

86. We find that the spring constant is  $k = mg/h$ . Thus, Eq. 16-13 becomes

$$T = 2\pi\sqrt{\frac{m}{k}} = 2\pi\sqrt{\frac{m}{(mg/h)}}2\pi\sqrt{\frac{h}{g}}$$

which we recognize as the period formula for a simple pendulum of length  $h$  (see Eq. 16-28).