THE SYSTEME INTERNATIONAL D'UNITES (SI)

Name _____

The measuring system used in science is the SI, which was adopted according to an international agreement reached in 1960. It is based on the metric system. The standard units in SI are:

Property	Unit	Symbol
mass	kilogram	kg
distance	meter	m
time	second	s
electric current	Ampere	A
temperature	Kelvin	K
amount of substance	mole	mol

As with the metric system, the SI utilizes prefixes to change the value of units. The following units are frequently used in science:

Prefix	Symbol	Value
mega-	M	1 000 000
kilo-	k	1 000
deci-	d	0.1
centi-	c	0.01
milli-	m	0.001
micro-	μ	0.000 001
nano-	n	0.000 000 0001

Example:
How many meters are equivalent to 500 mm?

$$500 \text{ mm} \times \frac{1 \text{ m}}{1\,000 \text{ mm}} = 0.5 \text{ m}$$

Make the following conversions within the SI.

1. 3.0 m = _____ cm
2. 1,500 mL = _____ L
3. 35 cg = _____ g
4. 0.05 m = _____ mm
5. 2.5 L = _____ mL
6. 0.25 km = _____ m
7. 50,000 μm = _____ m
8. 0.015 g = _____ mg
9. 75 cL = _____ L
10. 2,750 mg = _____ g

What would be a reasonable unit to use to measure the following?

11. distance from earth to moon _____
12. length of a bacterium _____
13. mass of a bowling ball _____
14. mass of an aspirin tablet _____
15. dropperful of medicine _____