Scientific & Standard Notation

I. Scientific Notation

A. To write very large or small #'s condensely.

B. To organize #'s from least to greatest

II. Standard Notation

A. The 'standard' in which we write #'s

III. Writing in Scientific Notation

- Distance from Earth to Sun

Standard Notation → 93,000,000. miles

How many #'s in between two decimals?

Scientific Notation → 9.3×10^{7}

- Mass of a Hydrogen Atom

0.00000285 grams

* To the negative power when the original # is a decimal.

2.85×10^{-6}

III. Writing in Standard Notation

ex: 5.73×10^{4}

- Moving the decimal the same amount as the exponent

$5.7300 = 57,300$

4 places

ex: 6.2×10^{-3}

$.0062 = .0062$

Scientific & Standard Notation

I. Scientific Notation

A. To be able to write very large or small #'s condensely.

B. To easily order #'s

II. Standard Notation

A. The 'standard' method of writing #'s.

- Use Scientific Notation if the # has a lot of zeros.

III. Writing in Scientific Notation

Earth to Sun: 93,000,000 miles (6 zeros)

New Decimal Point

Orig. Decimal Point

$$9.3 \times 10^{7}$$

In between 1 and 10

How many #'s are in between the 2 decimals

ex: Mass of a Hydrogen Atom: 0.00000000285 grams

Decimals are negative exponents

$$2.85 \times 10^{-9}$$

III. Writing in Standard Notation

ex: 5.32×10^{5}

- Move the decimal the amount as the exponent.

5.32000

532,000

ex: 8.037×10^{-4}

0008.037

.0008037