



# Tier 3

## Intervention Lessons

4.NBT.5

**Learning Target:** I will multiply multi-digit numbers

**Readiness for 5.NBT.5:** Multiply multi-digit whole numbers using the standard algorithm

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# Tier 3 Intervention Planning Guide

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

<b>Recommended Actions</b>	
<b>Beginning</b> (5 min.)	<ul style="list-style-type: none"> <li>➤ Review the learning target with the whole group</li> <li>➤ Ask each student to set a goal for the day based on their previous Quick Check Score</li> <li>➤ Have each student use a highlighter to plot their goal for the day</li> </ul>
<b>Middle</b> (15 min.)	<ul style="list-style-type: none"> <li>➤ Model solving a word problem – “I do” (<i>Sessions 1, 3 and 6 only</i>)</li> <li>➤ Guided Practice – “We do”</li> </ul> <p><b>Sessions 1 and 2:</b> Multiply multi-digit numbers using base-ten blocks and place-value cards</p> <p><b>Sessions 3, 4 and 5:</b> Multiply multi-digit numbers using area model drawings to find sub-totals</p> <p><b>Sessions 6, 7 and 8:</b> Multiply multi-digit numbers using place-value understanding</p>
<b>End</b> (10 min.)	<ul style="list-style-type: none"> <li>➤ Bring the students back together.</li> <li>➤ Ask students to reflect on their progress towards the learning target               <ul style="list-style-type: none"> <li>○ What did I learn today about multiplying multi-digit numbers?</li> <li>○ How confident do you feel about multiplying multi-digit numbers on my own? (Thumbs up, down, or sideways)</li> </ul> </li> <li>➤ Assess each student’s progress using the next <b>Quick Check</b> form</li> <li>➤ Guide students to self-correct their <b>Quick Check</b></li> <li>➤ Guide students to chart their progress in their <b>Growth Chart</b> <ul style="list-style-type: none"> <li>○ If not using Delta Math lessons, record the activity in the table</li> </ul> </li> <li>➤ Collect each student’s <b>Quick Check</b> and <b>Growth Chart</b></li> </ul>
<b>After Session 6</b>	<ul style="list-style-type: none"> <li>➤ Differentiation Options:               <ul style="list-style-type: none"> <li>○ Allow students who met the learning goal to work independently while others do the guided practice during the next session</li> <li>○ Exit students who met the learning goal for a third time</li> </ul> </li> <li>➤ Problem solve with a team to plan additional support for students who do not meet the learning goal within 8 sessions</li> </ul>



# Session 1: Modeling (I Do)

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

The principal of Delta Elementary brought 3 dozen donuts to the staff room for teacher appreciation day. There are 12 donuts in one dozen. How many donuts did the principal bring to the staff room?



# Session 1: Modeling (*I Do – Visual Support*)

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

The principal of Delta Elementary brought 3 dozen donuts to the staff room for teacher appreciation day. There are 12 donuts in one dozen. How many donuts did the principal bring to the staff room?

## Step 1 – Set up the problem

Multiplication Mat  
5<sup>th</sup> Grade - Readiness.5 4.NBT.5  
Number in E<sub>10</sub> p

10

2

3

Number of Groups

A multiplication mat with a grid. The top row contains a box with '10' and a box with '2'. Below the grid, there are three boxes for the number of groups, with the first one containing '3'.

## Step 2 – Build groups of ten

Multiplication Mat  
5<sup>th</sup> Grade - Readiness.5 4.NBT.5  
Number in E<sub>10</sub> p

10

2

3

Number of Groups

30

The mat is updated with three rows of ten boxes each, representing groups of ten. A box containing '30' is placed below the grid.

## Step 3 – Build groups of ones

Multiplication Mat  
5<sup>th</sup> Grade - Readiness.5 4.NBT.5  
Number in E<sub>10</sub> p

10

2

3

Number of Groups

30

6

The mat is updated with three rows of ten boxes each. A box containing '30' is placed below the grid, and a box containing '6' is placed to the right of the '30' box.

## Step 4 – Find the total

Multiplication Mat  
5<sup>th</sup> Grade - Readiness.5 4.NBT.5  
Number in E<sub>10</sub> p

10

2

3

Number of Groups

36

The mat is updated with three rows of ten boxes each. A box containing '36' is placed below the grid, representing the final product.



# Session 1: Modeling (I Do - Teacher Notes)

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

The principal of Delta Elementary brought 3 dozen donuts to the staff room for teacher appreciation day. There are 12 donuts in one dozen. How many donuts did the principal bring to the staff room?

I am going to think aloud to model solving this problem.

Your job is to watch, listen, think and ask questions.

