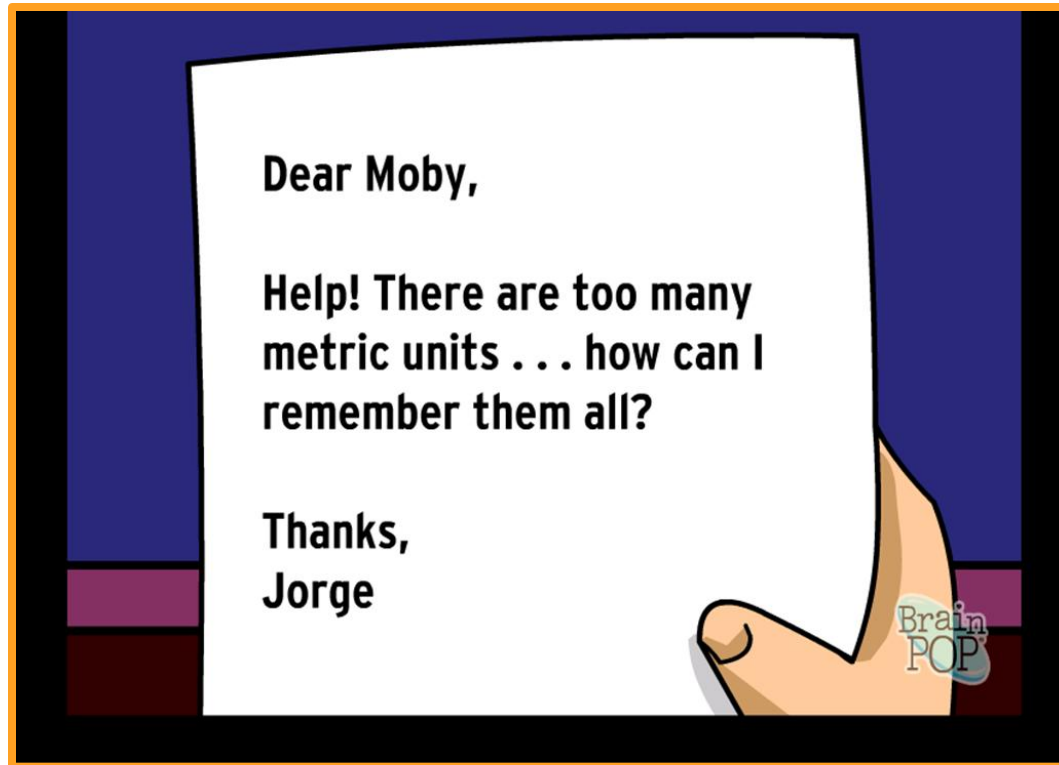


METRIC SYSTEM PREFIXES

USING THE INTERNATIONAL SYSTEM OF UNITS

METRIC UNITS



Let's review Metric Units
with Tim and Moby!



METRIC UNIT HELPFUL HINT



To memorize the six prefixes you really need to know, remember this sentence:

King Henry Doesn't Usually Drink Chocolate Milk

METRIC UNIT HELPFUL HINT

King	Henry	Doesn't	[Usually]
kilo	hecto	deka	[unit]
1,000	100	10	
Drink	Chocolate	Milk	
deci	centi	milli	
0.1	0.01	0.001	

Brain POP

If you look closely, you will see that each prefix is ten times bigger than the one to its right and one-tenth as big as the one to its left.

METRIC CONVERSION LINE



If you write the prefixes in a line, you can use this to convert from one measurement to another.

TIM'S AND MOBY'S EXAMPLE



Tim's and Moby's example...
How many milligrams are in 5 Hectograms?



On your prefix line, write the number above the prefix and place your finger under the prefix.



Count the number of units your finger passes while moving to the unit you're converting.



Take your number, and move the decimal point the same number of places in the same direction.



Take your number, and move the decimal point the same number of places in the same direction.



Add a 0 for each place the decimal moves.



There you have it: 5 hectograms is the same as 500,000 milligrams.

EXAMPLE #1-

How many milliliters are in 2 liters?



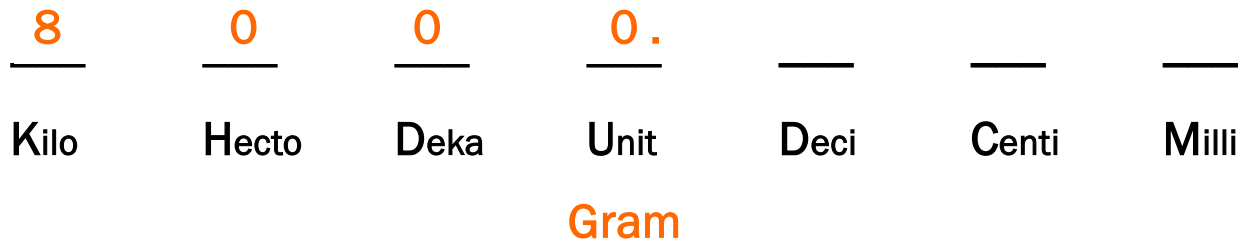
—	—	—	<u>2</u>	<u>0</u>	<u>0</u>	<u>0.</u>
Kilo	Hecto	Deka	Unit	Deci	Centi	Milli
			Liter			

2 liters = 2000 milliliters

2 L = 2000 mL

EXAMPLE #2-

How many grams are in 8 kilograms?

