30 Thorium-228 has a decay constant of $1.15 \times 10^{-8}\,s^{-1}$.

A small sample of thorium-228 is prepared, containing 5.00×10^{12} nuclei.

How long does it take for 3.00×10^{12} of these nuclei to decay?

A $3.62 \times 10^{7}\,s$ **B** $4.44 \times 10^{7}\,s$ **C** $7.23 \times 10^{7}\,s$ **D** $7.97 \times 10^{7}\,s$