Friday quiz 1 Precipitates, overall and ionic equations.

1) Give the name and formula of any precipitate formed when the following solutions are mixed. Write the balanced overall and ionic equations of any chemical reaction that may take place. Give states.
   a. Silver nitrate and sodium carbonate
      Name of precipitate _____
      Formula _____
      Overall equation _____
      Ionic equation _____

   b. Ammonium nitrate and potassium sulphide
      Name of precipitate _____
      Formula _____
      Overall equation _____
      Ionic equation _____

   c. Calcium nitrate and sodium carbonate
      Name of precipitate _____
      Formula _____
      Overall equation _____
      Ionic equation _____

   d. Barium nitrate and sodium sulfate
      Name of precipitate _____
      Formula _____
      Overall equation _____
      Ionic equation _____

   e. Copper(II) nitrate and sodium phosphate
      Name of precipitate _____
      Formula _____
      Overall equation _____
      Ionic equation _____

   f. Iron(III)nitrate and potassium phosphate
      Name of precipitate _____
      Formula _____
      Overall equation _____
      Ionic equation _____

   g. Copper(II) nitrate and potassium sulfide
      Name of precipitate _____
      Formula _____
      Overall equation _____
      Ionic equation _____

2) Name the spectator ions in the mixtures stated in question 1 above.

a.

b.

c.

d.

e.

f.

g.

3) Write balanced ionic equations for the following unbalanced, overall reactions.

a. $HCl(aq) + Na_2CO_3(aq) \rightarrow NaCl(aq) + H_2O(l) + CO_2(g)$

b. $HNO_3(aq) + NaOH(aq) \rightarrow NaNO_3(aq) + H_2O(l)$

c. $HNO_3(aq) + Zn(s) \rightarrow Zn(NO_3)_2(aq) + H_2(g)$

d. $NaOH(aq) + HCl(aq) \rightarrow NaCl(aq) + H_2O(l)$

e. $Ca(OH)_2(aq) + HCl(aq) \rightarrow CaCl_2(aq) + H_2O(l)$

Valency of Some Simple and Polyatomic Ions

Valency	Simple (+ve) ions	Simple (-ve) ions	Polyatomic ions
1	Copper(I), Cu^+ Hydrogen, H^+ Potassium, K^+ Silver, Ag^+ Sodium, Na^+	Hydride, H^- Chloride, Cl^- Bromide, Br^- Iodide, I^-	Ammonium, NH_4^+ Hydrogencarbonate, HCO_3^- Hydroxide, OH^- Nitrate, NO_3^-
2	Calcium, Ca^{2+} Copper(II), Cu^{2+} Iron(II), Fe^{2+} Lead(II), Pb^{2+} Magnesium, Mg^{2+} Zinc, Zn^{2+}	Oxide, O^{2-} Sulfide, S^{2-}	Carbonate, CO_3^{2-} Sulfate, SO_4^{2-}
3	Aluminium, Al^{3+} Iron(III), Fe^{3+}	Nitride, N^{3-}	Phosphate, PO_4^{3-}