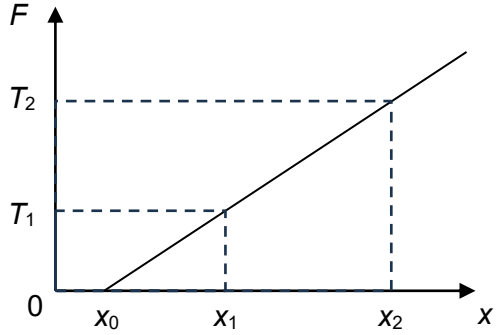
4 The force F required to extend a spring of unstretched length x_0 to a length x is measured. When the tension in the spring is T_1, the length of the spring is x_1. When the tension in the spring is T_2, the length of the spring is x_2.



What is the work done to stretch the spring from length x_1 to length x_2?

A $\frac{1}{2}(T_2)(x_2 - x_0)$

B $\frac{1}{2}(T_1 + T_2)(x_2 - x_1)$

C $\frac{1}{2}(T_1 + T_2)(x_2 + x_1 - 2x_0)$

D $\frac{1}{2}(T_1 + T_2)(x_2 - x_1 - 2x_0)$