

EE 451: Homework 7

1. Given the frequency samples

$$H_r\left(\frac{2\pi}{65}k\right) = \begin{cases} 1 & k = 0, 1, \dots, 16 \\ 0 & k = 17, \dots, 32 \end{cases}$$

and the phase is linear with delay equal to $(M - 1)/2$, plot the frequency response $H_1(\omega)$.

2. Given the frequency samples

$$H_r\left(\frac{2\pi}{65}k\right) = \begin{cases} 1 & k = 0, 1, \dots, 16 \\ 0.5886 & k = 17 \\ 0.1065 & k = 18 \\ 0 & k = 19, \dots, 32 \end{cases}$$

and the phase is linear with delay equal to $(M - 1)/2$, plot the frequency response $H_2(\omega)$ and compare the results with the previous frequency response $H_1(\omega)$ obtained from the previous problem.

3. #10.1 from textbook
4. #10.5 from textbook
5. #10.9 from textbook
6. #10.15 from textbook