Numerical Analysis

EIGHTH EDITION

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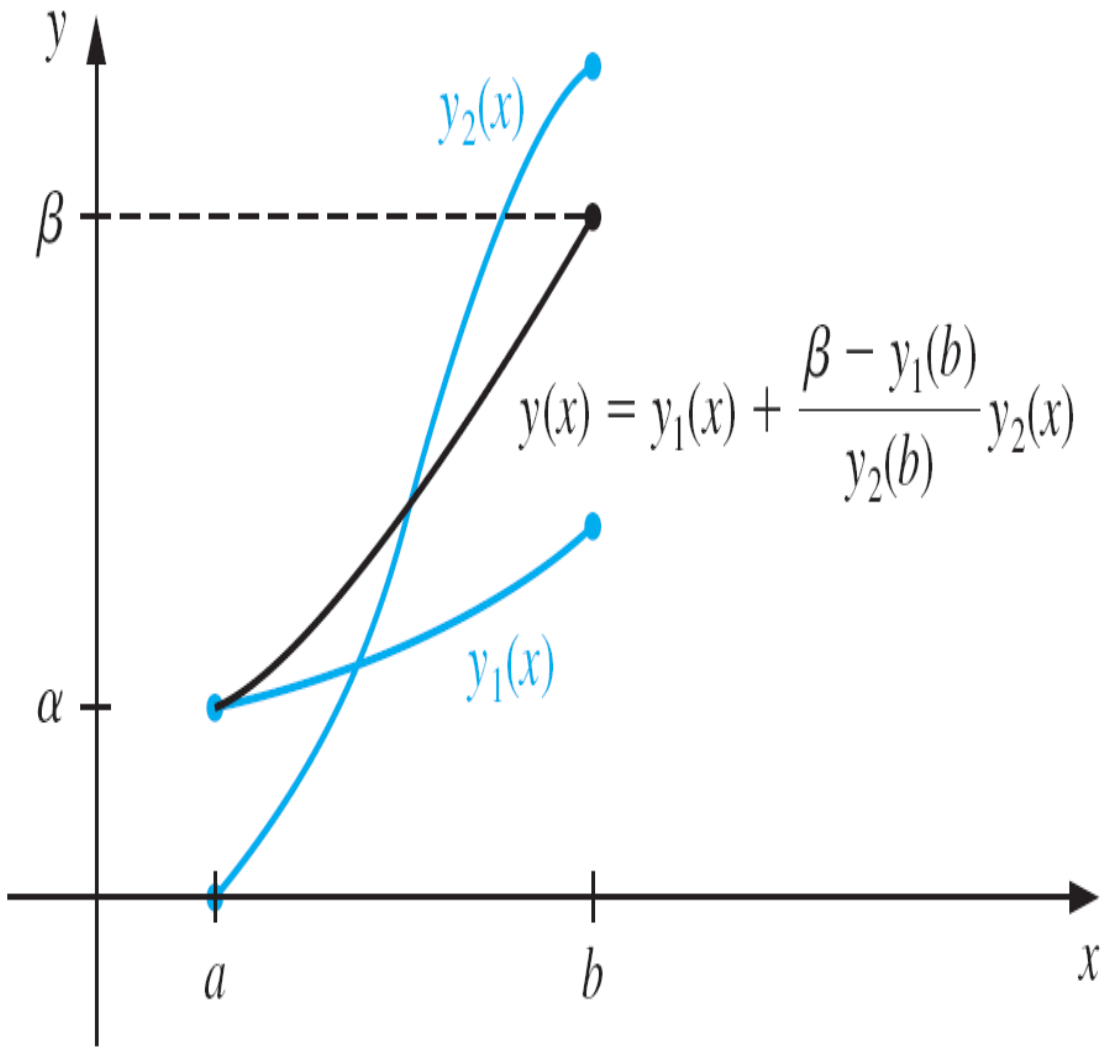
CHAPTER

