Problem 5.3
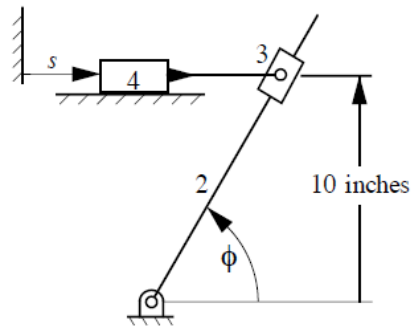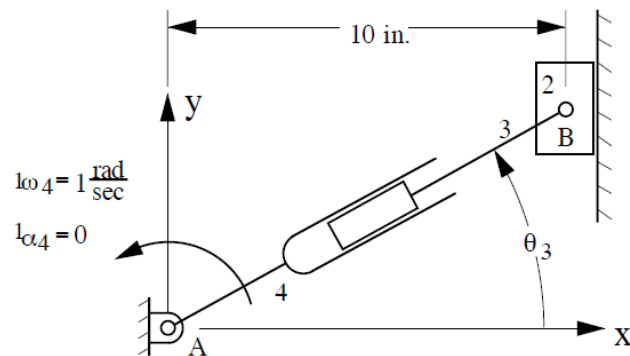
In the mechanism shown, $\dot{s} = -10$ in/s and $\ddot{s} = 0$ for the position corresponding to $\phi = 60°$. Find $\dot{\phi}$ and $\ddot{\phi}$ for that position using the loop equation approach.


Problem 5.8

Use loop equations to determine the velocity and acceleration of point B on link 2 when $\theta_3 = 30°$. Make point A the origin of your reference coordinate system.

Problem 5.14

For the mechanism in the position shown, the cam (link 2) rotates with an angular velocity of 200 rad/s. Write the vector loop equations for position, velocity, and acceleration and determine the angular velocity and acceleration of the follower (link 3). Use $\phi = 60°$ and neglect the follower thickness (i.e., assume that it is zero).

AD = 6.5 in
AB = 1.0 in
r = 2.0 in
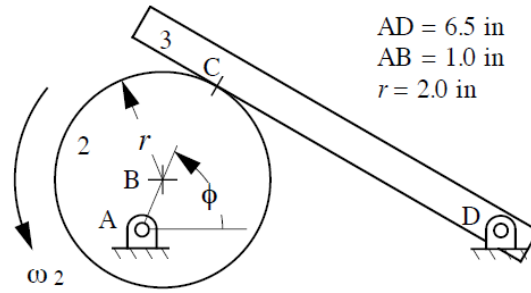
۴- در مکانیزم زیر، عضو ۲ با سرعت زاویه‌ای ثابت ۱۰ rad/s در جهت ساعتگرد دوران می‌کند. مطلوبست تصویر سرعت و شتاب عضو چهار (مکانیزم با مقایسه ۱:۱ رسم شده است).