

## Metric Conversions Worksheet I

Going up the table move the decimal to the left ↑ Going down the table move the decimal to the right ↓	T	tera-	1 000 000 000 000	$10^{12}$
	G	giga-	1 000 000 000	$10^9$
	M	mega-	1 000 000	$10^6$
	k	kilo-	1 000	$10^3$
	h	hecto-	100	$10^2$
	da	deca	10	$10^1$
		<b>NO PREFIX</b>	<b>1</b>	$10^0$
	d	deci	1/10	$10^{-1}$
	c	centi-	1/100	$10^{-2}$
	m	milli-	1/1000	$10^{-3}$
	μ	micro-	1/1000000	$10^{-6}$
	n	nano-	1/1000000000	$10^{-9}$

These are the metric divisions of quantity. The letter in the first column is used as the *prefix* before the type of quantity. Some common types of quantity are **grams (g)**, **metres (m)**, **joules (J)**, **seconds (s)**, and **bytes (B)**.

### EXAMPLES

1.0 kg = ? mg 1.000000 kg = 1 000 000 mg	kilo and milli differ by six zeros; kilo → milli is going down the table; therefore move the decimal six places to the right
2.3 cm = ? m 002.3 = 0.023 m	centi and no prefix differ by two zeros; centi → no prefix is going up the table; therefore move the decimal two places to the left

	From		To			Zeros difference	Move decimal left or right?
	prefix	quantity		prefix	quantity		
km	kilo	metres	m	<i>no prefix</i>	metres	3	right
Gg			Mg				
Mg			Gg				
mL			L				
kJ			mJ				
μs			ms				
B			kB				
cm			mm				
cL			μL				
mJ			cJ				