highlights the "pop-out" button in the top right corner of the viewer. A red arrow points from this button to Screen B. Screen B shows the Google Slides editor interface for a file named "Gr3(2) U3MAL1 Sample Lesson.pptx". The "File" menu is open, and the "Make a copy..." option is highlighted with a red box. A "Copy document" dialog box is open, showing the "Enter a new document name:" field with the text "Rename Your Presentation". The "OK" button is highlighted with a red box. The background of Screen B is the same blue slide as in Screen A.

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



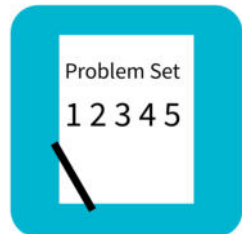
Read, Draw, Write



Learning Target



Personal White Board



Problem Set



Manipulatives Needed



Fluency



Think Pair Share



Whole Class



Individual



Partner



Small Group



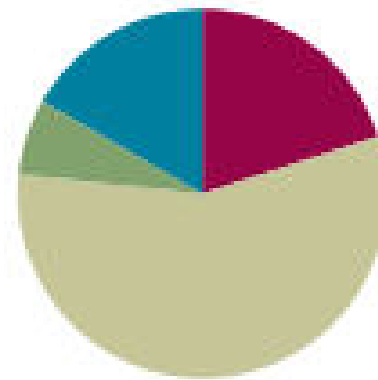
Small Group Time

Lesson 9

Objective: Multiply three- and four-digit numbers by one-digit numbers applying the standard algorithm.

Suggested Lesson Structure

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



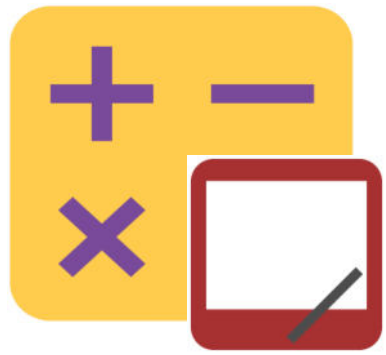
Fluency Practice (12 minutes)

- Expanded Form **2.NBT.3** (3 minutes)
- Multiply Mentally **4.NBT.4** (3 minutes)
- Multiply Using Disks **4.NBT.5** (6 minutes)

Expanded Form (3 minutes)



**I can multiply three- and four-digit numbers
by one-digit numbers applying the
standard algorithm.**

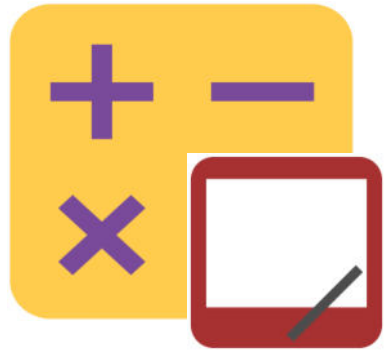


Fluency Practice

Expanded Form

$$300 + 40 + 3$$

Say the addition sentence with the answer in standard form.

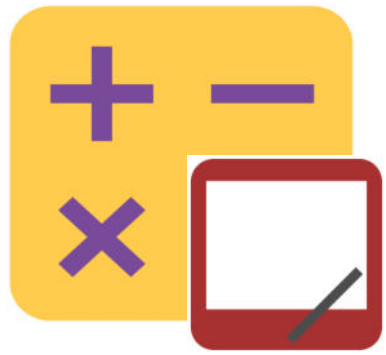


Fluency Practice

Expanded Form

$$4,000 + 600 + 70 + 9$$

Say the addition sentence with the answer in standard form.

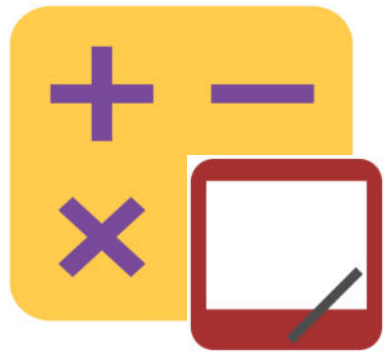


Fluency Practice

Expanded Form

$$500 + 8 + 20$$

Say the addition sentence with the answer in standard form.

