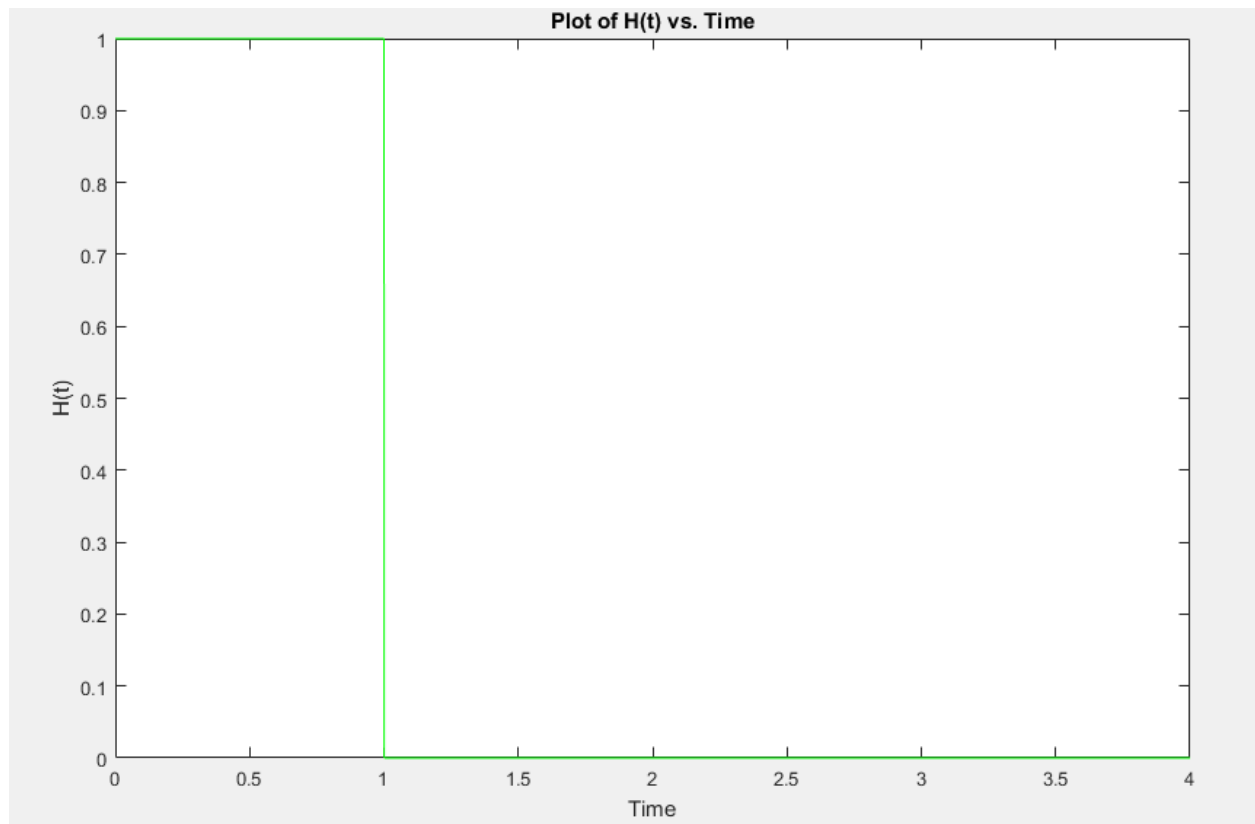
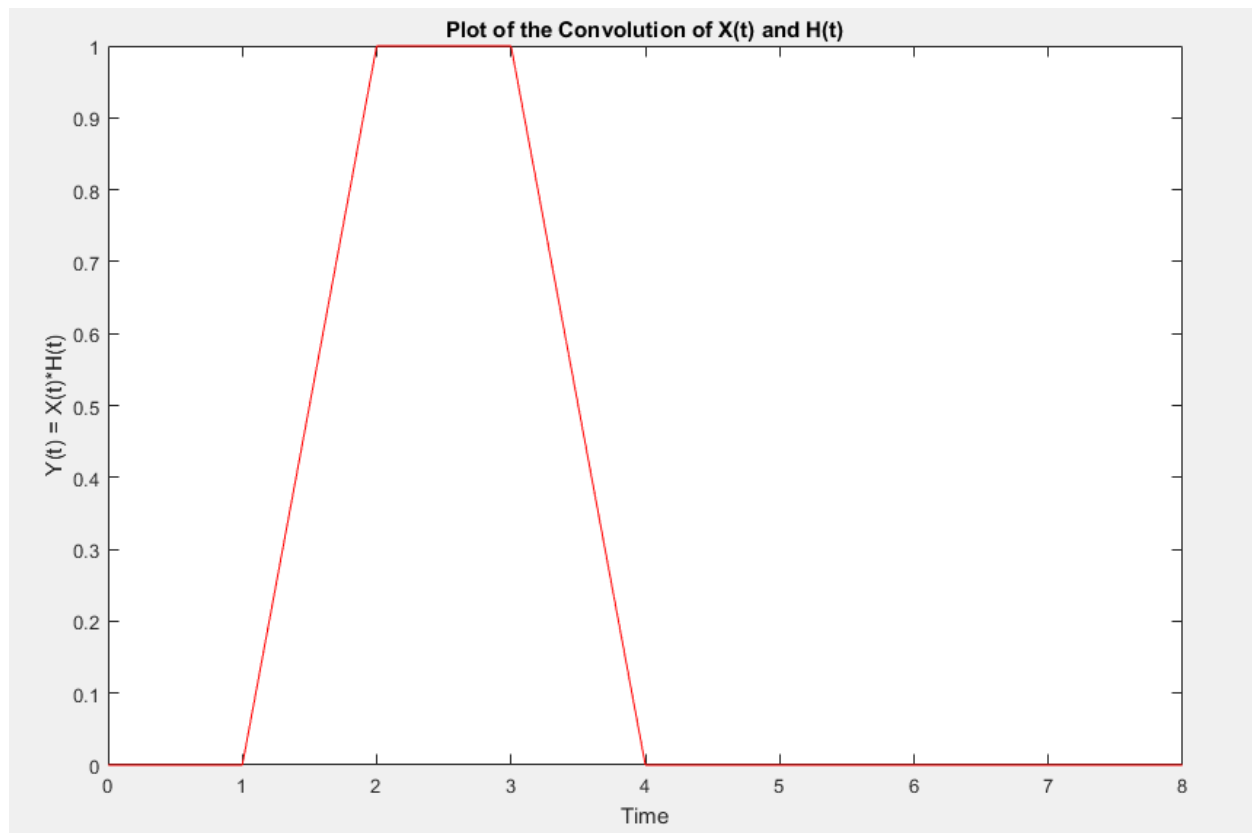


A plot of $X(t)$ over 4 seconds. ($dt = 0.001$)



A plot of $H(t)$ over 4 seconds ($dt = 0.001$)



A plot of $Y(t) = X(t)*H(t)$ over 8 seconds. ($dt = 0.001$)

The $(-dt)$ comes from the lack of overlap at $\text{length}(x)+\text{length}(h)$. If the convolution includes $\text{length}(x)+\text{length}(h)$ then convolution would be zero (an extraneous term).