

Grade 4 Unit 6

Lesson 10

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Unit 6 Lesson 10: Using Algorithms with Partial Products: 2

Two-digit Numbers

WU Number Talk: Products (Warm up)

Student Task Statement

Find the value of each expression mentally.

- 30×7
- 15×14
- 50×8
- 25×16

1 Partial Products, Recorded

Student Task Statement

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

$$\begin{array}{r}
 64 \\
 \times 87 \\
 \hline
 28 \\
 420 \\
 320 \\
 + 4,800 \\
 \hline
 5,568
 \end{array}$$

How do you think he arrived at the last five numbers? Record your thinking. Be prepared to share it with a partner.

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

Activity Synthesis

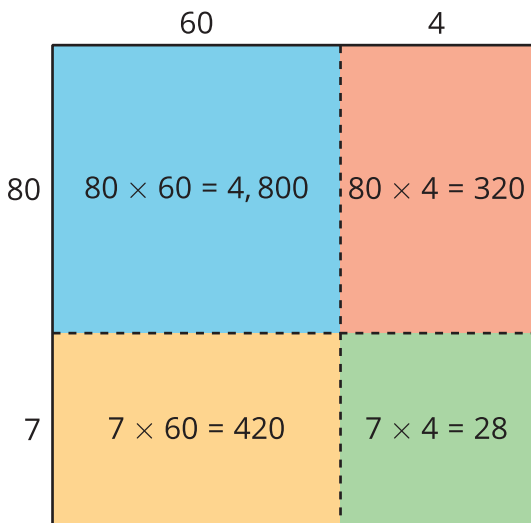
$$\begin{array}{r}
 64 \\
 \times 87 \\
 \hline
 28 \quad 7 \times 4
 \end{array}$$

$$\begin{array}{r} 64 \\ \times 87 \\ \hline 420 \end{array} \quad 7 \times 60$$

$$\begin{array}{r} 64 \\ \times 87 \\ \hline 320 \end{array} \quad 80 \times 4$$

$$\begin{array}{r} 64 \\ \times 87 \\ \hline 4,800 \end{array} \quad 80 \times 60$$

$$\begin{array}{r} 64 \\ \times 87 \\ \hline 28 \\ 420 \\ 320 \\ + 4,800 \\ \hline 5,568 \end{array} \quad \begin{array}{l} 7 \times 4 \\ 7 \times 60 \\ 80 \times 4 \\ 80 \times 60 \end{array}$$



2 Han's Multiplication Mishap

Student Task Statement

1. Decide with your partner who will find each product. Show your reasoning.

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

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

2. Here is Han's computation of 51×47 .

$$\begin{array}{r} 5 1 \\ \times 4 7 \\ \hline 7 \\ 3 5 \\ 4 0 \\ + 2 0 0 \\ \hline 2 8 2 \end{array} \quad \begin{array}{l} 7 \times 1 \\ 7 \times 5 \\ 40 \times 1 \\ 40 \times 5 \end{array}$$

- What error or errors did Han make?
- Show the correct computation for finding the value of 51×47 .

$$\begin{array}{r} 5 1 \\ \times 4 7 \\ \hline \end{array}$$