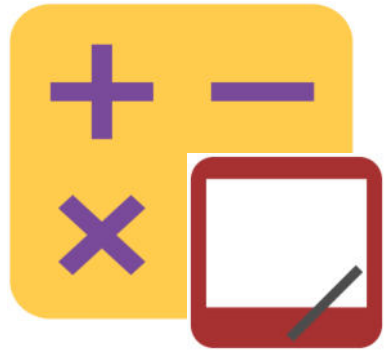


Fluency Practice

Expanded Form

275

**On your personal white board,
write 527 in expanded form.**

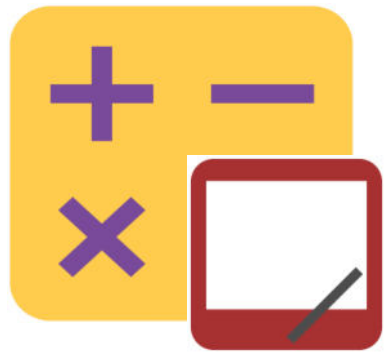


Fluency Practice

Expanded Form

4,638

**On your personal white board,
write 8,463 in expanded form.**



Fluency Practice

Expanded Form

9,705

**On your personal white board,
write 9,075 in expanded form.**



Fluency Practice

Multiply Mentally

Say the multiplication sentence.

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



Fluency Practice

Multiply Mentally

Say the multiplication sentence.

$$2 \times 3 = 6$$

$$10 \times 3 = \underline{\quad}$$



Fluency Practice

Multiply Mentally

Say the multiplication sentence.

$$2 \times 3 = 6$$

$$10 \times 3 = 30$$

$$300 \times 3 = \underline{\quad}$$



Fluency Practice

Multiply Mentally

Say the multiplication sentence.

$$2 \times 3 = 6$$

$$10 \times 3 = 30$$

$$300 \times 3 = 900$$



Fluency Practice

Multiply Mentally

Say the multiplication sentence.

$$2 \times 3 = 6$$

$$10 \times 3 = 30$$

$$\underline{300 \times 3 = 900}$$

$$312 \times 3 = 936$$



Fluency Practice

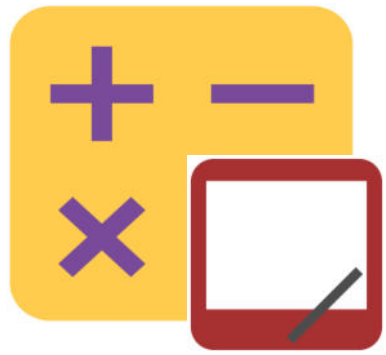
Multiply Mentally

Repeat the process for

$$432 \times 2$$

$$212 \times 4$$

$$124 \times 3$$



Fluency Practice

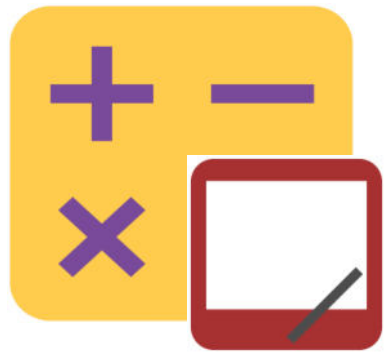
Multiply Using Disks

$$1 \times 312$$

On your personal white board, draw place value disks to show this multiplication sentence.

(1 x _____ hundreds) + (1 x _____ tens) + (1 x _____ ones)

Fill in the blanks and write the problem vertically.



