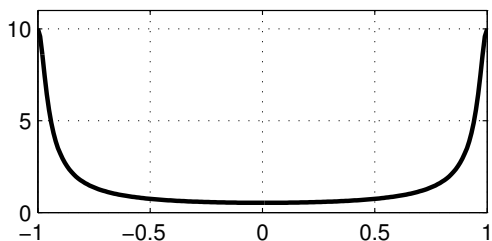
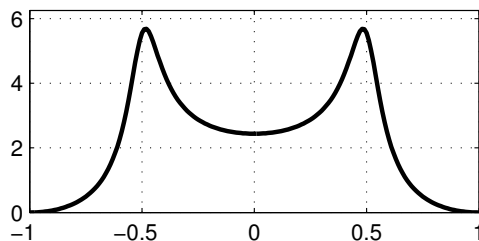


PROBLEM:

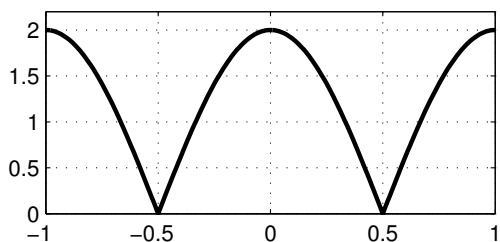
FREQ RESPONSE: A



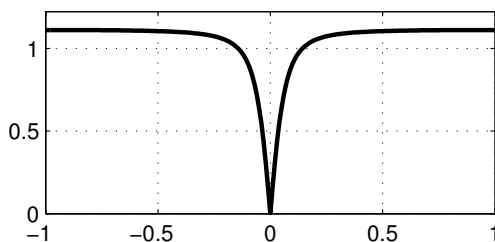
FREQ RESPONSE: B



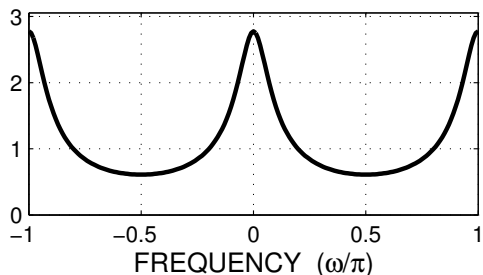
FREQ RESPONSE: C



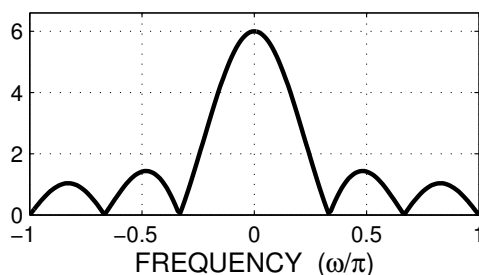
FREQ RESPONSE: D



FREQ RESPONSE: E



FREQ RESPONSE: F



For each of the frequency response plots (A, B, C, D, E, F), determine which one of the following systems (specified by either an $H(z)$, a difference equation, or a MATLAB statement) matches the frequency response (magnitude only). NOTE: frequency axis is normalized; it is $\hat{\omega}/\pi$.

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

$\mathcal{S}_5 : H(z) = \frac{1 + 2z^{-1} + z^{-2}}{1 + 0.64z^{-2}}$

$\mathcal{S}_2 : y[n] = -0.9y[n - 1] + x[n]$

$\mathcal{S}_6 : y = \text{filter}([1,1,1,1,1,1],[1],x)$

$\mathcal{S}_3 : y[n] = 0.8y[n - 1] + x[n] - x[n - 1]$

$\mathcal{S}_7 : H(z) = \frac{2}{1 - 0.64z^{-2}}$

$\mathcal{S}_4 : H(z) = \sum_{k=0}^4 z^{-k}$

$\mathcal{S}_8 : H(z) = 1 - z^{-3}$

Mark your answer in the following table:

FREQUENCY RESPONSE	SYSTEM ($\mathcal{S}_\#$)	FREQUENCY RESPONSE	SYSTEM ($\mathcal{S}_\#$)
A		B	
C		D	
E		F	