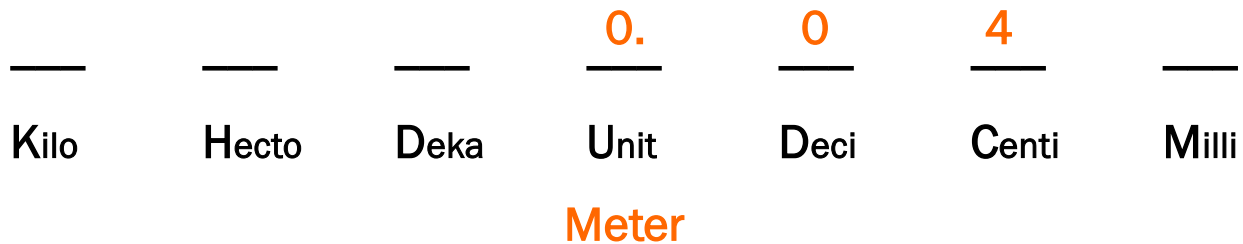


8 kilograms = 8000 grams

8 kg = 8000 g

EXAMPLE #3-

How many meters are in 4 centimeters?

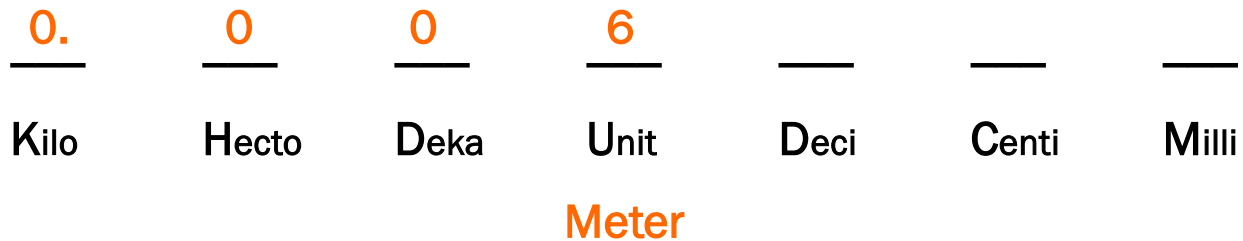


$$4 \text{ centimeters} = 0.04 \text{ meters}$$

$$4 \text{ cm} = 0.04 \text{ m}$$

EXAMPLE #4-

How many kilometers are in 6 meters?



$$6 \text{ meters} = 0.006 \text{ kilometers}$$

$$6 \text{ m} = 0.006 \text{ km}$$

EXAMPLE #5-

How many milliliters are in 25 liters?

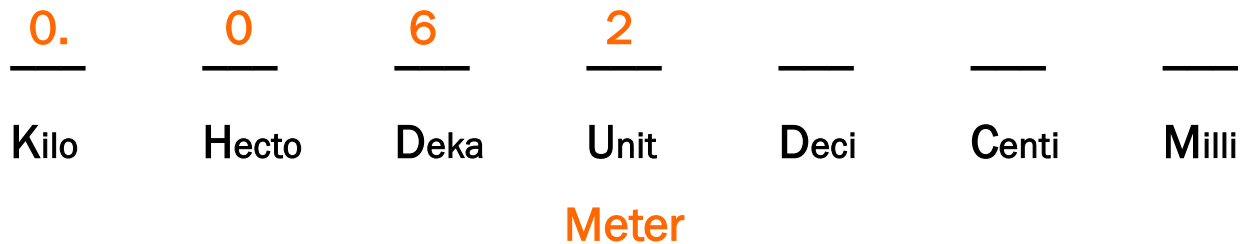


25 liters = 2500 milliliters

25 L = 2500 mL

EXAMPLE #6-

How many kilometers are in 62 meters?



$$62 \text{ meters} = 0.062 \text{ kilometers}$$

$$62 \text{ m} = 0.062 \text{ km}$$

JUST FOR FUN... OTHER PREFIXES

IN DEPTH

King Henry and his chocolate milk cover the six most common metric prefixes. But you would need a much longer mnemonic to cover the rest!

Here are the rare prefixes that only scientists and mathematicians get to deal with on a regular basis, along with the super-large or super-small numbers they represent!

Yotta: 1,000,000,000,000,000,000,000,000,000

Zetta: 1,000,000,000,000,000,000,000,000

Exa: 1,000,000,000,000,000,000,000

Peta: 1,000,000,000,000,000

Tera: 1,000,000,000,000

Giga: 1,000,000,000

Mega: 1,000,000

Micro: 0.000001

Nano: 0.000000001

Pico: 0.000000000001

Femto: 0.000000000000001

Atto: 0.000000000000000001

Zepto: 0.00000000000000000001

Yocto: 0.000000000000000000000001

