

HW 2 Assignment

$$\omega_0 = 0, 0.2\pi, 0.4\pi, \dots, 0.8\pi, \pi$$

$$1.2\pi, \dots, 1.8\pi, 2\pi$$

For all cases, find its N ,
and hand-plot the sequence.

Due date to be announced.

$$W_0 = \underbrace{\Omega_0 T}_{\substack{\text{rad} \\ \text{or} \\ \text{rad/sample}}} = 2\pi \frac{\Omega_0}{\Omega_T}$$

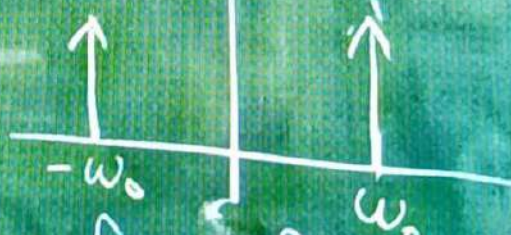
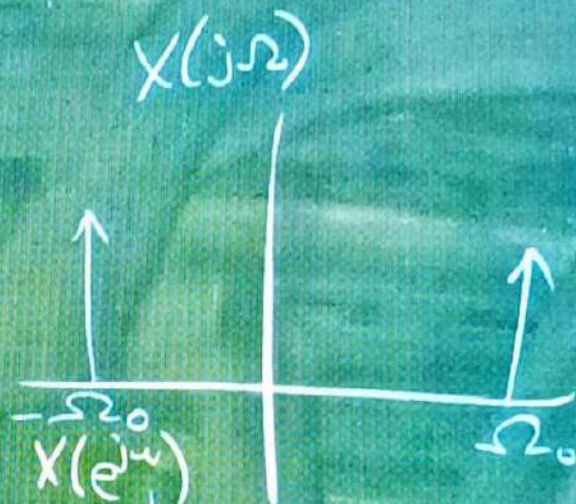
HW 2 (2)

$$x(t) = \cos \Omega_0 t$$

$$x[n] = \cos \omega_0 n$$

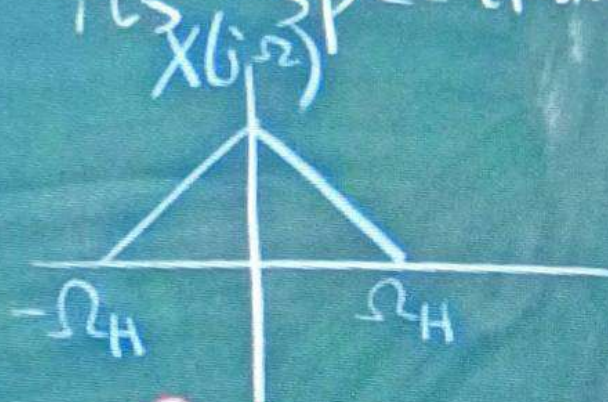
Suppose

$$f_T = 1.5f_0, 2f_0, 3f_0, 10f_0$$



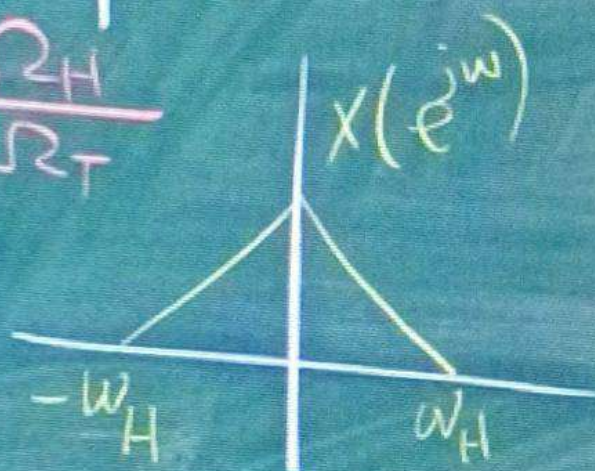
For each case, plot:
 $x(t)$ and its spectrum

(3) $x(t)$ with



$$\omega_H = 2\pi \frac{\Omega_H}{\Omega_T}$$

Suppose $x[n]$ with



For each case,
 provide the spectrum $X(e^{j\omega})$