

- 6 The strain energy W of a spring is determined from its spring constant k and extension x . The spring obeys Hooke's law and the value of W is calculated using the equation shown.

$$W = \frac{1}{2} kx^2$$

The spring constant is $100 \pm 2 \text{ N m}^{-1}$ and the extension is $0.050 \pm 0.002 \text{ m}$.

What is the percentage uncertainty in the calculated value of W ?

A 6%

B 10%

C 16%

D 32%