**Homework 7**

A. Semimajor axis = 6894.1 Km

B.

R Initial =

[6894.1, 0, 0] Km

Velocity Initial =

[0, 3.4047, 6.7989] Km

C and D.

Initial Declination = 0 degrees

End Declination = -0.1136 degrees

Initial Right Ascension = 360 degrees

End Right Ascension = 0.0494 degrees

E. I added the correct drag equation, but I wasn’t really getting too much of a difference between the results. The right ascension nodes were off by .1 degrees. I have also attached plots.

Initial Declination = 0 degrees

End Declination = -0.1136 degrees

Initial Right Ascension = 360 degrees

End Right Ascension = 359.9588 degrees