Example 2-1: Figure **??** shows a plot of the signal

$$x(t) = 20\cos(2\pi(40)t - 0.4\pi)$$
(2.1)

In terms of our definitions, the signal parameters are A = 20, $\omega_0 = 2\pi(40)$ rad/s, $f_0 = 40$ Hz, and $\varphi = -0.4\pi$ rad. The signal size depends on the amplitude parameter A; its maximum and minimum values are +20 and -20, respectively. In Fig. **??** the maxima occur at

 $t = \ldots, -0.02, 0.005, 0.03, \ldots$

and the minima at

 $\ldots, -0.0325, -0.0075, 0.0175, \ldots$

The time interval between successive maxima in Fig. ?? is 0.025 s, which is equal to $1/f_0$. To understand why the signal has these properties, we will need to do more analysis.

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