

Elastic potential energy

1. A spring ($k = 7.50 \text{ N/m}$) has been stretched 0.40 m from its equilibrium position. What is the potential energy now stored in the spring?
2. A spring ($k = 800 \text{ N/m}$) has been compressed, and 196 J of potential energy is stored. What distance from equilibrium has the spring been compressed?
3. Calculate the spring constant of a spring that stores 100 J of energy when compressed 500 cm .
4. A spring has 900 J of energy applied to it. It has a spring constant of 20 N/m . Calculate the extension.
5. A spring has 900 J of energy applied to it. It has a spring constant of $20,000 \text{ N/m}$. Calculate the extension.

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1. A spring ($k = 7.50 \text{ N/m}$) has been stretched 0.40 m from its equilibrium position. What is the potential energy now stored in the spring? (0.6 J)
2. A spring ($k = 800 \text{ N/m}$) has been compressed, and 196 J of potential energy is stored. What distance from equilibrium has the spring been compressed? (0.700m)
3. Calculate the spring constant of a spring that stores 100 J of energy when compressed 500 cm . (8 N/m)
4. A spring has 900 J of energy applied to it. It has a spring constant of 20 N/m . Calculate the extension. (9.5m)
5. A spring has 900 J of energy applied to it. It has a spring constant of $20,000 \text{ N/m}$. Calculate the extension. (0.3m)