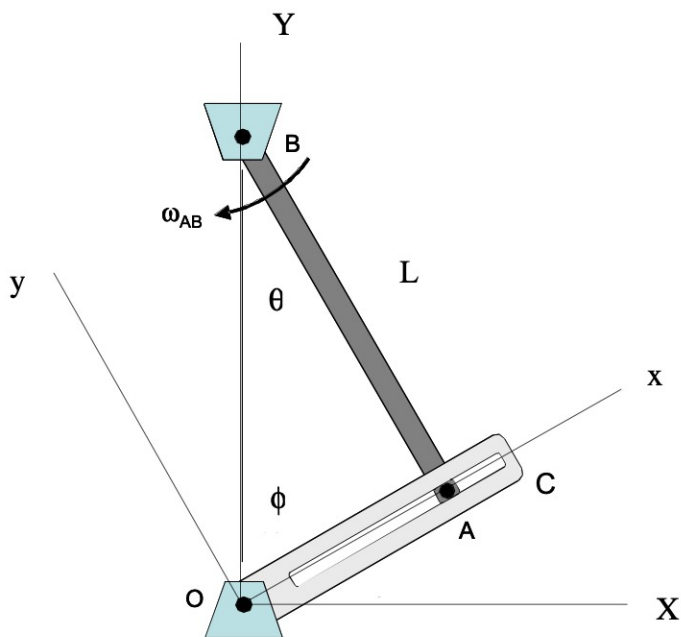


Homework H.3.C

Given: The mechanism shown below is driven by a motor attached at B. End A of link AB is free to slide within a straight slot within link OC. The angular velocity of ω_{AB} is in the direction shown and constant.

Find: For the position shown, determine:

- The angular velocity of OC.
- The velocity of A relative to an observer positioned on OC and rotating with OC.
- The angular acceleration of OC.
- The acceleration of A relative to an observer positioned on OC and rotating with OC.



Use the following parameters in your analysis: $\omega_{AB} = 2 \text{ rad/s}$, $L = 0.17 \text{ m}$, $\theta = 30^\circ$ and $\phi = 60^\circ$.