10 A charged capacitor is connected across a resistor of resistance R and the current in the resistor is measured.

A graph of ln (current) against time is plotted and the gradient of the graph is determined.

Which of the following gives the capacitance of the capacitor?

☒ **A** $-\text{gradient} \times R$

☒ **B** $\dfrac{-1}{(\text{gradient} \times R)}$

☒ **C** $\dfrac{-R}{\text{gradient}}$

☒ **D** $\dfrac{-\text{gradient}}{R}$

(Total for Question 10 = 1 mark)