Fluency Practice

Multiply Using Disks

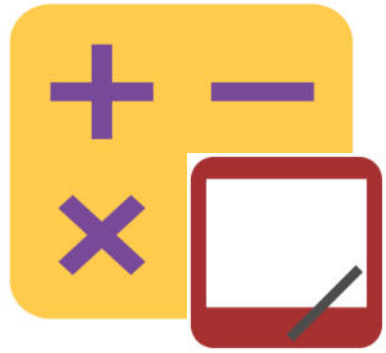
$$1 \times 312$$

$$1 \times 300 = 300$$

$$1 \times 10 = 10$$

$$1 \times 2 = 2$$

$$1 \times 312 = 312$$



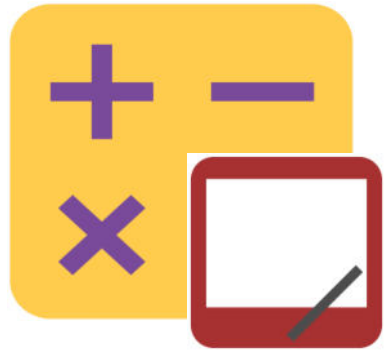
Fluency Practice

Multiply Using Disks

Use the same process for the following problems:

$$2 \times 312 =$$

$$3 \times 312 =$$



Fluency Practice

Multiply Using Disks

Use the same process for the following problems:

$$2 \times 2,154$$

$$4 \times 212$$

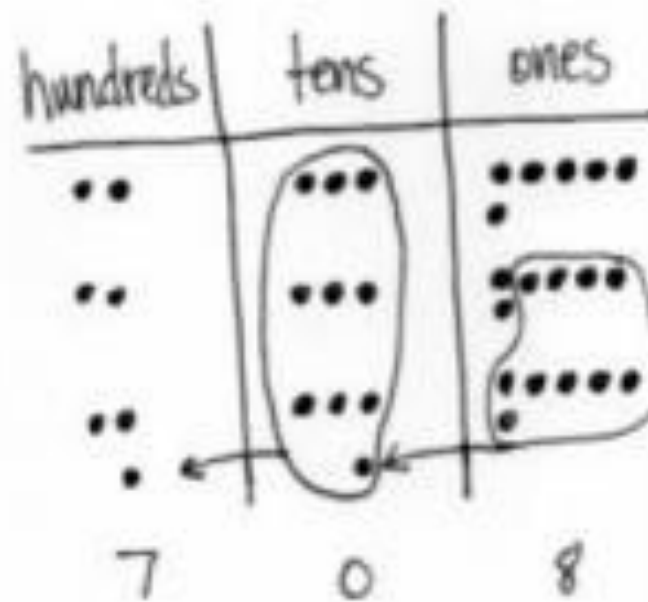
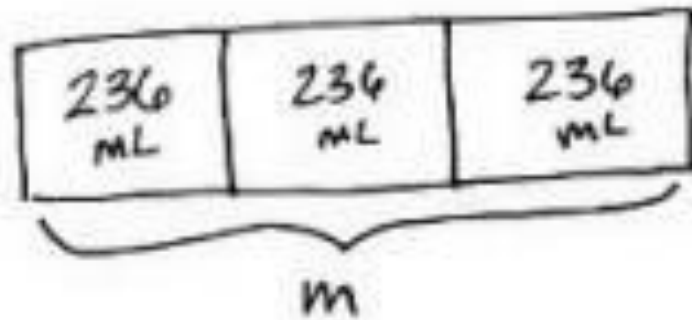
$$3 \times 1,504$$

Application Problem

Calculate the total amount of milk in three cartons if each carton contain 236 mL of milk.

Application Problem



Calculate the total amount of milk in three cartons if each carton contain 236 mL of milk.



There are 708mL in 3 cartons of milk.

Concept Development

Materials

-  (T) Ten thousands place value chart
-  (S) Personal white boards, ten thousands place value chart (template)



Concept Development

Problem 1:

