

- 2** A metal sphere of radius r is dropped into a tank of water. As it sinks at speed v , it experiences a drag force F given by $F = krv$, where k is a constant.

What are the SI base units of k ?

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

- 3** An Olympic athlete of mass 80 kg competes in a 100 m race.