HW5 Problem 3

```
fprintf('\n');
clearvars -except function_list hw_pub toolsPath
close all
CelestialConstants; % import useful constants

phase_angle = 30*pi/180;
h = 6e3; %km
a = Earth.R + h;
n = sqrt(Earth.mu/a^3);
t_phase = (2*pi + phase_angle)/n
t_phase/3600;
a_phase = ((t_phase/(2*pi))^2*Earth.mu)^(1/3);
dv1 = sqrt(2*Earth.mu/a-Earth.mu/a_phase) - sqrt(Earth.mu/a)
dv2 = sqrt(Earth.mu/a) - sqrt(2*Earth.mu/a-Earth.mu/a_phase)
dv_tot = abs(dv1) + abs(dv2)
```

```
t_phase =

   1.4847e+04


dv1 =

    0.1456


dv2 =

   -0.1456


dv_tot =

    0.2911
```

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