

PROBLEM:

The phase of a sinusoid can be related to time shift: $x(t) = A \cos(2\pi f_o t + \phi) = A \cos(2\pi f_o (t - t_1))$

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

- (a) “When $t_1 = 5$ sec, the value of the phase is $\phi = 3\pi/2$.”

Explain whether this is TRUE or FALSE.

- (b) “When $t_1 = -5$ sec, the value of the phase is $\phi = \pi/4$.”

Explain whether this is TRUE or FALSE.

- (c) “When $t_1 = 16$ sec, the value of the phase is $\phi = -2\pi/5$.”

Explain whether this is TRUE or FALSE.