

39. (a) Using Eq. 7-8, we have

$$W_{\text{applied}} = (8.0 \text{ N})(0.70 \text{ m}) = 5.6 \text{ J} .$$

(b) Using Eq. 8-29, the thermal energy generated is

$$\Delta E_{\text{th}} = f_k d = (5.0 \text{ N})(0.70 \text{ m}) = 3.5 \text{ J} .$$