

Homework Problem H6.D

Given: A block having a weight of W rests on a rough horizontal surface, with a coefficient of static friction of μ_s between the block and ground. A smooth cylinder of weight W_C is placed between the right side of the block and an inclined plane.

Find:

- Determine the largest weight W_C such that the system remains in equilibrium. Express your answer in terms of W .
- For the cylinder weight found above, is the block in a state of impending tipping or impending slipping?

For this problem, use the following parameter value: $\mu_s = 0.50$.

