

- 4** The spring constant  $k$  of a coiled wire spring is given by the equation

$$k = \frac{Gr^4}{4nR^3}$$

where  $r$  is the radius of the wire,  $n$  is the number of turns of wire and  $R$  is the radius of each of the turns of wire. The quantity  $G$  depends on the material from which the wire is made.

What is a suitable unit for  $G$ ?

- A**  $\text{Nm}^{-2}$       **B**  $\text{Nm}^{-1}$       **C**  $\text{Nm}$       **D**  $\text{Nm}^2$

**Space for working**