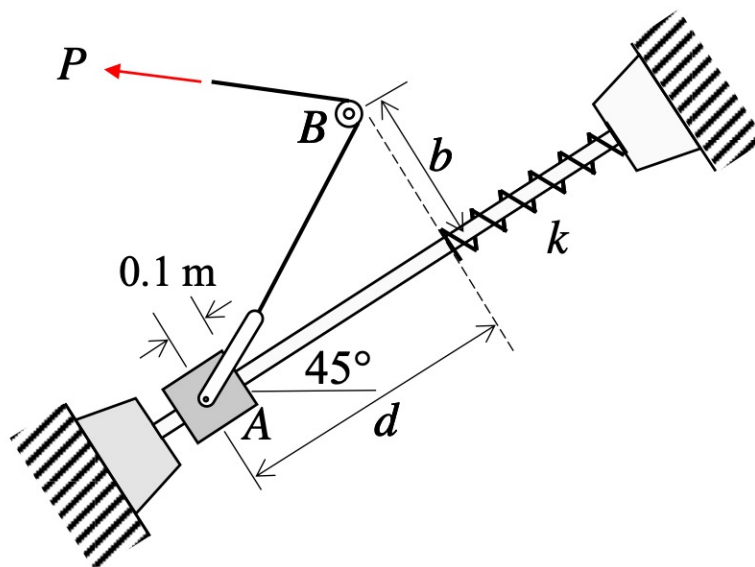


Homework H.4.I

Given: A constant force P acts at the free end of the cable as block A (having mass m) is pulled up the smooth rod. The system starts out from rest.

Find: Determine the stiffness k of the spring corresponding to a maximum spring compression of Δ_{max} .



Use the following parameters in your analysis: $m = 28\text{ kg}$, $P = 50\text{ N}$, $b = 1\text{ m}$, $d = 1.2\text{ m}$ and $\Delta_{max} = 0.02\text{ m}$.