**Stoichiometry Practice**

**Name #1:**

**Name #2:**

**Period: 2 3 4**

**Part One: For each question, write down the given (G) and unknown (?). Use your stoichiometry graphic organizer to determine which steps are needed to solve each problem.**

1. Given: Unknown:

Circle the steps needed to solve the problem: part 1 part 2 part 3

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**Part Two: Pick 5 stoichiometry problems to solve on a separate sheet of paper. Show your work and circle your answers.**

1. **2 NaOH (aq) + H2SO4 (aq) 🡪 2 H2O (l) + Na2SO4 (aq)**

What mass of sodium sulfate is theoretically produced from the reaction of 10.00g of sodium hydroxide with excess sulfuric acid?

1. **2 NaOH (aq) + H2SO4 (aq) 🡪 2 H2O (l) + Na2SO4 (aq)**

What is the mass of water produced from the reaction of 392.36g of sulfuric acid with excess sodium hydroxide?

1. **Pb(SO4)2 (aq) + 4 LiNO3 (aq) 🡪 Pb(NO3)4 (aq) + Li2SO4 (aq)**

What mass of lithium sulfate is theoretically produced from the reaction of 199.67g of lead (IV) sulfate with excess lithium nitrate?

1. **Pb(SO4)2 (aq) + 4 LiNO3 (aq) 🡪 Pb(NO3)4 (aq) + Li2SO4 (aq)**

What is the theoretical yield, in grams, of lead (IV) nitrate produced from the reaction of 172.38g of lithium nitrate?

1. **4 Al (s) + 3 O2 (g) 🡪 2 Al2O3 (s)**

What is the theoretical yield, in grams, of aluminum oxide produced from the reaction of 6.745g of aluminum with excess oxygen gas?

1. **4 Al (s) + 3 O2 (g) 🡪 2 Al2O3 (s)**

What is the mass of aluminum oxide produced from the reaction of 160.0g of oxygen gas reacts with excess aluminum?

1. **6 K (s) + N2 (g) 🡪 2 K3N (s)**

What is the theoretical yield, in grams, of potassium nitride when 78.20g of potassium react with excess nitrogen gas?

1. **6 K (s) + N2 (g) 🡪 2 K3N (s)**

How many grams of potassium nitride can be made when 4.670 g of nitrogen gas react with excess potassium?

1. **Zn (s) + 2 CrCl3 (aq) 🡪 2 CrCl2 (aq) + ZnCl2 (aq)**

What is the mass of chromium (II) chloride produced from the reaction of 326.95g of zinc with excess chromium (III) chloride?

1. **Zn (s) + 2 CrCl3 (aq) 🡪 2 CrCl2 (aq) + ZnCl2 (aq)**

What is the theoretical yield of zinc (II) chloride when 79.18g of chromium (II) chloride react with excess zinc?