Name: Nick McCullough, Brandon McLaren, Ryan McLenithan

AERE 161, Spring 2022 Lab 3 Due date: 2/11/2022

Problem 5.21

- - - -*(insert your solution here)*

```
clear,clc
% McCullough, McLaren, McLenithan, Lab 3, Problem 5.21
% change while loop to for loop

myprod = 1; % set myprod = 1
for i = 1:1:4 % set the range 1-4 step size 1
   num = input('Enter a number: '); % ask user for input
   myprod = myprod * num; % multiple myprod by num
end % end loop

disp(myprod) % displaying myprod
```

Output 1:

------*(insert output (your results) here)*

```
Enter a number: 2
Enter a number: 2
Enter a number: 2
Enter a number: 2
   16
```

Problem 5.22

- - - -*(insert your solution here)*

```
clear,clc
% McCullough, McLaren, McLenithan, Lab 3, Problem 5.22
% Write a script that will generate random integers in the
% range from 0 to 50, and print them, until one is finally
```

```
% generated that is greater than 25. The script should print
% how many attempts it took.

disp('We are trying to generate a random integer above 25 and below 50.') % display the reason for the code
X = randi([0,50]) % generating random integer 0-50
Z = 1 % assign attempt variable to 1
while X <=25 % while loop for random integer less than 25
   X = randi([0,50]) % another attempt to generate a random integer
   Z = Z + 1 % keeps track of attempt variable
end % end the while loop
fprintf('It took %g of attempts to create a random integer above 25 \n',Z) % fprintf to display how many attempts
```

Output 1:

------*(insert output (your results) here)*

We are trying to generate a random integer above 25 and below 50.

X =

13

Z =

1

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```
X =

    25


Z =

     2


X =

    35


Z =

     3

It took 3 of attempts to create a random integer above 25
>>
```

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Problem 5.40

- - - -*(insert your solution here)*

```
clear,clc
% McCullough, McLaren, McLenithan, Lab 3, Problem 5.40
% Write a beautyofmath script which iterates from integers 1-9 produces

disp('beautyofmath') % display beautyofmath title
n = 0 % create variable n
for z = 1:9 % create variable for loop with range 1-9
   n = n*10+z; % create variable for n*10 plus Z integer
   a = n*8+z; % create variable for n*8 plus the integer
   fprintf('%.0fx8+%g=%.0f\n',n,z,a) % fprintf to display answers without any numbers after the
decimal
end
```

Output 1:

------*(insert output (your results) here)*

```
beautyofmath


n =


     0


1x8+1=9
12x8+2=98
```

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123x8+3=987

1234x8+4=9876

12345x8+5=98765

123456x8+6=987654

1234567x8+7=9876543

12345678x8+8=98765432

123456789x8+9=987654321