6. a) $y[n] = \underbrace{u[n+3]}_{x[n]} * \underbrace{u[n-3]}_{h[n]}$

para $n-3 < -3$, $n < 0$ $y[n] = 0$

para $n-3 \geqslant -3$, $n \geqslant 0$ $y[n] = \sum_{k=-3}^{n-3} 1 = n+3$

$y[n] = \begin{cases} n+3 & , \text{ } n \geqslant 0 \\ 0 & , \text{ } n < 0 \end{cases}$

b) $y[n] = 3^n u[-n+3] * u[n-2]$
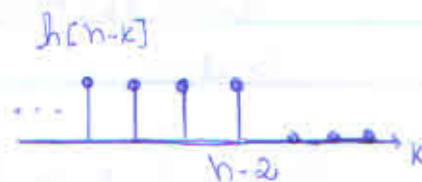
para $n-2 \leqslant 3$, $n \leqslant 5$ $y[n] = \sum_{k=-\infty}^{n-2} 3^k$

                                $y[n] = \frac{1}{6} 3^n$

para $n-2 \geqslant 4$, $n \geqslant 6$ $y[n] = \sum_{k=-\infty}^{3} 3^k \rightarrow y[n] = \frac{31}{2}$

$y[n] = \begin{cases} \frac{1}{6} \cdot 3^n & , \text{ } n \leqslant 5 \\ \frac{81}{2} & , \text{ } n \geqslant 6 \end{cases}$

C) $(1/4)^n \, u[n] * u[n+2]$

para $n+2 < 0$, $n < -2$ $y[n] = 0$

para $n+2 \geq 0$, $n \geq -2$ $y[n] = \sum_{k=0}^{n+2} \left(\frac{1}{4}\right)^k$

$$y[n] = \frac{4}{3} - \frac{1}{12} \cdot \left(\frac{1}{4}\right)^n$$

$$y[n] = \begin{cases} \frac{4}{3} - \frac{1}{12} \cdot \left(\frac{1}{4}\right)^n & , \; n \geq -2 \\ 0 & , \; n < -2 \end{cases}$$

d.) $y[n] = \cos\left(\frac{\pi}{2} \cdot n\right) u[n] * u[n-5]$

para $n-5 < 0$, $n < 5$ $y[n] = 0$

para $n-5 \geq 0$, $n \geq 5$ $y[n] = \sum_{k=0}^{n-5} \cos\left(\frac{\pi}{2} k\right)$

$$y[n] = \begin{cases} 1 & n = 4v+1, \; 4v+2 \\ 0 & n = 4v, \; 4v+3 \end{cases}$$

$$y[n] = u[n-5] \, f[n]$$

onde,

$$f[n] = \begin{cases} 1 & n = 4v+1, \; 4v+2 \\ 0 & n = 4v, \; 4v+3 \end{cases}$$