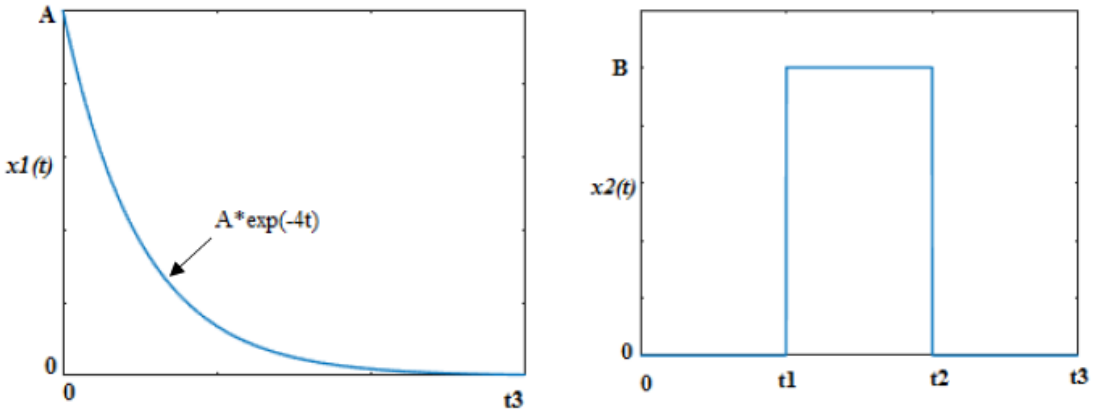
Exercise 1

Representing Signals

Part 1:

Write a Matlab script to generate the signals x1(t) and x2(t) shown below. Let A=1, B=1, t1=1 sec, t2=2 sec, t3=3 sec, and dt = 0.001.



Plot the signals x1(t) and x2(t) on separate graphs. Multiply them and plot the product signal.

Part 2:

Write a Matlab script to find the sum of a sinusoidal signal $x1(t) = A1\ \sin(2\pi f1t)$ and the signal shown below over 3 seconds. The amplitude $A1$ of the sinusoidal signal should be 2 with the frequency $f1$ =1Hz. Plot the signals $x1$ and $x2$ and the summed signal $x1 + x2$ generated by your code. Set dt=0.001.