

Grade 4 Unit 6

Lesson 11

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Unit 6 Lesson 11: Partial Products and the Standard Algorithm**WU Number Talk: The Value of the Digits (Warm up)**

Student Task Statement

Find the value of each expression mentally.

- 5×101
- 5×102
- 5×203
- 5×404

1 Two Algorithms to Multiply

Student Task Statement

1. Here are two algorithms for finding the value of 3×713 .

Kiran

$$\begin{array}{r} 713 \\ \times 3 \\ \hline 2,139 \end{array}$$

Diego

$$\begin{array}{r} 713 \\ \times 3 \\ \hline 9 \\ 30 \\ + 2,100 \\ \hline 2,139 \end{array}$$

Discuss with your partner:

- a. How are Kiran's algorithm and Diego's algorithm alike? How are they different?
 - b. How do you think Kiran found the product 2,139?
2. Find the value of each product.
 - a. 212×4
 - b. $3 \times 4,132$

2 Algorithm Comparison

Student Task Statement

1. Analyze the two algorithms used to find the value of 4×223 .

Kiran

$$\begin{array}{r} \\ \\ \\ \times \\ \hline 8 \end{array}$$

Diego

$$\begin{array}{r} \\ \\ \\ \times \\ \hline \\ \\ \\ + \\ \hline \\ \hline \end{array}$$

- a. How are Kiran and Diego's algorithms alike? How are they different?
 - b. Where is the 12 in Kiran's algorithm?
2.
 - a. Try using Kiran's algorithm to find the value of 512×3 .
 - b. Check your work using a different method.

Images for Activity Synthesis

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