Predicting Precipitate Formation—Additional Practice

1. Using the solubility rules, determine whether each of the following compounds is soluble in water:
   (a) calcium sulfate _____
   (b) hydrogen sulfide _____
   (c) sodium nitrate _____
   (d) copper(II) chloride _____
   (e) magnesium carbonate _____
   (f) sodium hydroxide _____

2. Complete each of the following word equations. Using the solubility rules, determine whether a precipitate forms. Rewrite each word equation as a balanced chemical equation. Be sure to include the states of all the reactants and products.
   (a) magnesium nitrate and lithium sulfate

   (b) lead(II) acetate and silver nitrate

   (c) sodium bromide and sodium nitrate

   (d) silver nitrate and ammonium phosphate

   (e) magnesium hydroxide and calcium nitrate

   (f) potassium carbonate and barium chloride

   (g) silver nitrate and potassium chloride

   (h) lead(II) nitrate and potassium sulfide