

- 29** At time  $t$ , a sample of a radioactive substance contains  $N$  atoms of a particular nuclide. At time  $(t + \Delta t)$ , where  $\Delta t$  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**  $\frac{N\Delta N}{\Delta t}$

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

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

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