Stoichiometry Using Solutions SCH 4C

1. Determine the mass of aluminum sulphide that will form when 450 mL of 0.2 M sodium sulphide is reacted.

Al(NO₃)₃ + Na₂S \Rightarrow Al₂S₃ + NaNO₃

2. Determine the concentration of silver nitrate that would form from the reaction of 0.400 g of silver. The total volume of the solution is 250 mL

 $Ag + Au (NO_3)_3 \Rightarrow AgNO_3 + Au$

3. What concentration of sulphuric acid results from the reaction of 50.0 mL of 0.25 M sodium sulphate. Total volume of resulting solution will be 75.0 mL

 Na_2SO_4 + HCl \Rightarrow H_2SO_4 + NaCl

 What was the concentration of 125 mL of sodium phosphate if the resulting concentration of ammonium phosphate is 3.5 M for 250 mL of solution.

 $Na_3PO_4 + NH_4Cl \Rightarrow (NH_4)_3PO_4 + NaCl$

5. 100 mL of 0.1 M lead(II) nitrate is mixed with 100 mL of 0.1 M sodium chloride. Determine the maximum possible mass of lead(II) chloride that can form.

$$Pb(NO_3)_2 + NaCl \Rightarrow PbCl_2 + NaNO_3$$