

40 At time t , a sample of a radioactive substance contains N atoms of a particular nuclide.

At time $(t + \Delta t)$, where Δt is a short period of time, the number of atoms of the nuclide is $(N - \Delta N)$.

Which expression is equal to the decay constant of the nuclide?

A $\frac{\Delta N}{N}$

B $\frac{\Delta N}{\Delta t}$

C $\frac{\Delta N}{N\Delta t}$

D $\frac{N\Delta N}{\Delta t}$