Gas Stoichiometry Worksheet- Accel. Name: _____ Per.: ___

Please answer the following questions, showing all of your work! Write or balance the equations if needed.

1. How many grams of oxygen gas are needed to react with 12.50 L of hydrogen gas at STP?

$2\ H_2\ (g) + O_2\ (g) \rightarrow 2\ H_2O\ (l)$

2. Determine how many liters of propane gas (C_3H_8) will undergo complete combustion with 34.0 g of oxygen gas at 755.0 mmHg and 22.5°C.

$\_\_\_C_3H_8\ (g) + \_\_\_O_2\ (g) \rightarrow \_\_\_CO_2\ (g) + \_\_\_H_2O\ (g)$

3. How many liters of hydrogen gas are formed from the complete reaction of 2.550g magnesium metal at .890 atm and 23.0°C?

$Mg(s) + 2\ HCl(aq) \rightarrow MgCl_2\ (aq) + H_2(g)$

4. Solid potassium metal will react with chlorine (Cl_2) gas to form ionic potassium chloride. How many liters of chlorine gas are needed to completely react with 0.204g of potassium at STP?

$\_\_\_K\ (s) + \_\_\_Cl_2\ (g) \rightarrow \_\_\_KCl\ (s)$

5. Determine how many moles of water vapor will be produced at 1.00 atm and 200.0°C by the complete combustion of 10.5L of methane gas (CH_4). You must write the balanced equation.