Lesson 9:

Multiply two-and three-digit numbers by two-digit numbers by using the standard algorithm.

CCSS Standard –5.NBT.B.5

FLUENCY (15-min) **Multiply by Multiples of 10, 100, 1,000, and 10,000**

Sprint A

Write the product.

1.	$1 \times 20 =$ _____	20
2.	$2 \times 600 =$ _____	1,200
3.	$3 \times 9{,}000 =$ _____	27,000

FLUENCY (15-min) **Multiply by Multiples of 10, 100, 1,000, and 10,000**

A

Number Correct: _____

Write the product.

1.	$1 \times 10 =$ _____		23.	$5{,}000 \times 7 =$ _____	
2.	$1 \times 30 =$ _____		24.	$6{,}000 \times 8 =$ _____	
3.	$2 \times 30 =$ _____		25.	$7{,}000 \times 9 =$ _____	
4.	$3 \times 30 =$ _____		26.	$1 \times 10{,}000 =$ _____	
5.	$30 \times 3 =$ _____		27.	$2 \times 20{,}000 =$ _____	
6.	$40 \times 4 =$ _____		28.	$3 \times 30{,}000 =$ _____	
7.	$50 \times 5 =$ _____		29.	$40{,}000 \times 4 =$ _____	
8.	$1 \times 100 =$ _____		30.	$50{,}000 \times 5 =$ _____	
9.	$2 \times 200 =$ _____		31.	$60{,}000 \times 6 =$ _____	
10.	$3 \times 400 =$ _____		32.	$7 \times 70{,}000 =$ _____	
11.	$300 \times 4 =$ _____		33.	$8 \times 80{,}000 =$ _____	
12.	$200 \times 5 =$ _____		34.	$9 \times 90{,}000 =$ _____	
13.	$200 \times 6 =$ _____		35.	$2 \times 90 =$ _____	
14.	$7 \times 300 =$ _____		36.	$3 \times 90 =$ _____	
15.	$8 \times 400 =$ _____		37.	$6 \times 10{,}000 =$ _____	
16.	$9 \times 500 =$ _____		38.	$20{,}000 \times 5 =$ _____	

Sprint A

STOP!!

Underline the last problem that you did.

I am going to read the answers. If you got it right, call out "Yes!"

Count the number you got **correct** and write the number at the top of the page.

THIS WILL BE YOUR PERSONAL GOAL FOR SPRINT B

FLUENCY (15-min) **Multiply by Multiples of 10, 100, 1,000, and 10,000**

Sprint B

Write the product.

1.	$1 \times 20 =$ _____	20
2.	$2 \times 600 =$ _____	1,200
3.	$3 \times 9{,}000 =$ _____	27,000

FLUENCY (15-min) **Multiply by Multiples of 10, 100, 1,000, and 10,000**

B

Number Correct: _____

Improvement: _____

Write the product.

1.	1 × 10 = _____	
2.	1 × 20 = _____	
3.	2 × 20 = _____	
4.	3 × 20 = _____	
5.	20 × 3 = _____	
6.	30 × 4 = _____	
7.	40 × 5 = _____	
8.	1 × 100 = _____	
9.	2 × 200 = _____	
10.	3 × 400 = _____	
11.	300 × 4 = _____	
12.	200 × 5 = _____	
13.	200 × 6 = _____	
14.	7 × 200 = _____	
15.	8 × 300 = _____	
16.	9 × 400 = _____	
17.	1 × 1,000 = _____	

23.	4,000 × 7 = _____	
24.	5,000 × 8 = _____	
25.	6,000 × 9 = _____	
26.	1 × 10,000 = _____	
27.	2 × 10,000 = _____	
28.	3 × 20,000 = _____	
29.	30,000 × 4 = _____	
30.	40,000 × 5 = _____	
31.	50,000 × 6 = _____	
32.	7 × 60,000 = _____	
33.	8 × 70,000 = _____	
34.	9 × 80,000 = _____	
35.	2 × 80 = _____	
36.	3 × 80 = _____	
37.	5 × 10,000 = _____	
38.	5 × 20,000 = _____	
39.	60,000 × 7 = _____	

Sprint B

STOP!!

Underline the last problem that you did.

I am going to read the answers. If you got it right, call out "Yes!"

Count the number you got **correct** and write the number at the top of the page.

Determine your improvement score!

LAUNCH (5-min)

Discuss a real-world use of an area model.

Painting a Mural Video

What did you notice in the video?

