

For this assignment, you should have a driver script that calls each of the functions that you need to write. You should hand in your driver script, the file containing all the functions you wrote along with any requested sample output.

- 1) (2 pts) Write a script that will plot  $w(x) = e^{-x}$ ,  $y(x) = e^{-x^2}$  and  $z(x) = \ln(x^3 + 1)$  over the interval  $x \in [0, 2]$  on a single set of axes.
- 2) (3 pts) Write a script that will create surface and contour plots of

$$z(x, y) = e^{-\frac{x^2+y^2}{10}} \sin(2x) \cos(3y)$$

over the domain  $x \in [-\pi, \pi]$ ,  $y \in [-2\pi, 2\pi]$ . Make sure your mesh grids are fine enough to capture all important features of the plots.