Quantitative Analysis Assignment #3

Equilibria and Titrations

1) What mass of nickel sulfide (NiS; FW=90.759) can be dissolved in 5 L of water if the K_{sp} is 1.3×10^{-25}?

2) A mixture of sodium oxalate ($Na_2C_2O_4$; FW=101.9997) and sodium monoxalate ($NaHC_2O_4$; FW=80.0179) weighed 1.578 g and was titrated to excess with 48.01 mL of 0.522 M HCl. The excess HCl was titrated with 0.7435 M NaOH and needed 3.98 mL of NaOH to be neutralized. What was the weight percent of each of the two compounds in the original sample?