## Lesson 5: Standard Algorithm: Multi-digit Numbers without Composing

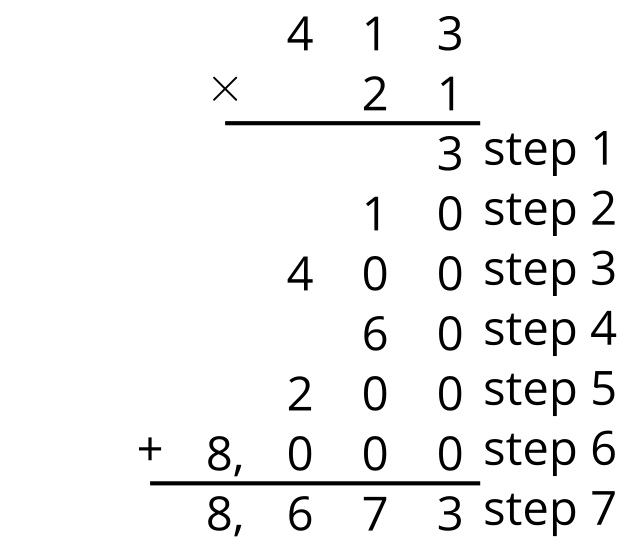
* Let’s use the standard algorithm to multiply two-digit numbers and three-digit numbers.

### Warm-up: Number Talk: Partial Products

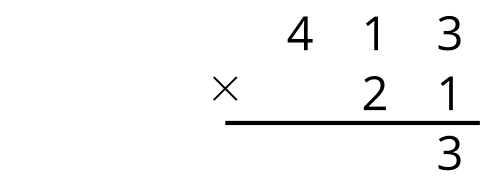
Find the value of each product mentally.

### 5.1: Compare Two Algorithms

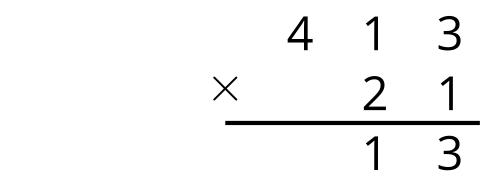
Two algorithms for finding the value of  are shown.



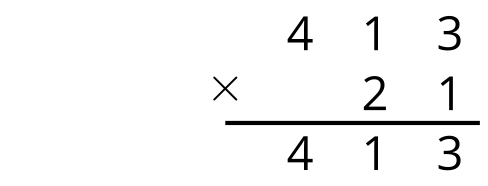
step 1



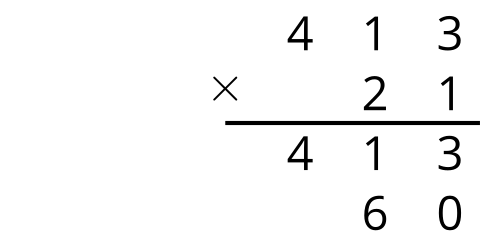
step 2



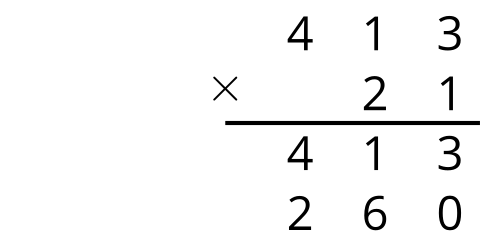
step 3



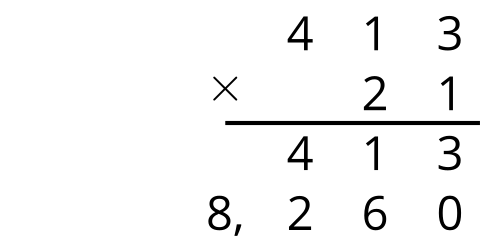
step 4



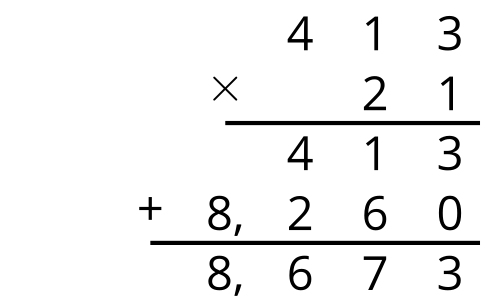
step 5



step 6



step 7

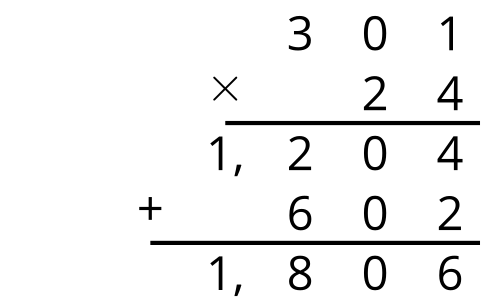


1. How are the two algorithms the same? How are they different?
2. Explain or show where you see each step from the first algorithm in the second algorithm.
3. How do the final steps in the two algorithms compare?

### 5.2: Use the Standard Algorithm

Use the standard algorithm to find the value of each expression.

1. Diego found the value of . Here is his work. Why doesn’t Diego’s answer make sense?

* 



© CC BY 2021 Illustrative Mathematics®