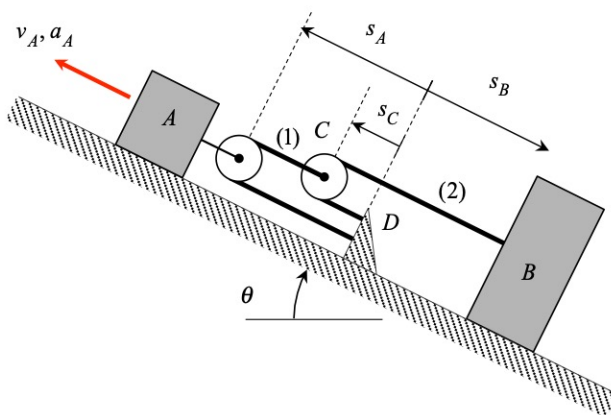


Problem H.1.I

Given: An inextensible cable (1) is attached to fixed ground at end D and to the center of pulley C at the other end, with the cable wrapped around a pulley that is mounted on block A. A second inextensible cable (2) is attached to fixed ground at end D and to block B, with the cable being wrapped around pulley C. Block A is known to have a speed and acceleration of v_A and a_A , respectively, up the incline on which A and B move.

Find: For this problem:

- Determine the speed of B
- Determine the magnitude of the acceleration of B.



Use the following parameters in your analysis: $v_A = 10 \text{ m/s}$, $a_A = 4 \text{ m/s}^2$ and $\theta = 24^\circ$.