
EXERCISE 3.2: If the two sinusoids being added were to have nonzero phases, that is,

$$x(t) = \cos(2\pi f_1 t + \varphi_1) + \cos(2\pi f_2 t + \varphi_2)$$

the frequencies, f_c and f_Δ , would remain the same, but the phases, φ_Δ and φ_c , would change.

$$x(t) = 2 \cos(2\pi f_\Delta t + \varphi_\Delta) \cos(2\pi f_c t + \varphi_c)$$

Determine the phases needed in the product representation.

