

## Scientific Notation

- an easier way to write **really BIG** or really small numbers
- zeroes get stored as the exponent
- rules:
  - (1-9)
  - re-write number with a nonzero digit first, immediately followed by a decimal point (.)
    - e.g., 4.72, not 47.2
  - write additional digits after decimal point
  - add "x 10"
  - count the # of places the decimal moved
  - write that number in the exponent of 10
    - e.g.,  $4.72 \times 10^2$

$$49000 = 4.9 \times 10000$$

$4.9 \times 10^4$

$$12,000,000,000,000 = 1.2 \times 10^{13}$$

$$5138675309 = 5.138675309 \times 10^9$$

$$0.00512 = 5.12 \times 0.001$$
$$5.12 \times 10^{-3}$$