

Figure 10.1: $S_r(x)$ and $S_s(y)$ when $0 < s < r - \rho(x, y)$.

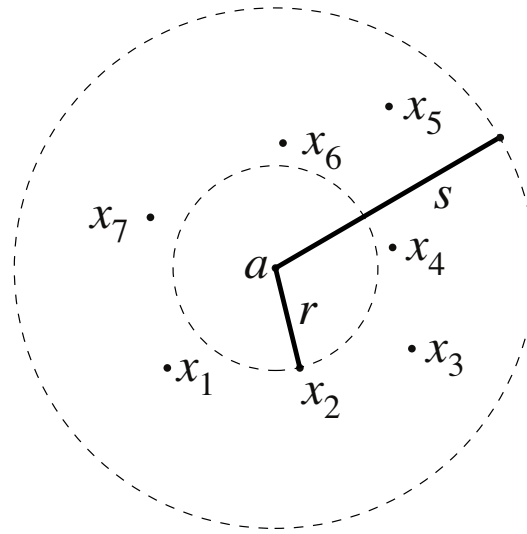


Figure 10.2: The minimum distance from a to an element of $L = \{x_1, \dots, x_7\}$ is r .

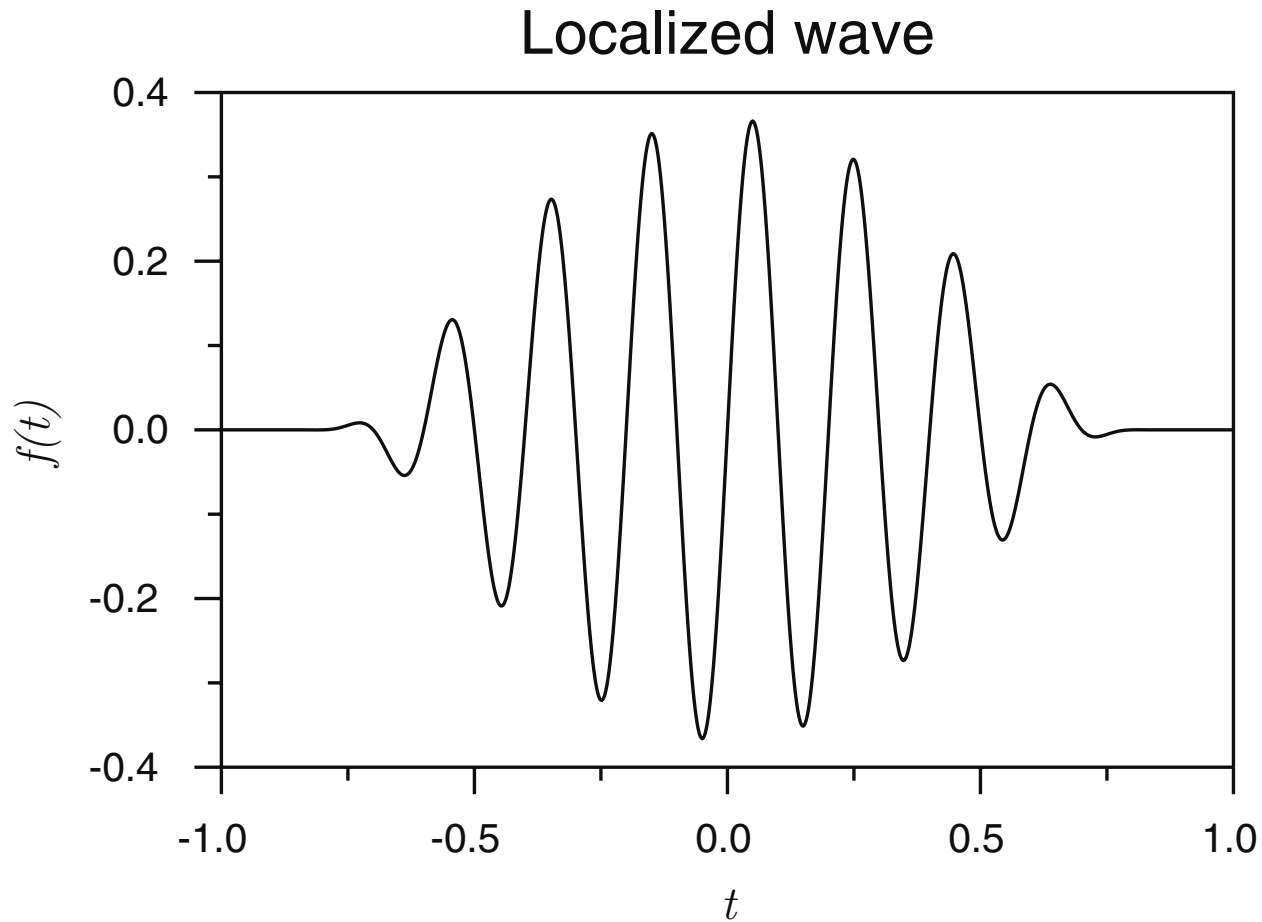


Figure 10.3: Plot of the localized wave defined by the function $f(t) = \exp(- (t + 1)^{-2}(t - 1)^{-2}) \sin \omega t$ if $-1 < t < 1$ and $f(t) = 0$ for all other values of t . The support of f is the closed set $[-1, 1]$.

