1. **What is the reason for placing a semicolon at the end of a MATLAB command?**

Semicolons at the end of lines suppresses output of that command.

1. **What is the purpose of the MATLAB hold command?**

The hold command informs the plotter not to clear the plot before drawing the next graphic.

1. **Provide a MATLAB expression using compact colon notation to generate the following 2-dimensional array (matrix):**

A = [1:1:6; 2:2:12; 3:3:18];

1. **Consider the following MATLAB commands:**

A = [1:5; zeros(1,3),ones(1,2); 10:-1:6];

S = size(A);

Q = S(1) + length(A) - A(2,5) + length(zeros(1,3));

**What is the value of Q? Try to figure it out first before entering the commands into MATLAB. Hint: write out what you think each command does.**

The value of Q is 10. The first line creates a 3x5 matrix A = [1 2 3 4 5; 0 0 0 1 1; 10; 9 8 7 6], the second line spits out the size of the matrix as a vector (so a v = [3 5]). S(1) is the first element of this vector, 3, length(A) is the number of columns in A, 5, A(2,5) is the value of he element in the 2nd row and 5th column, 1, and length(zeros(1,3)) is length of the mariz of zeros creates by the zeros function, or 3. So Q = 3 +5 -1 +3 = 10

1. **Use MATLAB to generate 8 random values between 0 and 1, sort them in ascending order, and compute the mean value. Begin a script and copy these commands into it. Remember to suppress your outputs!**

mean\_value = mean(sort(rand([1, 8])));

1. **Create a function m-file that takes one input, x, and outputs y, where 𝑦 = √(𝑥^2 + 15). Be sure to suppress the output, and also include a clarifying comment or two using the percent symbol (%) to explain your function—this is always good practice and will help you and others know what your code is supposed to do. Once you have it working, add an example of it to your script.**

Script included.

1. **Create a script m-file that does all of the following in order (suppress the output from each expression, and remember to include comments where appropriate):**
   1. **Create an array with the numbers 1 4 7 in the first row and 3 5 8 in the second row.**
   2. **Create an array that runs from 10 to 50, with an increment of 0.1, using the colon operator.**
   3. **Create an array that runs from 10 to 50 with 1900 equally spaced points, using linspace.**
   4. **Create an array that is the result of the equation 5 cos x, where x is the array you created in part 7b.**
   5. **Create an array that is the result of the equation 3sin 2 𝑦𝑦, where y is the array you created in part 7c. Remember, you need to do something to prevent MATLAB from attempting to do matrix math.**
   6. **Create a single plot that shows both the solution to part 7d using a solid blue line and the solution to part 7e using a dashed black line. Label the axes and give the plot a sensible title.**
   7. **Create an array that is the solution to your function from step 6, where the input to the function is the array from part 7b.**
   8. **Plot the solution from 7g, but reverse the x axis on the plot. Label and title your plot.**

Script included.

1. **Publish your m-file from step 7 and print the resulting html page using the lab printer. It won’t print in color, but that’s OK**

HTML file included.