**First, it is important to know what the problem is about.**

**The problem is about donuts the principal brought for teacher appreciation day.**

**Second, I need to determine what I need to find.**

**I need to find the total number of donuts that the principal brought.**

**Third, I need to determine what I know.**

**I know that the principal brought 3 dozen donuts and there are 12 donuts in each dozen.**

**Fourth, I need to figure out what I can try.**

**I am going to try using base-ten blocks and place-value cards to find out how many donuts the principal brought.**

**I will begin setting up the multiplication problem by representing the 3 groups vertically on the left side of the mat and the 12 in each group horizontally above the mat.**

*(Build each number on the multiplication mat using blocks and cards.)*

**Now, I'm going to find the total in 3 groups of 12 by placing 3 groups of 10 on the mat.**

*(Build the 3 groups of 10 on the multiplication mat using blocks and cards.)*

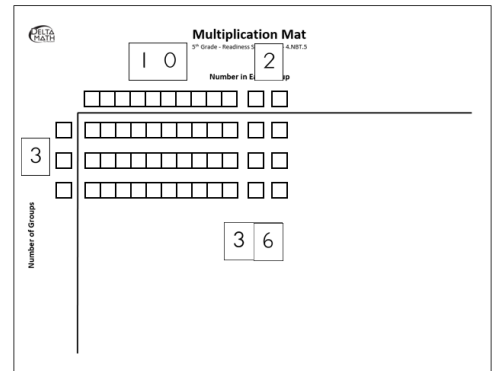
**3 groups of ten is equal to 30. (Slide the 30 place-value card below the tens.)**

**Next, I'm going to place 3 groups of 2 on the mat.**

*(Build the 3 groups of 2 inside the multiplication mat using blocks and cards.)*

**3 groups of 2 is equal to 6. (Slide the 6 place-value card below the ones.)**

**The total of 30 and 6 is equal to 36. (Slide the 6 on top of the 30 place-value card to create the standard form, 36.)**



**Last, I need to make sure that my answer makes sense.**

**I found that the principal brought 36 donuts to the staff room. It makes sense because there are 12 donuts in each dozen and I built 3 groups of 12 using base-ten blocks. Then, I added the total value of tens and total value of ones to find the total.**

# Place-Value Cards (1 → 100)

1	6	2	0	6	0	
2	7	3	0	7	0	
3	8	4	0	8	0	
4	9	5	0	9	0	
5	1	0	1	0	0	
<	>	=	+	-	x	÷
Less Than	Greater Than	Equal to				



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 1: Guided Practice (We Do)

**Materials:**

- Base-Ten Blocks (1 hundred, 20 tens and 20 ones)
- Place-value Cards (2 sets)
- Multiplication Mat

**We Do Together:** (Teacher Actions)

- Say the multiplication problem.
- Use base-ten blocks and place-value cards to help you multiply the numbers and write the answer.

1. $2 \times 16$	2. $6 \times 12$
3. $12 \times 16$	4. $11 \times 17$

**You Do Together:** (As a class, or in small groups)

- Students take turns leading and repeat the steps to multiply the numbers.

5. $7 \times 13$	6. $3 \times 17$
7. $13 \times 17$	8. $12 \times 15$





# Session 1: Self-Reflection

**Learning Target:** I will multiply multi-digit numbers

Briefly discuss student responses

- What did I learn today about multiplying multi-digit numbers?
  
- How confident do I feel about multiplying multi-digit numbers on my own? (*Thumbs up, down, or sideways*)



# Quick Check - Form A

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$\begin{array}{r} 396 \\ \times 4 \\ \hline \end{array}$$

