

Worksheet 5: Fun with Convolutions and Modifying Other People's Programs

Instructions: Work in class to solve the convolution integral we performed by hand

1. Download `acnv.m` to a MATLAB accessible location
2. Open a separate `.m` file and initialize a time variable, `t` and `y(t)`.
3. Using your knowledge of piecewise functions, plot the expected result of the convolution of $x(t)$ and $h(t)$ that we performed in class by plugging in the calculated values of our answer.
4. Run `acnv.m`, which flips and shifts the red function ($go(t)$) and shows the areas where the convolution integral is accumulating area.
5. Modify `acnv` such that $f(t)$ is the $x(t)$ and $go(t)$ is the $h(t)$ and run the code again. You may have to make modifications to the time variables to get this to work.
6. Compare the result ($c(t)$) with your hardcoded answer from the first part. Are they the same? Why or why not?
7. Save the end result figure of `acnv.m` as a `.pdf` as well as the figure of your hardcoded plot of the solution and upload it to Sakai's drop box