

Understanding Place Value

Topic 1

1-1 Numbers through one million (1,000,000)

Expanded Form

$$300,000 + 20,000 + 7,000 + 600 + 80 + 7$$

Expanded form shows the value of each digit in a number

Can you write the number shown in expanded form above? Try it!

1-1 Numbers through one million (1,000,000)

<u>Expanded Form</u>	$1,000,000 + 400,000 + 2,000 + 900 + 70$
<u>Number Name</u> (Word Form)	one million, four hundred two thousand, nine hundred seventy
<u>Numerals</u>	1,402,970

1-2 Place Value Relationships

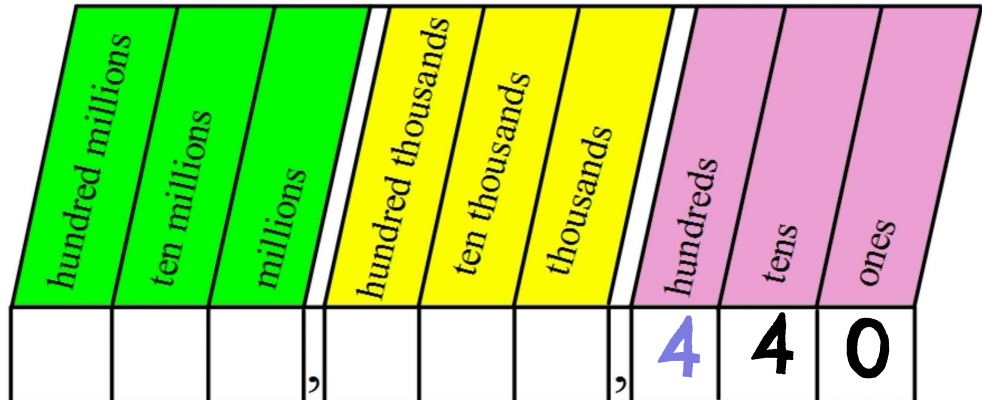
I can... recognize that a digit in one place has 10 times the value of a digit to its right.

In the number 440, the 4 in the hundreds place is 10 times greater than the 4 in the tens

$$4 \text{ hundreds} = 400$$

$$4 \text{ tens} = 40$$

400 is 10 times greater than 40



1-3 Compare Whole Numbers

I can...use place value to compare whole numbers and by using the symbols $>$, $<$, $=$

1 Step 1

Write the numbers, lining up places. Begin at the left and compare.

6,356
6,378

The thousands digit is the same in both numbers.

2 Step 2

Look at the next digit, compare the hundreds.

6,356
6,378

The hundreds digit is also the same in both numbers.

3 Step 3

The first place where the digits are different is the tens place. Compare the tens.

6,356 5 tens $<$ 7 tens,
6,378 so 6,356 $<$ 6,378.

The North Pole is closer than the equator to Earth's center.

1-4 ROUND Whole Numbers

I can...use place value to round whole numbers.

ROUNDING RULES

STEP 1: Find the rounding place. Underline it.

STEP 2: Go next door one place to the right. Circle it.

STEP 3: Ask: is the circled number... *4 or less?* *5 or more?*

Let it rest! *Raise the score!*

STEP 4: Change all the numbers to the right of the underlined number to ZEROs.

Example: Round 314,285 to the nearest thousand.

STEP 1: 314,285

STEP 2: 314,285

STEP 3: 2 < 5
let it rest

STEP 4: 314,000

1-5 Construct Arguments

I can...construct arguments using what I know about place value relationships.

Conjecture -
is a statement that is believed to be true, but has not been proven.

You can **construct an argument** to support or oppose a conjecture. A **conjecture** is a statement that is thought to be true but has not yet been proven.

When you construct an argument, give a clear and complete explanation, and use numbers, objects, drawings, or actions to justify your argument.

The land area of Texas is two hundred sixty-one thousand, two hundred thirty-two square miles. The number is written as 261,332. Construct a math argument that explains if the number is written correctly.

Sample answer: The number is written incorrectly.

The digit in the hundreds place should be a 2;

261,232.