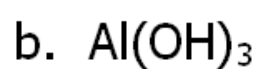


74. Write the balanced equation for the dissolution reactions and solubility product expressions for each of the following:



76. Calculate  $K_{sp}$  value for each solid:
- The solubility of  $Pb_3(PO_4)_2$  is  $6.2 \times 10^{-12}$  mol/L.

b. The solubility of  $\text{Li}_2\text{CO}_3$  is  $7.4 \times 10^{-2}$  mol/L.

78. The concentration of  $\text{Ag}^+$  in a solution saturated with  $\text{Ag}_2\text{C}_2\text{O}_4$  (s) is  $2.2 \times 10^{-4}$  M. Calculate  $K_{\text{sp}}$  for  $\text{Ag}_2\text{C}_2\text{O}_4$ .

80. Calculate the solubility of each of the following compounds in moles per liter. Ignore acid-base properties.
- a.  $\text{PbI}_2$ ,  $K_{\text{sp}} = 1.4 \times 10^{-8}$
  - b.  $\text{CdCO}_3$ ,  $K_{\text{sp}} = 5.2 \times 10^{-12}$
  - c.  $\text{Sr}_3(\text{PO}_4)_2$ ,  $K_{\text{sp}} = 1 \times 10^{-31}$

82. Calculate the molar solubility of  
 $\text{Mg (OH)}_2$ ,  $K_{\text{sp}} = 8.9 \times 10^{-12}$ .

84. For each of the following pairs of solids, determine which solid has the smallest molar solubility.

