Unit 3 – Chapter 3: Stoichiometry

Stoichiometry quiz

1. How many grams of barium phosphate are required to react completely with 10.9 grams of potassium hydroxide to form potassium phosphate and barium hydroxide?

$$Ba_3(PO_4)_2 + KOH \rightarrow Ba(OH)_2 + K_3PO_4$$
(UNBALANCED)

2. 1.7 grams of calcium nitrate is combined with 15.7 grams of sodium phosphate.

$$Ca(NO_3)_2 + Na_3PO_4 \rightarrow Ca_3(PO_4)_2 + NaNO_3$$
(UNBALANCED)

- a) What is the limiting reagent?
- b) How many grams of calcium phosphate are produced?
- c) How much excess remains?

3. 7.55 grams of sodium chloride is combined with 7.87 grams magnesium sulfate and 5.95 grams of magnesium chloride are produced.

NaCl + MgSO₄
$$\rightarrow$$
 Na₂SO₄ + MgCl₂
(UNBALANCED)

- a. What is the percent yield of this reaction?
- b. What is the limiting reagent?
- c. How much excess reagent remains?