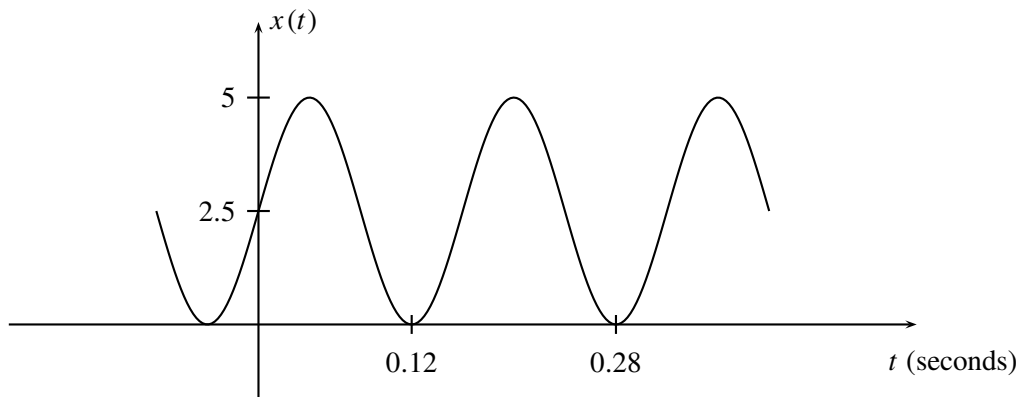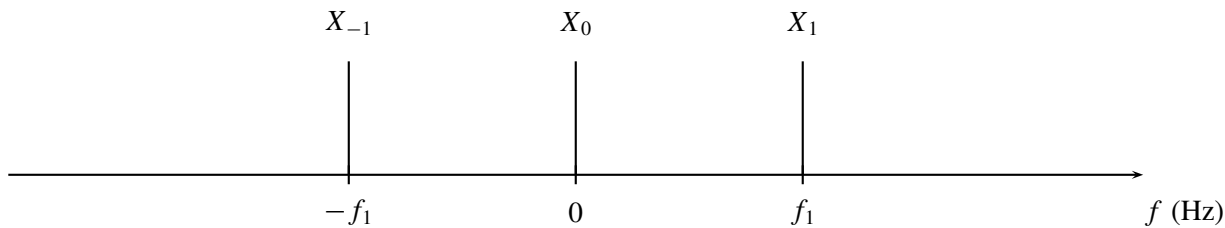# PROBLEM:

A signal $x(t) = A\cos(2\pi f_1 t + \phi)$ is shown in the figure below,

The spectrum of $x(t)$ has the form

Determine the values for f_1, X_0, X_1, and X_{-1}. Note that the frequencies f are given in Hertz.

$f_1 = 6.25 \text{ Hz}$

$X_0 = 2.5$

$X_1 = 1.25\, e^{-j\pi/2}$

$X_{-1} = 1.25\, e^{j\pi/2}$