11

Boundary-Value Problems for Ordinary Differential Equations

Figure 11.1



11.2 The Shooting Method for Nonlinear Problems

Figure 11.2

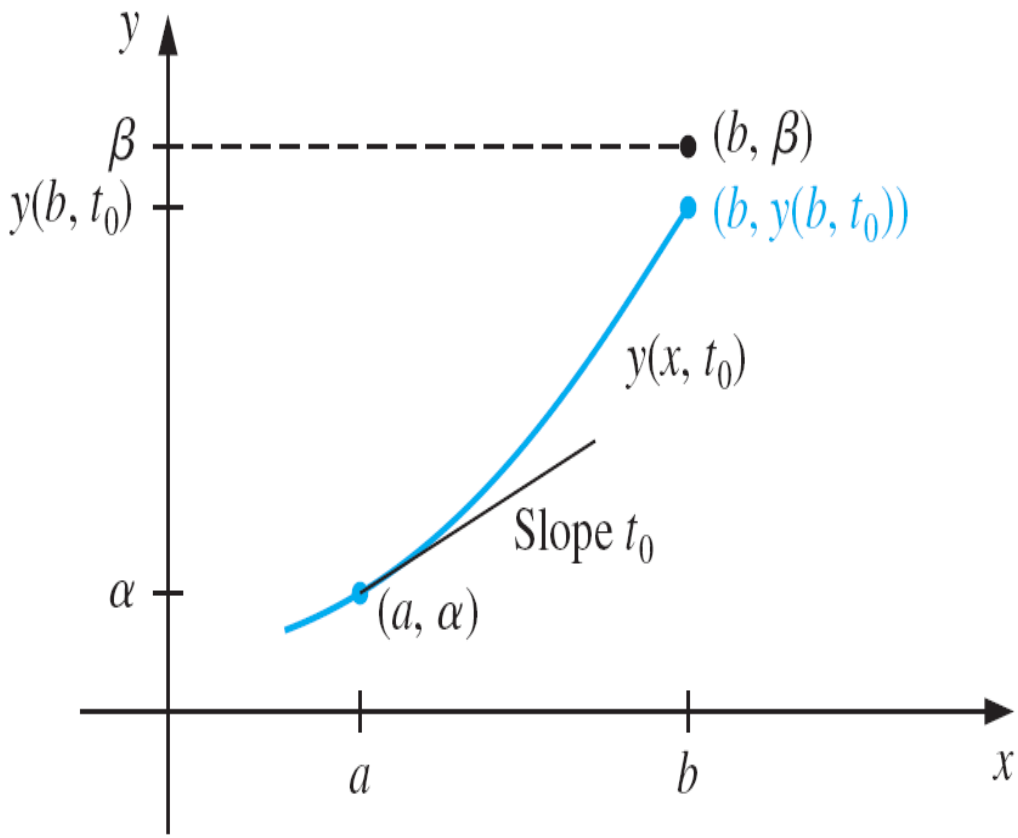


Figure 11.3

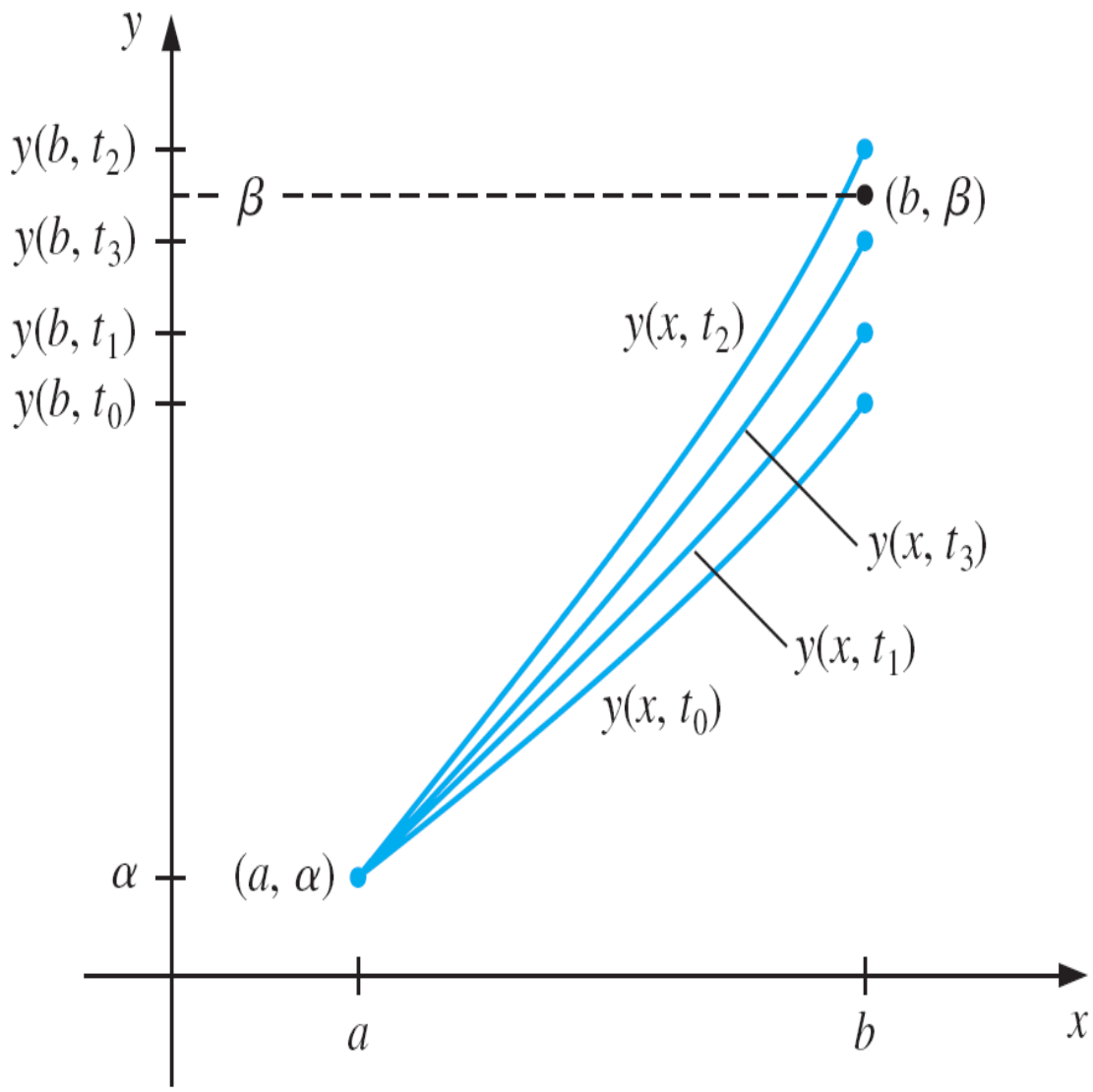

y
$y(b, t_2)$
β
$y(b, t_3)$
$y(b, t_1)$
$y(b, t_0)$
(b, β)
$y(x, t_2)$
$y(x, t_3)$
$y(x, t_1)$
$y(x, t_0)$
α
(a, α)
a
b
x

