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EMT 2331: Dynamics of Planar Mechanisms- Computer work

Write a computer program in any language which allows you to input various lengths of links of the four-bar linkage and then to determine if the linkage is a double-crank (parallel or drag link), crank-rocker, rocker-crank or a double-rocker mechanism. Show the output of your program for each of the five cases.

If the linkage is a crank-rocker mechanism, and given that, the crank, coupler, follower and fixed links are of lengths, 50 mm, 200 mm, 150 mm and 205 mm the program should also do the following,

(a) Calculate, tabulate and plot the variations of the follower's angular displacement (θ_4), velocity ($\dot{\theta_4}$) and acceleration ($\ddot{\theta_4}$) for one revolution of the crank in steps of 5^0.

(b) Calculate, tabulate and plot the variations of the coupler's angular displacement (θ_3), velocity ($\dot{\theta_3}$) and acceleration ($\ddot{\theta_3}$) for one revolution of the crank in steps of 5^0.