AE 4361 – Assignment 3

1) a)

b)

Using the provided ‘Kepler\_solver’ code with t = 9\*3600 = 32400s, e=0.549, M0 = 0, a=26610km

E= 4.2269 rad

c)

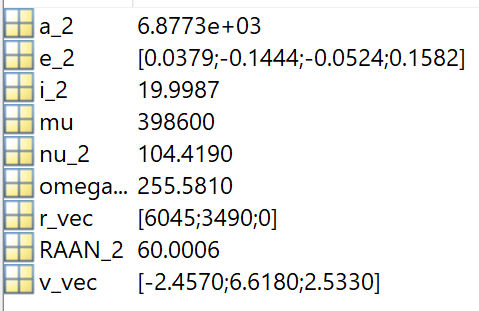
d)

2)

|  |  |
| --- | --- |
| Semi-major axis (a) *km* | **6877.3** |
| Eccentricity (e) | **0.1582 or [0.0379, -0.1444, -0.0524]T** |
| Inclination (i) *deg* | **20.000** |
| Right ascension of ascending node (Ω) *deg* | **30.000** |
| Argument of perigee (ω) *deg* | **255.581** |
| True Anomaly (υ) *deg* | **104.419** |

See “AE4361 HW3” starting at Q2 comment at the end of document for code.

Workspace variables for Q2:



3)

a) m

b) m

c) m

d) m

See code and function on next pages.