6 Polonium-218 is a naturally occurring radioactive isotope with a half-life of 185 s. A sample of this isotope contains 2.75×10^{15} unstable nuclei.

Which of the following expressions can be used to determine the activity in Bq of the sample?

☒ **A** $\dfrac{185}{\ln 2} \times 2.75 \times 10^{15}$

☒ **B** $\dfrac{2.75 \times 10^{15}}{\ln 2 \times 185}$

☒ **C** $\dfrac{\ln 2}{185} \times 2.75 \times 10^{15}$

☒ **D** $\dfrac{\ln 2}{2.75 \times 10^{15}} \times 185$

(Total for Question 6 = 1 mark)