Quiz 5.2 – Precipitation and Acid/Base Reactions

Name: Key

Question 1

Identify if each compound is soluble or insoluble

$(NH_4)_3PO_4$	PbI_2	NH_4NO_3	$BaSO_4$
soluble	insoluble	soluble	insoluble

$Fe_2(CO_3)_3$	$Hg_2(NO_3)_2$	Ag_2S	$BaCl_2$
insoluble	soluble	insoluble	soluble

Question 2

Predict the products (including phases) and write a *net ionic* equation for each of the following reactions:

$NaCl(aq) + AgNO_3(aq) \longrightarrow NaNO_3(aq) + AgCl(s)$

$Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$

$Pb(ClO_4)_2(aq) + K_2So_4(aq) \longrightarrow 2KClO_4(aq) + PbSO_4(s)$

$Pb^{2+}(aq) + SO_4^{2-}(aq) \rightarrow PbSO_4(s)$

$2\,LiCH_3CO_2(aq) + Pb(NO_3)_2(aq) \longrightarrow 2\,LiNO_3(aq) + Pb(CH_3CO_2)_2(aq)$

No reaction

$BaI_2(aq) + Ag_2SO_4(aq) \longrightarrow BaSO_4(s) + 2\,AgI(s)$

$Ba^{2+}(aq) + 2\,I^-(aq) + 2\,Ag^+(aq) + SO_4^{2-}(aq) \rightarrow BaSO_4(s) + 2\,AgI(s)$

$(NH_4)_2SO_4(aq) + FeNO_3(aq) \longrightarrow Fe_2SO_4(aq) + 2\,NH_4NO_3(aq)$

No Reaction

$3\,Na_2S(aq) + 2\,CrCl_3(aq) \longrightarrow 6\,NaCl(aq) + Cr_2S_3(s)$

$2\,Cr^{3+}(aq) + 3\,S^{2-}(aq) \longrightarrow Cr_2S_3(s)$