

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$

$$^{\circ}\text{C} = \frac{(^{\circ}\text{F} - 32)}{1.8}$$

$$\text{K} = ^{\circ}\text{C} + 273$$

$$1 \text{ inch} = 2.54 \text{ cm}$$

$$1 \text{ lb} = 454 \text{ g}$$

$$1 \text{ qt} = 946 \text{ mL}$$

$$M = \frac{\text{moles solute}}{\text{L solution}}$$

$$\text{mass \% concentration} = \frac{\text{mass of solute}}{\text{mass of solution}} \times 100\%$$

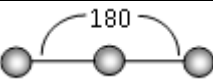
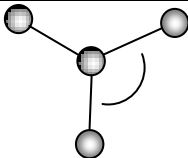
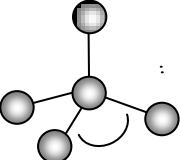
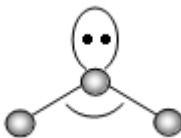
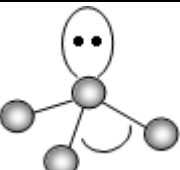
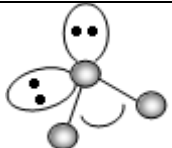
$$1 \text{ mole} = 6.02 \times 10^{23} \text{ particles}$$

$$1 \text{ mole of gas} = 22.4 \text{ L at STP}$$

$$1 \text{ atm} = 760 \text{ torr} = 760 \text{ mm Hg} = 14.7 \text{ psi}$$

$$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$$

### CHM130 Table of Molecular Shapes and Bond Angles

General formula	MOLECULAR GEOMETRY	NAME of SHAPE	Bond Angles
AB <sub>2</sub>		linear	180°
AB <sub>3</sub>		trigonal planar	120°
AB <sub>4</sub>		tetrahedral	109.5°
AB <sub>2</sub> E		bent	<120°
AB <sub>3</sub> E		trigonal pyramid	<109.5°
AB <sub>2</sub> E <sub>2</sub>		bent	<109.5°