

Homework H.2.C

Given: Rigid body AB is shaped as quarter-circle arc with a radius of R . End B of the bar is constrained to move along a vertical wall, whereas end A moves along an incline at an angle of $\theta = 53.13^\circ$ with respect to the horizontal. At the instant shown, the center O of the AB arc is directly below end B, and end A moves with a constant speed of v_A .

Find: For this problem:

- Determine the velocity and acceleration of end B of the bar. Express your answers as vectors and in terms of the parameters of v_A and R .
- Is the speed of B increasing, decreasing or constant?

