

2015 AP[®] CHEMISTRY FREE-RESPONSE QUESTIONS

4. Answer the following questions about the solubility of Ca(OH)_2 ($K_{sp} = 1.3 \times 10^{-6}$).
- (a) Write a balanced chemical equation for the dissolution of $\text{Ca(OH)}_2(s)$ in pure water.
- (b) Calculate the molar solubility of Ca(OH)_2 in $0.10\text{ M Ca(NO}_3)_2$.
- (c) In the box below, complete a particle representation diagram that includes four water molecules with proper orientation around the Ca^{2+} ion.

Represent water molecules as .

