How many years would it take to reduce the ^{14}C in a compound to one fourth of its original value?

$$^{14}C \longrightarrow {}^{14}N + \beta \qquad t_{1/2} = 5.73 \times 10^3 \text{ yrs}$$

1. 1.15×10^4 yrs
2. 2.86×10^3 yrs
3. 2.29×10^4 yrs
4. 1.43×10^3 yrs

Correct Answer: **1.**

Comments to the instructor: Choice 2 is picked by the student who thinks one half life is one half the time. Choice 3 is picked by the student who quadruples the half life. Choice 4 is picked by the student who takes one fourth of the half life.