# Lesson 10: Ten Times As Much

### Standards Alignments

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| --- | --- |
| 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

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| 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) 5min

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

### Student Responses

* 1. In 872,000, the 2 is 2,000 and in 700,208, the 2 is 200.
	2. $2,​000÷10=200$ or $200×10=2,​000$
	3. In 872,000, the 7 is 70,000 and in 700,208, the 7 is 700,000.
	4. $70,​000×10=700,​000$ or $700,​000÷10=70,​000$