Name

Period

Date

Grams, Moles, and Liter Conversions

**Moles to Grams**

1) If you have 3.0 mol of NaCl, how many grams of NaCl are there?

2) What is the mass of 0.80 mol of NaHCO3?

**Grams to Moles**

3) How many moles of CO2 are in 66.0g of CO2?

4) How many moles of CaCO3 are in 10.0g of CaCO3?

*(1 mol of any gas at standards conditions (STP) = 22.4 L of volume)*

**Moles to Liters**

5) What is the volume of 0.05 mol of neon gas at STP?

6) How many liters of gas would you have with 3.6 moles of H2?

*(1 mol of any gas at standards conditions (STP) = 22.4 L of volume)*

**Liters to Moles**

7) If a helium balloon fills 5.6 L of space at standard conditions, how many moles of He are in it?

8) If you wanted to fill a balloon to 0.50 L with CO2 at standard conditions, how many moles of CO2 would you need?

9) How many moles of argon atoms are present in 11.2 L of Ar gas at STP?

**Grams to Moles to Liters**

10) Determine the volume in liters occupied by 14 g of N2 gas at STP.

11) Determine the mass of Cl2 from 213 L of Cl2?

12) Determine the volume in liters occupied by 53g of O2 gas at STP.