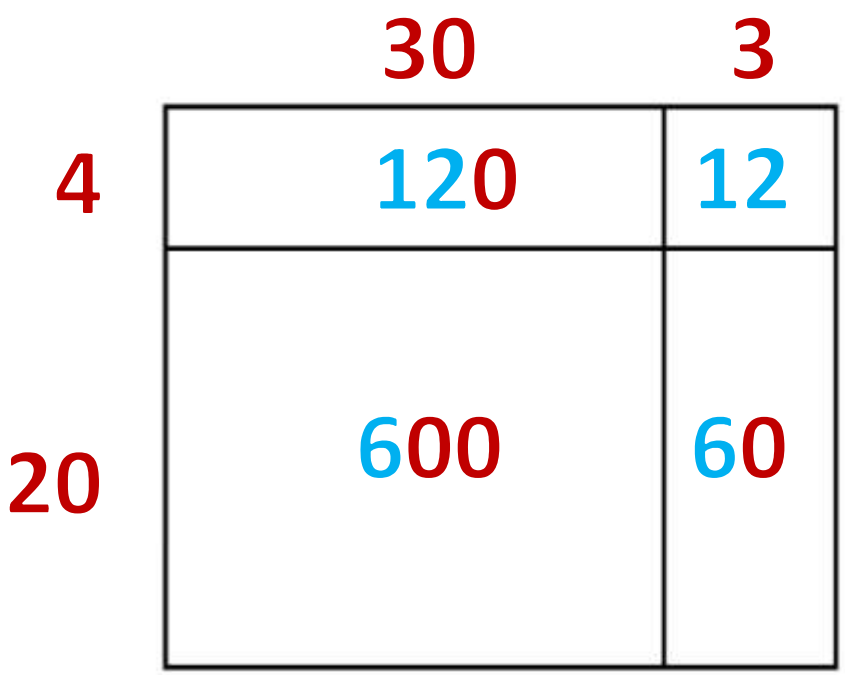
What do you wonder?

Does having the factors broken apart by place value help you multiply?

https://digital.greatminds.org/lessons/player/lesson/teacher-preview

LEARN (30-min) **Relate the Area Model to the Standard Algorithm**

Mr. Perez paints the gymnasium wall. The wall is 24 feet wide and 33 feet long. How many square feet does Mr. Perez paint?



600
120
60
+ 12
792

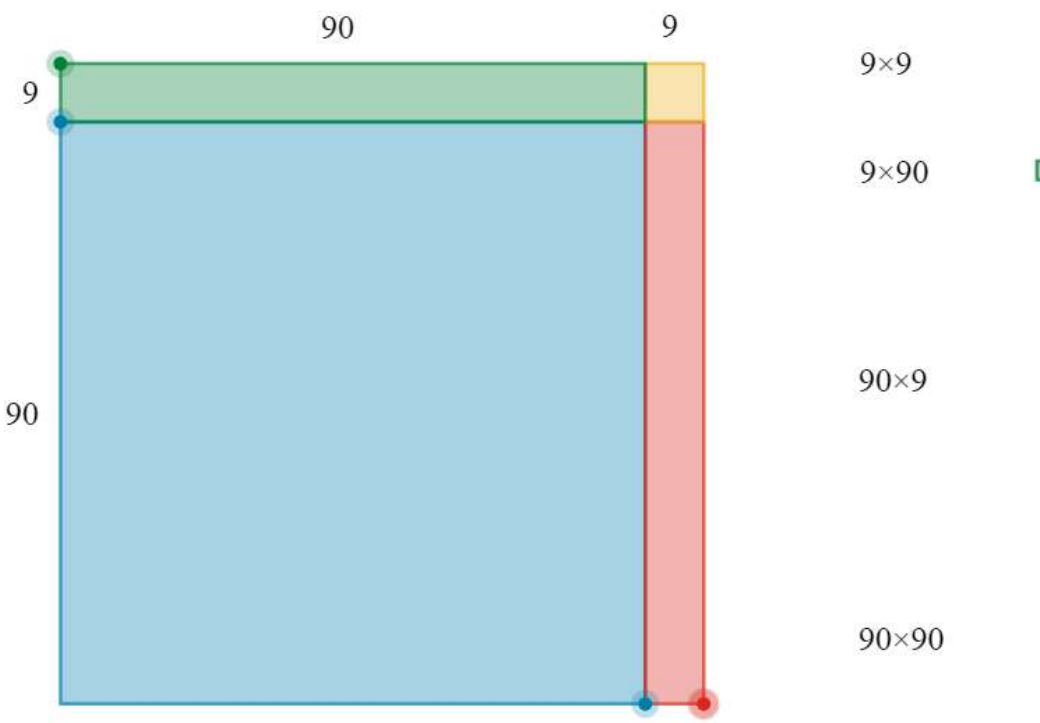
		1	
		3	3
×		2	4
	1	3	2
+	6	6	0
	7	9	2

Mr. Perez paints 792 square feet.

