1) Perform the following conversions:

a)	$28.0 \text{ cm} \rightarrow \text{m}$	e)	$6.8 \times 10^4 \text{ mg} \rightarrow \text{kg}$
D)	1000. $\mathbf{m} \rightarrow \mathbf{km}$	I)	$8.54 \text{ g} \rightarrow \text{kg}$
c)	$9.28 \text{ cm} \rightarrow \text{mm}$	g)	$25.0 \text{ mL} \rightarrow \text{L}$
d)	10.68 g →mg	h)	22.4 L → μL
2) Perform	the following conversions:		
a)	$4.5 \text{ cm} \rightarrow \text{fm}$	e)	0.65 kg → mg
b)	$12 \text{ nm} \rightarrow \text{cm}$	f)	5.5 kg \rightarrow g
c)	8.0 km → mm	g)	0.468 L → mL
d)	164 mg \rightarrow g	h)	9.0 μL → mL
3) Perform	the following conversions:		
a)	650.89 Gm → pm	e)	2383.7 Mg → mg
b)	$249 \text{ cm} \rightarrow \text{km}$	f)	39.46 µg → cg
c)	$45.14 \text{ dm} \rightarrow \text{Mm}$	g)	139.42 pL → nL
d)	570 hg → μg	h)	$5.23 \times 10^{-4} \text{ TL} \rightarrow \text{kL}$
4) Perform	the following conversions:		
a)	42.2 in → cm	d)	42.8 kg → lb
b)	$0.64 \text{ m} \rightarrow \text{in}$	e)	$3.5 \text{ qt} \rightarrow \text{mL}$
c)	$2.00 \text{ in}^2 \rightarrow \text{cm}^2$	f)	$20.0 L \rightarrow gal$
5) Perform	the following conversions:		
a)	35.6 m →ft	d)	95 lb → g
b)	16.5 km → mi	e)	20.0 gal \rightarrow L
c)	$4.5 \text{ in}^3 \rightarrow \text{mm}^3$	f)	$4.5 \times 10^4 \text{ ft}^3 \rightarrow \text{m}^3$

6) A cube is 27 cm long, 21 cm wide and 4.4 cm thick. What is the volume of the cube in:

- b) liters
- c) cubic inches

7) Another cube is 16 inches by 8 inches by 10 inches. What is its volume in:

- a) liters
- b) gallons
- c) cubic meters

8) Concentrated hydrochloric acid has a density of 1.19 g/mL. What is the mass of 250.0 mL of HCl_(aq)?

9) What mass of mercury (density 13.6 g/cm³) will occupy a volume of 25.0 mL?

10) One liter of homogenized whole milk has a mass of 1032 grams. What is the density of the milk in"

- a) grams per mL?
- b) kg per L?
- c) lb/gal
- 11) The volume of blood plasma in adults is 3.1 L. Its density is 1.03 g/cm³. Approximately how many pounds of blood plasma are there in your body?
- 12) A 25.0 mL sample of water at 90 °C has a mass of 24.12 g. Calculate the density of water at this temperature.
- 13) The density of sulfuric acid is 1.84 g/mL. What volume of this acid will weigh 100. g?