

## Contents

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## Initialize

---

```
clear; clc;
```

## Define variables and constants

---

```
global mu  
mu = 398600;           % km^3/s^2
```

## Initial conditions

---

```
R0 = [-1984 -5348 3471];      % km  
V0 = [10.36 -5.763 -2.961];  % km/s  
t = 50*60;                   % s
```

## do algorithm (from appendix D.16) and output results

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```
[R, V] = rv_from_r0v0(R0, V0, t);  
fprintf("Final position: R=(%g, %g, %g) km", R(1), R(2), R(3));  
fprintf("\nFinal velocity: V=(%g, %g, %g) km/s", V(1), V(2), V(3));
```

```
Final position: R=(23047.4, -6972.41, -9219.57) km  
Final velocity: V=(6.65628, 0.886381, -3.96803) km/s
```