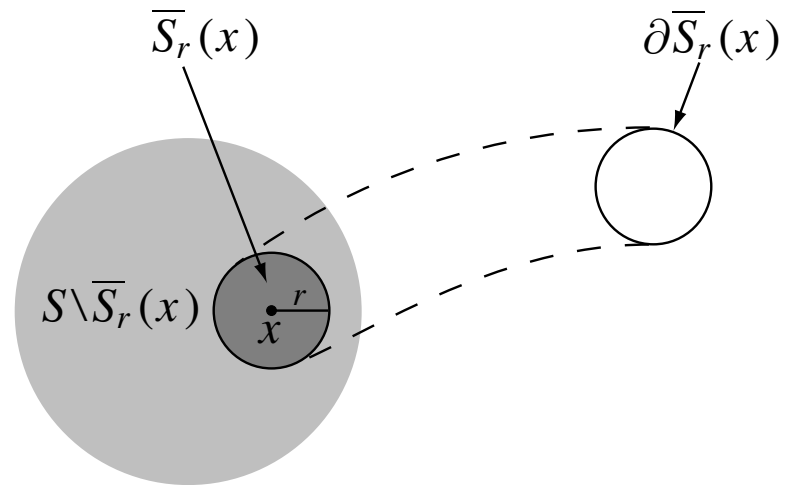


Figure 10.4: $\bar{S}_r(x)$, $S \setminus \bar{S}_r(x)$ and $\partial \bar{S}_r(x)$ in $S \subset \mathbb{R}^2$ under the 2-norm. In this example, but not in all metric spaces, $\overline{\bar{S}_r(x)} = \bar{S}_r(x)$.

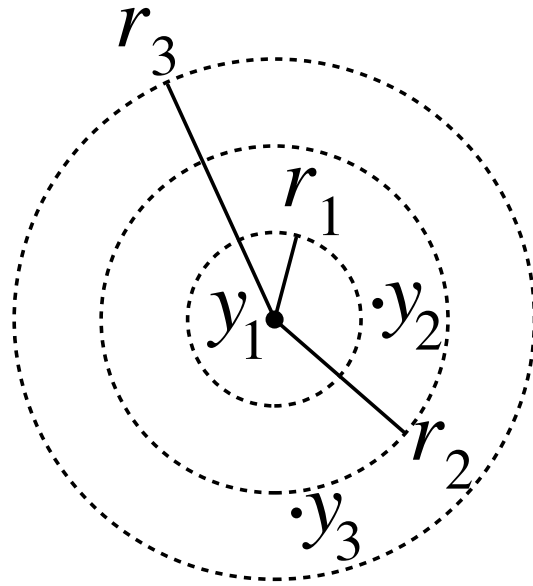


Figure 10.5: Illustration of the construction of y_1 , y_2 and y_3 .
The sequence (y_1, y_2, \dots) is unbounded.

