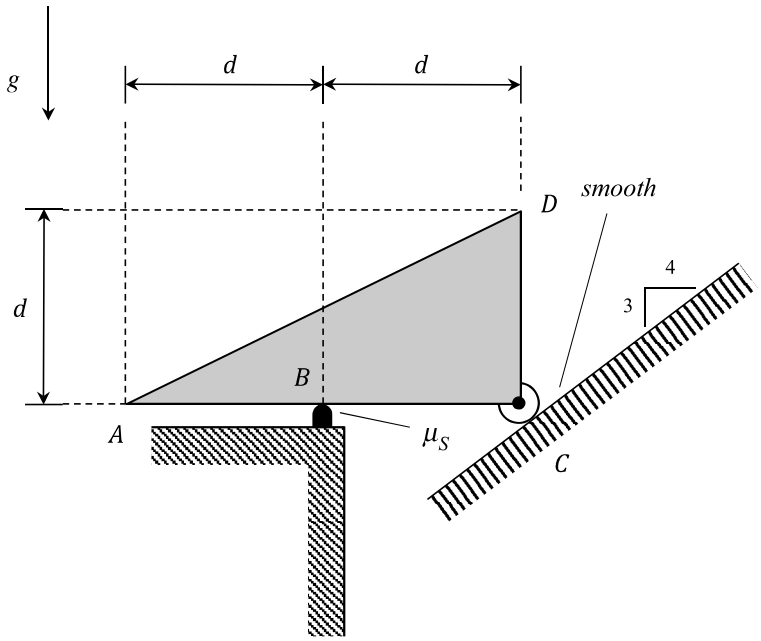
Homework H17.A

Given: A homogeneous block having a weight of W is supported by a rough peg at B and a smooth roller support at C.. In the position shown, edges AC and CD of the block are horizontal and vertical, respectively.

Find: For this problem:

a) Determine the required friction force on the block at B in order for the block to remain in equilibrium. Write your answer in terms of W.

b) Determine the numerical value for the *minimum* μ_S required to keep the block in equilibrium.



Homework H17.B

Given: Blocks A and B have masses of 2m and m, respectively, and are connected by the cable-pulley system shown.. The coefficient of friction between each block and ground is μ_S.

Find: Determine the numerical value for the minimum μ_S required to keep the system in equilibrium.

For this problem, use the following parameter: $\theta = 36.87°$.