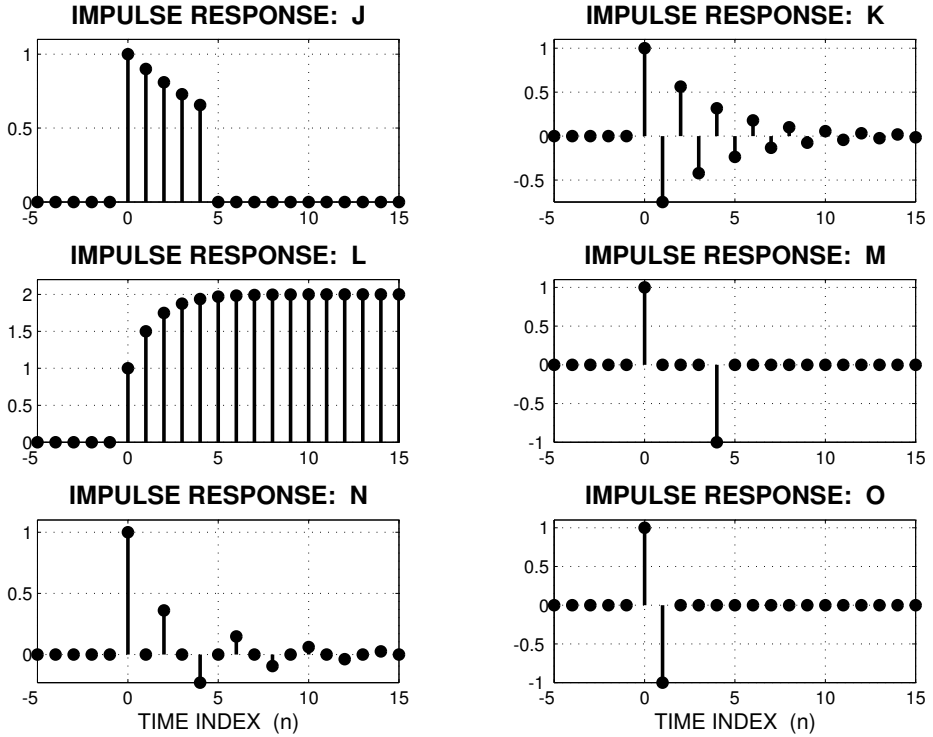
PROBLEM:



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.

$\mathcal{S}_1$: $y[n] = -.75y[n-1] + x[n]$

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

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

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

$\mathcal{S}_5$: $H(z) = \dfrac{2}{1-z^{-1}} + \dfrac{-1}{1-.5z^{-1}}$

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

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

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

Mark your answer in the following table:

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