

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
		NO PREFIX	1	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				