Lesson 10: Ten Times As Much

Standards Alignments

Addressing 4.NBT.A.1, 4.NBT.A.2, 4.NBT.B.4

Teacher-facing Learning Goals

- Write equations to show that each place in a multi-digit number is ten times the value of the place to its immediate right.

Student-facing Learning Goals

- Let's write equations to show the relationship between the digits in multi-digit numbers.

Lesson Purpose

The purpose of this lesson is to write equations to represent the relationship between the value of digits in multi-digit numbers.

In the previous lesson, students wrote multi-digit numbers in expanded form to highlight the value of each digit. They also described the "ten times" relationship between the value of a digit in one place and the value of the same digit in the place to its right. In this lesson, students use multiplication and division equations to represent this relationship.

Access for:

Students with Disabilities

- Engagement (Activity 2)

Instructional Routines

MLR1 Stronger and Clearer Each Time (Activity 1), Number Talk (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 did the student work you selected impact the direction of the discussion? What student work might you pick next time if you teach the lesson again?

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

5 min

Same Digit, Different Place

Standards Alignments

Addressing 4.NBT.A.1

Student-facing Task Statement

Here are two numbers: 872,000 and 700,208

1. a. What is the value of the 2 in each number?
   b. Write a multiplication or division equation to show the relationship between these two values.
2. a. What is the value of the 7 in each number?
   b. Write a multiplication or division equation to show the relationship between these two values.

Student Responses

1. a. In 872,000, the 2 is 2,000 and in 700,208, the 2 is 200.
   b. $2{,}000 \div 10 = 200$ or $200 \times 10 = 2{,}000$
2. a. In 872,000, the 7 is 70,000 and in 700,208, the 7 is 700,000.
   b. $70{,}000 \times 10 = 700{,}000$ or $700{,}000 \div 10 = 70{,}000$