

# REVIEW

METRIC

PREFIXES

## COMMON METRIC PREFIXES

Small values:	letter	power of 10	
deci	d	$10^{-1}$	one-tenth
centi	c	$10^{-2}$	one-hundredth
milli	m	$10^{-3}$	one-thousandth
micro	$\mu$ or mc	$10^{-6}$	one-millionth
nano	n	$10^{-9}$	one-billionth
pico	p	$10^{-12}$	one-trillionth
Large values:			
deca	da	$10^1$	ten
hecto	h	$10^2$	hundred
kilo	k	$10^3$	thousand
Mega	M	$10^6$	million
Giga	G	$10^9$	billion
Tera	T	$10^{12}$	trillion

These prefixes may be used with length (meters), mass (grams), liquid volume (liters), time (seconds) and other units (bytes).

Examples: Think about the magnitude of each of these.

- He ran a 5K race in 40 minutes. **5K means 5000 meters (~3.1 mi)**
- I have 2.5 gigs on my phone.  **$2.5 \times 10^9$  bytes of memory**
- Sound travels at 300,000 km each second. **(~671 million m/sec)  $300,000 \text{ km} = 3 \times 10^5 \times 10^3 \text{ m}$**
- An ant has a mass of 3 mg.  **$3 \text{ mg} = 3 \times 10^{-3} \text{ g} = 0.003 \text{ g}$**
- A computer can multiply two 10-digit numbers in 1ns. **(nano second)  $10^{-9}$**
- She takes 1000mg of fish oil daily.  **$1000 (10^{-3}) \text{ g} = 1 \text{ g}$**
- The medicine comes in 10cc vials. **cc = cubic centimeter = ml (for liquids)**
- One  $\mu\text{gram}$  per kg of body weight is a lethal dose of ricin.  **$\uparrow$  micro ( $10^{-6}$ )**

Have you heard statements like these?

- Pascal micro manages everything in the office.
- Grace needs mega bucks to purchase the house she wants

Guess the answer to these:

- 2000 Mockingbirds = 2 kilo mockingbirds
- One-millionth of a fish =  $10^{-6}$  of a fish = microfish
- One million phones =  $10^6$  phones = mega phone