**Represent and solve 6×162 in the
place value chart.**



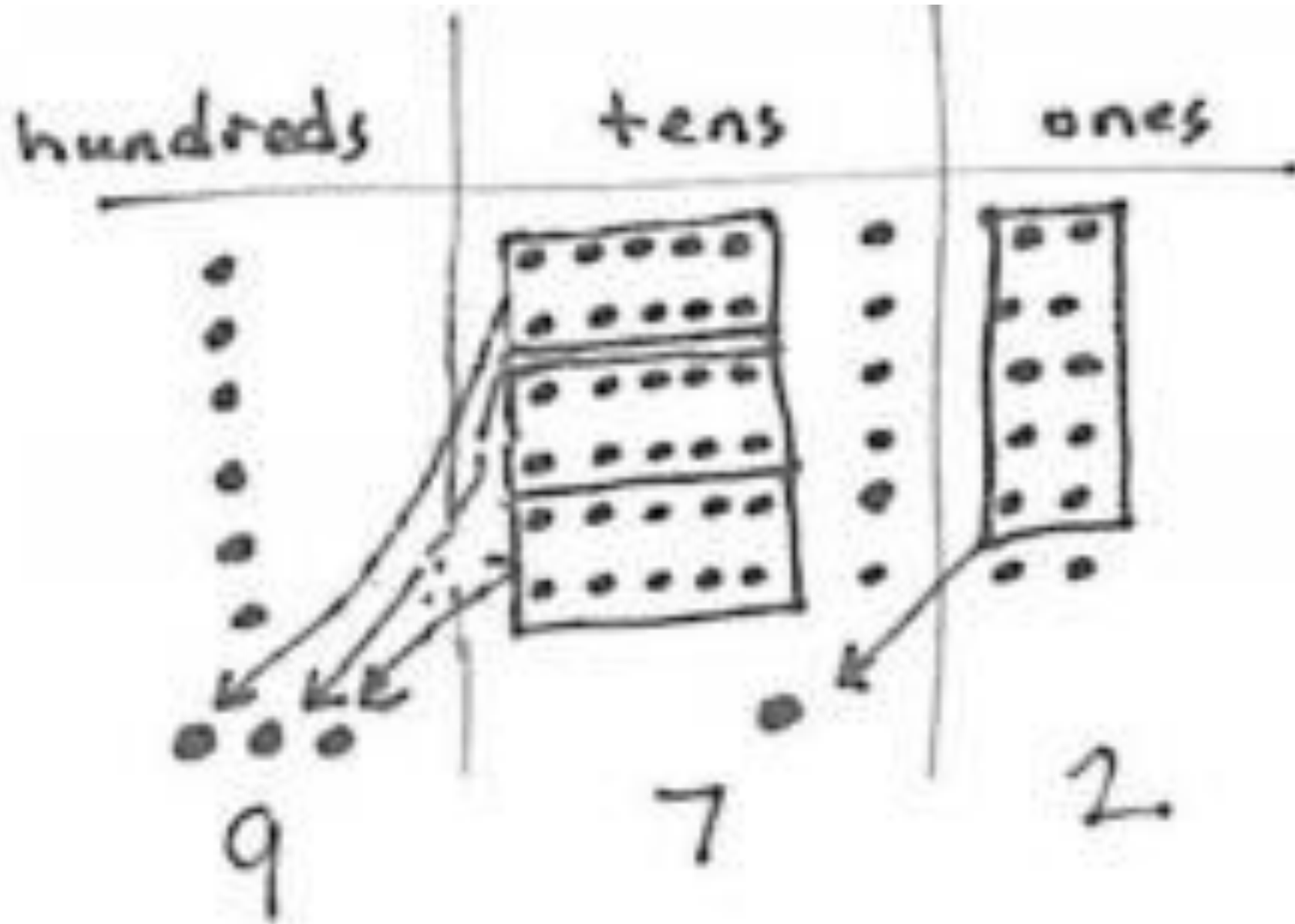
Concept Development

Represent 6×162 on your place value chart using the repeated addition way.

Was it necessary to regroup?



