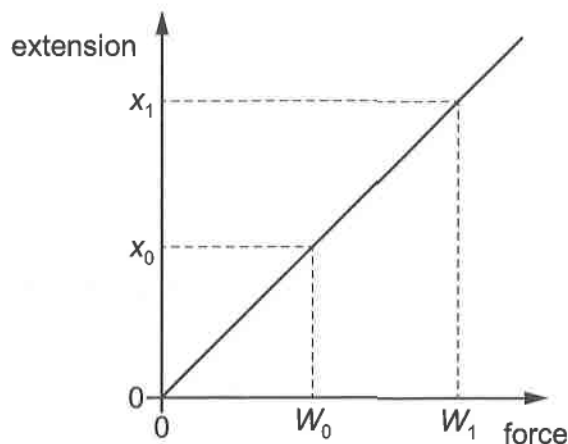
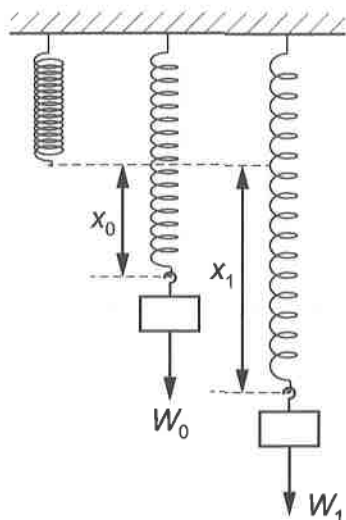


7 An object of weight W_0 is suspended from a spring so that the spring extends by x_0 .

The object is replaced with a second object of weight W_1 . The total extension is now x_1 , as shown.

The extension–force graph for the spring is shown.



How much extra elastic potential energy is stored in the spring when its extension increases from x_0 to x_1 ?

- A $(W_1 - W_0)(x_1 - x_0)$
- B $\frac{1}{2} W_1 (x_1 - x_0)$
- C $\frac{1}{2} (W_1 - W_0)(x_1 - x_0)$
- D $\frac{1}{2} (W_1 x_1 - W_0 x_0)$