PROBLEM:

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

$$x(t) = A\cos(2\pi f_\circ t + \phi) = A\cos(2\pi f_\circ (t - t_1)) \tag{1}$$

In the following parts, assume that the period of the sinusoidal wave is $T = 10$ 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 $t_1 = 8$ sec, the value of the phase is $\phi = 2\pi/5$."
Explain whether this is TRUE or FALSE.