

HW #2

Please, write clearly and justify all your steps, to get proper credit for your work.

This is a simple numerical project in Matlab (or Python if you prefer).

Define a variable with the command `"x=0:0.001:1;"` in Matlab. This defines a row vector with values ranging from 0 to 1 in steps of 0.001 increment. Now plot the several functions $f_n(x)$ (on the same image) in the sequences defined in Ex.7 for $n=2$, $n=10$, and $n=50$. Think about a way to produce the piecewise definition of the functions. Refer to Matlab Help if needed. You may want to call the resulting vectors of function values f_2 , f_{10} , and f_{50} . Plotting the functions is simply done by `"plot(x,f2);"` and similarly for f_{10} and f_{50} . Please, be sure to label the plot.

At the end, save your plot, create a PDF file and email to me together with the Matlab or Python code you used to generate the function values.