

Chapter 11, Solution 24.

$$T = 2, \quad v(t) = \begin{cases} 5, & 0 < t < 1 \\ -5, & 1 < t < 2 \end{cases}$$

$$V_{\text{rms}}^2 = \frac{1}{2} \left[\int_0^1 5^2 \, dt + \int_1^2 (-5)^2 \, dt \right] = \frac{25}{2} [1 + 1] = 25$$

$$V_{\text{rms}} = \mathbf{5 \, V}$$