

PROBLEM:

The phase of a sinusoid can be related to time shift:

$$x(t) = A \cos(2\pi f_o t + \phi) = A \cos(2\pi f_o(t - t_1)) \quad (1)$$

In the following parts, assume that the period of the sinusoidal wave is $T = 20$ sec.

- (a) “When $t_1 = -2$ sec, the value of the phase is $\phi = \pi/5$.”

Explain whether this is TRUE or FALSE.

- (b) “When $t_1 = 5$ sec, the value of the phase is $\phi = -\pi$.”

Explain whether this is TRUE or FALSE.

- (c) “When $t_1 = 15$ sec, the value of the phase is $\phi = \pi/2$.”

Explain whether this is TRUE or FALSE.