

SCIENTIFIC NOTATION

MAIN IDEAS

NOTES

Scientific Notation

- Used to write very LARGE and very small numbers.
- Written as a product of 2 factors
 3.79×10^8
↑ ↑
factor #1 factor #2
is a number is a power
between 1 and 10 of 10

Large Numbers

Step 1: Move the decimal to the left to make a # between 1 and 10

$$\underbrace{72,000,000.}_{\text{Factor \#1}} \rightarrow 7.2$$

Step 2: Count the number of places you moved the decimal point. Write as a power of 10.
moved 7 places left = 10^7
(Factor #2)

$$72,000,000 = 7.2 \times 10^7$$

MAIN IDEAS

NOTES

Small
Numbers

Step 1: move the decimal
to the right to make
a # between 1 and 10

$$\underbrace{.00000072}_{7 \text{ places}} \rightarrow 7.2 \text{ (factor \#1)}$$

Step 2: count the number
of places you moved the
decimal point. Write as a
negative power of 10

Moved 7 places to the right =
 10^{-7} (factor #2)

$$.00000072 = 7.2 \times 10^{-7}$$

Scientific
to
Standard

positive exponents = move decimal
RIGHT (larger number)

$$6.2 \times 10^6 = 6,200,000$$

Negative exponents = move decimal
LEFT (smaller number)

$$6.2 \times 10^{-6} = .0000062$$