EECS 360
Homework #4

1. Section 3.2 Participation Activities
   3.2.1: Measuring impulse response via a narrow pulse input.
   3.2.2: Determining impulse response as the derivative of the step response.
2. Concept questions 3.2.1
3. Exercise 3.2.1
4. Exercise 3.2.5
5. Section 3.3 Participation Activities
   3.3.1: Methods to implement convolution.
   3.3.2: Convolution of two rectangular pulses.
   3.3.3: Convolution of two rectangular pulse.
   3.3.4: Convolution of functions with step functions
6. Show that a system represented by a convolution is an LTI system.

$$\int_{-\infty}^{\infty} h(\tau)\, x(t-\tau)\, d\tau$$

7. Section 3.4 Participation Activities
   3.4.1: RC circuit response to rectangle pulse, graphical and analytical convolution.
   3.4.2: Review of analytical convolution: rectangle and triangle.
   3.4.3: Graphical convolution of rectangular pulse input and triangle impulse response.
8. Exercise 3.4.1
9. Exercise 3.4.4
10. Let h(t) = $\text{rect}\left(\frac{t-15}{2}\right)$ and x(t)=$\text{rect}\left(\frac{t-10}{2}\right)$, find h(t)$*$x(t) and plot.