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```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%
%
% This script is for Homework 5 problem 3.12
%
% Created by: Johnathan Tucker
%
% Created on: 2/15/2020
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%
%
```

Housekeeping

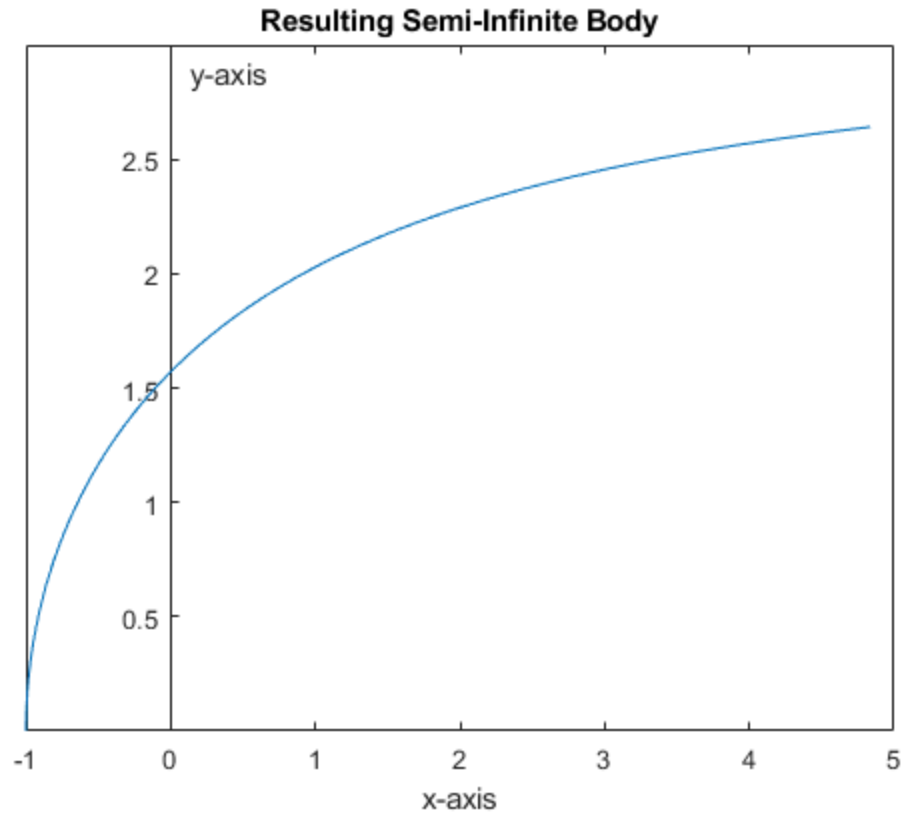
```
clc;
clear all;
close all;
```

Create necessary constants for part a

```
theta = linspace(pi,0.5);
x = ((pi-theta)./sin(theta)).*cos(theta);
y = (pi-theta);
x(1) = -1;
```

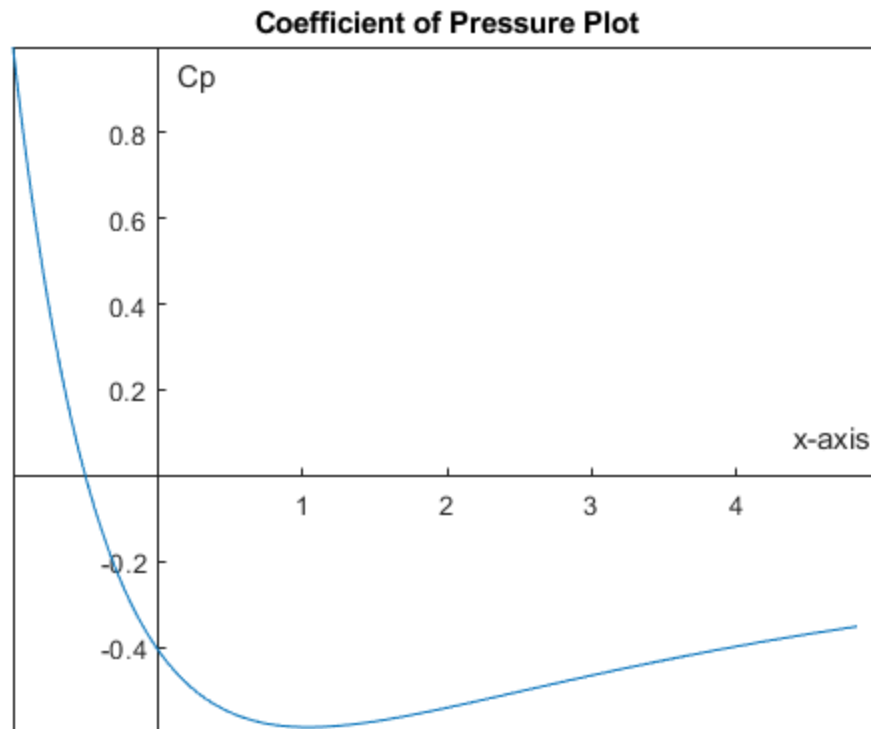
Create plot for part a

```
figure(1)
plot(x,y)
title("Resulting Semi-Infinite Body")
xlabel("x-axis")
ylabel("y-axis")
ax = gca;
ax.XAxisLocation = 'origin';
ax.YAxisLocation = 'origin';
```



Create cp function for part b

```
cp = -((1./((x.^2)+(y.^2))) + (2.*x./((x.^2)+(y.^2))));  
figure(2)  
plot(x,cp)  
title("Coefficient of Pressure Plot")  
xlabel("x-axis")  
ylabel("Cp")  
ax = gca;  
ax.XAxisLocation = 'origin';  
ax.YAxisLocation = 'origin';
```



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