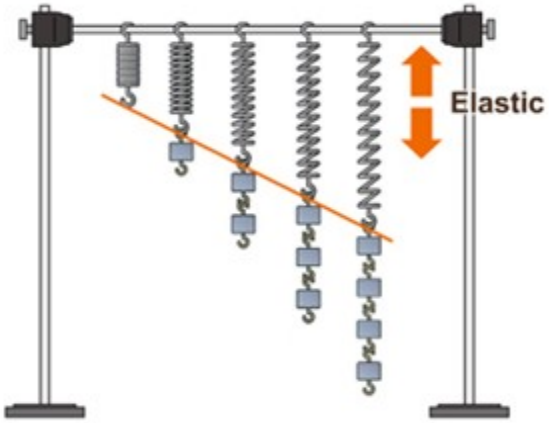
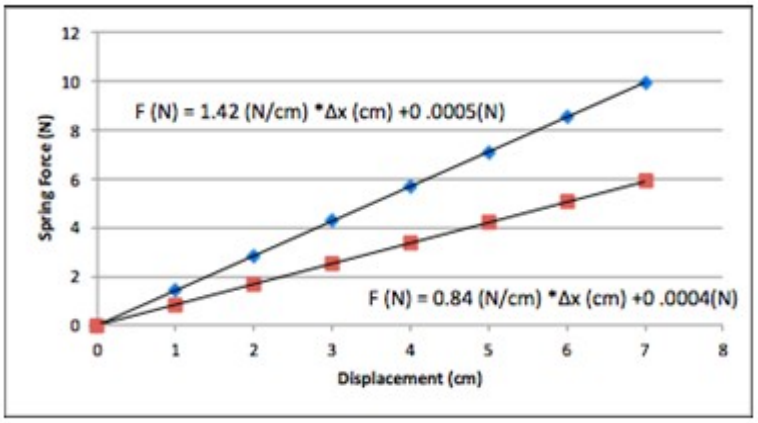
Elastic Potential Energy

SPH4U

The magnitude of the force F_x required to _____ or _____ an ideal spring is _____ to x, the _____ of the spring from its _____ position:



The constant of proportionality k depends on the _____.



The energy stored in objects that are stretched or compressed (or bent or twisted) is called

_____ **potential energy** _____.

For an ideal spring:

Example: A ball of mass 0.10 kg is hung from a vertical spring that stretches to a new equilibrium position 0.20 m below the initial position.

(a)What is the spring constant of the spring?

(b)What was the maximum extension of the spring before it came to rest at its new equilibrium position?

Textbook questions:

p. 207 #5
p. 211 #10, 12, 13