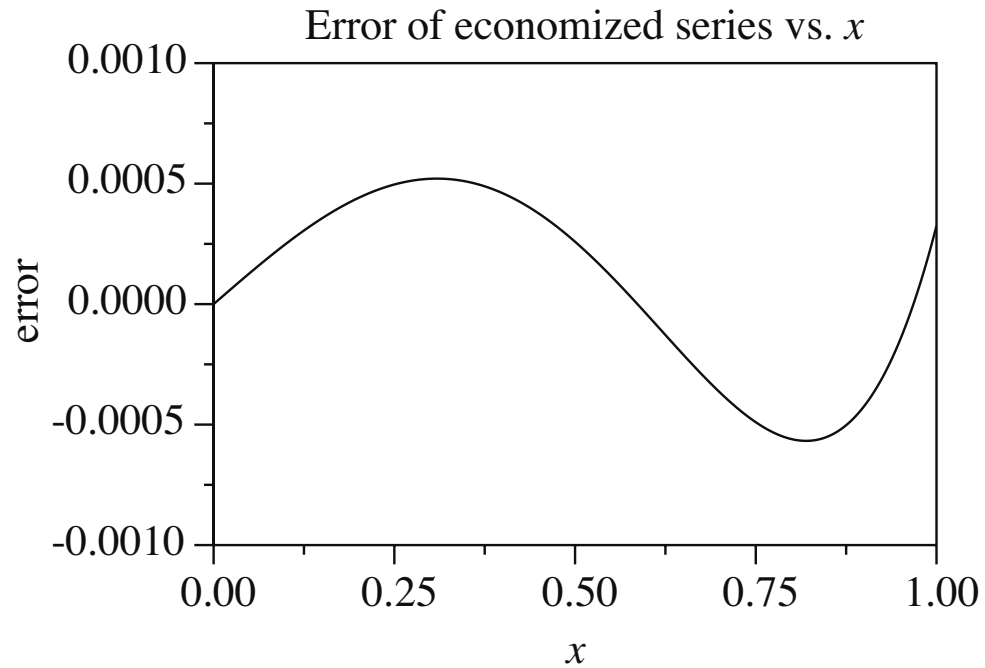


Figure 10.6: Error in the economized sine series, Eq. (10.317).

From: *Modern Mathematical Methods for Physicists and Engineers*, by C. D. Cantrell © 2000 Cambridge University Press

