

PROBLEM:

Define $x(t)$ as

$$x(t) = 4 \cos(100\pi(t - 0.0025)) + 5 \cos(100\pi(t + 0.005)).$$

Determine X and ω_0 such that we can write $x(t)$ as

$$x(t) = \Re\{X e^{j\omega_0 t}\}.$$