

## Lesson 9: Same Digit, Different Value

### Standards Alignments

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

### Teacher-facing Learning Goals

- Describe that the value of a digit in one place represents ten times what it represents in the place to its right.

### Student-facing Learning Goals

- Let's describe the relationship between the digits in multi-digit numbers.

### Lesson Purpose

The purpose of this lesson is to describe the value of a digit in one place as having ten times the value of the same digit in a place to its right.

This lesson shifts the focus from reading and writing numbers to describing the multiplicative relationship between place values in a multi-digit number. In previous lessons, students used base-ten blocks to represent large numbers, and wrote numbers in expanded form. In this lesson, they use their developing understanding of the value of a digit to begin to articulate that a digit in one place is ten times the value as the same digit in a place to its right.

The syntheses in this lesson help students connect the language of “ten times the value” to equations to help them represent this concept.

### Access for:

#### Students with Disabilities

- Representation (Activity 1)

#### English Learners

- MLR2 (Activity 2)

### Instructional Routines

Card Sort (Activity 1), True or False (Warm-up)

### Materials to Copy

- Card Sort: Large Numbers (4 to 6 digits) (groups of 2): Activity 1

## Lesson Timeline

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

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

 5 min

### The Value of Digits

#### Standards Alignments

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#### Student-facing Task Statement

Here are two numbers: 531,690 and 58,487.

1. Write each number in expanded form.
2. Write a multiplication equation to represent the relationship between the digit 5 in both numbers.

#### Student Responses

1.  $500,000 + 30,000 + 1,000 + 600 + 90$  ,  $50,000 + 8,000 + 400 + 80 + 7$
2.  $50,000 \times 10 = 500,000$