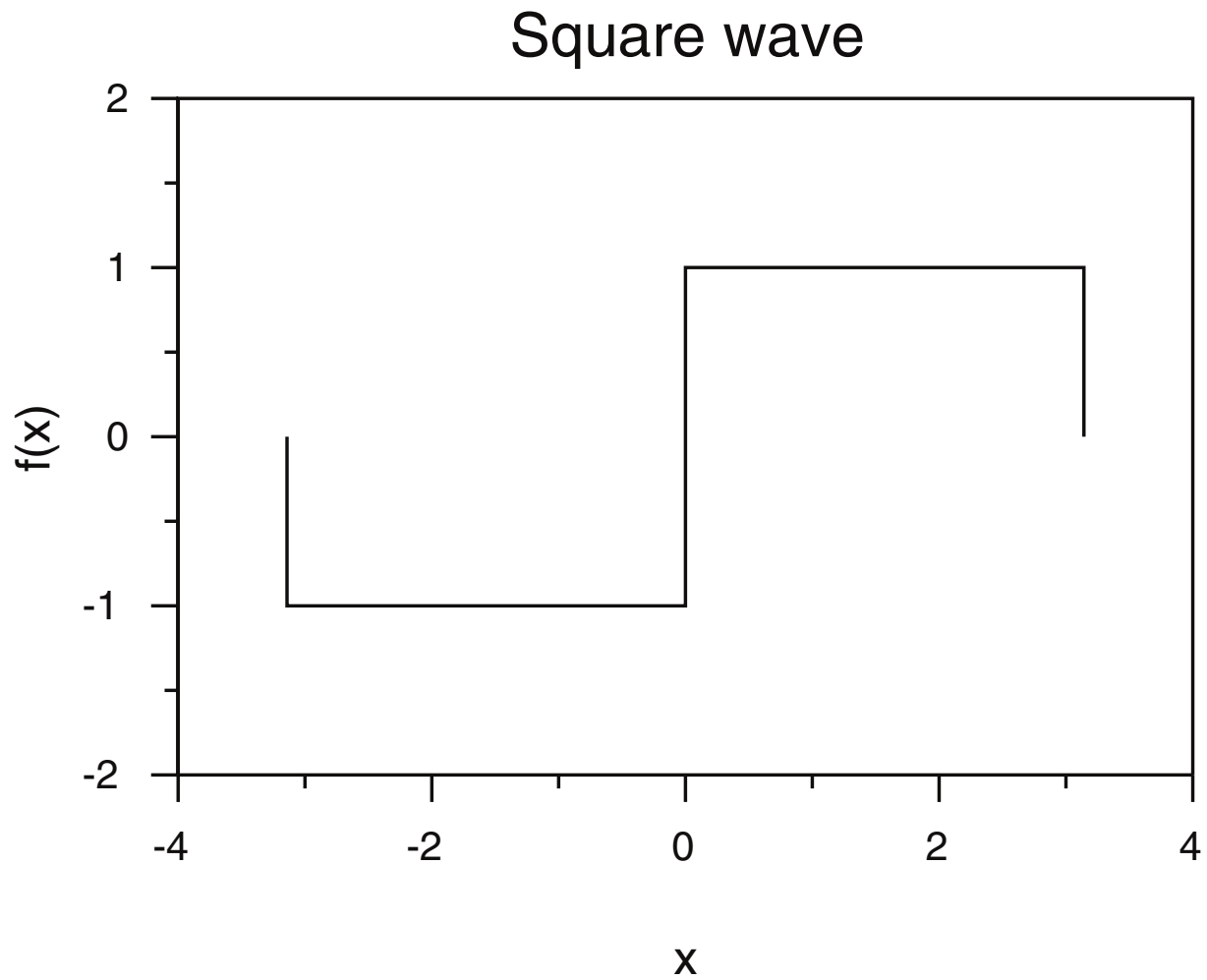


Figure 10.7: Periodic square wave of unit amplitude.

