Name: _____ Date: _____

Types of Chemical Reactions (Part II): Single and Double Displacement

For each of the chemical reactions listed below, complete the following:

- 🕮 The type of chemical reaction (single or double displacement)
- ✎ Balance the skeletal equation

1. Sulphuric acid reacts with iron (II) sulphide to produce iron (II) sulphate and hydrogen sulphide.

   🕮 Reaction type: _____

   ✎ Balance the skeletal equation: _____H_2SO_4 + _____FeS → _____$FeSO_4$ + _____H_2S

2. An alkali metal such as sodium displaces hydrogen from water to form sodium hydroxide and hydrogen gas.

   🕮 Reaction type: _____

   ✎ Balance the skeletal equation: _____Na + _____H_2O → _____NaOH + _____H_2

3. Valuable silver can be recovered from a solution of silver nitrate by adding copper to produce copper (II) nitrate and a silver precipitate.

   🕮 Reaction type: _____

   ✎ Balance the skeletal equation: _____$AgNO_3$ + _____Cu → _____$Cu(NO_3)_2$ + _____ Ag

4. If we were to add table salt to a solution of silver nitrate we would produce sodium nitrate solution and silver chloride.

   🕮 Reaction type: _____

   ✎ Balance the skeletal equation: _____NaCl + _____$AgNO_3$ → _____$NaNO_3$ + _____AgCl

5. Potassium iodide reacts with lead (II) sulphate to produce potassium sulphate and lead (II) iodide.

   🕮 Reaction type: _____

   ✎ Balance the skeletal equation: _____ KI + _____ $PbSO_4$ → _____K_2SO_4 + _____PbI_2

6. The metal zinc reacts with tin (II) chloride under high heat conditions to produce zinc chloride and tin.

   🕮 Reaction type: _____

   ✎ Balance the skeletal equation: _____Zn + _____$SnCl_2$ → _____$ZnCl_2$ + _____Sn

7. Sodium hydroxide will be neutralized when combined with hydrochloric acid to produce table salt and water.

   🕮 Reaction type: _____

   ✎ Balance the skeletal equation: _____NaOH + _____HCl → _____NaCl + _____H_2O

8. Hydrogen bromide reacts with iron (III) hydroxide to produce iron (III) bromide and water.

   🕮 Reaction type: _____

   ✎ Write and balance the skeletal equation: _____+ _____ → _____ + _____