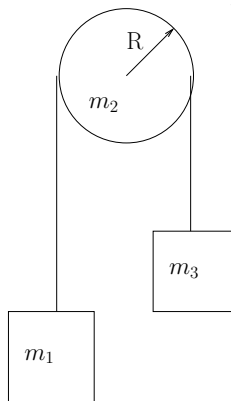


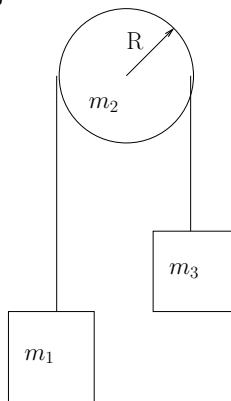
A 0.1 m radius disk accelerates with an angular acceleration of 1 rad/s^2 . Its initial angular velocity was -20 rad/s . (a) What is its angular velocity after 5 s (b) What are the tangential and radial components of the acceleration of a point on the disk?

Suppose you have a cylinder of radius 0.5 m and mass 1000 kg being spun on its outer rim of its length. What is its moment of inertia?

In the diagram below $m_1 = 15$ kg, $m_2 = 20$ kg, $m_3 = 20$ kg, and $R = 0.5$ m. How fast is m_2 moving if it falls 1 m from its initial position?



In the diagram below $m_1 = 15$ kg, $m_2 = 20$ kg, $m_3 = 20$ kg, and $R = 0.5$ m. What is the acceleration of the objects?



Consider a hollow sphere rolling down an incline plane with a 45 degree angle to the horizon. If the sphere has a mass of 0.1 kg and a radius of 0.1 m, what is the acceleration on the sphere if it rolls without slipping?