

7 Carbon-14 is a radioactive isotope with a decay constant of $1.2 \times 10^{-4} \text{ year}^{-1}$.

The fossil of a plant contains 24% of the amount of carbon-14 that would have been present when the plant was alive.

Which of the following expressions gives the age of the fossil in years?

☐ **A** $1.2 \times 10^{-4} \times \ln \frac{1}{0.24}$

☐ **B** $1.2 \times 10^{-4} \times \ln \frac{0.76}{0.24}$

☐ **C** $\frac{1}{1.2 \times 10^{-4}} \times \ln \frac{1}{0.24}$

☐ **D** $\frac{1}{1.2 \times 10^{-4}} \times \ln \frac{0.76}{0.24}$

(Total for Question 7 = 1 mark)