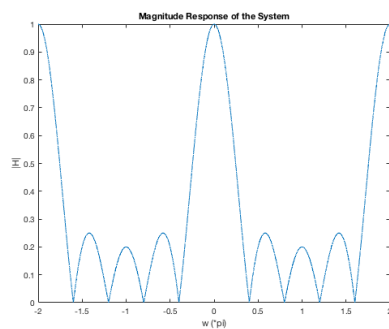


EE473 HW-1

Ibrahim Kahraman 2015401108

QUESTION-2

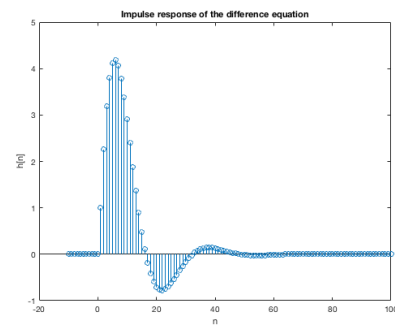
Question-2b



Magnitude Response

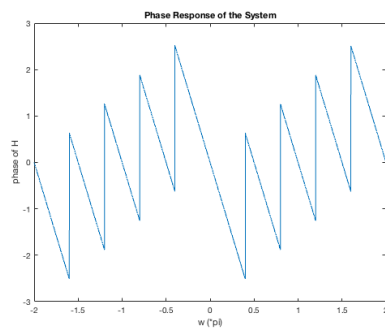
QUESTION-3

Question-3a



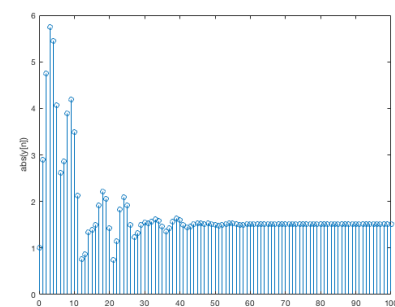
Impulse response of the Difference Equation

Question-2c



Phase Response

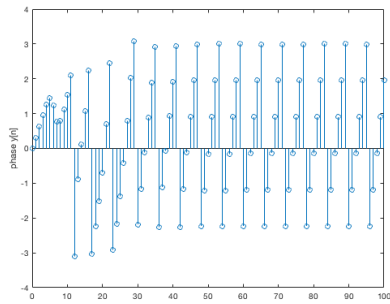
Question-3c



Magnitude of $y[n]$

The phase of the system is not linear, so this system changes the phase of the input. Therefore, it is phase distorting system.

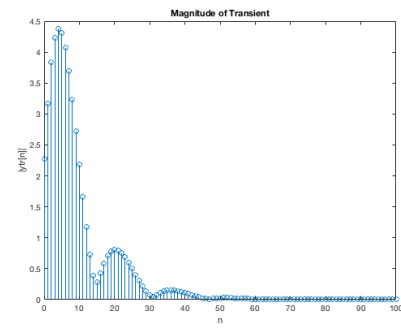
While n goes to infinity, the magnitude converges approximately to 1.5.



Phase of $y[n]$

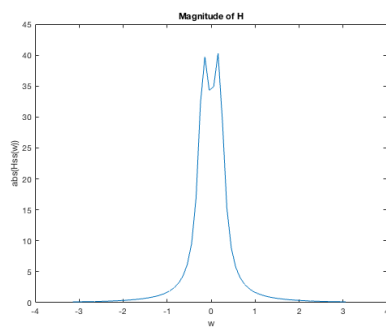
However, while n goes to infinity, the phase diverge.

Question-3f

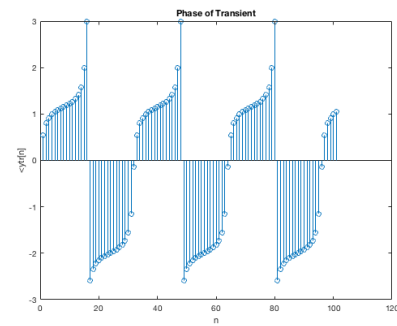


Magnitude of transient response

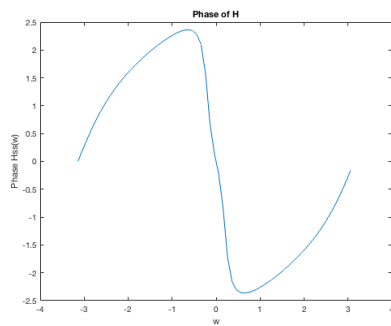
Question-3e



Magnitude of H



Phase of transient response



Phase of H