Department of Mechanical Engineering

ME 2201 Kinematics & Dynamics of Machinery

Assignment 2 (Bonus)

Due on: **September 30, 2021**

1. In Figure 1 below, link OA is fixed and is 400 mm in length. The link OP is 200 mm in length, while AR = 700 mm and RS = 300 mm. The vertical height from O to S is 200 mm. The angular velocity of link OP is in the direction shown and has a magnitude of 7π rad/s. Determine the velocity and acceleration of S and the angular velocity and acceleration of link RS using loop closure method for one full rotation of link OP. Compare the results with the ones obtained previously using graphical method for angle AOP of 120 degrees.

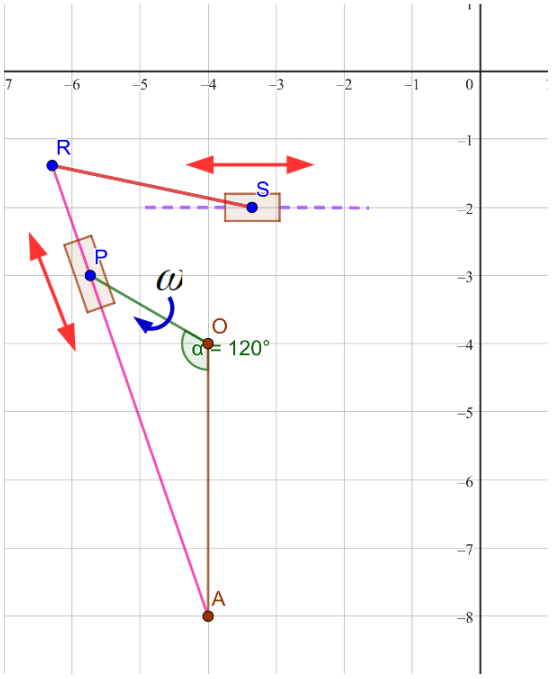

Figure 1