**3** The time $T$ taken for a satellite to orbit the Earth on a circular path is given by the equation

$$T^2 = \frac{kr^3}{M}$$

where $r$ is the radius of the orbit, $M$ is the mass of the Earth and $k$ is a constant.

What are the SI base units of $k$?

**A** $kg^{-1}m^{-3}s^2$ **B** $kg^{-1}m^3s^2$ **C** $kg\,m^{-3}s^2$ **D** $kg\,m^3s^2$