**2.**

$$\begin{array}{r} 2581 \\ \times 6 \\ \hline \end{array}$$

**3.**

$$\begin{array}{r} 46 \\ \times 13 \\ \hline \end{array}$$

**4.**

$$\begin{array}{r} 28 \\ \times 35 \\ \hline \end{array}$$

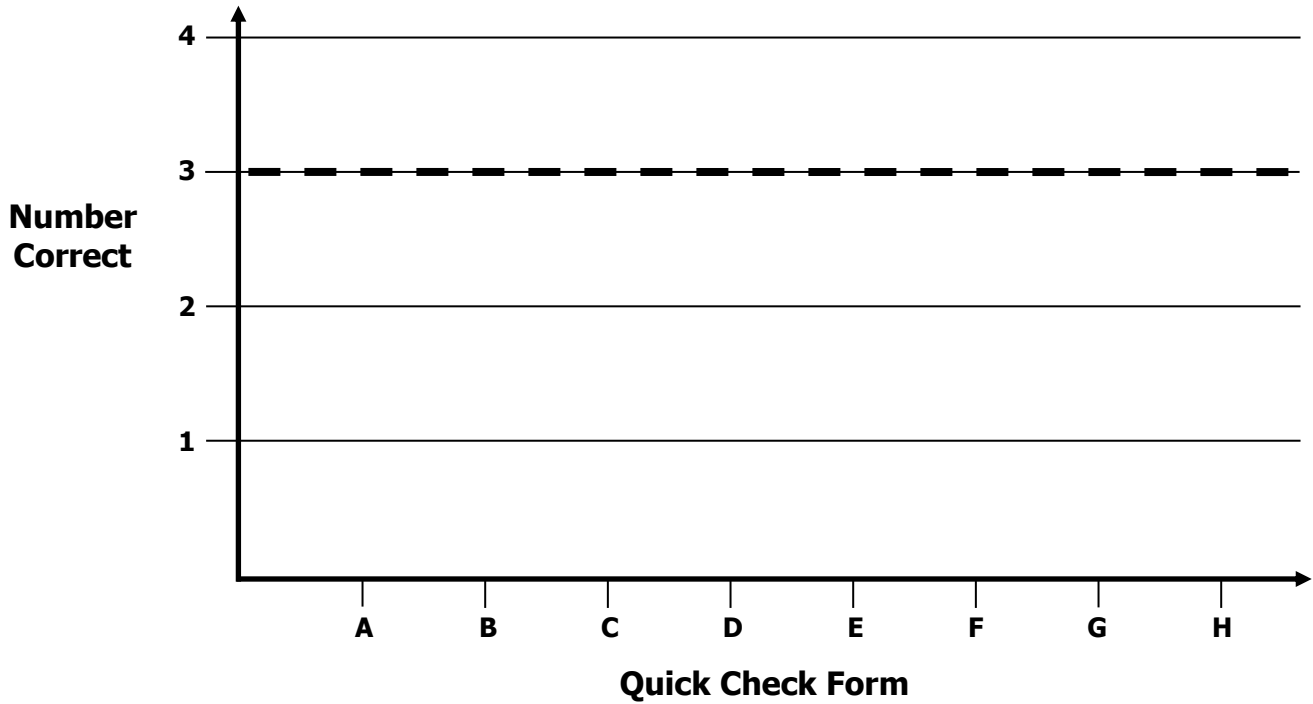


# Growth Chart

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers.

**Goal:** 3 out of 4 correct



Intervention	Date	Score
Session 1:		
Session 2:		
Session 3:		
Session 4:		
Session 5:		
Session 6:		
Session 7:		
Session 8:		



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 2: Guided Practice (We Do)

**Materials:**

- Base-Ten Blocks (1 hundred, 20 tens and 20 ones)
- Place-value Cards (2 sets – See Session 1)
- Multiplication Mat

**We Do Together:** (Teacher Actions)

- Say the multiplication problem.
- Use base-ten blocks and place-value cards to help you multiply the numbers and write the answer.

1. $3 \times 14$	2. $4 \times 13$
3. $13 \times 14$	4. $12 \times 18$

**You Do Together:** (As a class, or in small groups)

- Students take turns leading and repeat the steps to multiply the numbers.

5. $6 \times 12$	6. $2 \times 16$
7. $12 \times 17$	8. $13 \times 16$



## Session 2: Self-Reflection

**Learning Target:** I will multiply multi-digit numbers

Briefly discuss student responses

- What did I learn today about multiplying multi-digit numbers?
  
- How confident do I feel about multiplying multi-digit numbers on my own? (*Thumbs up, down, or sideways*)



# Quick Check - Form B

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$\begin{array}{r} 427 \\ \times 3 \\ \hline \end{array}$$

**2.**

$$\begin{array}{r} 3126 \\ \times 7 \\ \hline \end{array}$$

**3.**

$$\begin{array}{r} 57 \\ \times 14 \\ \hline \end{array}$$

**4.**

$$\begin{array}{r} 39 \\ \times 24 \\ \hline \end{array}$$



## Session 3: Modeling (I Do)

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

A candy store ordered 9 cases of dark chocolate. Each case holds 125 individually wrapped squares of chocolate. How many squares of dark chocolate did the candy store order?



# Session 3: Modeling (I Do – Visual Support)

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

A candy store ordered 9 cases of dark chocolate. Each case holds 125 individually wrapped squares of chocolate. How many squares of dark chocolate did the candy store order?

