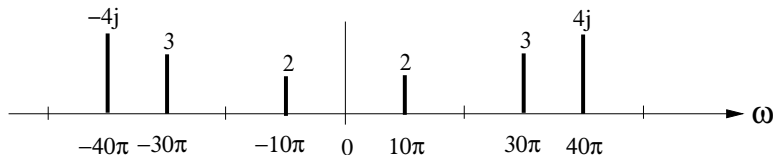


**PROBLEM:**

Shown in the figure is a spectrum plot for the periodic signal  $x(t)$ .



- (a) Determine the period  $T_0$  of  $x(t)$ .

$T_0 =$

- (b) A periodic signal of this type can be represented as a Fourier series of the form

$$x(t) = \sum_{k=-\infty}^{\infty} a_k e^{j\omega_0 k t}.$$

If the Fourier series coefficients of  $x(t)$  are denoted by  $a_k$ ,  $k = 0, \pm 1, \pm 2, \pm 3, \dots$ , determine which coefficients have non-zero value. List these Fourier series coefficients and their values below.