PROBLEM:
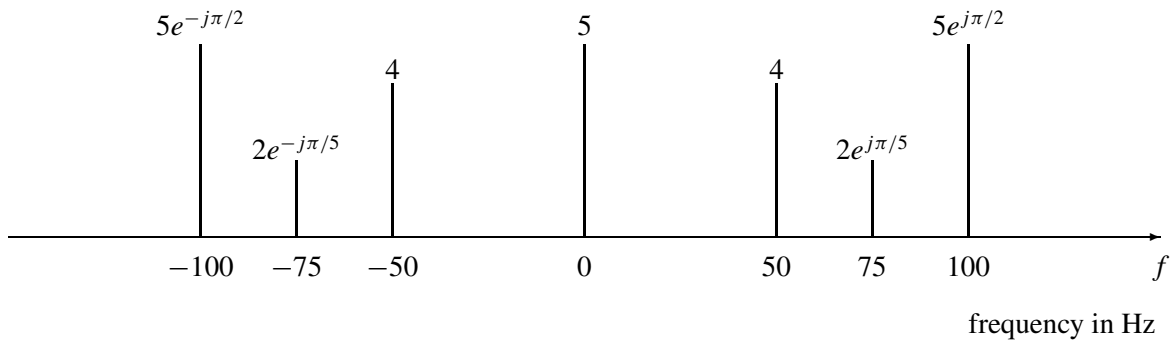
A real signal

$$x(t) = A \cos(200\pi t + \phi) + B \cos(\omega_1(t - \tau)) + C \cos(\omega_2 t) + D$$

has the following two-sided spectrum:

frequency in Hz

(a) Determine A, B, C, D, ω_1, ω_2, ϕ, and τ the signal $x(t)$ with the above spectrum.

$A =$ _____

$B =$ _____

$C =$ _____

$D =$ _____

$\phi =$ _____

$\omega_1 =$ _____

$\omega_2 =$ _____

$\tau =$ _____

(b) The signal $x(t)$ is periodic. Determine the fundamental frequency f_0, of the signal $x(t)$.

$f_0 =$ _____