<b>Set up the problem</b>	<p style="text-align: center;"><b>125 per case</b></p> <p style="text-align: center;">100          +      20      +      5</p> <p><b>9 Cases</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 100px; height: 50px;"></td> <td style="width: 100px; height: 50px;"></td> <td style="width: 100px; height: 50px;"></td> </tr> </table>								
<b>Find the sub-totals</b>	<p style="text-align: center;"><b>125 per case</b></p> <p style="text-align: center;">100          +      20      +      5</p> <p><b>9 Cases</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 100px; height: 50px; text-align: center;">9 x 100</td> <td style="width: 100px; height: 50px; text-align: center;">9 x 20</td> <td style="width: 100px; height: 50px; text-align: center;">9 x 5</td> </tr> <tr> <td style="text-align: center;">900</td> <td style="text-align: center;">180</td> <td style="text-align: center;">45</td> </tr> </table>	9 x 100	9 x 20	9 x 5	900	180	45		
9 x 100	9 x 20	9 x 5							
900	180	45							
<b>Record the sub-totals</b>	<p style="text-align: center;"><b>125 per case</b></p> <p style="text-align: center;">100          +      20      +      5</p> <p><b>9 Cases</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 100px; height: 50px; text-align: center;">9 x 100</td> <td style="width: 100px; height: 50px; text-align: center;">9 x 20</td> <td style="width: 100px; height: 50px; text-align: center;">9 x 5</td> <td style="width: 50px;"></td> </tr> <tr> <td style="text-align: center;">900</td> <td style="text-align: center;">180</td> <td style="text-align: center;">45</td> <td style="text-align: right; vertical-align: top;">900 180 45</td> </tr> </table>	9 x 100	9 x 20	9 x 5		900	180	45	900 180 45
9 x 100	9 x 20	9 x 5							
900	180	45	900 180 45						
<b>Find the total</b>	<p style="text-align: center;"><b>125 per case</b></p> <p style="text-align: center;">100          +      20      +      5</p> <p><b>9 Cases</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 100px; height: 50px; text-align: center;">9 x 100</td> <td style="width: 100px; height: 50px; text-align: center;">9 x 20</td> <td style="width: 100px; height: 50px; text-align: center;">9 x 5</td> <td style="width: 50px;"></td> </tr> <tr> <td style="text-align: center;">900</td> <td style="text-align: center;">180</td> <td style="text-align: center;">45</td> <td style="text-align: right; vertical-align: top;">900 180 <u>+ 45</u> 1,125</td> </tr> </table>	9 x 100	9 x 20	9 x 5		900	180	45	900 180 <u>+ 45</u> 1,125
9 x 100	9 x 20	9 x 5							
900	180	45	900 180 <u>+ 45</u> 1,125						





# Session 3: Modeling (I Do - Teacher Notes)

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

A candy store ordered 9 cases of dark chocolate. Each case holds 125 individually wrapped squares of chocolate. How many squares of dark chocolate did the candy store order?

**I am going to think aloud to model solving this problem.**

**Your job is to watch, listen, think and ask questions.**

**First, it is important to know what the problem is about.**

**The problem is about a candy store ordering individually wrapped squares of dark chocolate.**

**Second, I need to determine what I need to find.**

**I need to find how many squares of dark chocolate the candy store ordered.**

**Third, I need to determine what I know.**

**I know that a candy store ordered 9 cases and each case holds 125 squares.**

**Fourth, I need to figure out what I can try.**

**Since this problem includes hundreds, tens and ones, I think using blocks would be more difficult, so I will draw an area model to help me find the total number of squares of dark chocolate.**

		<b>125 per case</b>					
		100	+	20	+	5	
<b>9 Cases</b>	9 x 100	9 x 20	9 x 5				900
	900	180	45				180
							$\begin{array}{r} + \\ + \\ \hline 45 \\ \hline 1,125 \end{array}$

**I will begin drawing a rectangle, similar to the shape created when we multiplied using base ten blocks.**

*(Draw a rectangle and label the sides with "9 Cases" and "125 per case".)*

**Next, I will separate the area into 3 sections to represent each place-value of 125...hundreds, tens and ones.**

*(Draw vertical lines inside the rectangle.)*

**Now, I will separate 125 into each place-value across the top of the rectangle and find each area separately.**

*(Write "100 + 20 + 5".)*

**To find the total number of hundreds, I need to multiply 9 times 1 hundred. *(Write "9 x 100")***

**9 times 1 hundred is 9 hundreds...which is equal to 900. *(Write "900")***

**To find the total number of tens, I need to multiply 9 times 2 tens. *(Write "9 x 20")***

**9 times 2 tens is 18 tens...which is equal to 180. *(Write "900")***



# Session 3: Modeling (I Do - Teacher Notes)

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

		<b>125 per case</b>					
		100	+	20	+	5	
<b>9 Cases</b>	9 x 100	9 x 20	9 x 5			900	
	900	180	45			180	
						+ 45	
						1,125	

**To find the total number of ones, I need to multiply 9 times 5 ones. (Write "9 x 5")**

**9 times 5 ones is 45 ones. (Write "45")**

**It is easier to combine the sub-totals by rewriting them next to the drawing as an addition problem. (Write the sub-totals as an addition problem next to the drawing.)**

**0 ones plus 0 ones plus 5 ones is 5 ones.**

*(Point to the digits in the ones column. Then, write 5 in the ones-digit of the answer.)*

