Name _____ Block: _____ Date: _____

Chemistry 12

PREDICTING SOLUBILITY

1. Determine the solubility of the following ionic compounds from the table ***Solubility of Common Compounds in Water***.

   a. $AgCl$ _____
   b. $NaOH$ _____
   c. FeS _____
   d. $FeSO_4$ _____
   e. $Al_2(CO_3)_3$ _____
   f. $Fe(NO_3)_3$ _____
   g. Na_3PO_4 _____
   h. CuI _____
   i. $CuCl_2$ _____
   j. $PbBr_2$ _____

2. Determine whether 0.2 M solutions of the following mixtures form a precipitate when mixed and give the formula of any precipitate formed.

   a. $AgNO_3$ and NH_4Br _____
   b. $SrBr_2$ and $NaNO_3$ _____
   c. KOH and $AlCl_3$ _____
   d. NaI and $Pb(NO_3)_2$ _____
   e. BaS and Na_2SO_4 _____
   f. CaS and NH_4Cl _____

3. You wish to make some precipitates. You will make up 0.2 M solutions of certain soluble salts, mix the solutions and filter off the resulting precipitates. Give the complete chemical formulae for the soluble salts you would select to make up the necessary solutions for the following precipitates.

   a. $PbCl_2$ _____
   b. $AgBr$ _____
   c. Cr_2S_3 _____
   d. $SrSO_4$ _____