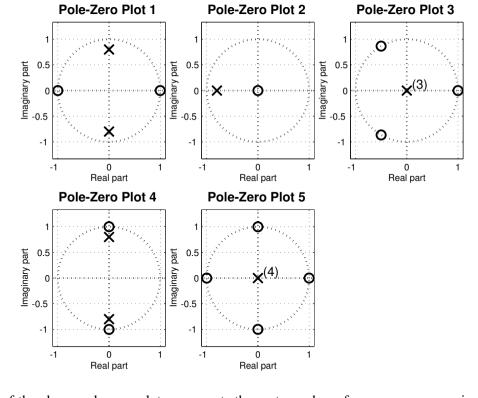
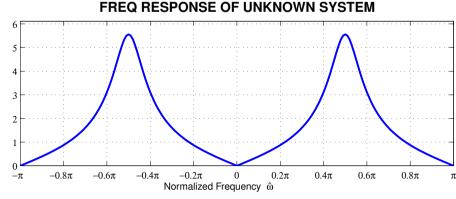
PROBLEM:



(a) Which of the above pole-zero plots represents the system whose frequency response is given in the following graph?



- (b) Now assume that each of the systems represented by the above pole-zero plots has impulse response $h_k[n]$, where k is the index shown in the title of the pole-zero plot.
 - (i) Which of the systems are FIR systems?
 - (ii) In the table below, indicate with an X each of the systems for which $h_k[n] * e^{j\pi n} = 0$, where * denotes convolution.

| System # | 1 | 2 | 3 | 4 | 5 |
|-----------------------------|---|---|---|---|---|
| $h_k[n] * e^{j\pi n} = 0??$ | | | | | |