Name:

A-Level Physics: **w25 14**

23 Which expression gives the formula for the spring constant?

A Fx **B** $2Fx^2$ **C** $\frac{F}{x}$ **D** $\frac{F}{x^2}$

A-Level Physics: **s25 11**

23 A uniform metal wire of length L and diameter d has spring constant k.

What is the Young modulus of the metal?

A $\frac{\pi d^2}{4kL}$ **B** $\frac{\pi d^2}{kL}$ **C** $\frac{kL}{\pi d^2}$ **D** $\frac{4kL}{\pi d^2}$

A-Level Physics: **s25 13**

22 A wire of length L_0 is attached at one end to a fixed point. A tensile force is applied to the other end so that the wire extends and has a new length L_1.

What is the strain of the wire?

A $\left(\frac{L_1}{L_0}\right) - 1$ **B** $L_1 - L_0$ **C** $\left(\frac{L_1}{L_0}\right) + 1$ **D** $L_1 + L_0$

A-Level Physics: **s25 14**

17 What is the definition of strain?

A extension per unit cross-sectional area

B extension per unit original length

C force per unit cross-sectional area

D force per unit extension