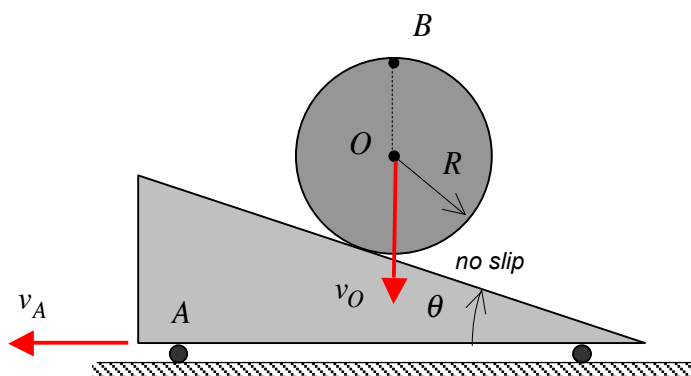


Homework H.2.F

Given: Wedge A moves to left with a speed of v_A . A circular disk is able to roll without slipping on the inclined surface of the wedge. At the instant shown, the velocity of the center of the disk O is moving straight down with an unknown speed of v_O .

Find: For this problem:

- (a) Determine the angular velocity of the disk and the velocity of O. Write your answers as vectors.
- (b) Determine the velocity of point B on the disk that is directly above O on the outer surface of the disk. Write your answer as a vector.



Use the following parameters in your analysis: $R = 1.5$ ft, $v_A = 30$ ft/s and $\theta = 20^\circ$.