NAME: **HONORS CHEMISTRY**

SECTION: Avogadro’s Law Problems

Standard Temperature and Pressure (STP): 0oC, 1 atm (or equivalent)

760 mm Hg = 1 atm = 101.3 kPa = 760 torr

Avogadro’s Law Equation

Remember to follow the general strategy:

List what you know

Set up the problem

Estimate and calculate

Avogadro’s Law (sentence form):

Avogadro’s Law

1. If 2.16 moles of helium gas occupies a volume of 59.5 L at a particular temperature and pressure, what volume does 8.52 moles of helium occupy under the same conditions?
2. If 9.5 g of neon gas occupies a volume of 15.0 L at a particular temperature and pressure, what volume does 6.7 g of neon occupy under the same conditions?
3. Consider two sample of hydrogen gas (composed of H2 molecules). Sample 1 contains 0.85 moles H2 and has a volume of 20.8 L at 1 atm of pressure and 25oC. Sample 2 has a volume of 17.6 L at the same temperature and pressure. Calculate the number of moles of H2 in sample 2.