PROBLEM: Design a single-dwell cam to move a follower from 0 to 2” in 60°, fall 2” in 90°, and dwell for the remainder. The total cycle must take 2 seconds.

1. Design the CAM using polynomial functions.
    a. Write an algorithm to plot the s, s’, s’’, and s’’’ diagrams.
    b. If the polynomial function is chosen properly, the rise and fall can be written as a single function as opposed to one polynomial function for rise and a second for fall. You can solve the problem either way; however, if you solve it both ways correctly, I will give you BONUS credit.
2. Design the CAM using cycloidal functions.
    a. Write an algorithm to plot the s, s’, s’’, and s’’’ diagrams.