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Math 5

UNIT 3 – Operations: Whole Numbers & Decimal
3-2 Multiplying Multi-Digit Whole Numbers

Name:		Date:	

Common Core Standards	CCSS.MATH.CONTENT.5.NBT.B.5 Fluently multiply multi-digit whole numbers using the standard algorithm CCSS.MATH.CONTENT.5.NBT.B.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

3-2 Multiplying Multi-Digit Whole Numbers

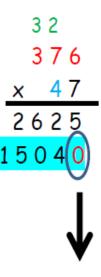## Steps in Multiplying Multi-Digit Whole Numbers using the Standard Algorithm

Example 1: Find the product of 376 x 47.

Step 1: Align the factors vertically according to their place values.

$$
\begin{array}{r}
376 \\
\times\ 47 \\
\hline
\end{array}
$$

Step 2: Multiply 7 to each digit of 375 starting with the ones digit. Don't forget to carry over the tens digit every time you multiply 7 to each digit of 375.

$$
\begin{array}{r}
54 \\
376 \\
\times\ 47 \\
\hline
2632 \\
\end{array}
$$

Step 3: Multiply 40 to each digit of 376 starting with the ones digit.

Why 40? Remember that in **47**, **"4"** is in the tens place… thus it has a value of **"40"**.

$$
\begin{array}{r}
3\,2 \\
3\,7\,6 \\
\times \quad 4\,7 \\
\hline
2\,6\,2\,5 \\
1\,5\,0\,4\,\textcircled{0}
\end{array}
$$

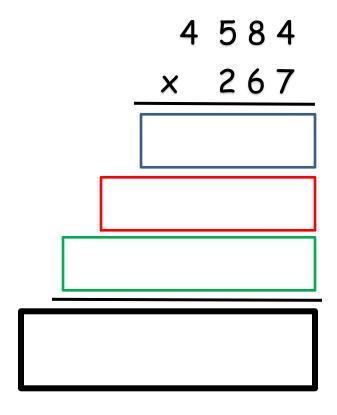Adding **"zero"** means that we are multiplying by tens.

If you are multiplying a value in the hundreds place, then 2 **"zeros"** are added, because we are multiplying by hundreds.

Step 4:   Add the partial products to get the final product.

$$
\begin{array}{r}
376 \\
\times\quad 47 \\
\hline
2632 \\
+15040 \\
\hline
17672 \\
\end{array}
$$

Therefore, 376 x 47 = 17 672.

You Complete Me!

Multiply the numbers using the **Standard Algorithm**. Fill the boxes with the correct values (include zeros).

$$
\begin{array}{r}
4\ 5\ 8\ 4 \\
\times\ \ 2\ 6\ 7 \\
\hline
\end{array}
$$

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Task Cards

Perform the indicated operation. Match the pink card with the blue card.

1	a
435×37	18 272

2	B
571×32	124 784

6

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3	C
6 241 × 53	**1 868 193**

4	D
5 672 × 22	**330 773**

5	E
7 443 x 251	16 095

6	F
12 421 x 212	2 633 252

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ANSWER KEY

At the Right Place!

32 088

275 040

916 800

1 223 928

Task Cards

1.   E

2.   A

3.   D

4.   B

5.   C

6.   F