**0 tens plus 8 tens plus 4 tens is 12 tens.**

*(Point to the digits in the tens column.)*

**12 tens is equal to 1 hundred and 2 tens. I will write this new hundred below and the 2 tens in the answer.**

*(Write a small 1 on the answer line in the hundreds column. Then, write a 2 in the tens-digit of the answer.)*

**9 hundreds plus 1 hundred plus this new hundred is 11 hundreds.**

*(Point to the digits in the hundreds column.)*

**11 hundreds is equal to 1 thousand 1 hundred. I will write the new thousand below and 1 hundred in the answer.**

*(Write the new thousand on the answer line. Then, write a 1 in the hundreds-digit of the answer.)*

**Lastly, this new thousand needs to be included in the answer.**

*(Write the 1 in the thousands-digit of the answer.)*

**Last, I need to make sure that my answer makes sense.**

**I found that 1,125 squares of chocolate were ordered. It makes sense because I represented 9 groups of 125 using an area model drawing. Then, I multiplied 9 times each place-value to help me find the total.**



Name \_\_\_\_\_

Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 3: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Say the multiplication problem.
- Use an area model drawing to help you multiply the numbers.

1.

$$\begin{array}{r} 284 \\ \times 7 \\ \hline \end{array}$$

--	--	--

2.

$$\begin{array}{r} 1527 \\ \times 4 \\ \hline \end{array}$$

--	--	--	--

3.

$$\begin{array}{r} 84 \\ \times 23 \\ \hline \end{array}$$




Name \_\_\_\_\_ Date \_\_\_\_\_

Learning Target: I will multiply multi-digit numbers

## Session 3: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to multiply multi-digit numbers.

4.

$$\begin{array}{r} 375 \\ \times 6 \\ \hline \end{array}$$

--	--	--

5.

$$\begin{array}{r} 1639 \\ \times 5 \\ \hline \end{array}$$

--	--	--	--

6.

$$\begin{array}{r} 68 \\ \times 37 \\ \hline \end{array}$$


**Learning Target:** I will multiply multi-digit numbers

## Session 3: Guided Practice *(We Do – Teacher Notes)*

**We Do Together:** (Teacher Actions)

- Say the multiplication problem.
- Use an area model drawing to help you multiply the numbers.

1.

$$\begin{array}{r}
 284 \\
 \times 7 \\
 \hline
 1400 \\
 560 \\
 + 28 \\
 \hline
 1988
 \end{array}$$

	200	+	80	+	4
7	7 x 200 1400	7 x 80 560	7 x 4 28		

2.

$$\begin{array}{r}
 1527 \\
 \times 4 \\
 \hline
 4000 \\
 2000 \\
 80 \\
 + 28 \\
 \hline
 6,108
 \end{array}$$

	1000	+	500	+	20	+	7
4	4 x 1000 4000	4 x 500 2000	4 x 20 80	4 x 7 28			

3.

$$\begin{array}{r}
 84 \\
 \times 23 \\
 \hline
 1600 \\
 240 \\
 80 \\
 + 12 \\
 \hline
 1,932
 \end{array}$$

	80	+	4
20	20 x 80 1600	20 x 4 80	
+			
3	3 x 80 240	3 x 4 12	



## Session 3: Self-Reflection

**Learning Target:** I will multiply multi-digit numbers

Briefly discuss student responses

- What did I learn today about multiplying multi-digit numbers?
  
- How confident do I feel about multiplying multi-digit numbers on my own? (*Thumbs up, down, or sideways*)



# Quick Check - Form C

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$\begin{array}{r} 582 \\ \times 7 \\ \hline \end{array}$$

**2.**

$$\begin{array}{r} 2875 \\ \times 6 \\ \hline \end{array}$$

**3.**

$$\begin{array}{r} 85 \\ \times 13 \\ \hline \end{array}$$

**4.**

$$\begin{array}{r} 46 \\ \times 32 \\ \hline \end{array}$$



Name \_\_\_\_\_

Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 4: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Say the multiplication problem.
- Use an area model drawing to help you multiply the numbers.

1.

$$\begin{array}{r} 296 \\ \times 7 \\ \hline \end{array}$$

--	--	--

2.

$$\begin{array}{r} 1638 \\ \times 3 \\ \hline \end{array}$$

--	--	--	--

3.

$$\begin{array}{r} 79 \\ \times 46 \\ \hline \end{array}$$






Name \_\_\_\_\_ Date \_\_\_\_\_

Learning Target: I will multiply multi-digit numbers

## Session 4: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to multiply multi-digit numbers.

4.

$$\begin{array}{r} 387 \\ \times 6 \\ \hline \end{array}$$

--	--	--

5.

$$\begin{array}{r} 1728 \\ \times 5 \\ \hline \end{array}$$

--	--	--	--

6.

$$\begin{array}{r} 86 \\ \times 39 \\ \hline \end{array}$$




## Session 4: Self-Reflection

**Learning Target:** I will multiply multi-digit numbers

Briefly discuss student responses

- What did I learn today about multiplying multi-digit numbers?
  
