```
%Liam Hood
%Aero 215 Aircraft Midterm
%Lift and Drag of Martian glider
    %Calculates lift, drag, and L/D for a glider with given
 coefficients of
    %lift and drag, as well as wing area and starting altitude and
 velocity
    clear all;
    clc;
    %%Birdy Glider
        disp('Birdy')
        %Input glider characteristics
        CL = .65; %Coefficient of Lift
        CD = .02; %Coefficient of Drag
        S = 48;   %m^2
        v = 45;   %velocity at launch in m/s
        h = 16000;%height of launch in m
        MarsGliderFunction( CL , CD , S , v , h );%runs function to
 calculate lift, drag, and L/D

    %%Raptor Glider
        disp('Raptor')
        %Input glider characteristics
        CL = .80; %Coefficient of Lift
        CD = .012; %Coefficient of Drag
        S = 110;   %m^2
        v = 35;   %velocity at launch in m/s
        h = 16000;%height of launch in m
        MarsGliderFunction( CL , CD , S , v , h );%runs function to
 calculate lift, drag, and L/D

    %%Boomer Glider
        disp('Boomer')
        %Input glider characteristics
        CL = 1.35; %Coefficient of Lift
        CD = .023; %Coefficient of Drag
        S = 202;   %m^2
        v = 18;   %velocity at launch in m/s
        h = 16000;%height of launch in m
        MarsGliderFunction( CL , CD , S , v , h );%runs function to
 calculate lift, drag, and L/D
```

```
Birdy
Lift
  109.5314

Drag
    3.3702

L/D
   32.5000
```

```
Raptor
Lift
  186.8864

Drag
    2.8033

L/D
   66.6667

Boomer
Lift
  153.1754

Drag
    2.6097

L/D
   58.6957
```

Published with MATLAB® R2017a