Unit 6, Lesson 10

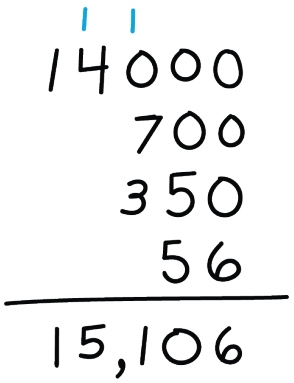
Using Algorithms with Partial Products: 2 Two-Digit Numbers

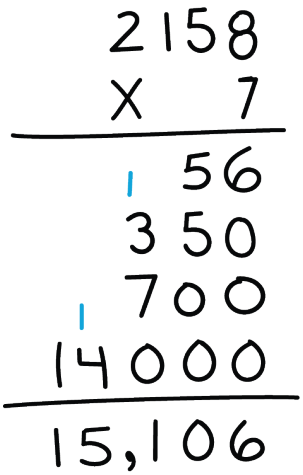
Let's try to multiply two-digit numbers with an algorithm that uses partial products.

Warm-up

Notice and Wonder: Ways to Keep Track

What do you notice? What do you wonder?

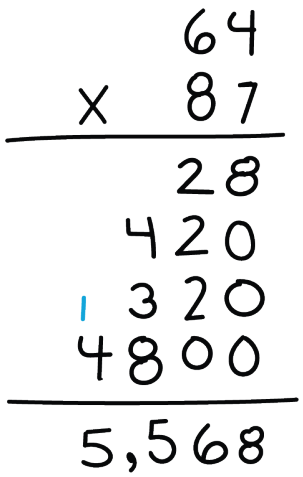




Activity 1

Partial Products, Recorded

1. Tyler uses an algorithm to find the value of 64×87.



Describe each step in Tyler's method. How do you think he arrived at the last five numbers? Record your thinking.

2. Use Tyler's method to find the value of 31×15. Then draw a diagram to check your answer.

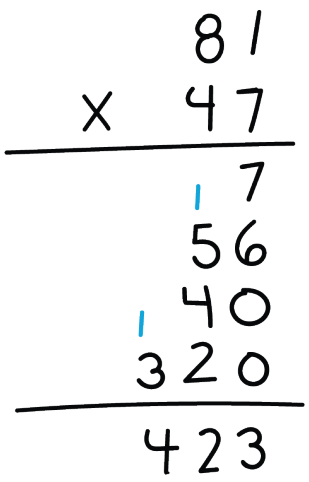
Activity 2

Han's Multiplication Mishap

1. Decide with your partner who will find each product. Show your thinking. Organize it so it can be followed by others.

$$\begin{array}{r} 19 \\ \times\ 32 \\ \hline \end{array} \qquad \begin{array}{r} 32 \\ \times\ 19 \\ \hline \end{array}$$

2. Here is Han's computation of 81×47.



   a. What error or errors did Han make?

   b. Show the correct computation for finding the value of 81×47.

$$\begin{array}{r} 81 \\ \times\ 47 \\ \hline \end{array}$$