Mobile Robotics
Assignment 1

1. Consider a differential drive robot that starting from the origin of the global frame G, with its initial heading along the x-axis of frame G, traverses as per the following controls:

    a. For first 2 seconds moves with v = 2m/s, **ω = pi/10 rad/s**
    b. For next 2 seconds moves with v = 2m/s, **ω = -pi/10 rad/s**
    c. For next 2 seconds moves with v = 3m/s, **ω = 0 rad/s**
    d. For next 2 seconds moves with v = 3m/s, **ω = pi/5 rad/s**

Where shall the robot at the end of 8 seconds? Please show the intermediate computations.

Compute the final location through a concatenation of homogenous transforms. Clearly specify the homogenous transform, T matrix at the end of each control with respect to the frame at the start of that control (as done in class)

Deadline: Aug 19, midnight