Solution Stoichiometry Precipitation probs



1. All the silver in a 45.0 mL portion of silver nitrate solution is precipitated as silver iodide by 26.0 mL of 0.250 M CaI2 according to the reaction below.
2. AgNO3 (aq) + CaI2 (aq) 🡪 2 AgI (s) + Ca(NO3)2 (aq)

What is the concentration of the silver nitrate solution?

What is the mass of silver iodide precipitated?

1. What volume of 0.750 M Pb(NO3)2, in mL is required to react completely with 1.25 L of 2.25 M NaCl solution?
2. What volume of 0.100 M lead(II) nitrate is required to precipitate completely
3. 25.0 ml of 0.0832 M nickel(II)sulfate
4. 55.8 mL of 0.222 M hydrochloric acid
5. 18.7 mL of 0.389 M potassium chromate



1. A mixture contains only NaCl and Fe(NO3)3. A 0.456 g sample of the mixture is dissolved in water, and an excess of NaOH is added, producing a precipitate, Fe(OH)3. The precipitate is filtered, dried and weighed. Its mass is 0.107 g. Calculate the following:
	1. The mass of iron in the sample
	2. The mass of Fe(NO3)3 in the sample
	3. The mass percent of iron III nitrate in the sample

2 AgNO3(aq) + K2CrO4(aq) 🡪 Ag2CrO4(s) + 2 KNO3(aq)

1. How many milliliters of 0.10 M K2CrO4 must be added to excess AgNO3 solution to produce 2.0 x 10-4 mol of Ag2CrO4 precipitate?
	1. How many mL of 0.60 M silver nitrate must be added to excess potassium chromate solution to produce 3.0 g of silver chromate?
	2. How many mL of 0.60 M silver nitrate will react with 50.0 mL of 0.10 M potassium chromate?