* Question Paper:
  + Estimations - Body is moving. Give them xy coordinators, hope to god they figure out they have to turn it into polar coordinates rather than cartesian. (ref last year’s paper)
    - Estimations - Triangulations
    - Possibly be more specific to push people towards alpha beta for last part, but we’re still looking for their thought process
  + Navigation - Frames of Refrence, check last year’s paper, make the question nicer and ensure it covers all details
    - Bob has taken weed, moving through dimensions and various frames of refrence
    - Either take a trajectory and express in different frames (possibly bonus)
      * Or give them point and then make them go through it
  + Navigation - Houghmann Transfer
    - In normal gravity
    - Now do in r^3 gravity, prove (not going to happen, need to pivot)
  + Navigation - Lagrange Points
    - Bob has numerically solved the two body problem, and has simulated three bodies. Now he’s trying to find out where to begin his small mass orbit so that he stays in a predictable stable orbit for his rescuers to come and find him. Identify these points and tell us about it. (probably a bigger buildup with the sub-parts to give them better intuition).
* Round 2 Electric Boogaloo - Tasks After Lecture
  + Navigation
    - Plan:
      * Frames of reference
      * Orbits and orbit propagation
    - Task
      * simulate using matlabs/python orbit of moon around the earth (just around the earth, ignore effects of sun). Code an orbit propagator in essence. Two body simulation (orbitting common center of mass). DON’T TELL THEM ABOUT COMMON CENTER OF MASS. Possibly use a star system to be less vague about common center of mass requirement.
      * Alternatively, give earth and moon starting point, numerically integrate keplerian equations to find motion.
    - Bonus is to plot Jupiter and any two moons.
  + Estimations
    - Make Alpha-Beta
    - Kalman filters.
  + Controls
    - If flatsat, then use that as lecture
    - Make PID control
  + Hardware