

## Lab 1 Assignment

*Instructor:* Rong Qin

Due Friday January 24th on Blackboard by 2 pm.

- (1) For the following problems start a diary and turn in the print out as well as the plot.
- (2) Let

$$A = \begin{pmatrix} 8 & 1 & 6 \\ 3 & 5 & 7 \\ 4 & 9 & 2 \end{pmatrix} \quad B = \begin{pmatrix} 2 & 7 & 6 \\ 9 & 5 & 1 \\ 4 & 3 & 8 \end{pmatrix}$$

- (a) Calculate  $AB$ .
  - (b) Calculate  $A$  times  $B$  componentwise.
- (3) Let  $f(x) = -6x + 50$ ,  $g(x) = \sqrt{|25x + 4|}$ ,  $h(x) = x^2$ . Plot these using input values from -10 to 10 with 200 equally spaced points. All functions should be a different color and style (use the command "help plot" to find the plot options for different colors and styles.) Be sure to add a legend to your plot.

Please only submit the pertinent parts of the diary. I don't need to see all your mistakes. You can edit the diary after you double click on it. Make sure your homework includes your name, section number, and lab number on the top of each submission.