

Sec. 3.4 Convergence of the Fourier Series

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Chap. 3

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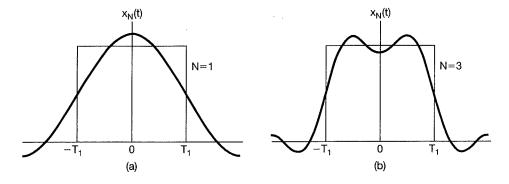
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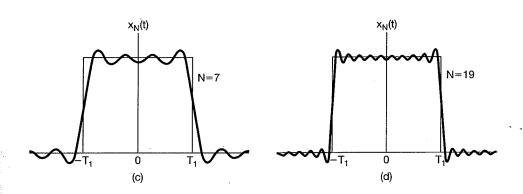
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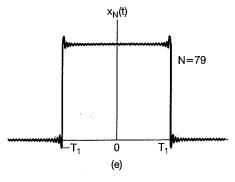
square wave

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**Figure 3.9** Convergence of the Fourier series representation of a square wave: an illustration of the Gibbs phenomenon. Here, we have depicted the finite series approximation  $x_N(t) = \sum_{k=-N}^N a_k e^{jk\omega_0 t}$  for several values of N.