Classical Mechanics

Answer Sheet – Homework Set 7

Questions beginning with ** do not have answers on this sheet.

$-ml\dot{\theta}^2 - mg\cos\theta$

$$\ddot{y} = \frac{(m_1 - m_2)g}{\left(m_1 + m_2 + \frac{M}{2}\right)}$$

$0 \;\; or \;\; \pi$

0

0

$$\ddot{\theta} + \left(\frac{g}{l}\right)\sin\theta = 0$$

$mg\cos\alpha$

$g\sin\alpha$

$$\cos^{-1}\left(\frac{g}{\omega^2 R}\right)$$

$$\frac{1}{2}\left(m_1 + m_2 + \frac{1}{2}M\right)\dot{y}^2 + m_1 g y + m_2 g(l - y - \pi R)$$

$$\ddot{\theta} - \omega^2 \sin\theta\cos\theta + \left(\frac{g}{R}\right)\sin\theta = 0$$