

Name: _____

Chemistry Honors PracTest: Chemical Equations and Aqueous Reactions

1. Write the answer in the space at left. (12 pts.)
- _____ In a chemical reaction what/which are conserved **A.** atoms **B.** molecules **C.** both A and B
 - _____ 3.00g Ag_2O decomposes into 2.79g Ag and ___g of oxygen gas.
 - _____ Total number of H atoms indicated by $3\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$
 - _____ Salts that dissociate 100% and conduct an electric current are known as strong _____.
 - _____ Evidence of a double displacement reaction is the production of a gas, water, or _____.
 - _____ Term for ions which do not participate directly in an aqueous reaction.
 - _____ Products formed when an acid reacts with a base. *Answer in space "g." and "h."*
 - _____
 - _____ $\text{H}_2\text{O}_{(g)} \longrightarrow \text{H}_2\text{O}_{(l)}$ Endothermic or Exothermic?
 - _____ If 5000 units of Na_3PO_4 are dissolved in water it will produce ___ Na^+ ions and ___ PO_4^{3-} ions.
 - _____ Suggest an ion which could be used to precipitate all of the $\text{Mg}^{2+}_{(aq)}$ from a solution of $\text{Mg}(\text{NO}_3)_2$.
2. Identify if the pairs of ions will produce a (P)recipitate or remain (S)oluble. (10 pts.)
- | | |
|--|--|
| a. _____ Ag^+ and Cl^- | d. _____ Fe^{3+} and NO_3^- |
| b. _____ K^+ and $\text{C}_2\text{H}_3\text{O}_2^-$ | e. _____ Ba^{2+} and SO_4^{2-} |
| c. _____ NH_4^+ and PO_3^{3-} | f. _____ Ba^{+2} and OH^- |
3. Write the products of dissociation for the following aqueous substances. Include charges. (10 pts.)
- $\text{MgI}_2 \rightarrow$
 - $\text{H}_2\text{SO}_4 \rightarrow$
 - $\text{Na}_2\text{SO}_3 \rightarrow$
 - $\text{Fe}(\text{C}_2\text{H}_3\text{O}_2)_3 \rightarrow$
 - $(\text{NH}_4)_3\text{PO}_4 \rightarrow$
4. Predict the products and write a balanced chemical equation for the following reactants. For a reaction that produces a precipitate circle the precipitate. (15 pts.)
- thallium(I) nitrate and potassium iodide

 - magnesium hydroxide and sulfuric acid

c.) sodium hydroxide and iron(II) chloride

d.) zinc acetate and hydrogen sulfide

e.) sodium phosphate and calcium nitrate

5. Write a balanced molecular, complete ionic, and net ionic equation that includes phase notation for the reaction of chromium(III) nitrate and sodium hydroxide. (6 pts.)

5. For each salt listed below, indicate which strong acid and strong base would be needed to produce that salt. Write a balanced chemical equation for each salts production. (4 pts.)

a.) CaSO_4

b.) K_3PO_4