

**Question 1**

2391

The population  $N$  of a town, after  $t$  years, is given by the formula  $N = N_0 e^{0.04t}$ , where  $N_0$  is the initial population. Which expression represents the number of years it takes until the town has doubled its population?

- a)  $\frac{2 \log_e 100}{5}$
- b)  $4 \log_e 2$
- c)  $2 \log_e 25$
- d)  $25 \log_e 2$