Stoichiometry Station review

Name:_____Period:_____Date:_____

Directions: Answer all the questions correctly and concisely. Show all work and units for each calculation in order to receive credit!

STATION #1:

1a) Suppose 3.5g of calcium chloride reacts with 6.3g of silver nitrate. How many moles of calcium nitrate would be produced? Determine the limiting and excess reactants.

Balanced Equation =_____

LR = _____   ER = _____

1b) Suppose 2.6g of calcium chloride reacts with 4.8g of silver nitrate. How many moles of silver chloride would be produced? Determine the limiting and excess reactants.

Balanced Equation =_____

LR = _____   ER = _____

STATION #2:

2a) How many grams of fluorine gas must be reacted with sodium chloride in order to produce 3.67g of sodium fluoride?

Balanced Equation =_____

2b) How many grams of chlorine gas must be reacted with sodium bromide in order to produce 9.5g of sodium chloride?

Balanced Equation =_____

STATION #3:

3a) How many moles of oxygen gas must be reacted with iron in order to produce 23.5g of iron III oxide (rust)?

Balanced Equation =_____

3b) How many moles of iron must be reacted with oxygen gas in order to produce 18.6g of iron III oxide (rust)?

Balanced Equation =_____

STATION #4:

4a) Suppose 0.125 moles of acetic acid reacts with magnesium. How many grams of magnesium acetate would be produced?

Balanced Equation =_____

4b) Suppose 0.875 moles of acetic acid reacts with magnesium. How many grams of hydrogen gas would be produced?

Balanced Equation =_____

STATION #5:

5a) If 15.2g of hydrochloric acid reacts with zinc, how many grams of zinc chloride are produced?

Balanced Equation =_____

5b) If 12.6g of hydrochloric acid reacts with magnesium, how many grams of hydrogen are produced?

Balanced Equation =_____

STATION #6:

6a) Suppose 3.5g of magnesium hydroxide reacts with 0.5 moles of nitric acid. How many moles of water would be produced? Determine the limiting and excess reactants.

Balanced Equation =_____

LR = _____   ER = _____

6b) Suppose 0.065 moles of magnesium hydroxide reacts with 2.5g of nitric acid. How many moles of magnesium nitrate would be produced? Determine the limiting and excess reactants.

Balanced Equation =_____

LR = _____   ER = _____

STATION #7:

7a) Suppose 6.25g of hydrochloric acid decomposes. How many moles of hydrogen gas will be produced?

Balanced Equation =_____

7b) Suppose 2.37g of hydrochloric acid decomposes. How many moles of chlorine gas will be produced?

Balanced Equation =_____

8a) Suppose 0.95 moles of hydrochloric acid reacts with aluminum. How many moles of aluminum chloride will be produced?

Balanced Equation =_____

8b) Suppose 0.25 moles of hydrochloric acid reacts with aluminum. How many moles of hydrogen gas will be produced?

Balanced Equation =_____