

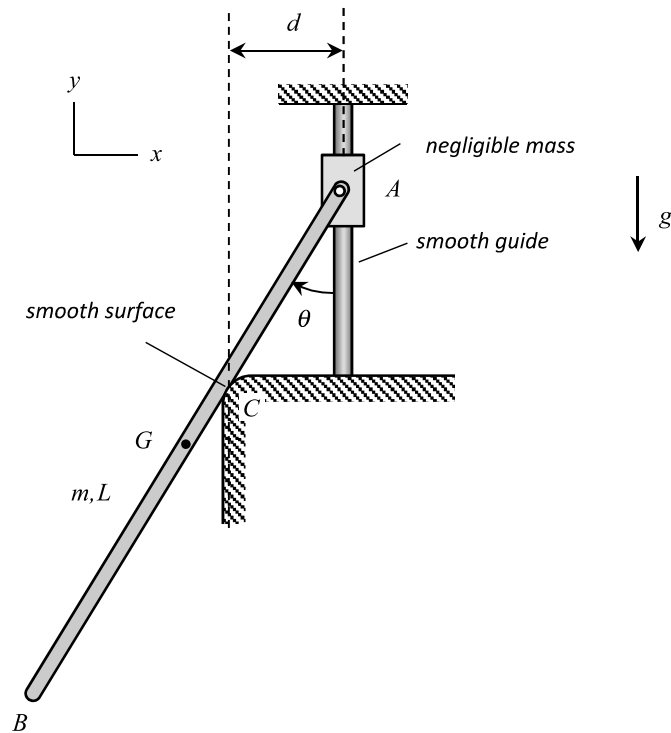
Homework H9.A

Given: A thin, homogeneous bar of length L and mass m is supported by a collar on a smooth vertical guide at end A and by contact with a smooth, surface at C , as shown in the figure.

Find: Determine the angle θ at which the bar is in static equilibrium.

Leave your answer in terms of, at most, m , L , d and g .

HINT: The contact force on the bar at C is perpendicular to the surface of the bar since the surface is smooth.



Homework H9.B

Given: An L-shaped bent bar is supported by smooth rollers at ends A and C, and by cable DE at E. A horizontal force F acts on the bar at location H. The weight of the bar is negligible compared to the load F .

Find: Determine the reactions on the bar at A and C, and the tension in cable DE. Express your answers in terms of F .