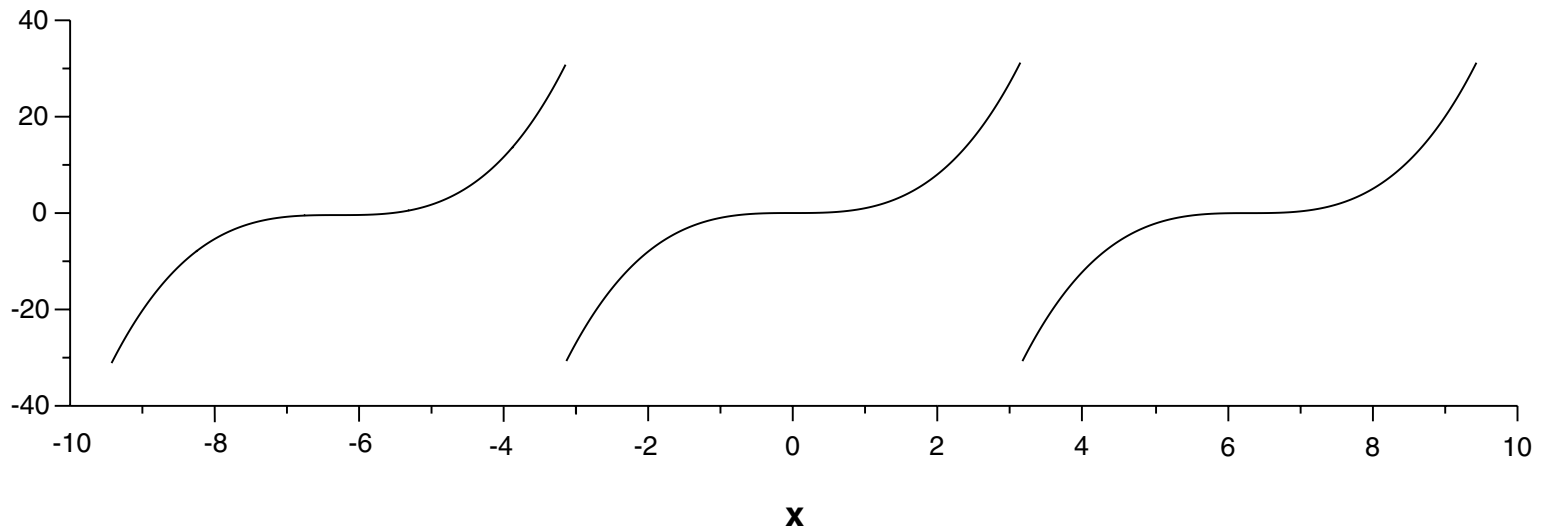


Figure 10.8: Three periods of the function (10.391) for $n = 3$, showing that at odd multiples of π the function has jump discontinuities, but its derivatives are continuous.

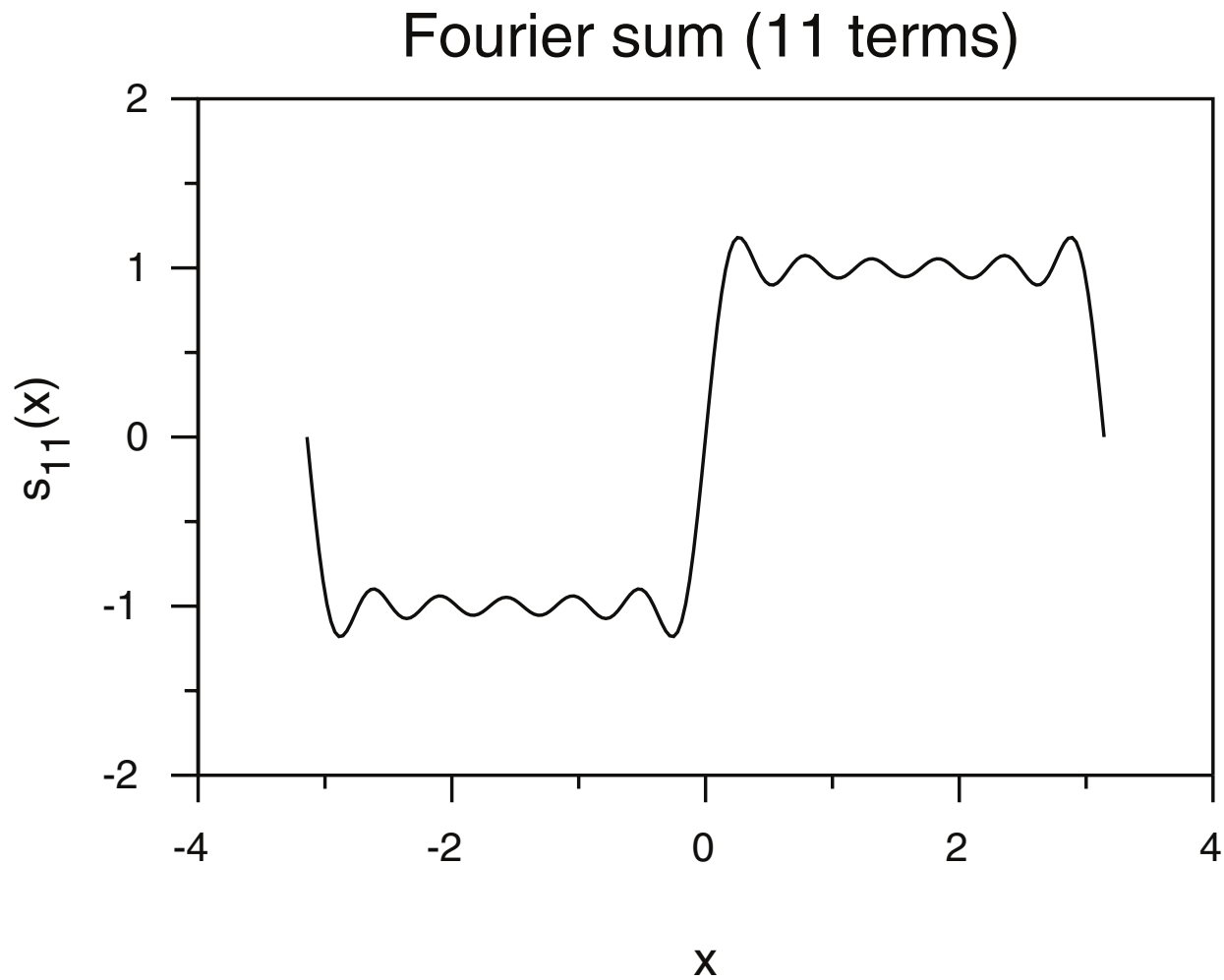


Figure 10.9: Partial sum of the Fourier series (10.388) for $k = 0$ through $k = 5$.

