Chemistry II Worksheet
Moles to Grams and Grams to Moles

NAME _____

INSTRUCTIONS: Work these problems on mole-gram and gram-mole conversions. Use scratch paper as needed. A Periodic Table would be most useful here, but please *try* to do these *without* your Card.

PART ONE: Moles to grams

1. 2.00 mole calcium sulfate = _____ g calcium sulfate
2. 0.65 mole ammonium nitrate = _____ g ammonium nitrate
3. 0.28 mole aluminum hydroxide = _____ g aluminum hydroxide
4. 0.0225 mole potassium permanganate = _____ g potassium permanganate
5. 0.57 mole copper(II) sulfate = _____ g copper(II) sulfate

PART TWO: Grams to moles

6. 25.00 g potassium chloride = _____ mole(s) potassium chloride
7. 5.38 g sodium sulfate = _____ mole(s) sodium sulfate
8. 19.22 g barium hydroxide = _____ mole(s) barium hydroxide
9. 25.75 g silver nitrate = _____ mole(s) silver nitrate
10. 87.65 g aluminum sulfate = _____ mole(s) aluminum sulfate

PART THREE: Stiochiometry

1. How many grams of magnesium oxide can we make if we start with 12.30 g of magnesium metal?

2. I'm decomposing 14.42 g of sodium chlorate into sodium chloride and oxygen. How many grams of oxygen will I get?

3. I want to generate some hydrogen gas for a demonstration, and decide to generate it by reacting zinc metal with hydrochloric acid. How much hydrogen will I generate if I completely react 10.00 g of zinc?

4. How much lead(II) iodide will be produced when we react 5.16 g of lead(II) nitrate with excess sodium iodide?

5. How much water vapor is produced by the combustion of 3632 g of octane, C_8H_{18} ?