

$$x[n] = \{1, 2, 3\}; h[n] = \{-1, 2, 2\}$$

we generate a circuler
Matrix of $L(n)$

(i.e)

$$\begin{bmatrix} y(0) \\ y(1) \\ y(2) \end{bmatrix} = \begin{bmatrix} -1 & 2 & 2 \\ 2 & -1 & 2 \\ 2 & 2 & -1 \end{bmatrix} \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$$

$$= \begin{bmatrix} -1+4+6 \\ 2-2+6 \\ 2+4-3 \end{bmatrix}$$

$$= \begin{bmatrix} 9 \\ 6 \\ 3 \end{bmatrix}$$

Lin

	2	2	1
1	2	1	2
2	4	2	4
3	6	3	6

$$2, 5, 10, 8, 8, 3$$