Homework 3

Due Date: Monday 12 March

1. For the mechanism shown below, AC = 40 mm, AB = 70 mm, CP = 80 mm. 
   For $\theta_2 = 30^\circ$, assume position solution gives BC = 40 mm and angle $\theta_3 = 60^\circ$ (from x-axis). If angular velocity $\omega_2 = 10$ rad/s ccw, determine $\omega_3$ and velocity of slider B on link 3. Solve by complex number method.

2. For the mechanism shown below, AD = 10 mm, AB = 20 mm, BC = CD = 30 mm, and BP = 40 mm. For $\theta_2 = 120^\circ$, assume position solution gives $\theta_3 = 23^\circ$ and $\theta_4 = 75^\circ$. 
   If angular velocity $\omega_2 = 10$ rad/s ccw, determine $\omega_3$ and $\omega_4$. Solve by complex number method.