In-Class Exercise – Command Line

Use the command line to calculate the following (some of the expected results are shown in parentheses):

1. Create your name as a string and assign it to the variable "Name".

2. Calculate $\dfrac{15}{8\times 10}$ (ans = 0.1875)

3. Assign variable "a" to have a value of 6

4. Create a variable "c" and set it equal to variable "a" times 2 (c = 12).

5. Create a variable "w" that is equal to:

$$w = \begin{matrix} 18 & 12 & 1 \\ 4 & 8 & 1 \end{matrix}$$

6. Find the cube of each element in w. That is, w^3

$$\left(ans = \begin{matrix} 5832 & 1728 & 1 \\ 64 & 512 & 1 \end{matrix} \right)$$

Variables and Arrays

Problem 1. Use one of the built in MATLAB matrix functions to create a matrix called M12 with 5 rows and 6 columns such that has every element is equal to 12. Do NOT key in every number – i.e. [12,12,12…

Problem 2.

a. Create a random matrix with between 2 and 10 rows and between 2 and 10 columns using "rand(randi(9)+1, randi(9)+1)". Do NOT add a semicolon suppressing the output.

b. Create a variable "rows" that is equal to the number of rows and "cols" that is equal to the number of columns of the matrix generated.

c. Assign the value in the last row and next to last column to the variable "w". Your solution should work even if you didn't know the number of columns and rows. That is, do NOT use the results above to do this.

d. Use the MATLAB publish feature to publish your script to a Word file.

Problem 3.

Execute the following in the command window:

  a. Clear the command window using the clc command

  b. Type: % NAME HW1, Problem 3 (replace NAME with your actual name).

  c. Create a variable **y** with multiple rows and columns that has the values

  d. Add 16 to each element of **y** and assign it to the variable **ra**.

  e. Compute $\sqrt{ex}$ where **x** represents an element of **y** and assign it to the variable **rd**. Your result should be another matrix the same size as **y.**