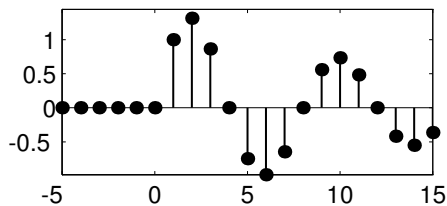
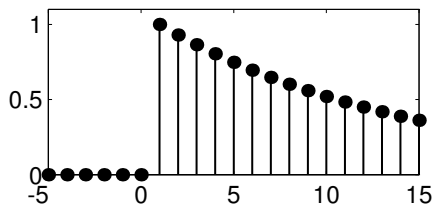


PROBLEM:

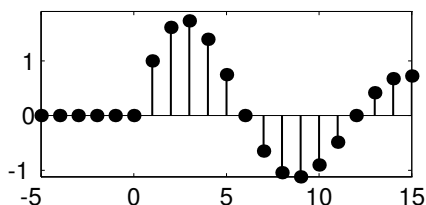
IMPULSE RESPONSE: J



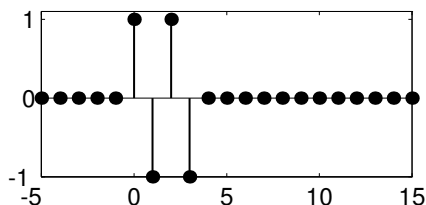
IMPULSE RESPONSE: K



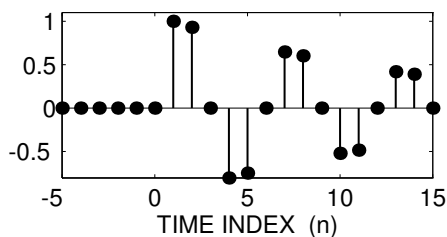
IMPULSE RESPONSE: L



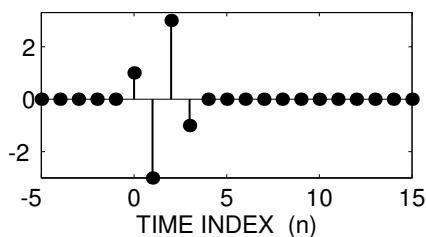
IMPULSE RESPONSE: M



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.

$$\mathcal{S}_0 : y[n] = 0.93y[n-1] + x[n-1]$$

$$\mathcal{S}_1 : H(z) = \frac{z^{-1}}{1 - 1.315z^{-1} + 0.8649z^{-2}}$$

$$\mathcal{S}_2 : H(z) = \frac{z^{-1}}{1 - 1.61z^{-1} + 0.8649z^{-2}}$$

$$\mathcal{S}_3 : H(z) = \frac{z^{-1}}{1 - 0.93z^{-1} + 0.8649z^{-2}}$$

$$\mathcal{S}_4 : H(z) = (1 - z^{-1})^3$$

$$\mathcal{S}_5 : H(z) = 1 - z^{-1} + z^{-2} - z^{-3}$$

$$\mathcal{S}_6 : y[n] = x[n] - x[n-3]$$

$$\mathcal{S}_7 : y[n] = \sum_{k=0}^3 x[n-k]$$

$$\mathcal{S}_8 : y[n] = x[n] + 2x[n-1] + 3x[n-2] + 2x[n-3] + x[n-4]$$