- How confident do I feel about multiplying multi-digit numbers on my own? (*Thumbs up, down, or sideways*)



# Quick Check - Form D

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$\begin{array}{r} 675 \\ \times 4 \\ \hline \end{array}$$

**2.**

$$\begin{array}{r} 3748 \\ \times 6 \\ \hline \end{array}$$

**3.**

$$\begin{array}{r} 63 \\ \times 17 \\ \hline \end{array}$$

**4.**

$$\begin{array}{r} 83 \\ \times 25 \\ \hline \end{array}$$



Name \_\_\_\_\_ Date \_\_\_\_\_

Learning Target: I will multiply multi-digit numbers

## Session 5: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Say the multiplication problem.
- Use an area model drawing to help you multiply the numbers.

1.

$$\begin{array}{r} 379 \\ \times 6 \\ \hline \end{array}$$

--	--	--

2.

$$\begin{array}{r} 2896 \\ \times 3 \\ \hline \end{array}$$

--	--	--	--

3.

$$\begin{array}{r} 68 \\ \times 37 \\ \hline \end{array}$$




Name \_\_\_\_\_ Date \_\_\_\_\_

Learning Target: I will multiply multi-digit numbers

## Session 5: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to multiply multi-digit numbers.

4.

$$\begin{array}{r} 376 \\ \times 8 \\ \hline \end{array}$$

--	--	--

5.

$$\begin{array}{r} 1937 \\ \times 9 \\ \hline \end{array}$$

--	--	--	--

6.

$$\begin{array}{r} 96 \\ \times 47 \\ \hline \end{array}$$




## Session 5: Self-Reflection

**Learning Target:** I will multiply multi-digit numbers

Briefly discuss student responses

- What did I learn today about multiplying multi-digit numbers?
  
- How confident do I feel about multiplying multi-digit numbers on my own? (*Thumbs up, down, or sideways*)



# Quick Check - Form E

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$\begin{array}{r} 396 \\ \times 4 \\ \hline \end{array}$$

**2.**

$$\begin{array}{r} 2581 \\ \times 6 \\ \hline \end{array}$$

**3.**

$$\begin{array}{r} 46 \\ \times 13 \\ \hline \end{array}$$

**4.**

$$\begin{array}{r} 28 \\ \times 35 \\ \hline \end{array}$$



## Session 6: Modeling (I Do)

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

A softball league director is ordering softballs. She plans to order one case for each team in the league. How many softballs will be ordered 9 teams if each case holds 25 softballs?





# Session 6: Modeling (I Do - Teacher Notes)

**Learning Target:** I will multiply multi-digit numbers

**Readiness** for multiplying multi-digit numbers using the standard algorithm

A softball league director is ordering softballs. She plans to order one case for each team in the league. How many softballs will be ordered 9 teams if each case holds 25 softballs?

**First, it is important to know what the problem is about.**

**This problem is about a softball league director ordering softballs.**

**Second, I need to determine what I need to find.**

**I need to find how many softballs will be ordered.**

**Third, I need to determine what I know.**

**I know that there are 9 teams in the league and each team will receive a case with 25 softballs.**

**Fourth, I need to figure out what I can try.**

**This time, I am going to use my understanding of place value to help me find the total number of softballs.**

**I will begin by writing what I know...25 softballs per team...and there are 9 teams...which can be calculated using multiplication. (Write the multiplication problem and labels.)**

**When I reflect back to the multiplication drawings, I remember breaking 2-digit numbers into tens and ones.**

**9 times 2 tens is 18 tens...which is equal to 1 hundred, 8 tens and 0 ones.**

*(Point to the 9 and tens digit, 2. Then, write 180 as the first sub-total.)*

**Also, 9 times 5 ones is 45 ones...which is equal to 4 tens and 5 ones.**

*(Write 45 as the second sub-total.)*

**To find the total, I must add the sub-totals.**

*(Write the "+" sign and answer line.)*

$$\begin{array}{r}
 25 \text{ Softballs per team} \\
 \times 9 \text{ Teams} \\
 \hline
 180 \\
 + 45 \\
 \hline
 225 \text{ Softballs}
 \end{array}$$

**0 ones plus 5 ones is 5 ones.**

*(Point to the 0 and 5 in the ones column. Then, write 5 in the ones-digit of the answer.)*

**8 tens plus 4 tens is 12 tens...which has the same value as 1 hundred and 2 tens.**

*(Point to the 8 and 4 in the tens column. Then, write the new hundred on the answer line and the 2 tens in answer.)*

**1 hundred plus this new hundred below is 2 hundreds.**

*(Point to the digits in the hundreds column. Then, write 2 in the hundreds-digit of the answer.)*

**Last, I need to make sure that my answer makes sense.**

**I found that 225 softballs would be ordered. It makes sense because I modeled this situation of equal groups as a multiplication problem. Then, I multiplied 9 times each place-value to help me find the total.**



Name \_\_\_\_\_

Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 6: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Say the problem and use place-value understanding to multiply the multi-digit numbers.

