Recognizing Place Values

Topic: CCSS 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.

Summary:

- **Base-Ten System**
    - In our number system, the position of the digit in a number defines its value.
        - Each place value is 10x larger than the place value directly to its right and 1/10x smaller than the place value directly to its left.
            - In the number 13,592, the 3 is in the thousands place and represents 3,000. In the number 26,341, the 3 is in the hundreds place and represents 300.

Practice:

- **Explain the value of each digit as 10x the value of the place value to its right and 1/10x the value of the place value to its left.**

    - Write the place value of the underlined digit in the numbers below.

        - 51,3<u>2</u>1,201 _____

        - <u>2</u>56,110 _____

        - 231,45<u>6</u>,007 _____

        - 19<u>1</u>,520,193 _____

        - 1,2<u>4</u>1 _____

    - Which of these numbers is sixty-five million, five hundred thirty-two thousand, one hundred fifty?

        - 6,553,215   - 65,532,105

        - 65,532,150   - 65,532,510

    - Which of these numbers is thirty-seven thousand, two hundred sixty-two?

        - 37,226   - 37,000,262

        - 37,262   - 37,000,226

- **Describe patterns found in place value.**

  - One million is equal to:

    A. 10 thousands

    B. 100 thousands

    C. 1,000 thousands

    D. 10,000 thousands

  - One thousand is equal to:

    A. One tenth of a million

    B. One hundredth of a million

    C. Hundred thousand tens

    D. Hundred thousand ones

  - Which of these number statements are false? Choose all that apply.

    A. 1 million > 100 thousands

    B. 1 million > 100,000 hundreds

    C. 1 million = 1,000 tens

    D. 1 million = 100 tens

  - Which of these number statements are true? Choose all that apply.

    A. 1 million = 1 thousand x 1,000

    B. 1 million = 1 thousand x 100

    C. 1 million = 100 thousand x 100

    D. 1 million = 1,000 thousand x 10

- **Demonstrate place value understanding by working flexibly with numbers.**

  - Write >, <, or = for each of the following number pairs.

    - 265,793 _____ 256,753

    - 2,121,212 _____ 2,121,212

    - 823,328,823 _____ 832,328,823

    - 955,897 _____ 9,055,897

  - Order the following lists of numbers from least to greatest.

    - 360,297; 369,297; 370,297 _____

    - 432,491; 432,191; 412,491 _____

    - 423,326,268; 423,326,278; 423,326,272 _____

    - 220,202,020; 220,020,020; 202,202,020 _____