

AE 252: Introduction to Aerospace Dynamics
Spring 2007

Homework #2

Due Thursday, February 1, at 5PM in the “AE252” box in the mailroom. Please start every problem on a new sheet of paper, and put your name on the *back* of each page.

1. Text problem 13.109
2. Text problem 13.117
3. Text problem 13.197
4. Text problem 13.183 (Use MATLAB to draw the graph of $\|\vec{a}\|$. Also, plot the trajectory of the follower—in cartesian coordinates—for one revolution of the cam.)
5. In class I mentioned the fountain at the Detroit International Airport, in which many streams of water arc across a flat pool (none of these streams intersect). Imagine you are a consultant, asked to design a similar fountain and provide plans for a contractor. How do you respond? (What information do you need? What is your design? What do your plans contain?)

For video/photos, search online or see the following (for example):

<http://i39.photobucket.com/albums/e189/curiousenver/Detroit%20Airport/fountain2.jpg>
<http://www.freewebs.com/trsphoto/DetroitAirport%20Fountain.jpg>