

PROBLEM:

It is possible to rewrite the sinusoidal signal $x(t) = A \cos(\omega_o t + \phi)$ in the form:

$$x(t) = A \cos(\omega_o(t - t_1)) \quad (1)$$

- Determine a formula that gives the relationship between ϕ and t_1 .
- When $x(t) = \sin(11\pi t)$ determine the value of t_1 that would be needed in the representation of equation (1).