Lesson 7: Multiply Three- and Four-digit Numbers by One-digit Numbers

Standards Alignments

Addressing   4.NBT.B.5

Teacher-facing Learning Goals

- Multiply three- and four-digit numbers using place value understanding and properties of operations.

Student-facing Learning Goals

- Let's multiply three- and four-digit numbers by one-digit numbers.

Lesson Purpose

The purpose of this lesson is for students to multiply a whole number of up to four digits by a one-digit number by decomposing factors by place value, finding partial products, and using properties of operations.

In the previous lesson, students represented multiplication using base-ten diagrams and rectangular diagrams, and used place value reasoning to multiply two-digit numbers by one-digit numbers. In this lesson, they use rectangular diagrams and expressions to multiply up to four-digit numbers by one-digit numbers. They continue to use place value reasoning to decompose the multi-digit factor and to use partial products in their computation.

Students should have multiple opportunities to hear the term "partial products" as referring to the results of multiplying a part of one factor and the other factor (or a part of one factor and a part of the other factor).

Access for:

♿ Students with Disabilities

- Representation (Activity 2)

🌐 English Learners

- MLR2 (Activity 1)

Instructional Routines

Estimation Exploration (Warm-up)

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	20 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

How can you leverage each of your student's ideas to support them in being seen and heard in tomorrow's math class?

Cool-down (to be completed at the end of the lesson)   🕐 5 min

The Value of the Product

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Student-facing Task Statement

Find the value of 6×218. Show your reasoning.

Student Responses

1,308. Sample response:

$(6 \times 200) + (6 \times 10) + (6 \times 8)$
$= 1,200 + 60 + 48$
$= 1,308$