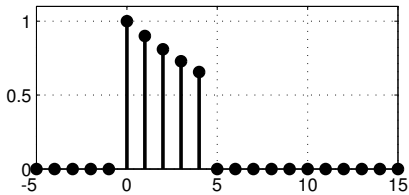
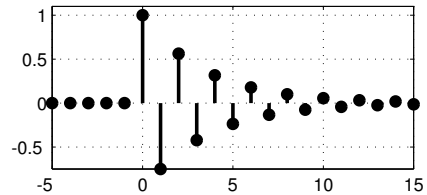
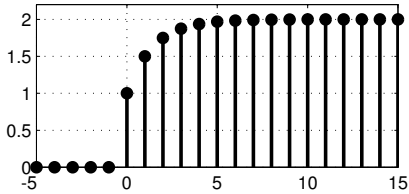
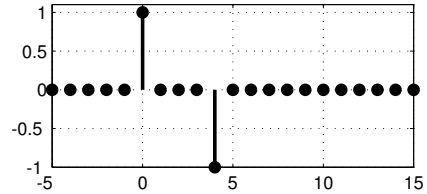
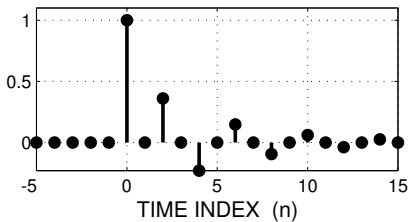
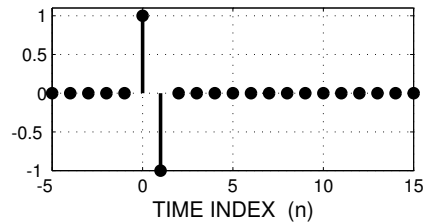


**PROBLEM:****IMPULSE RESPONSE: J****IMPULSE RESPONSE: K****IMPULSE RESPONSE: L****IMPULSE RESPONSE: M****IMPULSE RESPONSE: N****IMPULSE RESPONSE: O**

For each of the impulse-response plots (J, K, L, M, N, O), determine which one of the following systems (specified by either an  $H(z)$  or a difference equation) matches the impulse response.

$$\mathcal{S}_1: y[n] = -0.75y[n-1] + x[n]$$

$$\mathcal{S}_2: H(z) = \frac{1+z^{-2}}{1+0.64z^{-2}}$$

$$\mathcal{S}_3: H(z) = \sum_{k=0}^4 z^{-k}$$

$$\mathcal{S}_4: H(z) = \frac{1+z^{-2}}{1-0.75z^{-1}}$$

$$\mathcal{S}_5: H(z) = \frac{2}{1-z^{-1}} + \frac{-1}{1-0.5z^{-1}}$$

$$\mathcal{S}_6: H(z) = \sum_{k=0}^4 (0.9)^k z^{-k}$$

$$\mathcal{S}_7: y[n] = x[n] - x[n-1]$$

$$\mathcal{S}_8: H(z) = 1 - z^{-4}$$

Mark your answer in the following table:

IMPULSE RESPONSE	SYSTEM ( $\mathcal{S}_\#$ )	IMPULSE RESPONSE	SYSTEM ( $\mathcal{S}_\#$ )
J		K	
L		M	
N		O	