Name: Mubashar Khan **Assignment #:** 7

Summary of Problem Statement

Problem # 1

Write a program that takes a user input value for a Voltage and Frequency and uses that to check whether it will meet the conditions specified by the instructions.

Known / Input

Voltage (V) [V]
Frequency (f) [Hz]

Unknown / Output

Accepted = shows the number of accepted devices

Rejected = shows the number of rejected devices

Assumptions

None

Other Variables

Voltage_Check = Stores the value in Test(1) for data validation purposes
Frequency_Check = Stores the value in Test(2) for data validation purposes
counter = 0; %Defines counter to record the number of times the program is run
redo = 1;% Defines redo to start the loop
V = Vector that stores all valid Voltage values entered
f = Vector that stores all valid frequncy values entered

Algorithm

Start by asking the user to input the values for voltage and frequency in a 1x2 vector.
Check the voltage and frequency to make sure it is within the set parameters.
    if it is not, give the user 2 more attempts to enter a valid Voltage. if they don't, the program is terminated
    if the eneter a valid voltage but not a valid frequncy use input('TEXT') to make the user enter a valid frequency
Create the plot from the instruction sheet.
Create a counter for each time you get a value that is within the limits set by the plot.
    Each time the value is valid, the counter increase by one
Create a formatted print statement which gives the user the output which matches the instructions sheet
When checking the data, seperate the graph into 4 sections with each different height.
    Use an if loop nested withing a for loop to check all possible locations of a data point.

Test Cases

The test case I used to check my data was the same one given in the instructions
The results match the instructions exactly except for when the number of data points becomes greater than 10 when this happens the number is not centered within the red dot perfectly anymore.