Question 9

Student Life Disability Services
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What we know:

spring was compressed : 0.011 m, traveled $\Delta x = 1.93$ m

Target box distance: $\Delta x = 2.200$ m

How far should the spring be compressed to travel 2.200 meters?

No friction, $g = 10\ m/s^2$

Spring $KE = \frac{1}{2} k x^2$

$mgh = mg$

original compression

$0.011K = 1.93$

$k = 175.45$

Spring constant

$175.45x = 2.2$

$x = 0.013$

desired compression

Rhoda should compress the spring by 0.0125 m (1.25 cm) to reach the target