Chemistry Stoichiometry Review Name:

*In the following problems, calculate how much of the indicated product is made. Show all your work. Label all answers and use significant figures.*

1) LiOH + HBr 🡪 LiBr + H2O

If you start with 10.0 grams of lithium hydroxide, how many moles of lithium bromide will be produced?

2) C2H4 + 3 O2 🡪 2 CO2 + 2 H2O

If you start with 4.5 moles of ethylene (C2H4), how many grams of carbon dioxide will be produced?

3) Ca + 2 LiCl 🡪 CaCl₂ + 2 Li

If you start with 5.5 grams of lithium chloride, how many grams of calcium chloride will be produced?

4) 2 HCl + Na2SO4 🡪 2 NaCl + H2SO4

If you start with 2.31 moles of hydrochloric acid, how many grams of sulfuric acid will be produced?

Chemistry Stoichiometry Name:

*Write the complete balanced equations for each of the following chemical reactions. Then find the missing product.*

1) When dissolved beryllium chloride reacts with dissolved silver nitrate in water, aqueous beryllium nitrate and silver chloride powder are made. If you begin with 23.5 g of silver nitrate, how many moles of beryllium nitrate would be formed?

2) When isopropanol (C3H8O) burns in oxygen, carbon dioxide, water, and heat are produced. If you begin with 3 moles of oxygen gas, how many grams of water are produced?

3) When dissolved sodium hydroxide reacts with sulfuric acid (H2SO­4), aqueous sodium sulfate, water, and heat are formed. How many moles of sulfuric acid would be needed to produce 37.2 g of sodium sulfate?

4) When fluorine gas is put into contact with calcium metal at high temperatures, calcium fluoride powder is created in an exothermic reaction. How many grams of fluorine gas are required to produce 1.5 moles of calcium fluoride?

5) When sodium metal reacts with iron (II) chloride, iron metal and sodium chloride are formed. How many moles of sodium chloride are produced from 4.7 moles of iron (II) chloride?