# Lesson 7: Build Multiplication Fluency

- Let's multiply multi-digit whole numbers using the standard algorithm.

## Warm-up: Notice and Wonder: Same Solution

What do you notice? What do you wonder?

$$
\begin{array}{r}
1\phantom{00} \\
1\ 5\phantom{0} \\
4\ 1\ 7 \\
\times\ \ \ \ \ 2\ 8 \\
\hline
3,\ 3\ 3\ 6 \\
+\ \ \ \ 8,\ 3\ 4\ 0 \\
\hline
1\ 1,\ 6\ 7\ 6
\end{array}
\qquad
\begin{array}{r}
3\phantom{00} \\
5\phantom{00} \\
2\ 8 \\
\times\ 4\ 1\ 7 \\
\hline
1\phantom{00} \\
1\ 9\ 6 \\
2\ 8\ 0 \\
+\ 1\ 1,\ 2\ 0\ 0 \\
\hline
1\ 1,\ 6\ 7\ 6
\end{array}
$$

# 7.1: Greatest Product

$$\begin{array}{r} \square\square\square \\ \times \quad \square\square \\ \hline \end{array}$$
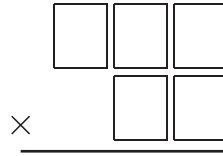
Directions:

- Partner A chooses a number card and writes the number in one of the blanks for Round 1.

- Partner B does the same.

- Repeat until each partner has a two-digit by three-digit multiplication problem.

- Find the product.

- The partner with the greater product wins a point.

- The partner with the most points after 5 rounds wins the game.

## 7.2: Desperately Seeking 9 New Units

Tyler notices that when he uses the standard algorithm and composes a new unit, sometimes there is 1 new unit, sometimes 2, all the way up to 8. He has not seen an example with 9 of the new unit.

1. For each of these products, how many of each new unit do you compose?

    a. $256 \times 5$

    b. $587 \times 8$

    c. $809 \times 9$

2. Do you think it is possible to compose 9 of a new unit with the standard multiplication algorithm?