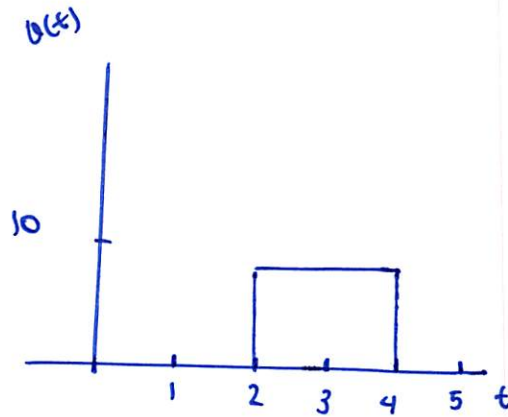
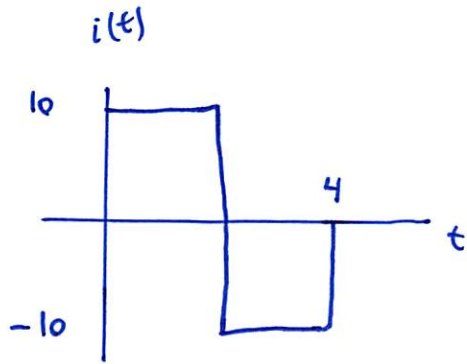


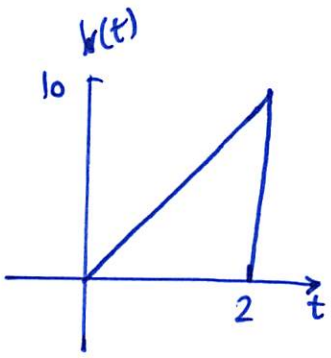
1) Express the voltage pulse in terms of the unit step. Calc. its derivative & sketch.



2) Express the current pulse shown in terms of the unit step. Find its integral & sketch



3) express the sawtooth function in terms of singularity functions.



$$4) \quad g(t) = \begin{cases} 3 & t < 0 \\ -2 & 0 < t < 1 \\ 2t-4 & t > 1 \end{cases}$$

express  $g(t)$  in terms of step & ramp functions.

5) Evaluate the following integral involving the impulse function:

$$\int_0^{10} (t^2 + 4t - 2) \delta(t-2) dt$$

$$\int_{-\infty}^{\infty} [\delta(t-1) e^{-t} \cos t + \delta(t+1) e^{-t} \sin t] dt$$