

78. (a) Hooke's law readily yields $(0.300 \text{ kg})(9.8 \text{ m/s}^2)/(0.0200 \text{ m}) = 147 \text{ N/m}$.

(b) With $m = 2.00 \text{ kg}$, the period is

$$T = 2\pi\sqrt{\frac{m}{k}} = 0.733 \text{ s} .$$