Stoichiometry Practice – ***HONORS*** Name:_____ Date:_____

For each problem, write out the chemical equation first and then balance each equation. Then solve each problem using the factor labeling (dimensional analysis) method. You must show ALL of your work and correct units to receive full credit.

1. How many moles of chlorine gas would react with 5.00 moles of sodium metal to produce sodium chloride precipitate?

2. How many atoms of iron metal are necessary to react with 5.00 molecules of oxygen gas to produce solid iron (III) oxide?

3. How many moles of carbon dioxide are needed to react with solid barium oxide in a synthesis reaction to produce 3.50 moles of barium carbonate precipitate?

4. How many moles of iron (III) oxide would be produced when 11.5 grams of iron (III) hydroxide decomposes into iron (III) oxide and liquid water?

5. How many grams of potassium chloride would react with oxygen gas to produce 45.0 grams of potassium chlorate?

6. How many formula units of lead (II) nitrate are needed to react with aluminum metal to produce 7.50 grams of lead metal and aluminum nitrate?

7. 1.50 grams of potassium chlorate decomposes into potassium chloride and oxygen. How many grams of oxygen will be produced?

8. How many formula units of solid silver oxide are produced if 7.00 moles of silver metal react with oxygen gas?