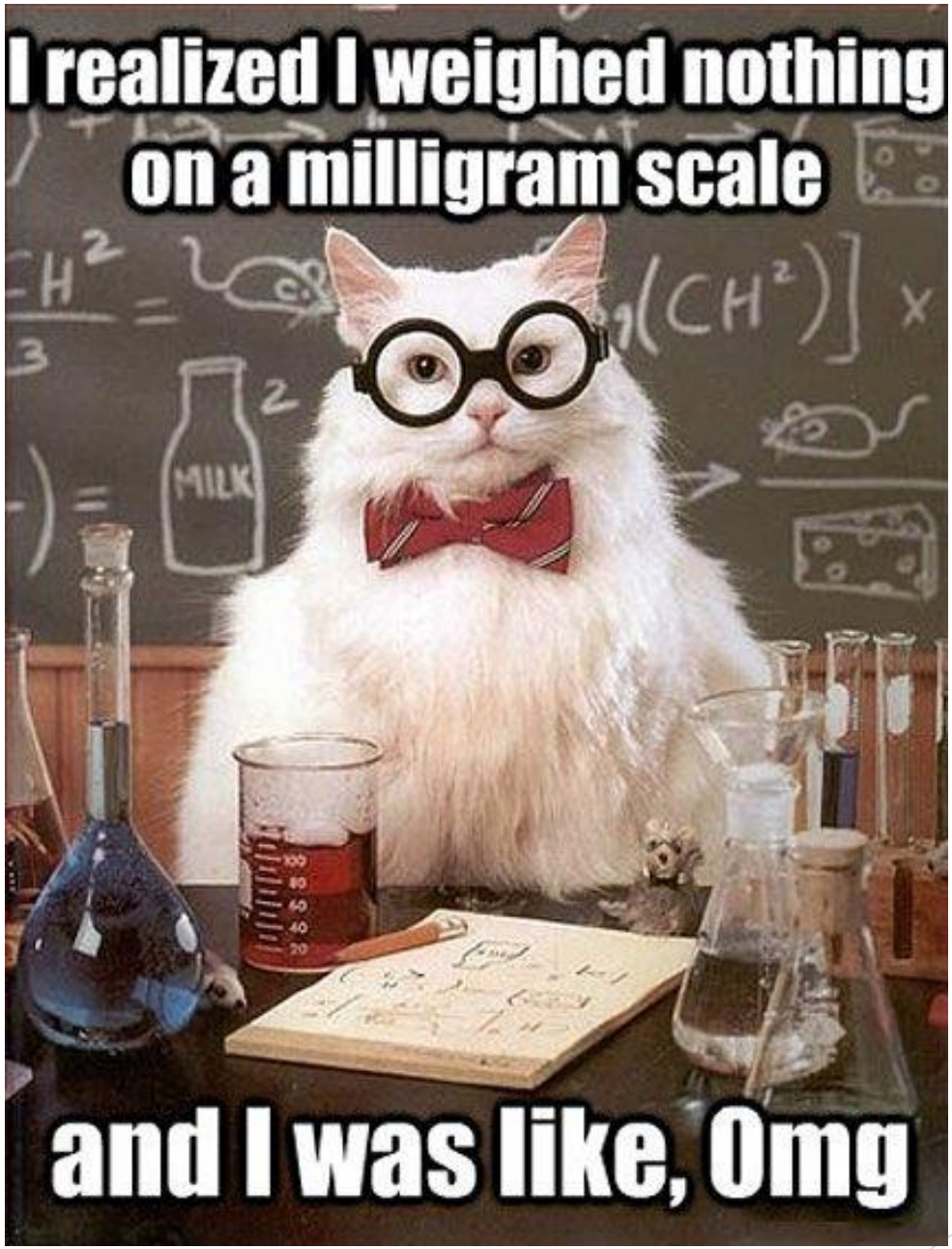
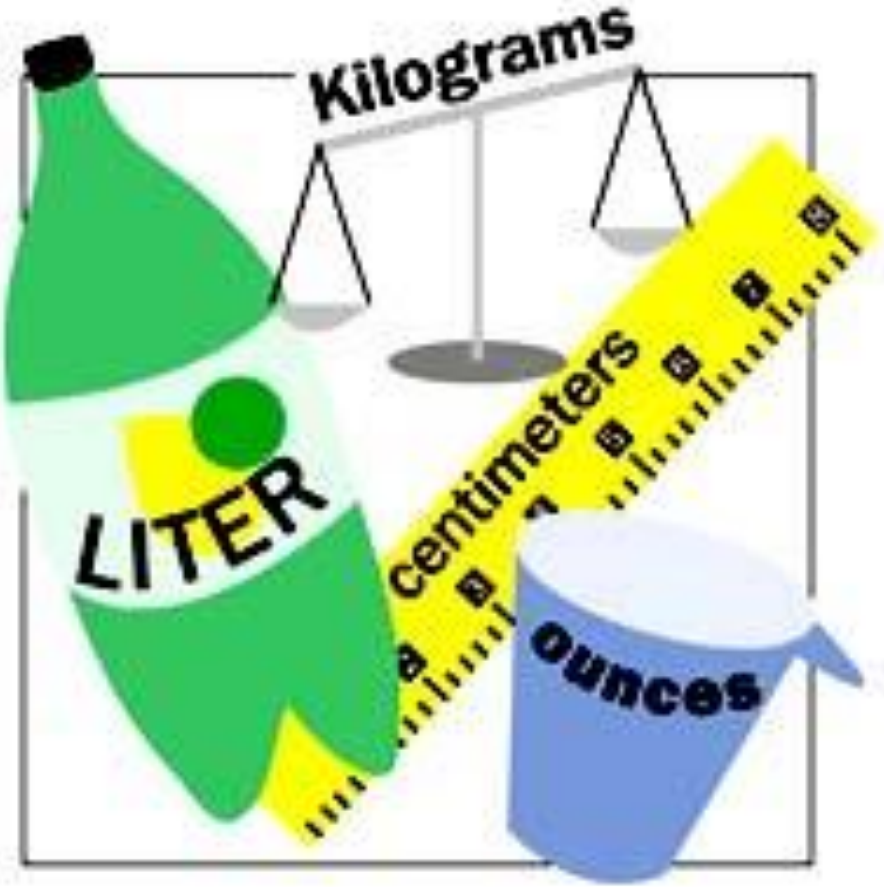
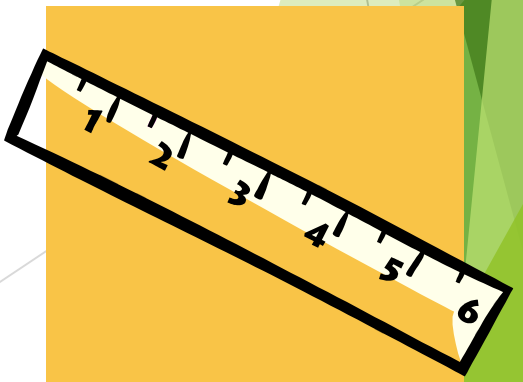

