

## G4 Playlist: Understanding Place Value

Aligns with *CCSS.MATH.CONTENT.4.NBT.A.1*: Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that  $700 \div 70 = 10$  by applying concepts of place value and division.

### Related Standards

- *CCSS.MATH.CONTENT.2.NBT.A.1* Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
  - *CCSS.MATH.CONTENT.2.NBT.A.1.A*: 100 can be thought of as a bundle of ten tens — called a “hundred.”
  - *CCSS.MATH.CONTENT.2.NBT.A.1.B*: The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
- *CCSS.MATH.CONTENT.4.NBT.A.2*: Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.
- *CCSS.MATH.CONTENT.4.NBT.A.3*: Use place value understanding to round multi-digit whole numbers to any place.
- *CCSS.MATH.CONTENT.5.NBT.A.1*: Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $1/10$  of what it represents in the place to its left.
- *CCSS.MATH.CONTENT.5.NBT.A.2*: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.



## Objectives

In this module, you will learn and practice the following skills:

- Understand the relationship between a digit's position in a number and its value.
- Compare the values of digits in different places.
- Multiply and divide numbers by powers of 10 and explain the result.

Let's get started!

## Key Terms

- **Place value** is the value of a digit, based on its position in a number.

PREVIEW



## Understanding Place Value

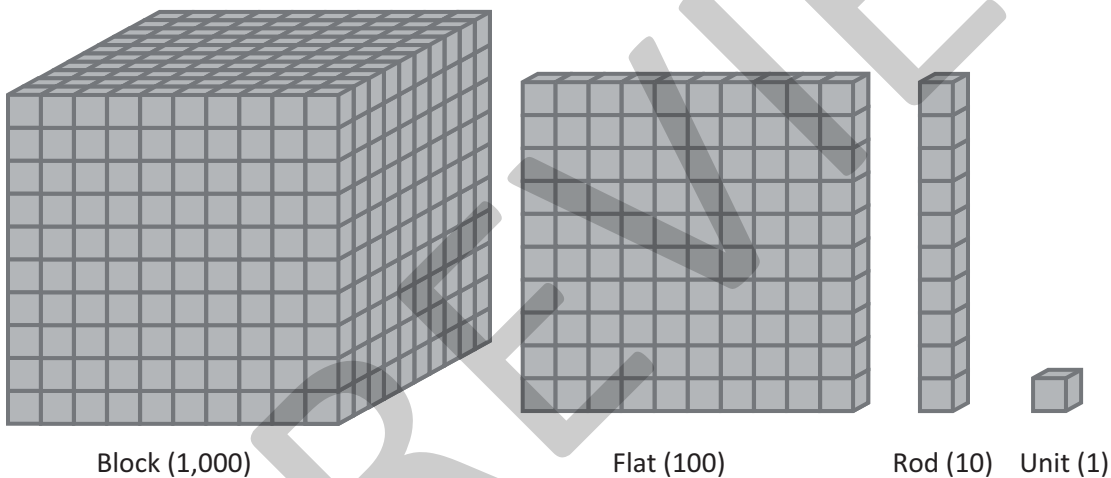
(4.NBT.A.1)

**Place value** is the value of a digit, based on its position in a number. Each place in a number has a value 10 times greater than the place to its right.

- When you multiply a number by 10, the value of each digit increases by a factor of 10, so each digit moves one place to the left.
- When you divide a number by 10, the value of each digit decreases by a factor of 10, so each digit moves one place to the right.

Place value can be represented using a place-value chart or base-ten blocks.

Thousands	Hundreds	Tens	Ones



If your students...

**Have difficulty representing numbers with place-value charts or base-ten blocks:**

WATCH: Use a Place Value Chart and Arrow Cards to Understand Large Numbers

[https://learnzillion.com/lesson\\_plans/8993-use-a-place-value-chart-and-arrow-cards-to-understand-large-numbers#fndtn-lesson](https://learnzillion.com/lesson_plans/8993-use-a-place-value-chart-and-arrow-cards-to-understand-large-numbers#fndtn-lesson)

