



# Same Digit, Different Value

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

## Warm-up

### True or False: Expanded Expressions

Decide if each statement is true or false. Explain your reasoning.

- $4,000 + 600 + 70,000 = 70,460$
- $900,000 + 20,000 + 3,000 = 920,000 + 3,000$
- $80,000 + 800 + 8,000 = 800,000 + 80 + 8$

## Activity 1

### Card Sort: Large Numbers

Your teacher will give you a set of cards that show multi-digit numbers.

- Sort the cards into categories in a way that makes sense to you. Be ready to explain the meaning of your categories.
- Join with another group and explain how you sorted your cards.
- Write each number in expanded form.
  - 4,620
  - 46,200
  - 462,000
- Write the value of the 4 in each number.
- Compare the value of the 4 in two of the numbers. Write two statements to describe what you notice about the values.  

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- How is the value of the 2 in 46,200 related to the value of the 2 in 462,000?



Activity 2

Expand Large Numbers

1. Express each number in standard form, expanded form, and word form.

number	expanded form	word form
784,003		
	$50,000 + 9,000 + 300 + 60 + 1$	
		eight hundred three thousand, ninety-nine
310,060		
		nine hundred thirty-four thousand, nine hundred

2. Choose 2 numbers from the table to make this statement true:

The 3 in \_\_\_\_\_ is ten times the value of the 3 in \_\_\_\_\_.

3. Explain why you chose those numbers.



4. Find 2 classmates who chose different numbers than you. Record their numbers. Take turns sharing your completed statements and explaining your reasoning.

◦ The 3 in \_\_\_\_\_ is ten times the value of the 3 in \_\_\_\_\_.

◦ The 3 in \_\_\_\_\_ is ten times the value of the 3 in \_\_\_\_\_.

