Dissociation Calculations

Calculate the concentrations of all ions in each solution.

0.50 M $Al_2(SO_4)_{3\,(aq)}$

25.7g $(NH_4)_3PO_{4\,(aq)}$ in 250.0mL H_2O.

210g $CoCl_2 \cdot 6H_2O$ in 800.0mL H_2O.

2.65 g of $Ba(OH)_2$ is dissolved in 70.0 mL of water to produce a saturated solution at 20 °C. Calculate the solubility in units of g/100 mL, g/L, and M.

A beaker containing 100.0 mL of saturated $BaCO_3$ solution weighs 159.60 g. The beaker is evaporated to dryness and weighs 56.36 g. The empty beaker weighs 24.33 g. Calculate the solubility in units of g/100 mL; g/ L; and M.

If 3.78 L of 0.960 M sodium fluoride solution is added to 6.36 L of 0.550 M calcium nitrate solution, what is the resulting concentration of $[Ca^{+2}]$ and $[F^-]$?

What is the concentration of each ion in the solution formed when 94.78 g of iron (III) sulphate is dissolved into 550.0 mL of water?

If the $[F^-]$ = 0.200 M, calculate the number of grams AlF_3 that would be dissolved in 2.00 L of water.

If the $[SO_4^{2-}]$ = 0.200 M in 2.0 L of $Al_2(SO_4)_3$, determine the $[Al^{3+}]$ and the molarity of the solution.

200.0 g of $CoCl_2$ is dissolved in 500.0 mL of water at 0°C to form a saturated solution. What is the solubility of $CoCl_2$ at 0°C in three different units?