Chemistry I: *Mole Concept for Chemical Formula* Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour: \_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_

6.02x1023 particles = 1 mol = molar mass

Calculate the given information of each of the following compounds. Show your work and always include units.

1. How much does 1.44 mol of Al(NO3)3 (aluminum nitrate) weigh?

2. How many molecules of Ca(OH)2 are in 500 g of calcium hydroxide?

3. How many moles of potassium sulfate is 312 g of K2SO4?

4. Convert 3.8 mol CaBr2 into molecules of calcium bromide.

5. How many grams of iron(III) oxide is 3.4x1036 molecules of Fe2O3?

6. How many moles of Pb3(PO4)2 is in 7.2 x 1020 molecules of lead(II) phosphate?

7. How many molecules of ammonium chloride are in 134 L of NH4Cl at STP?

8. How many moles of sulfur dioxide are equal to 1000 L of SO2?