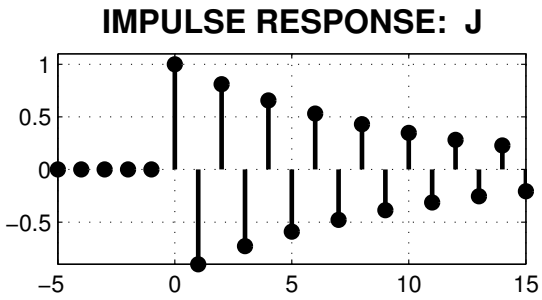
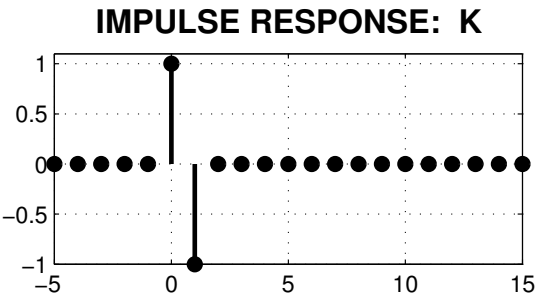
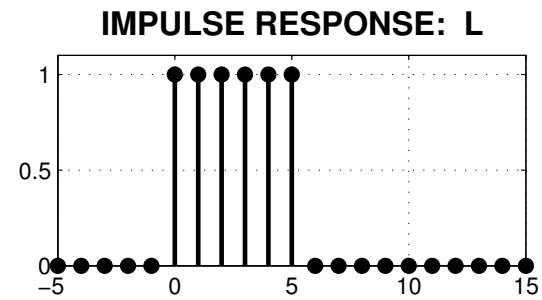
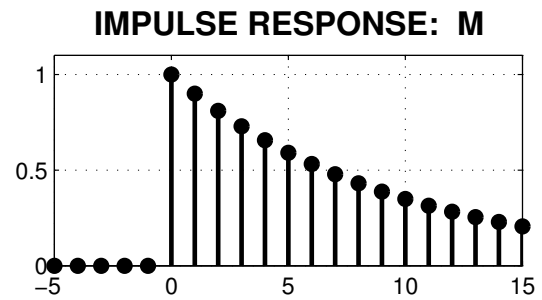
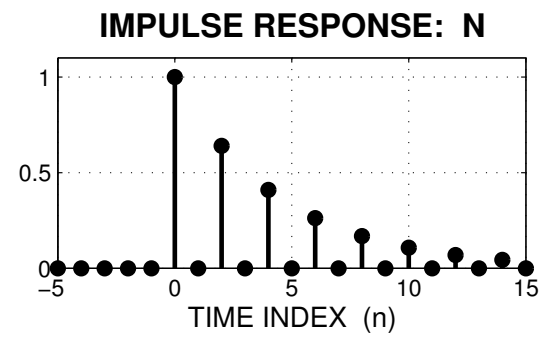
PROBLEM:

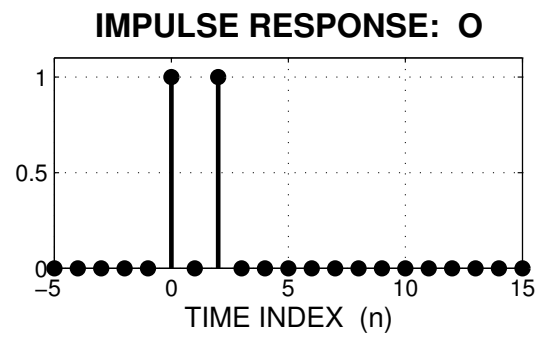












For each of the impulse-response plots (J, K, L, M, N, O), determine which one of the following systems (specified by either an $H(z)$ or a difference equation) matches the impulse response.

$\mathcal{S}_1$: $y[n] = -1.8y[n-1] + x[n]$

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

$\mathcal{S}_3$: $H(z) = z^{-1} - z^{-2}$

$\mathcal{S}_4$: $y[n] = \sum_{k=0}^{5} x[n-k]$

$\mathcal{S}_5$: $y[n] = -0.9y[n-1] + x[n]$

$\mathcal{S}_6$: $y[n] = x[n] + x[n-2]$

$\mathcal{S}_7$: $H(z) = \dfrac{1}{1 - 0.9z^{-1}}$

$\mathcal{S}_8$: $H(z) = \dfrac{0.5}{1 - 0.8z^{-1}} + \dfrac{0.5}{1 + 0.8z^{-1}}$

Mark your answer in the following table:

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