

**30** A radioactive sample of element X has an activity of  $A$ .

Another radioactive sample of element Y with the same number of radioactive nuclei as the sample of X has an activity of  $3A$ .

What is the ratio  $\frac{\text{half life of X}}{\text{half life of Y}}$ ?

**A** 0.11

**B** 0.33

**C** 3.0

**D** 9.0

**End of Paper**

