

Engineering Mechanics – Dynamics Worksheets

Force Acceleration I – Problem 4

A drum having a radius of 5 ft and weighing 161 lbs has a radius of gyration with respect to an axis perpendicular to the paper through the center of mass, G, of 2 ft. A couple of magnitude $C = 400$ ft-lbs is applied as shown.

- a. Determine the acceleration of the center of mass, G.
- b. Determine the magnitude and direction of the friction force.

