

14. In both cases, there is no acceleration, so the lifting force is equal to the weight of the object.

(a) Eq. 7-8 leads to  $W = \vec{F} \cdot \vec{d} = (360 \text{ kN})(0.10 \text{ m}) = 36 \text{ kJ}$ .

(b) In this case, we find  $W = (4000 \text{ N})(0.050 \text{ m}) = 200 \text{ J}$ .