Day 2 assignment Line Equations

Table of Contents

Nolan Anderson ENG 101 Due 1/14/19

Variables

```
% variables for slope and intercept
m1=-5; %m is for slope
m2=7;
m3=2;
b1=3;  %b is for y - intercept
b2=-6;
b3=12;

%variables for the boundaries of the lines
x1 = 0:1:20;
x2 = linspace(-5,18,41); %use linspace to give amount of numbers in
 between numbers
x3 = 4:3:125;
```

Equations of lines

```
y1 = m1*x1+b1; %using x1/x2/x3 repectively changes the boundaries
 based off of the arrays given.

y2 = m2*x2+b2;

y3 = m3*x3+b3;
```

Data based off of each line

```
mean_y1=mean(y1)  % Finds and outputs the mean of each data set
mean_y2=mean(y2)  % ex. mean_y1 shows the mean for line 1
mean_y3=mean(y3)


max_y1 = max(y1) % Finds and outputs the maximum value of each data
 set
max_y2 = max(y2) % ex. max_y1 shows the max for line 1
max_y3 = max(y3)
```

```
min_y1 = min(y1)   % Finds and outputs the maximum value of each data
 set
min_y2 = min(y2)   % ex. min_y1 shows the min for line 1
min_y3 = min(y3)
```

```
mean_y1 =

   -47
```

```
mean_y2 =

   39.5000
```

```
mean_y3 =

   140
```

```
max_y1 =

     3
```

```
max_y2 =

   120
```

```
max_y3 =

   260
```

```
min_y1 =

   -97
```

```
min_y2 =

   -41
```

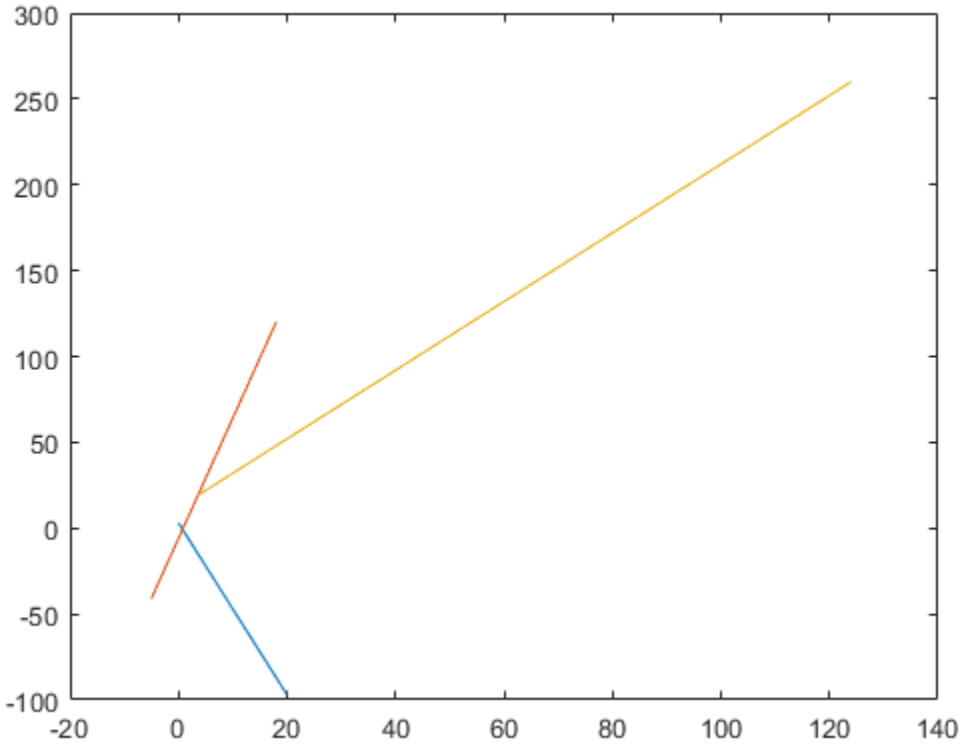
```
min_y3 =

    20
```

Plotting the lines

```
plot(x1,y1,x2,y2,x3,y3) %Plots the lines based on the boundaries given
 by x1/x2/x3

% red is y1, blue is y2, and yellow is y3
```



Published with MATLAB® R2018b