PROBLEM:

Define $x(t)$ as

$$x(t) = 5\cos(\omega_0 t + \pi/3) + 7\cos(\omega_0 t - 5\pi/4) + 3\cos(\omega_0 t + 3\pi/2)$$

Express $x(t)$ in the form $x(t) = A\cos(\omega_0 t + \phi)$ Use complex phasor manipulations to obtain the answer. Explain your answer by giving a "phasor diagram."