Problema720: Calcula a concentración de amoníaco, NH_3, que está disociado un 3%.
Dato $K_b = 1{,}79 \cdot 10^{-5}$.

	NH_3	+ H_2O ⇆	$NH_4^+{}_{(aq)}$	+ $OH^-{}_{(aq)}$
[inic.]	C		–	–
[eq.]	C – x		x	x

$$K_b = \frac{[NH_4^+]\cdot[OH^-]}{[NH_3]} = \frac{x^2}{C-x} = 1{,}79\cdot 10^{-5}$$

$$\alpha = \frac{Cant.disociada}{Cant.inicial}\cdot 100 = \frac{x}{C}\cdot 100 = 3\,\%$$

$$x = \frac{3\cdot C}{100} = 0{,}03C$$

Substituímos este valor na expresión da constante.

$$\frac{x^2}{C-x} = \frac{(0{,}03C)^2}{C-0{,}03C} = \frac{9\cdot 10^{-4}C^2}{C(1-0{,}03)} = \frac{9\cdot 10^{-4}C}{1-0{,}03} = 9{,}28\cdot 10^{-4}\cdot C = 1{,}79\cdot 10^{-5}$$

$$C = \frac{1{,}79\cdot 10^{-5}}{9{,}28\cdot 10^{-4}} = \underline{0{,}019\,M}$$