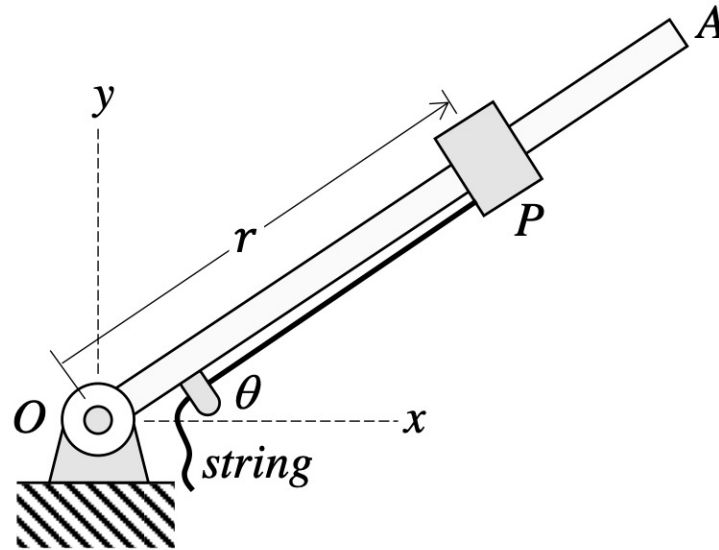


Homework H.1.F

Given: A string is used to pull in particle P in such a way that the radial position of P is given by $r = 1 - 0.05t^2$, while the angular orientation of arm OA is given by $\theta = 0.25 + 0.1t$, where r , θ and t are given in meters, radians and seconds, respectively.

Find: Determine the velocity and acceleration of P.



Use the following parameters in your analysis: $t = 3$ s.