I realized I weighed nothing
on a milligram scale
MILK
and I was like, Omg

THE METRIC SYSTEM



WHY DO WE USE THE METRIC SYSTEM?

- Everyone else does!!!
- We all need to speak the same “math language”
- IT IS EASIER!!!!!!!!!!



English System vs. Metric System
Which is easier???

- 1 meter = 100 centimeters
- 1 yard = 36 inches

- 1 liter = 1000 milliliters
- 1 gallon = 128 ounces

- 1 kilometer = 1000 meters
- 1 mile = 5,280 feet

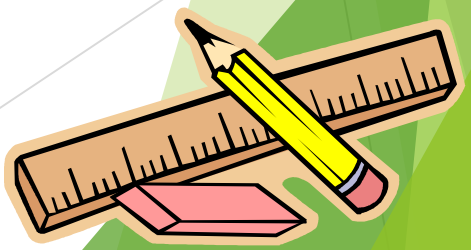
Metric system works on "BASE TEN"

Everything is changed by a factor of ten.

English system is totally random!!!

WHAT DOES THE METRIC SYSTEM MEASURE?

What it measures	Metric Unit
Mass	Gram
Volume	Liter
Length	Meter



SCIENTIFIC NOTATION

How we deal with very large numbers, and very small numbers

Who wants to write this number out over and over????

602,000,000,000,000,000,000,000

Not me!!! There is a way to write it out in a shorthand so it is faster and easier to write.

MOVE THE DECIMAL!

6.02×10^{23}

- $10^{\text{positive number}}$
  - To put in “Standard form” → Move your decimal to the RIGHT
  - Makes a BIG number
- $10^{\text{negative number}}$
  - To put in “Standard form” → Move your decimal to the LEFT
  - Makes a SMALL number

TRY THESE –

put in “standard notation”

2.5×10^{4}

3.8×10^{-2}

Put in “Standard Notation”

2.5×10^{4}

25000

3.8×10^{-2}

0.038

Lets go the other way

Put 45,000 in "Scientific Notation"

- Put ***ONE*** number **4.5**
  Then a decimal and the rest of the #s
- Count how many times you **4 times**
  would need to move that decimal
  to get the original number
- That becomes your exponent **4.5×10^4**

COMPARE: 45,000 > 4.5
so exponent is POSITIVE!

Try These

1) 12000000

2) 0.000034

Try These

1) $12000000 = 1.2 \times 10^{7}$

2) $0.000034 = 3.4 \times 10^{-5}$

$3.5 \times 10^4 = 3.5E4$

3.5 x 10^4

$3.5 \times 10_4$

~~3.5 x 104~~

1) The approximate distance from Saturn to the Sun is 888,000,000 miles. Convert this number to scientific notation.

A) 888×10^{6}

B) 8.88×10^{-8}

C) 8.88×10^{8}

D) 88.8×10^{7}

2) The age of the Earth is 4.6 x 10^9 years. Which is the correct conversion of this number to standard form?

A) 4,600,000,000

B) 46,000,000,000

C) 0.0000000046

D) 0.00000000046

3) The thickness of a human hair is 3×10^{-6} millimeters. Express this number in standard form.

A) 3,000,000

B) 300,000

C) 0.000003

D) 0.0000003