Area Model

Standard Algorithm

LEARN (30-min) **Relate the Area Model to the Standard Algorithm**



Show More | Show Less

Partial Products

We see partial products easily in the area model.

Do we see them in the standard algorithm?

https://digital.greatminds.org/lessons/player/lesson/teacher-preview

LEARN (30-min) **Relate the Area Model to the Standard Algorithm**

$28 \times 63 =$ _____

	60	3
8	480	24
20	1200	60

1200
480
60
+ 24
1,764

Area Model

Partial Products

			2	
			6	3
×			2	8
		5	0	4
+	1	2	6	0
	1,	7	6	4

Standard Algorithm

LEARN (30-min) **Relate the Area Model to the Standard Algorithm**

$28 \times 63 =$ _____

What does the 504 represent?

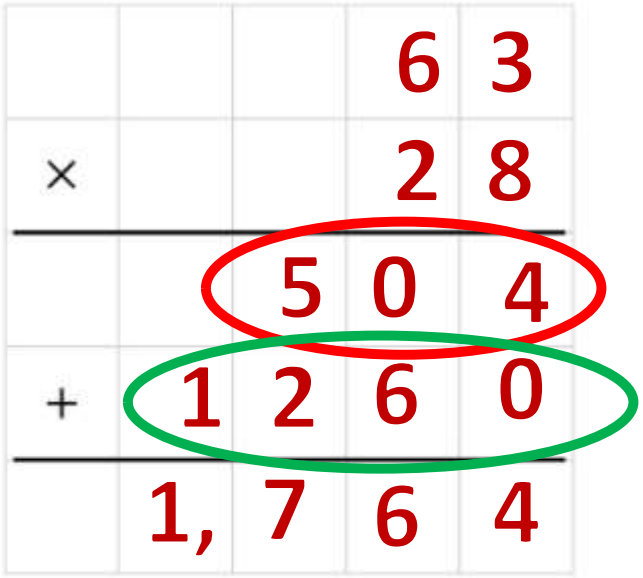
Eight 63's

What does the 1,260 represent?

Twenty 63's

What does the 1,764 represent?

Twenty-eight 63's

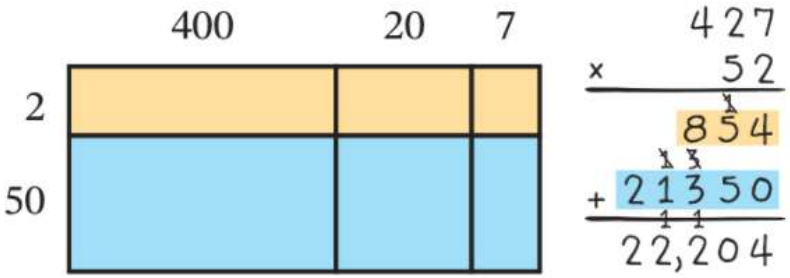


Standard Algorithm

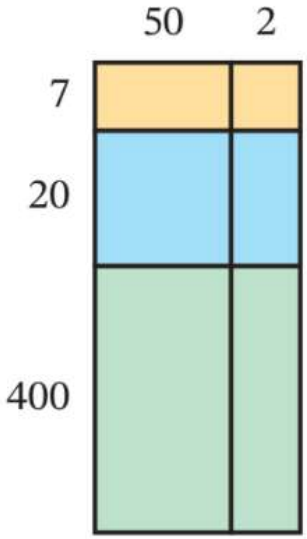
LEARN (30-min) **Relate the Area Model to the Standard Algorithm**

Flatback turtles lay 52 eggs in a nest. How many turtle eggs would there be in 427 nests?

$$\begin{array}{r} 427 \\ \times\ 52 \\ \hline \end{array}$$



$$\begin{array}{r} 427 \\ \times\ 52 \\ \hline 854 \\ +\ 21350 \\ \hline 22{,}204 \end{array}$$



$$\begin{array}{r} 52 \\ \times\ 427 \\ \hline 364 \\ 1040 \\ +\ 20800 \\ \hline 22{,}204 \end{array}$$

LAND (10-min)

Exit Ticket

9

Consider the expression shown.

$$446 \times 81$$

a. Draw an area model to find the partial products.

b. Multiply by using the standard algorithm.

Exit Ticket

Small Group Time:
Problem Set Page xx

Homework:
Page xx