**Chapter 14: Ideal gas law practice wksht Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Some of the problems below can be solved multiple ways. Use the ideal gas law to solve.***

1. **Calculate the volume (in L) of oxygen gas collected at STP if the sample has a mass of 2.67g.**
2. **Calculate the volume (in dm3) of 101 grams of neon gas collected at STP.**
3. **75.6 dm3 of sulfur dioxide gas is collected at STP. What is its mass?**
4. **How many moles of gas will occupy a 562 cm3 flask at -15.00 C and 88.7 kPa pressure?**
5. **What volume will be occupied by 0.766 mol of gas at 106 kPa and 15.50C?**
6. **A 759 cm3 vessel contains 0.0925 mol of a gas at 98.6 kPa. What is its temperature (in K)?**

***For the following problems, you will need to write and balance the equation, then use values to solve with the ideal gas law.***

1. **16.7 grams of magnesium reacts with excess hydrochloric acid at STP. My many liters of hydrogen gas are produced?**
2. **75.0 grams of calcium carbonate decomposes into carbon dioxide and calcium oxide, how many dm3 of carbon dioxide are made?**
3. **Excess chlorine gas reacts with 3.45 dm3 of hydrogen gas to produce how many grams of hydrochloric acid at STP?**