SP211 Worksheet
Ch. 15.4, Pendulums

1) A simple pendulum undergoes motion according to $\theta = 0.033 \cdot \cos(6.0t + \phi)$ where $\theta$ is in radians and $t$ is in seconds. What are a) the pendulum’s length and b) its maximum speed?

2) A physical pendulum consists of a meter stick with a pivot point at the 60 cm mark. What is its oscillation period?

3) You wish to make a “grandfather clock” ($T = 1 \text{ s}$) out of a hula-hoop ($I_{\text{hoop}} = MR^2$) that pivots about a point on the hoop. What radius does the hoop need to have?