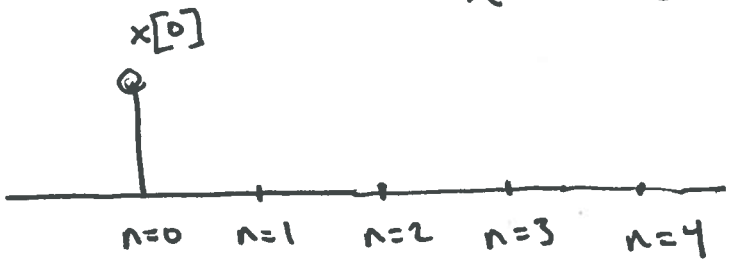
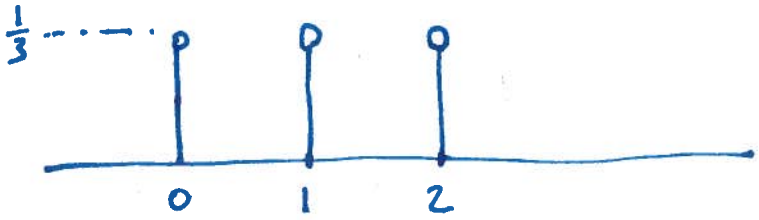
(1)

$$y[n] = \frac{1}{3}\left(x[n] + x[n-1] + x[n-2]\right)$$

$x[n] = \delta[n]$ $x=1$ at $n$

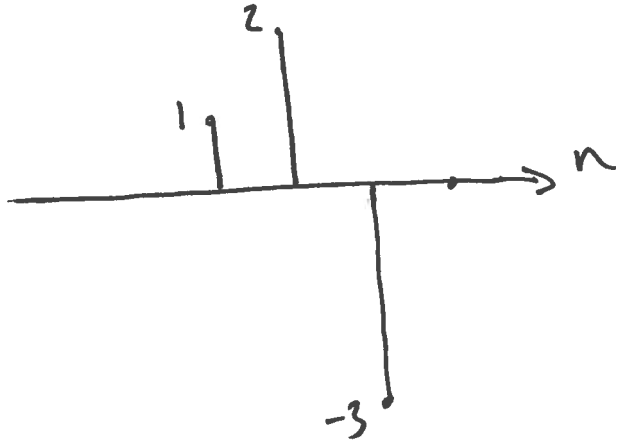
$x=0$ everywhere else.



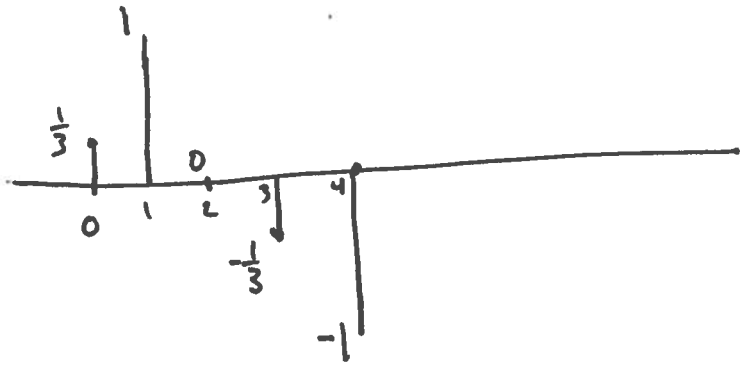
(2)

$x[n]$

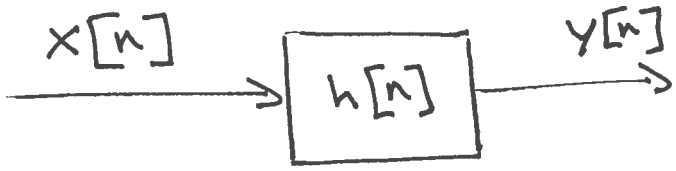



$y[n] = \frac{1}{3}(x[n] + x[n-1] + x[n-$

$y[n]$

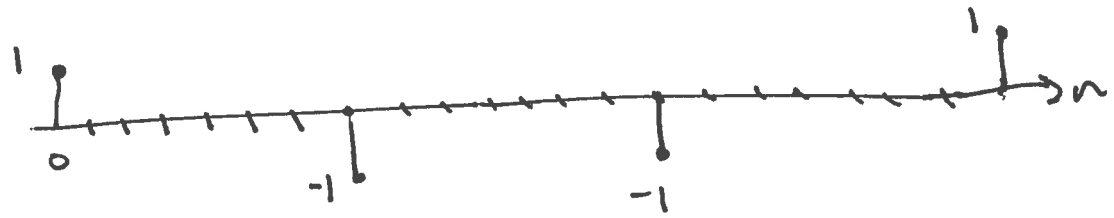


③

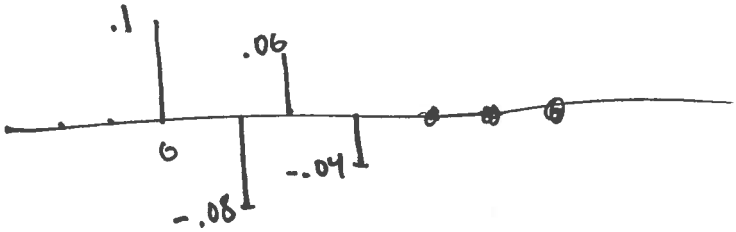



ⓐ

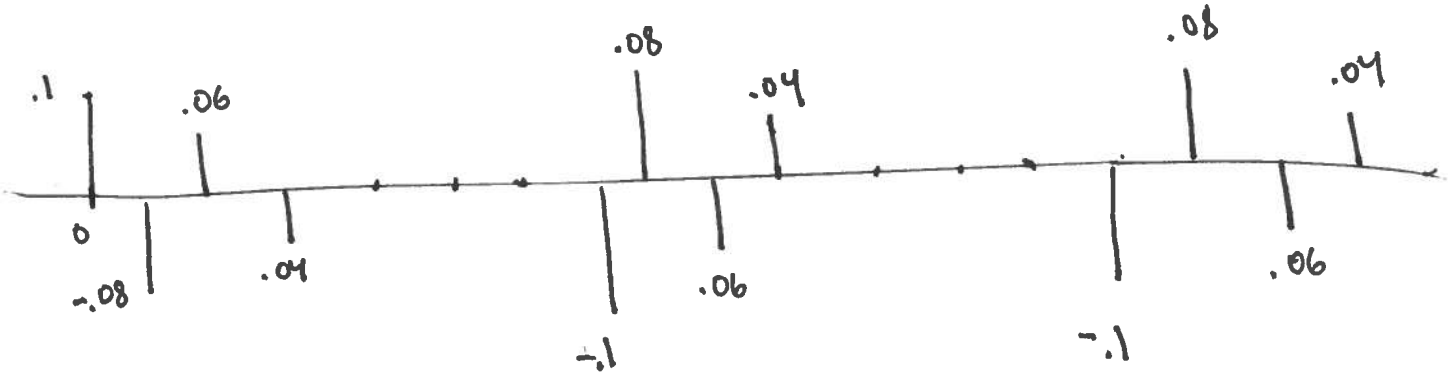
x[n]




h[n]




y[n]




I missed a .05 oops :

6

(a) $y[n] = \cos(\Omega_x n)\, x[n] + \cos(\Omega_w n)\, w[n]$

$\Omega_w - \Omega_x > 2\Omega_M$ and $\Omega_x \gg \Omega_M$ $\Omega_w \gg \Omega_M$

$$\cos(\theta) = \frac{1}{2} e^{j\theta} + \frac{1}{2} e^{-j\theta}$$