

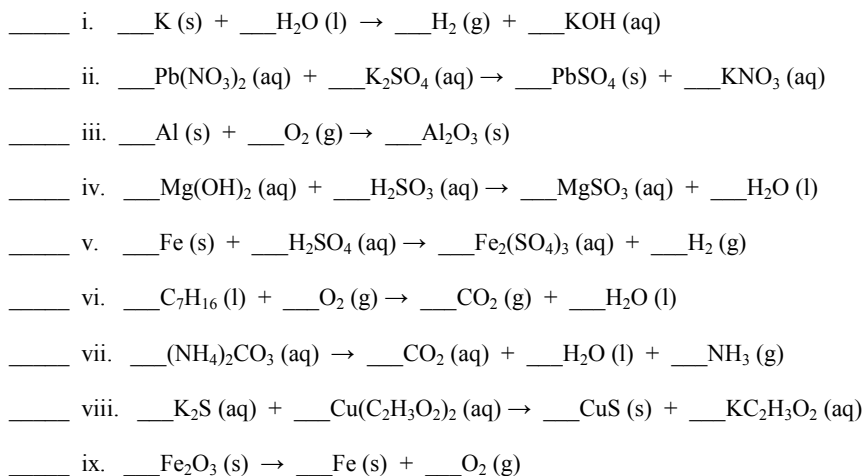
Chapter 8– part I

1. _____ FeO (l) + _____ Al (l) → _____ Al₂O₃ (l) + _____ Fe (l)
2. _____ CH₄ (g) + _____ O₂ (g) → _____ CO₂ (g) + _____ H₂O (g)
3. _____ MnO₂ (l) + _____ Al (l) → _____ Al₂O₃ (l) + _____ Mn (l)
4. _____ Ca (s) + _____ H₂O (l) → _____ Ca(OH)₂ (aq) + _____ H₂ (g)
5. _____ H₂SO₄ (aq) + _____ Al(OH)₃ (aq) → _____ Al₂(SO₄)₃ (s) + _____ H₂O (l)
6. _____ Fe (s) + _____ AgNO₃ (aq) → _____ Fe(NO₃)₃ (aq) + _____ Ag (s)
7. _____ C₄H₉OH (g) + _____ O₂ (g) → _____ CO₂ (g) + _____ H₂O (g)
8. _____ Al (s) + _____ I₂ (s) → _____ AlI₃ (s)
9. _____ Li₂CO₃ (aq) + _____ CuCl₂ (aq) → _____ CuCO₃ (s) + _____ LiCl (aq)
10. _____ Co (s) + _____ HBr (aq) → _____ H₂ (g) + _____ CoBr₃ (g)

Chapter 8 – Part II
Predicting Chemical Reactions

1. Using the solubility table provided for you on your periodic table, predict whether the following ionic compounds are soluble or insoluble in water.
- a. $\text{Mg}(\text{OH})_2$ _____
 - b. Li_2CO_3 _____
 - c. potassium chromate _____
 - d. $\text{Ca}_3(\text{PO}_4)_2$ _____
 - e. NH_4Cl _____
 - f. $\text{Pb}(\text{C}_2\text{H}_3\text{O}_2)_2$ _____
 - g. mercury (I) fluoride _____
 - h. CaSO_4 _____
 - i. K_2S _____
 - j. zinc sulfide _____
 - k. nickel (II) nitrate _____
 - l. ammonium hydroxide _____

2. First balance the following reactions, then classify each as
- a. Combination
 - b. Decomposition
 - c. Combustion
 - d. Neutralization
 - e. Single-Replacement
 - f. Double-Replacement



3. i. Predict the products for the following reactions. If no reaction occurs, write NR. Check the solubility rules to help you out.
ii. Balance the reaction.
iii. Classify the reaction according to question number 2.

