## Self-Assessment: Aqueous Solutions

## Weekly Homework Quiz

(a) The value of $K_{\mathrm{a}}$ for perchloric acid, $\mathrm{HClO}_{4}(a q)$, is $1 \times 10^{8}$. Calculate the $p \mathrm{H}$ and the $p \mathrm{OH}$ of $1.11 \mathrm{M} \mathrm{HClO}_{4}(a q)$ in water.
(b) The compound, yttrium iodate, $\mathrm{Y}\left(\mathrm{IO}_{3}\right)_{3}$, upon dissolution in water dissociates into $\mathrm{Y}^{3+}$ and $\mathrm{IO}_{3}{ }^{-}$. At $37^{\circ} \mathrm{C}$ the solubility of $\mathrm{Y}\left(\mathrm{IO}_{3}\right)_{3}$ in water is $2.22 \times 10^{-3} \mathrm{M}$. Calculate the value of the solubility product, $K_{\mathrm{sp}}$, of $\mathrm{Y}\left(\mathrm{IO}_{3}\right)_{3}$.

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