Figure 11.4

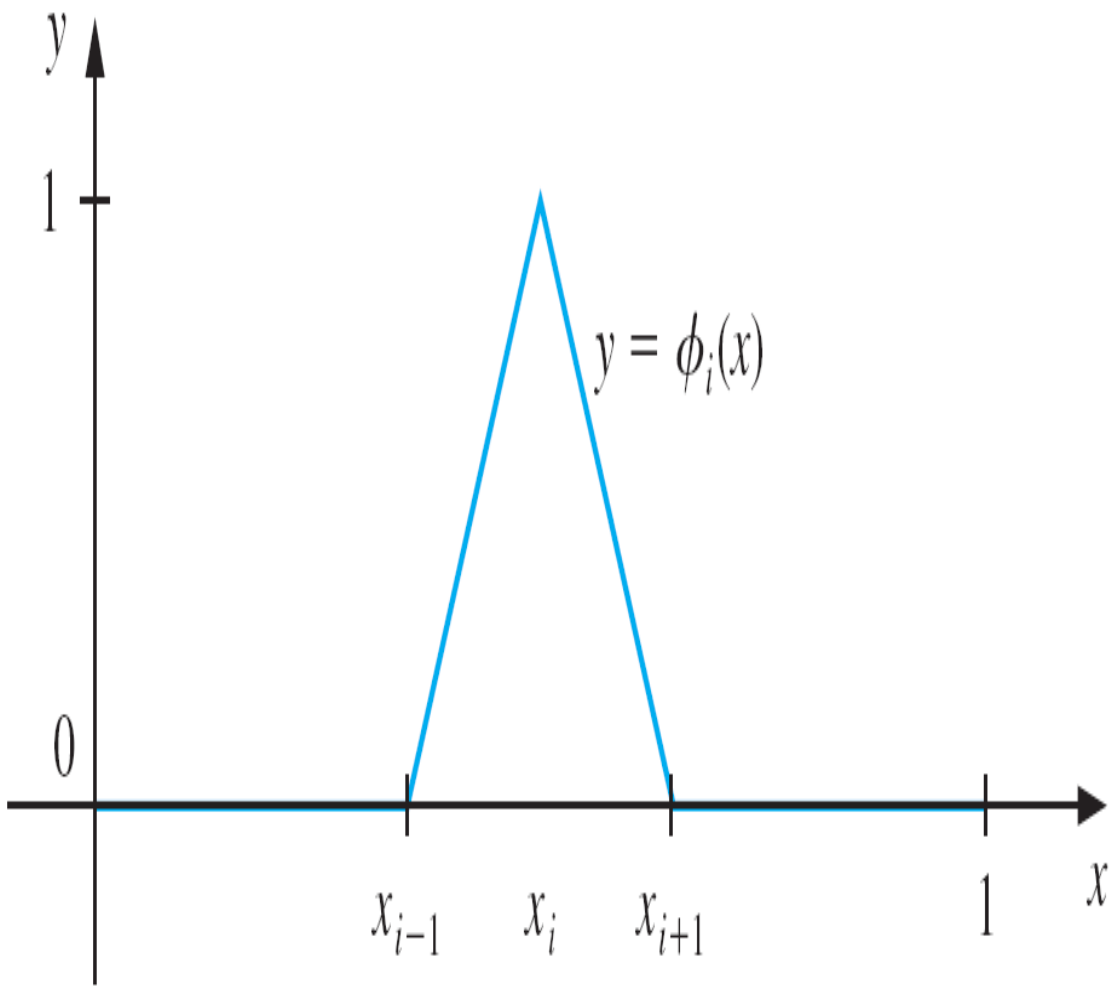


