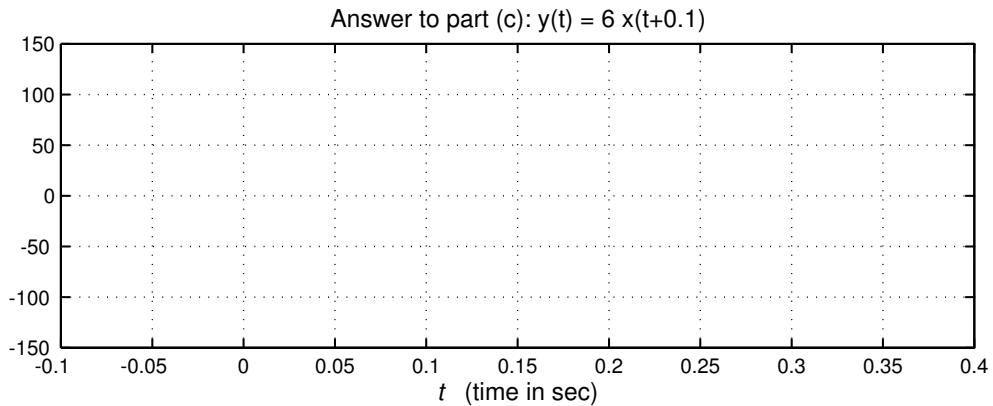
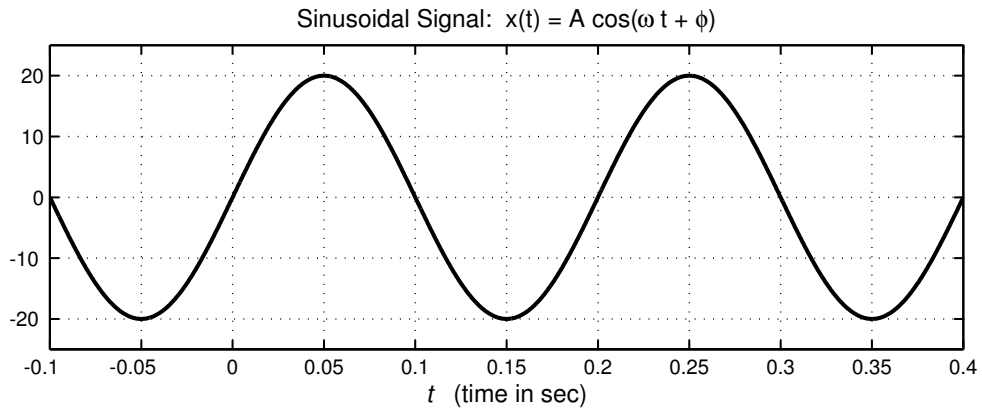


**PROBLEM:**

- (a) The above figure shows a plot of a sinusoidal wave  $x(t)$ . From the plot, determine the values of  $A$ ,  $\omega_0$ , and  $-\pi < \phi \leq \pi$  in the representation

$$x(t) = A \cos(\omega_0 t + \phi)$$

Where appropriate, be sure to indicate the units of the sinusoidal signal parameters.

- (b) The signal  $x(t)$  in part (a) can be written as the real part of a complex exponential. Determine  $Z$  for the complex signal  $z(t) = Z e^{j\omega_0 t}$  such that  $x(t) = \Re\{z(t)\}$ .
- (c) Sketch the signal  $y(t) = 3x(t + 0.005)$ , where  $x(t)$  is the signal from part (a). Use the axes provided above or make your own axes covering the same time interval.