

Question:

A diver is standing motionless at the end of a spring board and the board bends downward. If her twin joins her at the end of the board, how far downward will the board bend?

1. The same amount.
2. Twice as far.
3. Four times as far.

Weight

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- Easier to measure than mass.
- Depends on Acceleration Due to Gravity.
- Can't be measured directly.

Equilibrium

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- Not accelerating

Isolated Springs

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- The spring is at its equilibrium length.

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- Forces act to restore equilibrium length.
- The spring is in stable equilibrium.
- The forces are proportional to distortion.

Hooke's Law

The restoring force on the end of a spring is equal to a spring constant times the distance the spring is distorted. That force is directed opposite the distortion.

$$\text{Restoring Force} = - \text{Spring Constant} \cdot \text{Distortion}$$

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