## ECE 218 Signals and Systems Laboratory 7

## I. PREPARATION

1) Evaluate the following convolutions both in discrete time and continuous time.

a) y[n] = u[n] \* u[n - 3]b)  $y[n] = (\frac{1}{2})^n u[n - 2] * u[n]$ c)  $y[n] = (-1)^n * 2^n u[-n + 2]$ d) y(t) = (u(t) - u(t - 2)) \* u(t)e)  $y(t) = (e^{-t}u(t)) * (e^{-3t}u(t))$ 

2) Find the convolution of the signals x(t) and y(t) by hand.



## II. EXPERIMENTAL WORK

1) Write matlab programs that find the result of the convolutions in preparations 1 and 2. Compare them with your hand results.

Note: Use the matlab command conv to evaluate the convolution of two signals.

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