1.

$$\begin{array}{r} 257 \\ \times 9 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 3617 \\ \times 5 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 82 \\ \times 37 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 529 \\ \times 4 \\ \hline \end{array}$$



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 6: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to multiply the multi-digit numbers.

5.

$$\begin{array}{r} 745 \\ \times \quad 8 \\ \hline \end{array}$$

6.

$$\begin{array}{r} 4265 \\ \times \quad 3 \\ \hline \end{array}$$

7.

$$\begin{array}{r} 28 \\ \times 64 \\ \hline \end{array}$$

8.

$$\begin{array}{r} 295 \\ \times \quad 6 \\ \hline \end{array}$$

**Learning Target:** I will multiply multi-digit numbers

## Session 6: Guided Practice (We Do – Visual Support)

**We Do Together:** (Teacher Actions)

- Say the problem and use place-value understanding to multiply the multi-digit numbers.

<p>1.</p> $\begin{array}{r} 257 \\ \times \quad 9 \\ \hline 1800 \\ 450 \\ + \quad 63 \\ \hline 2313 \end{array}$ <p><i>Think:</i></p> <p><math>(9 \times 2 \text{ hundreds})</math></p> <p><math>(9 \times 5 \text{ tens})</math></p> <p><math>(9 \times 7 \text{ ones})</math></p>	<p>2.</p> $\begin{array}{r} 3617 \\ \times \quad 5 \\ \hline 15000 \\ 3000 \\ 50 \\ + \quad 35 \\ \hline 18085 \end{array}$ <p><i>Think:</i></p> <p><math>(5 \times 3 \text{ thousands})</math></p> <p><math>(5 \times 6 \text{ hundreds})</math></p> <p><math>(5 \times 1 \text{ ten})</math></p> <p><math>(5 \times 7 \text{ ones})</math></p>
<p>3.</p> $\begin{array}{r} 82 \\ \times 37 \\ \hline 2400 \\ 60 \\ 560 \\ + \quad 14 \\ \hline 3034 \end{array}$ <p><i>Think:</i></p> <p><math>(3 \text{ tens} \times 8 \text{ tens})</math></p> <p><math>(3 \text{ tens} \times 2)</math></p> <p><math>(7 \times 8 \text{ tens})</math></p> <p><math>(7 \times 2 \text{ ones})</math></p>	<p>4.</p> $\begin{array}{r} 529 \\ \times \quad 4 \\ \hline 2000 \\ 80 \\ + \quad 36 \\ \hline 2116 \end{array}$ <p><i>Think:</i></p> <p><math>(4 \times 5 \text{ hundreds})</math></p> <p><math>(4 \times 2 \text{ tens})</math></p> <p><math>(4 \times 9 \text{ ones})</math></p>



## Session 6: Self-Reflection

**Learning Target:** I will multiply multi-digit numbers

Briefly discuss student responses

- What did I learn today about multiplying multi-digit numbers?
  
- How confident do I feel about multiplying multi-digit numbers on my own? (*Thumbs up, down, or sideways*)



# Quick Check - Form F

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$\begin{array}{r} 427 \\ \times 3 \\ \hline \end{array}$$

**2.**

$$\begin{array}{r} 3126 \\ \times 7 \\ \hline \end{array}$$

**3.**

$$\begin{array}{r} 57 \\ \times 14 \\ \hline \end{array}$$

**4.**

$$\begin{array}{r} 39 \\ \times 24 \\ \hline \end{array}$$



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 7: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Say the problem and use place-value understanding to multiply the multi-digit numbers.

1.

$$\begin{array}{r} 257 \\ \times \quad 6 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 3617 \\ \times \quad 9 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 86 \\ \times 47 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 789 \\ \times \quad 3 \\ \hline \end{array}$$



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 7: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to multiply the multi-digit numbers.

5.

$$\begin{array}{r} 846 \\ \times \quad 7 \\ \hline \end{array}$$

6.

$$\begin{array}{r} 3967 \\ \times \quad 4 \\ \hline \end{array}$$

7.

$$\begin{array}{r} 68 \\ \times 79 \\ \hline \end{array}$$

8.

$$\begin{array}{r} 379 \\ \times \quad 6 \\ \hline \end{array}$$





## Session 7: Self-Reflection

**Learning Target:** I will multiply multi-digit numbers

Briefly discuss student responses

- What did I learn today about multiplying multi-digit numbers?
  
