PROBLEM:

A signal $x(t)$ is defined as

$$x(t) = 2\cos(\omega_0 t + \pi/3) + \sqrt{2}\cos(\omega_0 t - 3\pi/4)$$

(a) Use phasors to express $x(t)$ in the form $x(t) = A\cos(\omega_0 t + \phi)$.

(b) Plot all the phasors used to solve the problem in part (a) in the complex plane.

(c) Find a complex-valued signal $z(t)$ such that $x(t) = \Re e\{z(t)\}$.