

Metric Conversions

mega	Kilo	hecto	deca	base	deci	centi	milli	micro
M	k	h	da	g, m, s	d	c	m	μ
10^6	10^3	10^2	10^1	10^0	10^{-1}	10^{-2}	10^{-3}	10^{-6}
					$(\frac{1}{10})$	$(\frac{1}{10^2})$	$(\frac{1}{10^3})$	

$\xrightarrow{\text{move dec to right}} (\times 10^n)$
 $\xleftarrow{\text{move dec to left}} (\div 10^n)$

Ways to do metric conversions:

- ① move decimal / change exponent on 10
- ② use factor labelling
- ③ use the prefix (only if converting to the base unit)

Basic Skill Sheet

29. Convert 4008g to mg

① more decimal:

$$4008\text{g} = 4008000\text{mg}$$

② factor labelling:

$$x\text{mg} = 4008\text{g} \left(\frac{1000\text{mg}}{1\text{g}} \right)$$

$$x\text{mg} = 4008000\text{mg}$$

③ N/A

30. Convert 48mL to L

$$① \quad 48\text{mL} = 0.048\text{L}$$

$$② \quad x\text{L} = 48\text{mL} \left(\frac{1\text{L}}{1000\text{mL}} \right)$$

$$x\text{L} = 0.048\text{L}$$

$$③ \quad 48\text{mL} = 48 \times 10^{-3}\text{L} = 4.8 \times 10^{-2}\text{L}$$

31. Convert 239mm to cm

$$23.9\text{cm}$$

32. Convert 38kg to mg

$$38000000\text{mg}$$