- How confident do I feel about multiplying multi-digit numbers on my own? (*Thumbs up, down, or sideways*)



# Quick Check - Form G

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$\begin{array}{r} 582 \\ \times 7 \\ \hline \end{array}$$

**2.**

$$\begin{array}{r} 2875 \\ \times 6 \\ \hline \end{array}$$

**3.**

$$\begin{array}{r} 85 \\ \times 13 \\ \hline \end{array}$$

**4.**

$$\begin{array}{r} 46 \\ \times 32 \\ \hline \end{array}$$



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 8: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Say the problem and use place-value understanding to multiply the multi-digit numbers.

1.

$$\begin{array}{r} 364 \\ \times 8 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 6719 \\ \times 6 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 97 \\ \times 38 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 648 \\ \times 7 \\ \hline \end{array}$$



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers

## Session 8: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to multiply the multi-digit numbers.

5.

$$\begin{array}{r} 576 \\ \times \quad 9 \\ \hline \end{array}$$

6.

$$\begin{array}{r} 4892 \\ \times \quad 7 \\ \hline \end{array}$$

7.

$$\begin{array}{r} 37 \\ \times 86 \\ \hline \end{array}$$

8.

$$\begin{array}{r} 796 \\ \times \quad 8 \\ \hline \end{array}$$



## Session 8: Self-Reflection

**Learning Target:** I will multiply multi-digit numbers

Briefly discuss student responses

- What did I learn today about multiplying multi-digit numbers?
  
- How confident do I feel about multiplying multi-digit numbers on my own? (*Thumbs up, down, or sideways*)



# Quick Check - Form H

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will multiply multi-digit numbers.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$\begin{array}{r} 675 \\ \times 4 \\ \hline \end{array}$$

**2.**

$$\begin{array}{r} 3748 \\ \times 6 \\ \hline \end{array}$$

**3.**

$$\begin{array}{r} 63 \\ \times 17 \\ \hline \end{array}$$

**4.**

$$\begin{array}{r} 83 \\ \times 25 \\ \hline \end{array}$$



# Independent Practice

**Learning Target:** I will multiply multi-digit numbers

**Title of Game:** Build the Greater Product

**Number of Players:** 2

**Objective:** To build the greatest product.

**Materials:** 1 set of 1-digit number cards and 1 recording sheet per player.

## Directions:

- Each player...
  - Shuffle a set of Digit-cards and set in a pile face down out on the table.
  - Choose the top 4 cards.
  - Create and find the product of a multiplication problem on their recording sheet.
  - Verify each answer by checking it with a calculator.
    - For each incorrect answer, use a drawing to find the error and correct the recording sheet.
  - Assign points for the round. (0, 1, or 2 points are possible.)
    - Each player can earn 1 point for having a correct product.
    - The player with the greatest product receives 1 point.
  - Shuffle all of the cards together and repeat for the next round.



Name \_\_\_\_\_ Date \_\_\_\_\_

Learning Target: I will multiply multi-digit numbers

## Independent Practice: Build the Greater Product (Recording Sheet)

Game 1 (1-digit x 3-digit)	Game 2 (2-digit x 2-digit)
<p>Round 1</p> <p style="text-align: center;"><math>\begin{array}{r} \times \\ \hline \end{array}</math></p>	<p>Round 1</p> <p style="text-align: center;"><math>\begin{array}{r} \times \\ \hline \end{array}</math></p>
<p>Round 2</p> <p style="text-align: center;"><math>\begin{array}{r} \times \\ \hline \end{array}</math></p>	<p>Round 2</p> <p style="text-align: center;"><math>\begin{array}{r} \times \\ \hline \end{array}</math></p>
<p>Round 3</p> <p style="text-align: center;"><math>\begin{array}{r} \times \\ \hline \end{array}</math></p>	<p>Round 3</p> <p style="text-align: center;"><math>\begin{array}{r} \times \\ \hline \end{array}</math></p>



# Digit-Cards (3 sets)

0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9



# Questions for Solving Word Problems

Q<sub>1</sub>

*What is the problem about?*

Q<sub>2</sub>

*What do I need to find?*

Q<sub>3</sub>

*What do I know?*

Q<sub>4</sub>

*What can I try?*

Q<sub>5</sub>

*Does my answer make sense?*



# Steps for Solving Word Problems

Q<sub>1</sub>. *What is the problem about?*

Q<sub>2</sub>. *What do I need to find?*

Q<sub>3</sub>. *What do I know?*

Q<sub>4</sub>. *What can I try?*

Q<sub>5</sub>. *Does my answer make sense?*