CSE 3313 - Homework #4 – System Frequency Response HW

# System Frequency Response

Find the system frequency response or DTFT, if it exists



For the difference equation below

1. What range of values for 𝛼 will result in a system frequence response that exists?
2. Fing h[n] from the difference equation.
3. Find for the system.
4. Find the magnitude-squared system frequency response for the system in terms of trigonometric functions and plot the response from w=0 to w=2π.

To find magnitude squared of a complex frequency, you multiply by the complex conjugate.