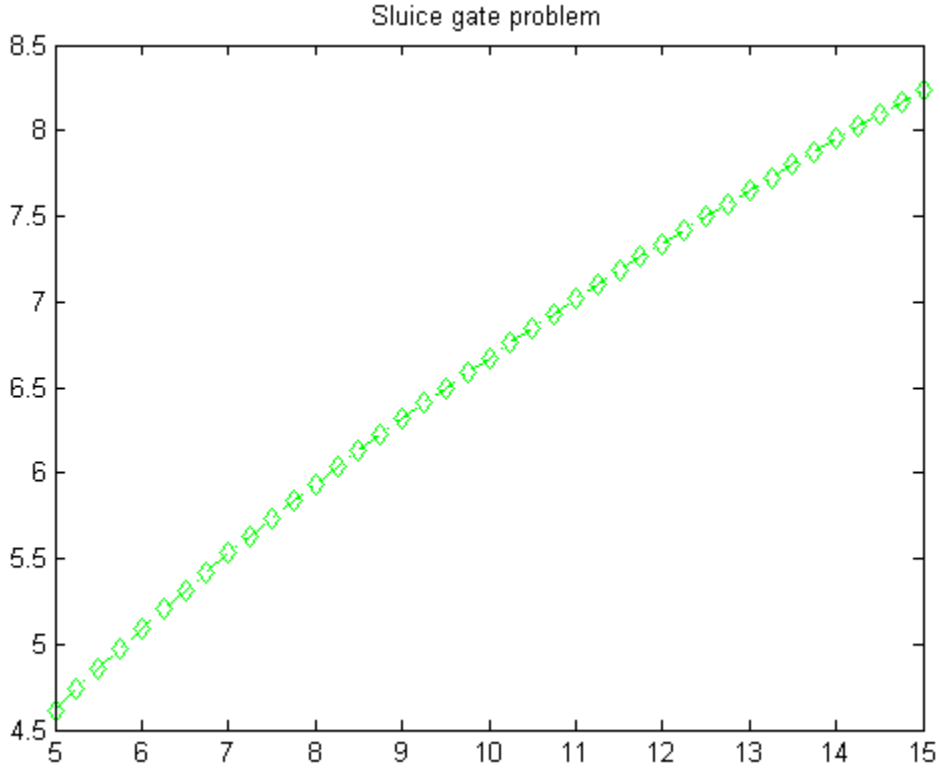
```
'05'

clc
clear all
z1=5;a=.8;cc=.61;g=9.81;z2=a*cc;h=.25;
if(.1<(a/z1) && (a/z1)<.2)
    a=z2*sqrt((2*g*(z1-z2))/(1-(z2/z1)^2))
else
    a='Not possible'
end
z1=z1:h:15;
ans_1=z2*sqrt((2*g*(z1-z2))./(1-(z2./z1).^2));
b_____z1_______QbyB=[z1', ans_1']
plot(z1,ans_1,'g-.d')
title('Sluice gate problem')


%%%%%%%%%%Output%%%%%%%%%%

        ans =

        05


        a =

            4.6135


        b_____z1_______QbyB =

            5.0000    4.6135
            5.2500    4.7375
            5.5000    4.8584
            5.7500    4.9764
            6.0000    5.0917
            6.2500    5.2046
            6.5000    5.3150
            6.7500    5.4233
            7.0000    5.5295
            7.2500    5.6337
            7.5000    5.7360
            7.7500    5.8366
            8.0000    5.9355
            8.2500    6.0328
            8.5000    6.1285
            8.7500    6.2228
            9.0000    6.3157
            9.2500    6.4073
            9.5000    6.4976
```

```
    9.7500    6.5867

   10.0000    6.6746
   10.2500    6.7613
   10.5000    6.8470
   10.7500    6.9316
   11.0000    7.0152
   11.2500    7.0978
   11.5000    7.1795
   11.7500    7.2603
   12.0000    7.3401
   12.2500    7.4192
   12.5000    7.4974
   12.7500    7.5748
   13.0000    7.6514
   13.2500    7.7272
   13.5000    7.8023
   13.7500    7.8768
   14.0000    7.9505
   14.2500    8.0235
   14.5000    8.0959
   14.7500    8.1677
   15.0000    8.2388
```



Published with MATLAB® R2013a