130 Final Exam Equation Sheet

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

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

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

$$\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$$

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

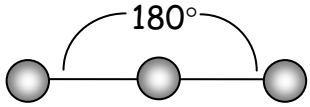
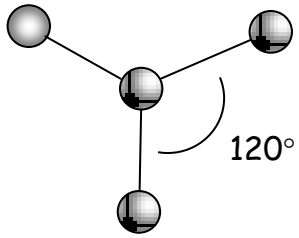
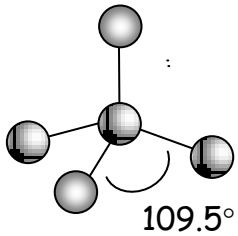
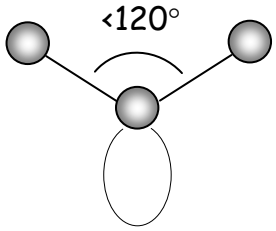
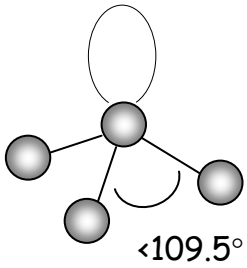
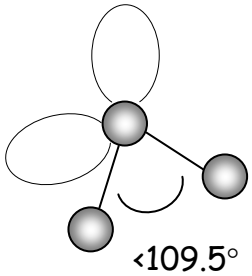
$$\text{mass \% concentration} = \frac{\text{mass of solute}}{\text{mass of solution}} \times 100\%$$

1 mole = 6.02×10^{23} particles

1 mole of gas = 22.4 L at STP

1 atm = 760 torr = 760 mm Hg

CHM130 Table of Molecular Shapes and Bond Angles

General formula	MOLECULAR GEOMETRY	NAME of SHAPE	Bond Angles
AB_2		linear	180˚
AB_3		trigonal planar	120˚
AB_4		tetrahedral	109.5˚
AB_2E		bent or angular	<120˚
AB_3E		trigonal pyramid	<109.5˚
AB_2E_2		bent or angular	<109.5˚