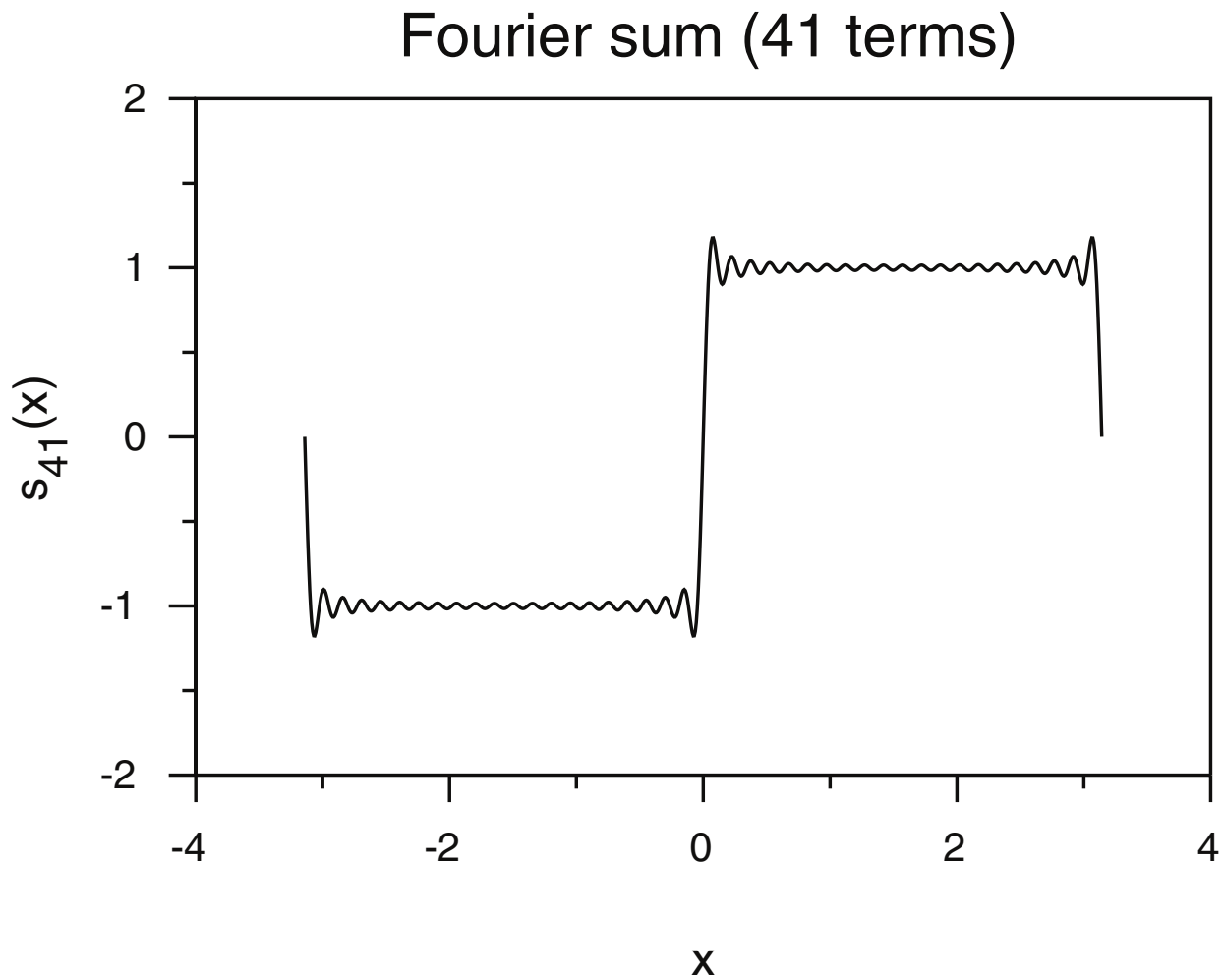


Figure 10.10: Partial sum of the Fourier series (10.388) for $k = 0$ through $k = 20$.

