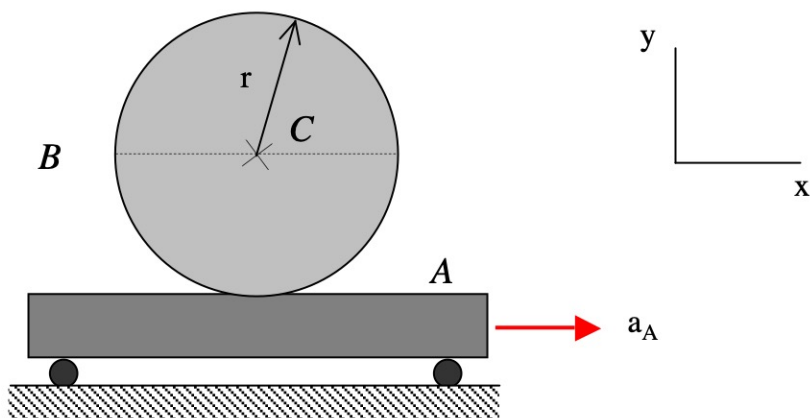


Homework H.2.C

Given: The wheel shown below rolls without slip on cart A. The cart has velocity $\vec{v}_A = v_A \hat{i}$ and acceleration $\vec{a}_A = a_A \hat{i}$. The center of the wheel has velocity $\vec{v}_C = v_C \hat{i}$ and acceleration $\vec{a}_C = a_C \hat{i}$.

Find: Determine the velocity and acceleration of point B.



Use the following parameters in your analysis: $r = 0.6$ m, $v_A = 8$ m/s, $v_C = 5$ m/s, $a_A = -4$ m/s² and $a_C = 8$ m/s².