Concept Development





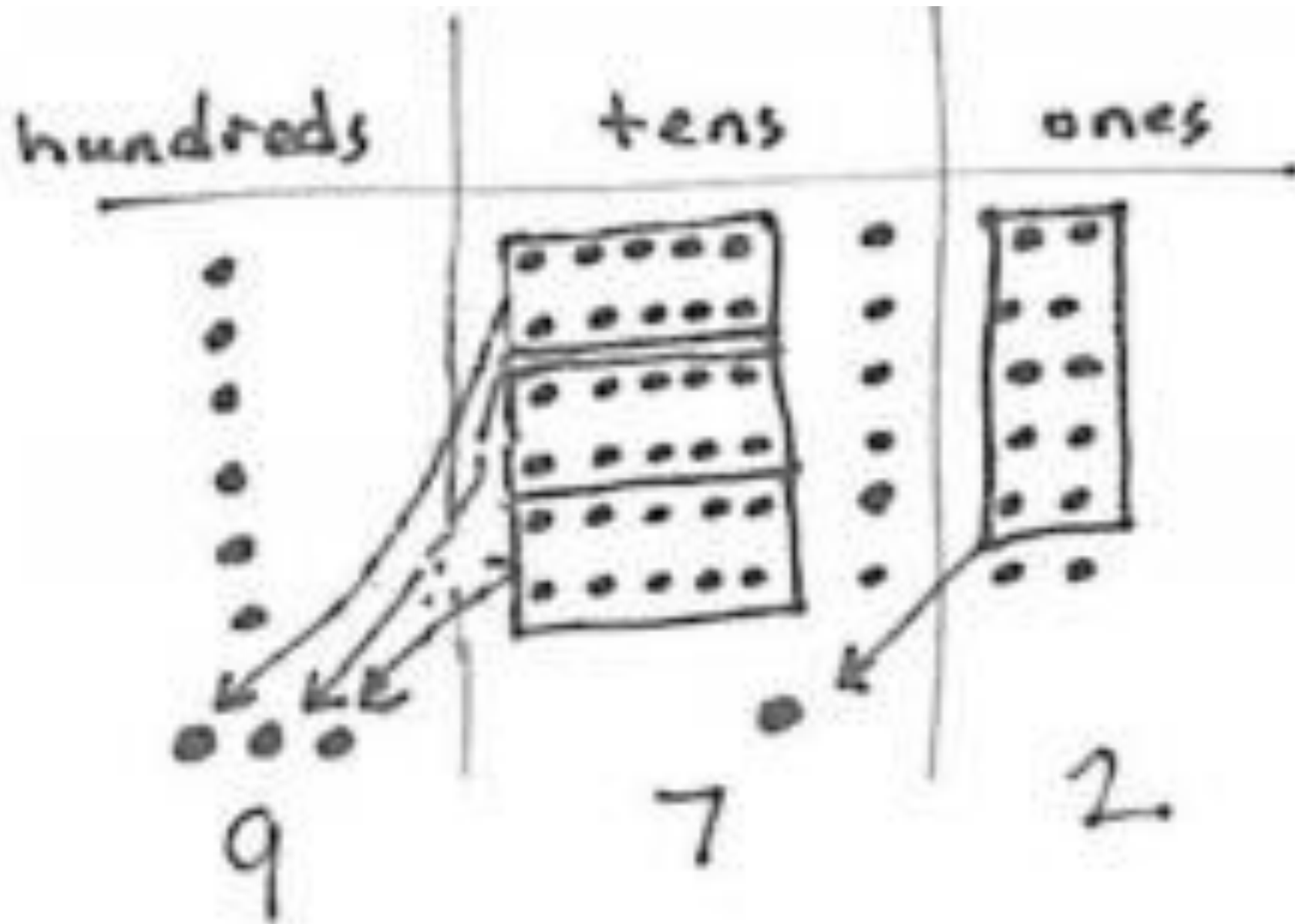
Concept Development

Write the expression 6×162 again vertically on your personal white boards.

Let's find a faster way to express your answer. Use the place value chart to help you.



Concept Development



$$\begin{array}{r} 162 \\ \times 6 \\ \hline 972 \end{array}$$



Concept Development

Problem 2:

Solve 5×237 using the partial products algorithm.



Concept Development

$$\begin{array}{r} 237 \\ \times 5 \\ \hline \end{array}$$

**Write the problem 5×237 vertically.
This time, rather than recording
5 groups of 237 to begin,
let's record the
partial products as we multiply each unit.**



Concept Development

237

x 5

35

Five times seven is...



Concept Development

237

x 5

35

150

Five times seven is...

Five times three tens is...



Concept Development

237

x 5

35

150

+ 1000

Five times seven is...

Five times three tens is...

Five times two hundreds is...



