PROBLEM:

Define $x(t)$ as

$$x(t) = 2\cos(2.5\pi t - \pi/3) + 2\cos(2.5\pi(t + 1)) + 2\cos(2.5\pi t + 4\pi/3)$$

(a) Express $x(t)$ in the form $x(t) = A\cos(\omega_0 t + \phi)$ by finding the numerical values of A and ϕ, as well as ω_0.

(b) Make two complex plane plots to illustrate how complex amplitudes (phasors) were used to solve part (a). On the first plot, show the three complex amplitudes being added; on the second plot, show your solution as a vector and the addition of the three complex amplitudes as vectors (head-to-tail).