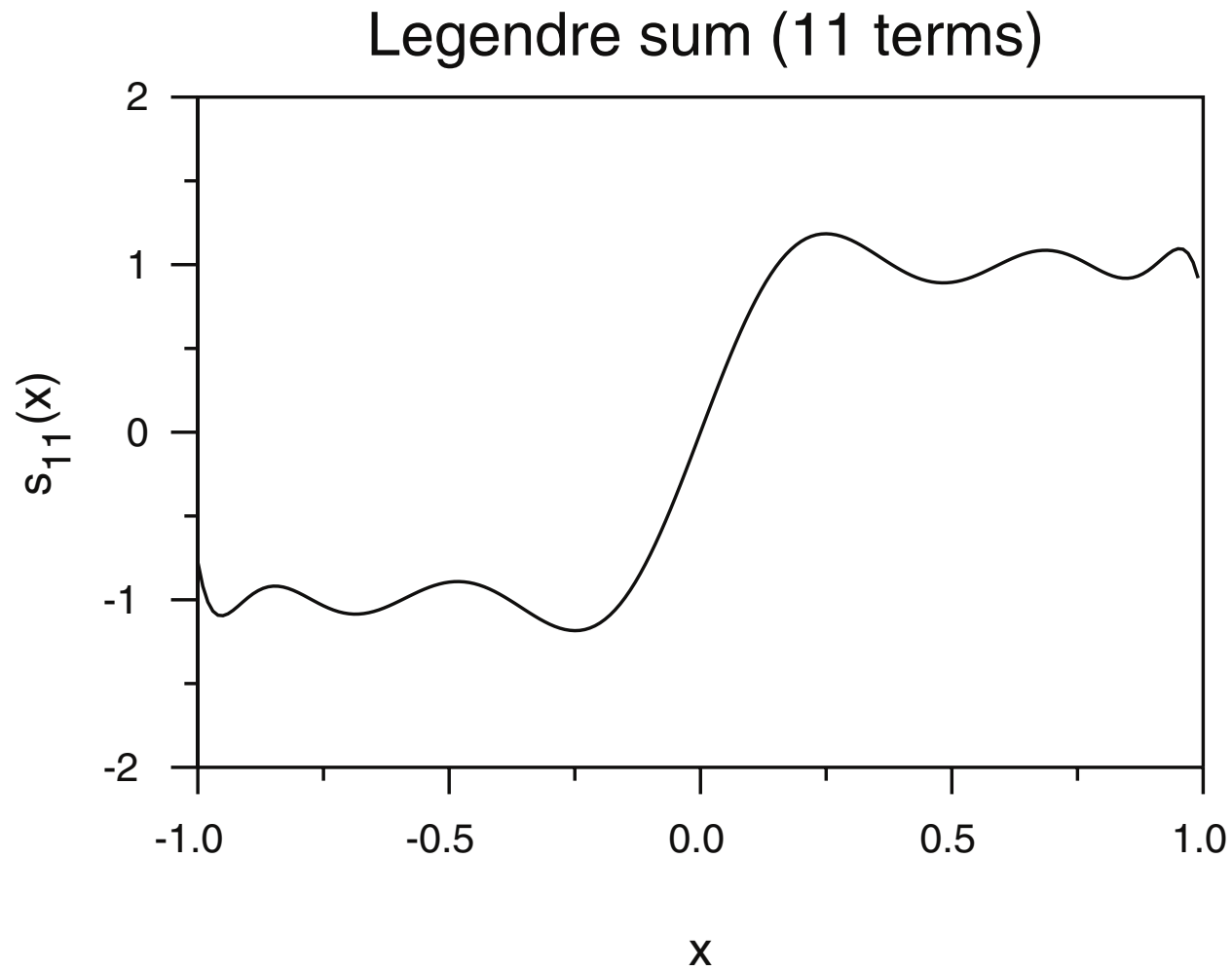


Figure 10.11: Partial sum of the Legendre series (10.416) for $k = 0$ through $k = 5$.