Concept Development

237

x 5

35

150

+ 1000

1,185

Five times seven is...

Five times three tens is...

Five times two hundreds is...

Five times 237



Concept Development

$$\begin{array}{r} 237 \\ \times 5 \\ \hline 35 \end{array}$$

$$\begin{array}{r} 237 \\ \times 5 \\ \hline 1185 \end{array}$$

$$\begin{array}{r} 150 \\ + 1000 \\ \hline 1,185 \end{array}$$



Concept Development

Problem 3:

**Shane measured 457 mL of water in a beaker.
Olga measured 3 times as much water.
How much water did they measure
altogether?**



Concept Development

Problem 3:

Shane measured 457 mL of water in a beaker. Olga measured 3 times as much water. How much water did they measure altogether?

Draw a tape diagram and discuss with a partner how you would solve this problem.



Concept Development

Problem 3:

Shane measured 457 mL of water in a beaker. Olga measured 3 times as much water. How much water did they measure altogether?

Draw a tape diagram and discuss with a partner how you would solve this problem.





Concept Development

Problem 3:

Shane measured 457 mL of water in a beaker. Olga measured 3 times as much water. How much water did they measure altogether?

Solve using the standard algorithm.





Concept Development

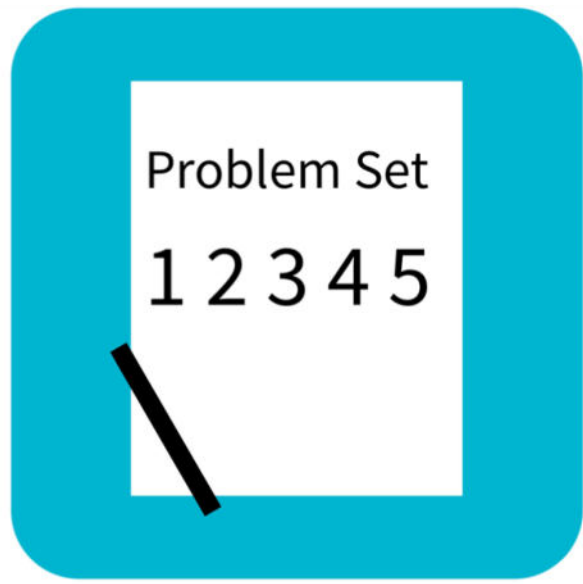
Problem 3:

Shane measured 457 mL of water in a beaker. Olga measured 3 times as much water. How much water did they measure altogether?

Solve using the standard algorithm.

$$\begin{array}{r} 457 \\ \times 4 \\ \hline 1,828 \end{array}$$

They measured 1,828 mL of water altogether.



Problem Set

Name _____

Date _____

1. Solve using each method.

Partial Products	Standard Algorithm
a. $\begin{array}{r} 34 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 34 \\ \times 4 \\ \hline \end{array}$

Partial Products	Standard Algorithm
b. $\begin{array}{r} 224 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 224 \\ \times 3 \\ \hline \end{array}$

2. Solve. Use the standard algorithm.

a.
$$\begin{array}{r} 251 \\ \times 3 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 135 \\ \times 6 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 304 \\ \times 9 \\ \hline \end{array}$$

Debrief

Explain to your partner how you used partial products and the standard algorithm to solve Problems 1(a) and 1(b). Why do both methods work? How are they different?

Look at the questions in Problem 2. Which ones would give you estimates that are very close to the actual product if you rounded the larger number to the hundreds place?

Do you think that you would get a different answer for Problem 4 if the question instead asked you to find 457 times as much as 9? Why or why not?

Debrief

Explain to your partner how you solved Problem 7. How did you keep track of what each of the numbers meant?

How could you use a tape diagram to represent the work you did on the Application Problem?

What significant vocabulary did we use today?

Exit Ticket

Name _____

Date _____

1. Solve using the standard algorithm.

a.

$$\begin{array}{r} 608 \\ \times \quad 9 \\ \hline \end{array}$$

b.

$$\begin{array}{r} 574 \\ \times \quad 7 \\ \hline \end{array}$$