

STUDY INFO FOR QUIZ ON METRIC PREFIXES & BASE UNITS – ON THURSDAY !!!!!

Make flashcards with the following conversions on them. **You SHOULDN'T just be memorizing the entire list—remember this is a system and can be applied to any base unit; but you DO need to know what the prefixes mean.** (I use meters as an example, but these prefixes can be used with any base unit, such as grams, liters, etc.)

1 000 000 000 nanometers = 1 meter
(nano = 10^{-9} or 1/1,000,000,000)

1 000 000 micrometers = 1 meter
(micro = 10^{-6} or 1/1,000,000)

1000 millimeters = 1 meter
(milli = 10^{-3} or 1/1000)

100 centimeters = 1 meter
(centi = 10^{-2} or 1/100)

Meter = base unit (1 or 10^0)

1 kilometer = 1000 meters
(kilo = 1000)

1 megameter = 1 000 000 meters
(mega = 1 000 000)

1 gigameter = 1 000 000 000 meters
(giga = 1 000 000 000)

Volume conversion

1 milliliters = 1 cubic centimeter = 1 cm^3

Here's another way to think about metric prefixes and what they mean...(table form).

NOTE: This is the same info as above.

Prefix	Unit Abbreviation	Exp. Factor	Meaning
Giga	G	10^9	1 000 000 000
Mega	M	10^6	1 000 000
Kilo	k	10^3	1 000
Centi	c	10^{-2}	0.01 or 1/100
Milli	m	10^{-3}	0.001 or 1/1000
Micro	μ	10^{-6}	0.000 001 or 1/1,000,000
Nano	n	10^{-9}	0.000 000 001 or 1/1,000,000,000

ADDITIONAL INFO – BASE UNITS

Quantity	Abbreviation	Unit	Unit Abbr.
Length	l	meter	m
Mass	m	grams	g
Time	t	seconds	s
Temperature	T	kelvin	K
Amount of substance	n	mole	mol