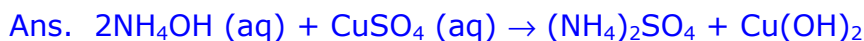


1. Aqueous solutions of ammonium hydroxide and copper (II) sulfate are combined in a test tube.

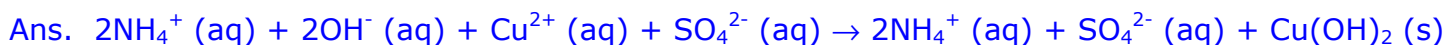
(i) Write down the molecular equation for the chemical reactants and predict the products. (*Be sure to balance the reaction*)



(ii) Using the solubility rules from Chapter 7, predict which of the products might be expected to precipitate in water.



(iii) Write down the complete ionic equation for the chemical reaction.



(iv) Using this information, write down the predicted net ionic equation for this reaction.



2. Aqueous solutions of barium chloride and copper(II) sulfate are combined in a test tube.

(i) Write down the molecular equation for the chemical reactants and predict the products. (*Be sure to balance the reaction*)



(ii) Using the solubility rules from Chapter 7, predict which of the products might be expected to precipitate in water.



(iii) Write down the complete ionic equation for the chemical reaction.

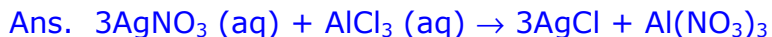


(iv) Using this information, write down the predicted net ionic equation for this reaction.



3. Aqueous solutions of silver nitrate and aluminum chloride are combined in a test tube.

(i) Write down the molecular equation for the chemical reactants and predict the products. (*Be sure to balance the reaction*)



(v) Using the solubility rules from Chapter 7, predict which of the products might be expected to precipitate in water.

Ans. AgCl should be insoluble

(ii) Write down the complete ionic equation for the chemical reaction.



(vi) Using this information, write down the predicted net ionic equation for this reaction.



4. Aqueous solutions of sodium hydroxide and hydrochloric acid are combined in a test tube.

(i) Write down the molecular equation for the chemical reactants and predict the products. (*Be sure to balance the reaction*)



(ii) Using the solubility rules from Chapter 7, predict which of the products might be expected to precipitate in water.

Ans. There will be no precipitate but H<sub>2</sub>O is formed

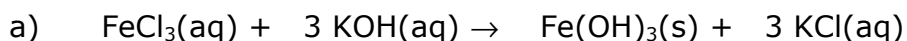
(iii) Write down the complete ionic equation for the chemical reaction.



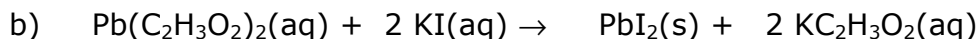
(iv) Using this information, write down the predicted net ionic equation for this reaction.



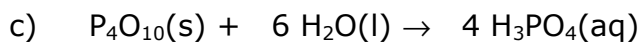
5. Classify the following chemical reactions in as many ways as possible.



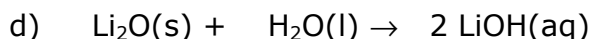
Ans. double displacement & precipitate



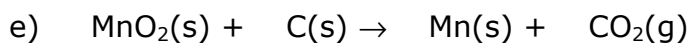
Ans. double displacement & precipitate



Ans. synthesis & oxidation-reduction



Ans. synthesis & oxidation-reduction



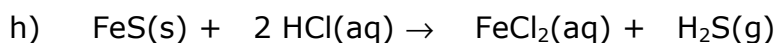
Ans. single displacement, gas formation, & oxidation-reduction



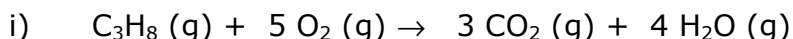
Ans. synthesis & oxidation-reduction



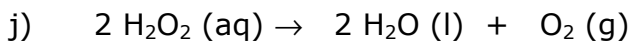
Ans. double displacement & acid-base



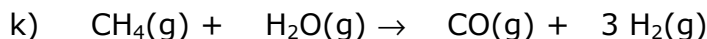
Ans. double displacement & gas formation



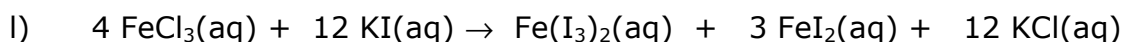
Ans. oxidation-reduction & combustion



Ans. decomposition, gas formation, & oxidation-reduction



Ans. oxidation-reduction & combustion



Ans. oxidation-reduction