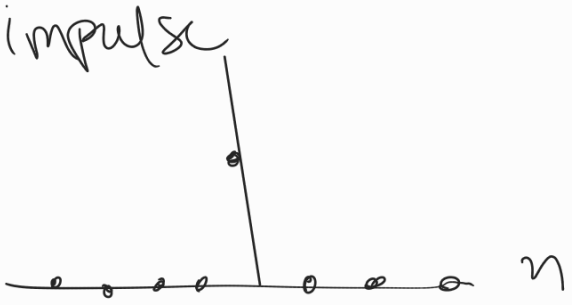
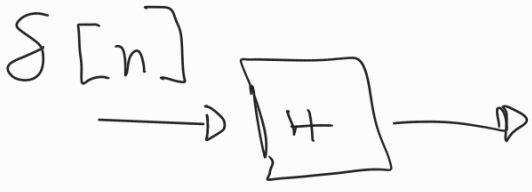
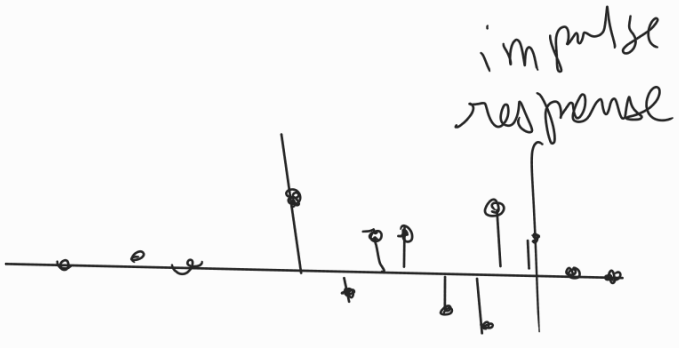
Characterizing linear, time-invariants systems using canonical inputs -

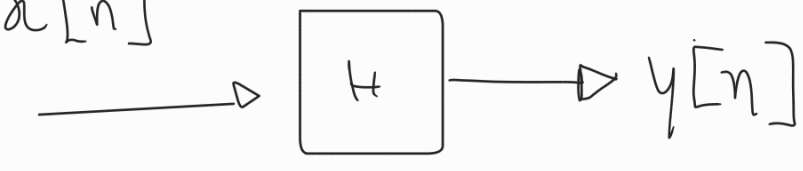
1) write arbitrary input as a weighted sum of time-shifted cannonical input

2) output is a weighted sum of time-shifted cannonical outputs









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

"convolution"

$h[n] * x[n]$

↑ operator notation