

PROBLEM:

Define $x(t)$ as

$$x(t) = 2 \cos(20\pi t + \pi/6) + 2\sqrt{3} \cos(20\pi(t - 1/30))$$

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