39 At time $t = 0$ the number of radioactive atoms in a sample of berkelium is 7.7×10^{23}. The decay constant of berkelium is $2.6 \times 10^{-8}\,\text{s}^{-1}$.

What time elapses before the number of particles has fallen to 8.6×10^{21}?

A $1.2 \times 10^8\,\text{s}$ **B** $1.5 \times 10^8\,\text{s}$ **C** $1.7 \times 10^8\,\text{s}$ **D** $2.1 \times 10^8\,\text{s}$