

Contd

in Continuous time

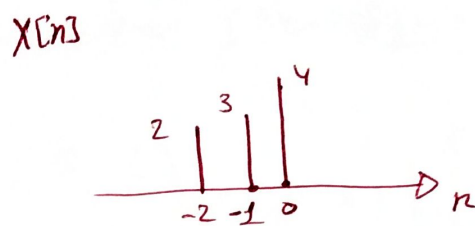
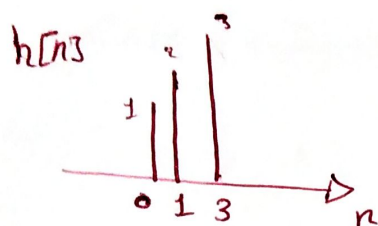
$$y(t) = \int_{-\infty}^{\infty} x(\tau) h(t-\tau) d\tau$$

in discrete time

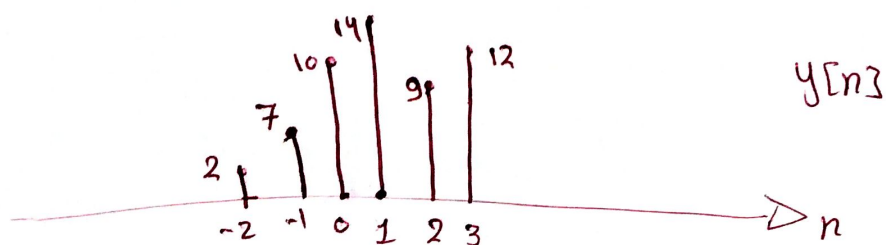
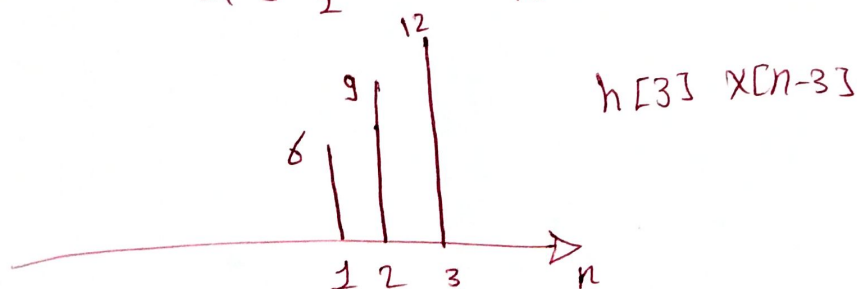
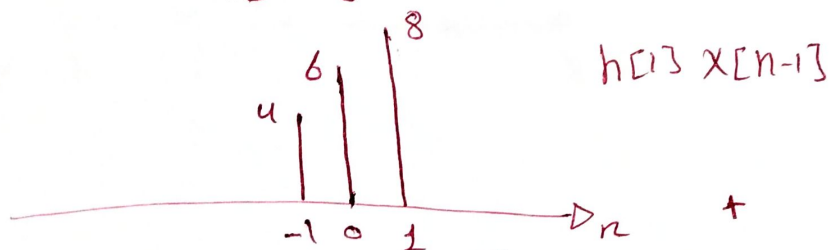
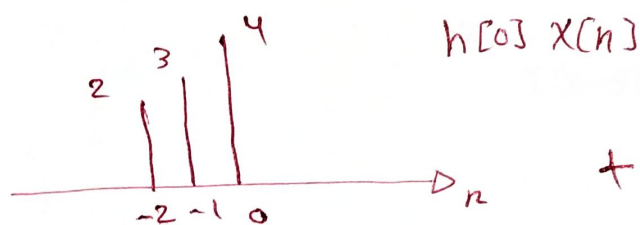
$$y[n] = \sum_{i=-\infty}^{\infty} h[i] x[n-i]$$

→ Const n

$$y[n] = \dots h[-1] x[n+1] + h[0] x[n] + h[1] x[n-1] + \dots$$



$$y[n] = h[0] x[n] + h[1] x[n-1] + h[2] x[n-2]$$



→ Dis Code

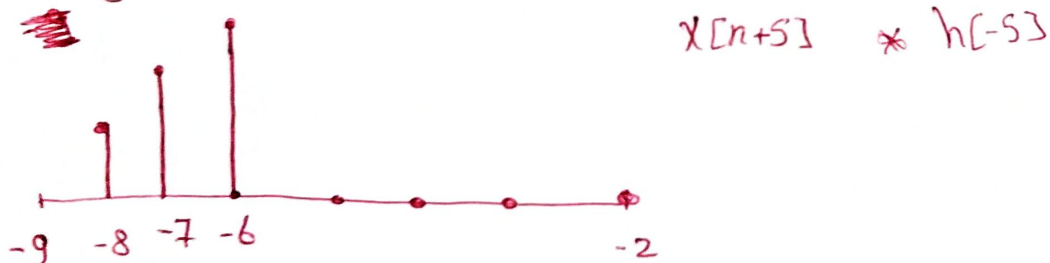
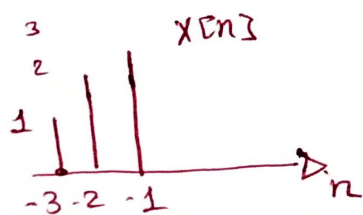
We can't deal with time from $\infty \rightarrow -\infty$ must define y in specific range

→ start of $y = \text{start of } x + \text{start of } h$

→ end of $y = \text{end of } x + \text{end of } h$

→ Shift x in this range of defined time [start of $y \rightarrow \text{end of } y$]

$$n_x = [-3 \ -2 \ -1] \quad x = [1 \ 2 \ 3]$$



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