

**2** The stress  $\sigma$  needed to fracture a particular solid is given by the equation

$$\sigma = k \sqrt{\frac{\gamma E}{d}}$$

where  $E$  is the Young modulus,  $d$  is the distance between planes of atoms, and  $k$  is a constant with no units.

What are the SI base units of  $\gamma$ ?

**A**  $\text{kg m s}^{-2}$

**B**  $\text{kg s}^{-2}$

**C**  $\text{kg m s}^{-1}$

**D**  $\text{kg s}^{-1}$

**3** Vectors  $P$  and  $Q$  are drawn to scale