

Chapter 8: Review Worksheet

Name: _____

1. What is a *precipitation reaction*? Write a balanced chemical equation illustrating a precipitation reaction.
2. Define the term *strong electrolyte*. What types of substances tend to be strong electrolytes? What does a solution of a strong electrolyte contain?
3. How do we use the solubility rules in determining the identity of the solid formed in a precipitation reaction? Give three examples including balanced complete and net ionic equations.
4. Describe some physical and chemical properties of *acids* and *bases*. What is meant by a *strong* acid or base? Give several examples of strong acids and strong bases. Write a neutralization reaction equation for a reaction between a strong acid and a strong base in aqueous solution.
5. What is a *salt*? Provide three formulas of salts and name them. Write chemical equations showing the formation of three different salts. What other product is formed when an aqueous acid reacts with an aqueous base? Write the net ionic equation for the formation of this substance.
6. What is *oxidation*? What is *reduction*? What is essential in an oxidation-reduction reaction? Write a balanced chemical equation illustrating an oxidation-reduction reaction between a metal and nonmetal. Indicate which species is oxidized and which is reduced. Can an oxidation reaction take place without a reduction also taking place? Why?
7. What is a *combustion* reaction? Write an equation that illustrates a combustion reaction. Are combustion reactions a unique type of reaction, or are they a special case of a more general type of reaction?
8. Give an example of a *synthesis* reaction and of a *decomposition* reaction. Are synthesis and decomposition reactions always also oxidation-reduction reactions? Explain.
9. The reagent shelf in a general chemistry lab contains aqueous solutions of the following substances; silver nitrate, sodium chloride, acetic acid, nitric acid, sulfuric acid, potassium chromate, barium nitrate, phosphoric acid, hydrochloric acid, lead nitrate, sodium hydroxide, and sodium carbonate. Suggest how you might prepare the following pure substances using these reagents and any normal laboratory equipment. If it is *not* possible to prepare a substance using these reagents, indicate why.
 - a. $\text{BaCrO}_4(\text{s})$
 - b. $\text{NaC}_2\text{H}_3\text{O}_2(\text{s})$
 - c. $\text{PbSO}_4(\text{s})$
 - d. $\text{AgCl}(\text{s})$
 - e. $\text{Na}_2\text{SO}_4(\text{s})$
 - e. $\text{BaCO}_3(\text{s})$

Types of Reactions Worksheet

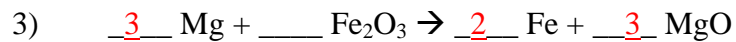
Balance the following equations and indicate the type of reaction taking place:



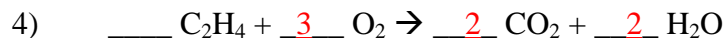
Type of reaction: **Precipitation/Double Displacement**



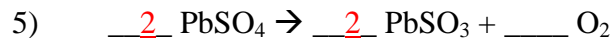
Type of reaction: **Precipitation/Double Displacement**



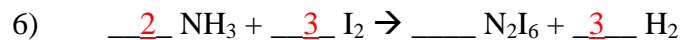
Type of reaction: **Redox/Single Displacement**



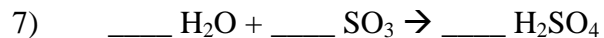
Type of reaction: **Redox/Combustion**



Type of reaction: **Redox/Decomposition**



Type of reaction: **Redox/Single Displacement**



Type of reaction: **Redox/Decomposition**



Type of reaction: **Redox/Acid-Base**