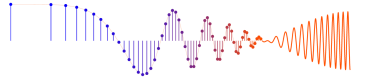




EXERCISE 5.5: In MATLAB, we can compute only the convolution of finite-length signals. Determine the length of the output sequence computed by the MATLAB convolution above.



$$\text{Length of } yy = \text{Length}(xx) + \text{Length}(hh) - 1$$

$$\text{Length of } xx = 51$$

because `0:50` generates `0,1,2,...,50`

$$\text{Length of } hh = 11$$

`ones(11,1)` is 11-element column

$$\Rightarrow \text{Length of } yy = 51 + 11 - 1 = 61$$