

**Name: Weikai Kong**  
**Uniqname: weikaik**  
**Lab Section: 107**  
**Date: 09/05/2023**

### Creating Variables

What type of variable is each of the 3 variables you have created?

*x is type **integer***

*y is type **float***

*str is type **string***

### Mathematical Operators

What is the order of operation of the last command?

*The exponential power gets done first, then the two subtractions.*

### Basic Commands

What happens when you enter the command “clear”?

*The workspace is clear.*

What happens when you enter the command “clc”?

*The command window is clear.*

### Creating Vectors & Matrices

Within the brackets, what does the “;” do?

*It does vertical concatenation.*

What does the “:” do?

*It creates a bound for the array elements. And increases by the increment in between.*

Do any of the lines cause an error? Why?

*The E one causes an error because the dimension of the second array being concatenated is not consistent with the first one.*

*The F one causes an error because there is an additional unsupported character.*

What does the ' do to matrix F?

*It breaks the statement.*

### Matrix Operations

Of the operations you entered, which doesn't work and why?

*J,K,M work but L doesn't because the dimensions of the two matrices being multiplied do not match.*

### Element Operations

Compare the output from M with N. What is the difference? Given what you notice, what effect does the “.” have?

The elements are different. The “.\*” operator does element wise multiplication thus “.” applies the operation to all the elements.

Write the line of code you used to create the matrix in the Lab 1 Assignment?

3.\*eye(3)

### **Function Calls**

What happens when you apply the sum function to a matrix, as opposed to a vector?

It sums up vertically instead of horizontally.

### **Simple Plotting**

In the plot function you called, what are t and w?

The corresponding X and Y coordinates.

What does specifying the third parameter as 'g' do? (Hint: Try changing 'g' to 'm' and replotting, and see what happens.)

It changes the color of the plot.

What changes did you observe when changing the increment in t from 0.5 to 0.1?

It becomes smoother.