HW1 Problem 2: Keplerian Orbital Elements to Cartesian Coordinates

```
fprintf('\n');
clearvars -except function_list pub_opt
close all

r = [-2436.45; -2436.45; 6891.037]; % km
v = [5.088611; -5.088611; 0.0]; % km/s
state = [r;v];
oe = cart2oe(state);
new_state = oe2cart(oe);
state_diff = new_state - state;

fprintf('Computed State Vector\n')
new_state
fprintf('Delta between original state vector and computed vector')
state_diff
```

```
Computed State Vector

new_state =

   1.0e+03 *

   -2.4365
   -2.4365
    6.8910
    0.0051
   -0.0051
    0.0000

Delta between original state vector and computed vector
state_diff =

   1.0e-09 *

   -0.1710
   -0.1723
    0.4866
   -0.0004
    0.0004
    0.0000
```

Published with MATLAB® R2013b