**Chapter 11, Solution 22.**

i(t) = [2–2cos(2t)] amps

$$I_{rms}^2 = \frac{1}{\pi}\left[\int_0^{\pi} [2-2\cos(2t)]^2\, dt\right]$$

$$¿\, \frac{1}{\pi}\left[\int_0^{\pi} 4\, dt + \int_0^{\pi} [-4\cos(2t)]\, dt + \int_0^{\pi} 4\cos^2(2t)\, dt\right]$$

$$¿\, \frac{1}{\pi}\left[4\pi + 0 + 4\int_0^{\pi}\left[\frac{1+\cos(4t)}{2}\right] dt\right] = \frac{1}{\pi}\left[4\pi + 4\left(\frac{\pi}{2}\right)\right] = 6$$

$$I_{rms} = \sqrt{6} = 2.449\, amps$$