Legendre sum (41 terms)

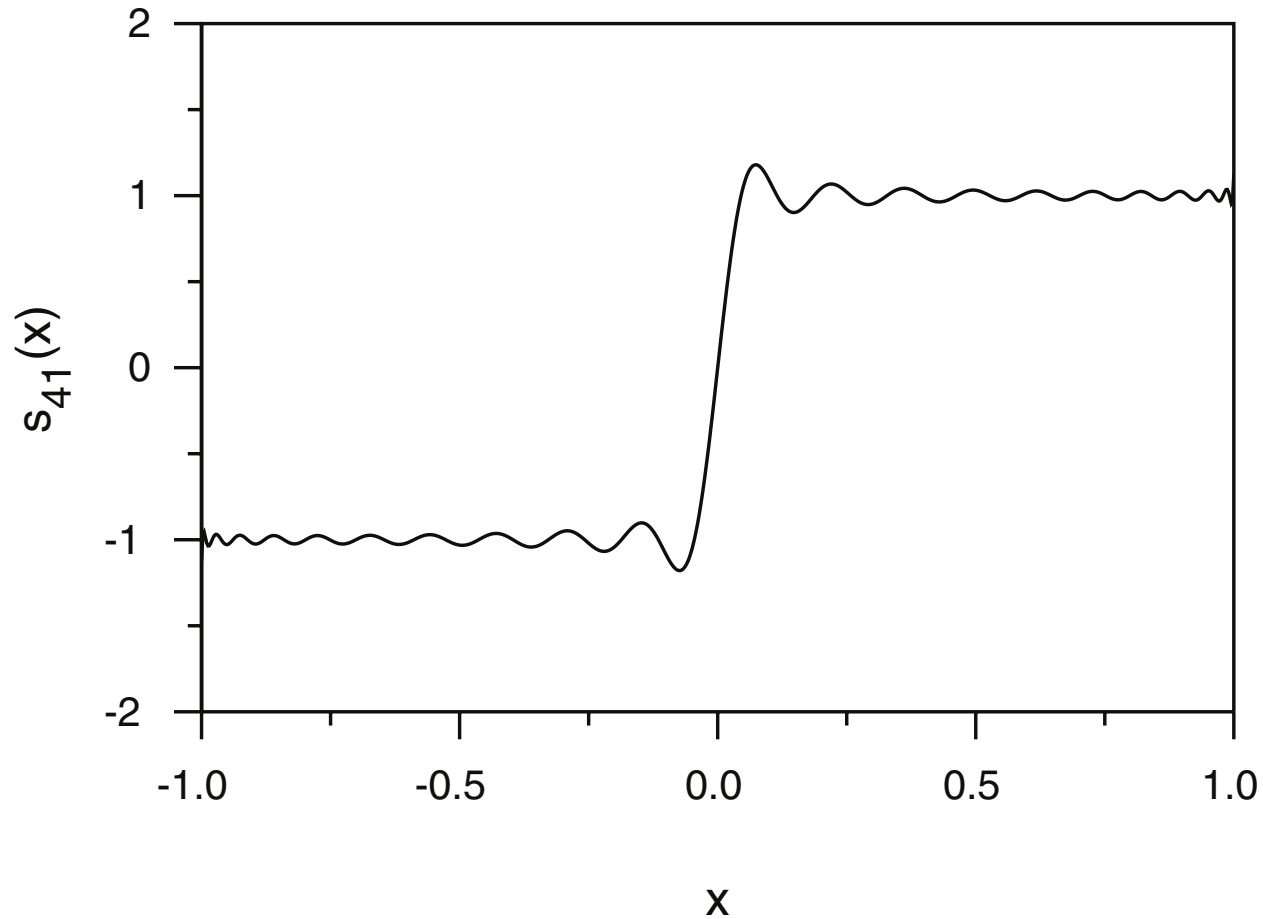


Figure 10.12: Partial sum of the Legendre series (10.416) for $k = 0$ through $k = 20$.