Practice Questions for Robot Mechanisms – GIM

Velocity and acceleration analysis of Planar Mechanisms using GIM

Software link: https://www.ehu.eus/compmech/software/

1. Draw the planar mechanism in GIM and compare with the analytical method

[A]

The mechanism shown in the figure is driven by link 2 at $\omega_2 = 45$ rad/s ccw.

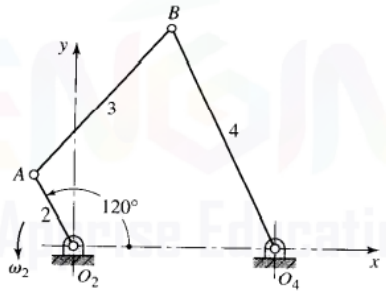
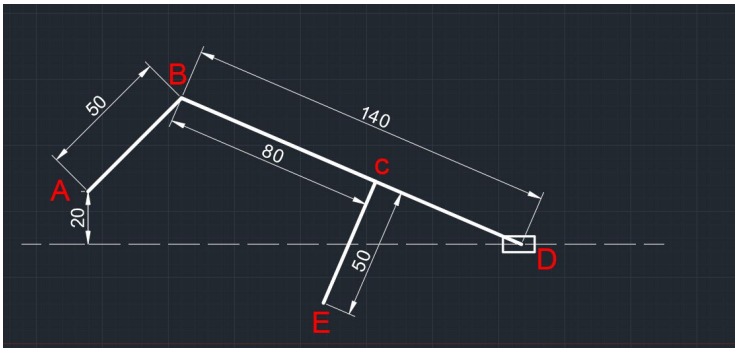


Figure P3.9 $R_{AO_2} = 4$ in, $R_{BA} = 10$ in, $R_{O_4O_2} = 10$ in, $R_{BO_4} = 12$ in.

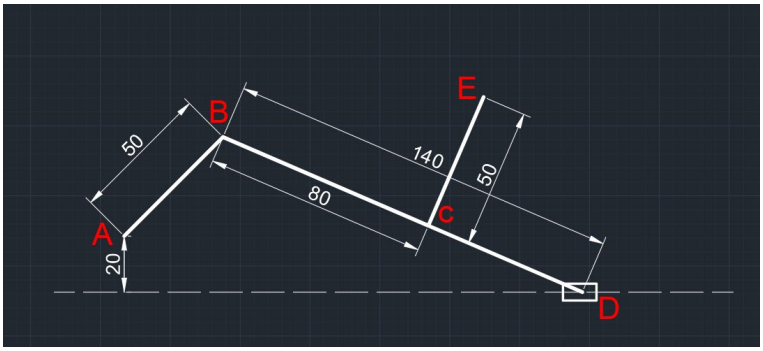
[B]

The offset slider-crank mechanism shown in figures 1 and 2 is driven by a motor with angular velocity ω2 = 500 rpm (ccw) at A. Determine the instantaneous velocity of point E and the angular velocities of the links in the mechanism. AB link angle is 45 degree.

(1)



(2)



By Deep Patel
(deep.researchnode@gmail.com)
(https://www.linkedin.com/in/deepresearch/)