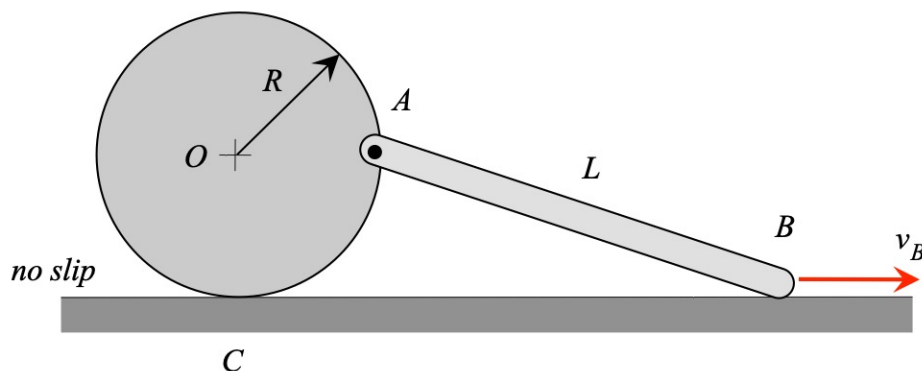


Homework H.2.F

Given: The circular disk shown rolls without slipping on a straight horizontal surface. Bar AB is pinned to point A on the disk, with end B constrained to move along a smooth horizontal surface with a constant speed v_B . At the position shown, A is directly to the right of the center O of the disk.

Find: For this position:

- Determine the angular velocities of link AB and of the disk. Write your answers as vectors.
- Determine the angular accelerations of link AB and of the disk. Write your answers as vectors.



Use the following parameters in your analysis: $R = 6$ in, $L = 10$ in and $v_B = 100$ in/s.