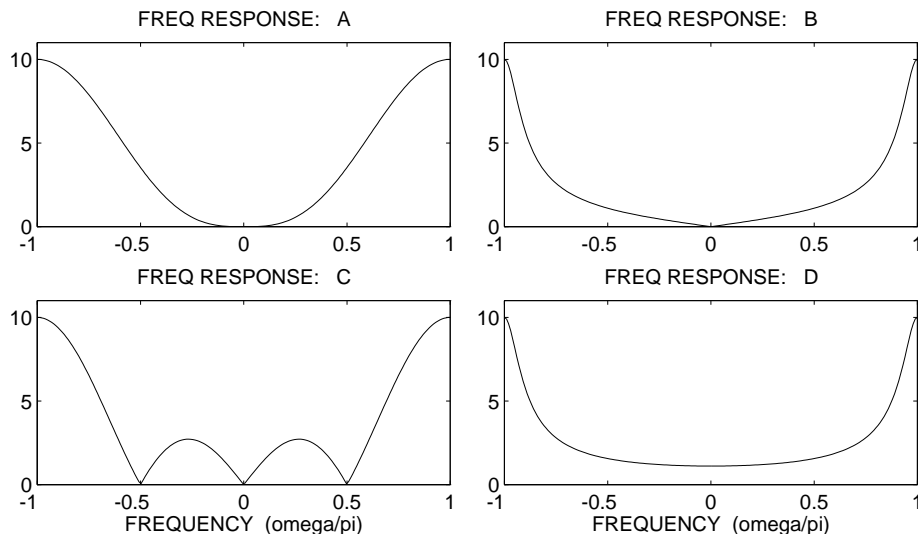## PROBLEM:

For the following systems, determine which frequency response plot (A, B, C, D) matches.

(a) For the following system

$$y[n] = -0.8y[n-1] + 2x[n]$$

derive a simple $\boxed{\text{real-valued}}$ expression for $|H(e^{j\hat{\omega}})|$, and select the appropriate plot.

(b) For the following system derive a simple expression for $|H(e^{j\hat{\omega}})|$, and select the appropriate plot.

$$y[n] = 2\tfrac{1}{2}x[n] - 2\tfrac{1}{2}x[n-1] + 2\tfrac{1}{2}x[n-2] - 2\tfrac{1}{2}x[n-3]$$