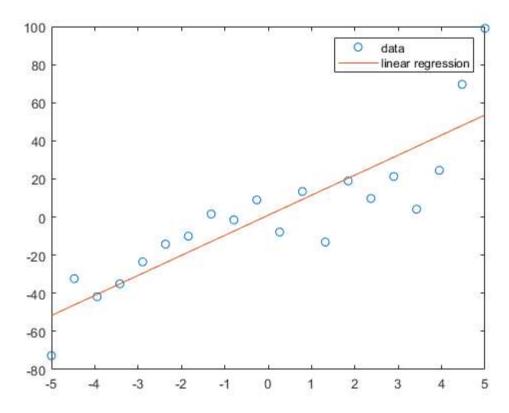
MAE107 HW6 Problem 3 Starter Script

```
clc
clear
close all
% Import data_test.txt into script; make sure the txt file is located in
% Matlab's current directory or in added path
data = readmatrix('data test.txt');
x = data(:,1);
y = data(:,2);
% Your code:
% a)
plot(x,y,'o');
hold on;
% b)
n = length(data);
a1 = (n*sum(x.*y)-sum(x)*sum(y))/(n*sum(x.^2)-sum(x)^2)
ybar = sum(y)/n;
xbar = a1*sum(x)/n;
a0 = ybar + xbar
f = a0 + a1*x;
plot(x,f);
legend('data','linear regression')
% c)
sr = sum((y-a0-a1*x).^2);
s = sqrt(sr/(n-2))
% d)
st = sum((y-ybar).^2);
r2 = (st-sr)/st
```

```
a1 =
    10.5233

a0 =
    0.9550

s =
    18.9054
```



Published with MATLAB® R2023a