

Aim 3: What is the metric system?

HW From textbook “CHEMISTRY a Contemporary Approach”

- Read “Units of Measurement” p538-540

The metric system uses powers of ten as a base. See [table C](#)

Test your understanding

1. How many grams are in 10 kg?
2. How many meters are in 100 micrometers?
3. Convert 45 pm to cm.
4. Convert 1 kg to pg.
5. How many kilometers, decimeters, centimeters, millimeters, micrometers, nanometers, and picometers are in 1 meter?

Full Table			
Factor	Prefix	Symbol	Amount
10^{18}	exa	E	1,000,000,000,000,000,000
10^{15}	peta	P	1,000,000,000,000,000
10^{12}	tera	T	1,000,000,000,000
10^9	giga	G	1,000,000,000
10^6	mega	M	1,000,000
10^3	kilo	k	1,000
10^2	hecto	h	100
10^1	deka	da	10
10^0	--	--	1
10^{-1}	deci	d	0.1
10^{-2}	centi	c	0.01
10^{-3}	milli	m	0.001
10^{-6}	micro	μ	0.000,001
10^{-9}	nano	n	0.000,000,001
10^{-12}	pico	p	0.000,000,000,001
10^{-15}	femto	f	0.000,000,000,000,001
10^{-18}	atto	a	0.000,000,000,000,000,001