**Chapter 13: Homework #1**

**Direction**s: write the balanced ME, CIE, and NIE for each reaction. Identify the spectator ions.

Example:

Solutions of ammonium carbonate and magnesium chlorate are mixed

ME: (NH4)2CO3(aq) + Mg(ClO3)2(aq) → MgCO3(s) + 2NH4ClO3(aq)

CIE: 2NH4+(aq) + CO32-(aq) + Mg2+(aq) + 2ClO3-(aq) → MgCO3(s) + 2 NH4+(aq) + 2ClO3-(aq)

NIE: CO32-(aq) + Mg2+(aq) → MgCO3(s)

1. Solutions of silver nitrate and potassium chloride are mixed
2. Solutions of sodium sulfide and zinc chloride are mixed
3. Solutions of ammonium chromate and barium acetate are mixed
4. solutions of potassium carbonate and iron (II) nitrate are mixed
5. solutions of lead (II) chlorate and cesium bromide are mixed
6. solutions of sodium permanganate and copper (II) acetate are mixed
7. solutions of ammonium oxalate and nickel (II) chlorate are mixed