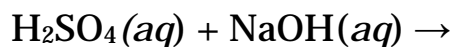


CHEM 106 Chapter 7 – Classification of Reactions

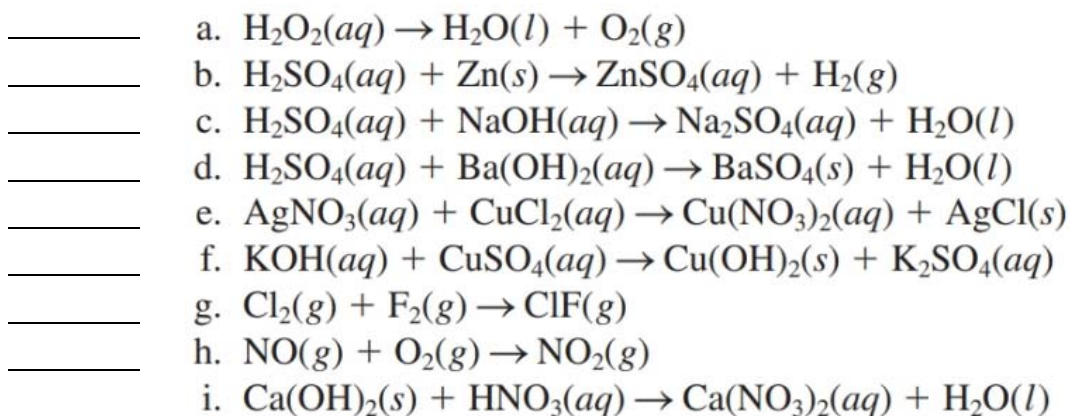
1. Complete the acid-base reactions below.



2. Identify each of the following equations as belonging to one or more of the following categories: precipitation, acid-base, or oxidation-reduction.

- _____ a. $\text{K}_2\text{SO}_4(aq) + \text{Ba}(\text{NO}_3)_2(aq) \rightarrow \text{BaSO}_4(s) + \text{KNO}_3(aq)$
- _____ b. $\text{HCl}(aq) + \text{Zn}(s) \rightarrow \text{H}_2(g) + \text{ZnCl}_2(aq)$
- _____ c. $\text{HCl}(aq) + \text{AgNO}_3(aq) \rightarrow \text{HNO}_3(aq) + \text{AgCl}(s)$
- _____ d. $\text{HCl}(aq) + \text{KOH}(aq) \rightarrow \text{H}_2\text{O}(l) + \text{KCl}(aq)$
- _____ e. $\text{Zn}(s) + \text{CuSO}_4(aq) \rightarrow \text{ZnSO}_4(aq) + \text{Cu}(s)$
- _____ f. $\text{NaH}_2\text{PO}_4(aq) + \text{NaOH}(aq) \rightarrow \text{Na}_3\text{PO}_4(aq) + \text{H}_2\text{O}(l)$
- _____ g. $\text{Ca}(\text{OH})_2(aq) + \text{H}_2\text{SO}_4(aq) \rightarrow \text{CaSO}_4(s) + \text{H}_2\text{O}(l)$
- _____ h. $\text{ZnCl}_2(aq) + \text{Mg}(s) \rightarrow \text{Zn}(s) + \text{MgCl}_2(aq)$
- _____ i. $\text{BaCl}_2(aq) + \text{H}_2\text{SO}_4(aq) \rightarrow \text{BaSO}_4(s) + \text{HCl}(aq)$

3. Identify each of the following equations as belonging to one or more of the following categories: precipitation, acid-base, or oxidation-reduction.



4. For any reaction in 2 that was oxidation-reduction (redox) give any other classification it falls into (e.g. synthesis).

5. Classify each redox reaction below as synthesis, decomposition or single replacement. If it doesn't fit a classification, specify "none."

