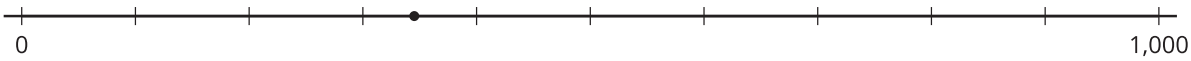
Lesson 11: Large Numbers on a Number Line

- Let's locate multi-digit numbers on a number line.

Warm-up: Estimation Exploration: What Number Could This Be?

What number is represented by the point?



Record an estimate that is:

too low	about right	too high

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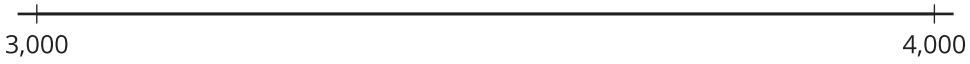
11.1: Locate Large Numbers

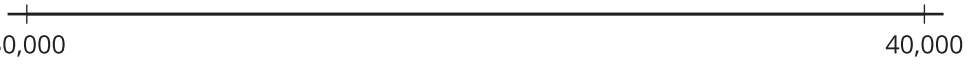
1. Locate and label each number on the number line.

a. 347

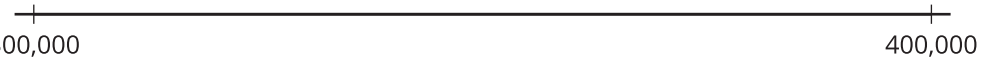
b. 3,470



c. 34,700

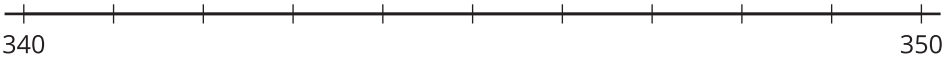


d. 347,000

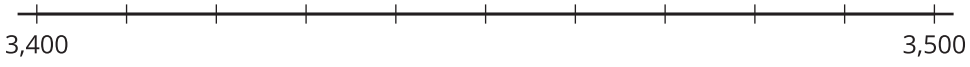


2. Locate and label each number on the number line.

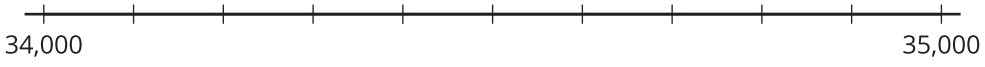
a. 347



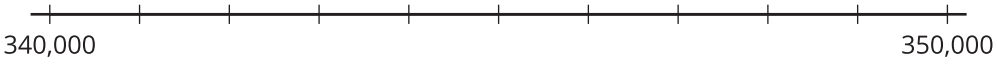
b. 3,470



c. 34,700



d. 347,000



3. What do you notice about the location of these numbers on the number lines? Make two observations and discuss them with your partner.

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11.2: So Many Numbers, So Little Line

Your teacher will assign a number for you to locate on the given number line.

A. 347

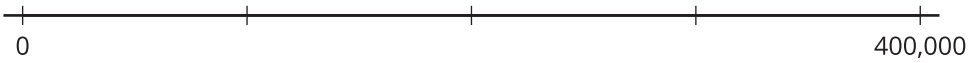
B. 3,470

C. 34,700

D. 347,000

1. Decide where your assigned number will fall on this number line. Explain your reasoning.

2. Work with your group to label the tick marks and agree on where each of the numbers should be placed.



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Section Summary

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In this section, we worked with numbers to the hundred-thousands.

First, we used base-ten blocks, 10-by-10 grids, and base-ten diagrams to name, write, and represent multi-digit numbers within 1,000,000. We wrote the numbers in **expanded form** so that we can see the value of each digit. For instance:

$$725{,}400 = 700{,}000 + 20{,}000 + 5{,}000 + 400$$

Next, we learned that the value of a digit in a multi-digit number is ten times the value of the same digit in the place to its right. For example:

- Both 14,800 and 148,000 have 4 in them.
- The 4 in 14,800 is in the thousands place. Its value is 4,000.
- The 4 in 148,000 is in the ten-thousands place. Its value is 40,000.
- The value of the 4 in 148,000 is ten times the value of the 4 in 14,800.

We used both multiplication and division equations to represent this relationship.

$$10 \times 4{,}000 = 40{,}000$$

$$40{,}000 \div 10 = 4{,}000$$

Finally, we analyzed the "ten times" relationships by locating numbers on number lines.

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