

Homework Problem H6.A

Given: A homogeneous disk having a weight of W has a cable wrapped around its perimeter and is in contact with a rough incline (with a static coefficient of μ_s). A vertical load F is applied to the free end of the cable.

Find:

- Determine the value of F and the friction force acting on the drum required to hold the disk in equilibrium. Express these forces in terms of the weight force W .
- Determine the numerical value for the minimum μ_s required to keep the disk in equilibrium.