Figure 11.5

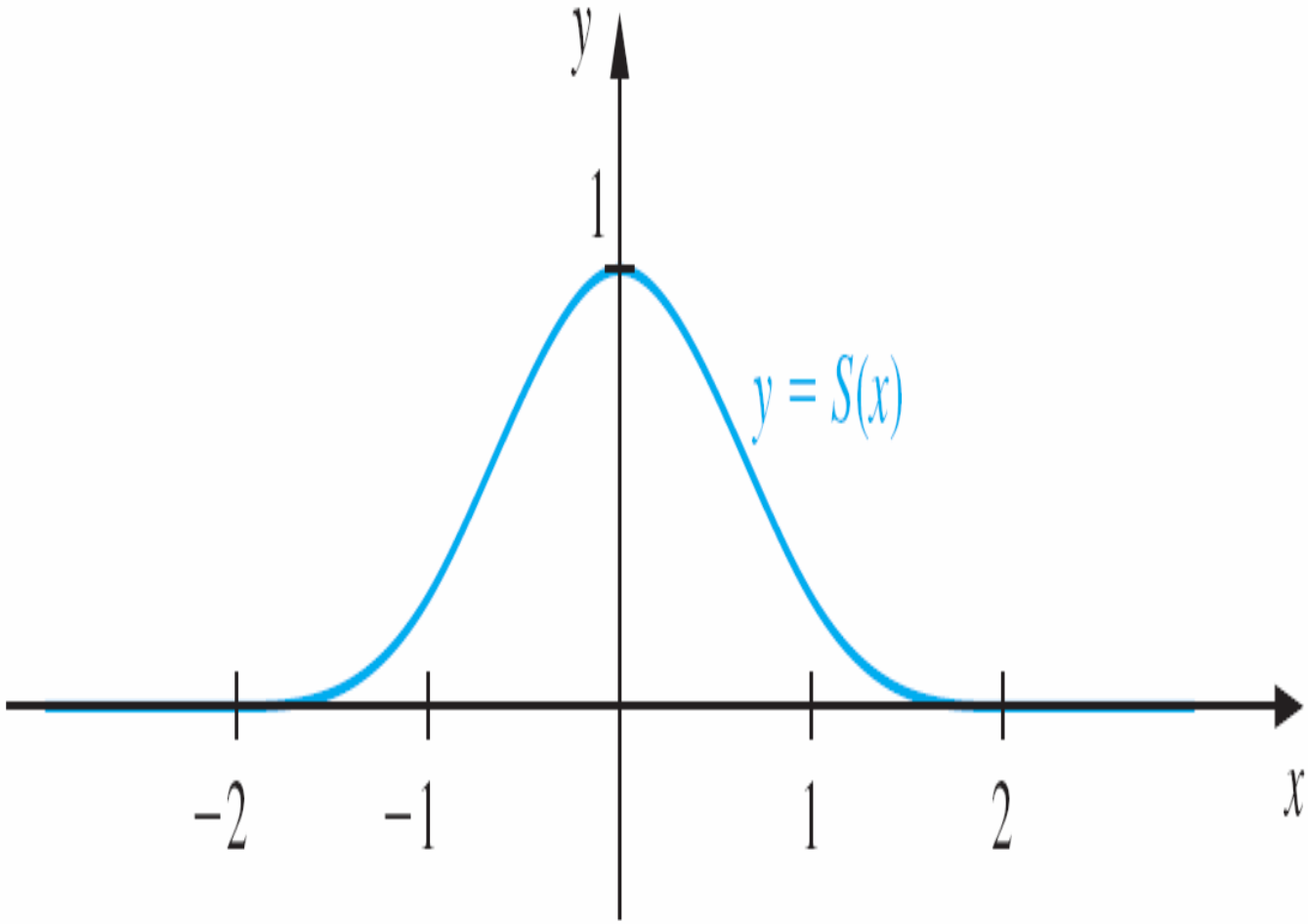


Figure 11.6

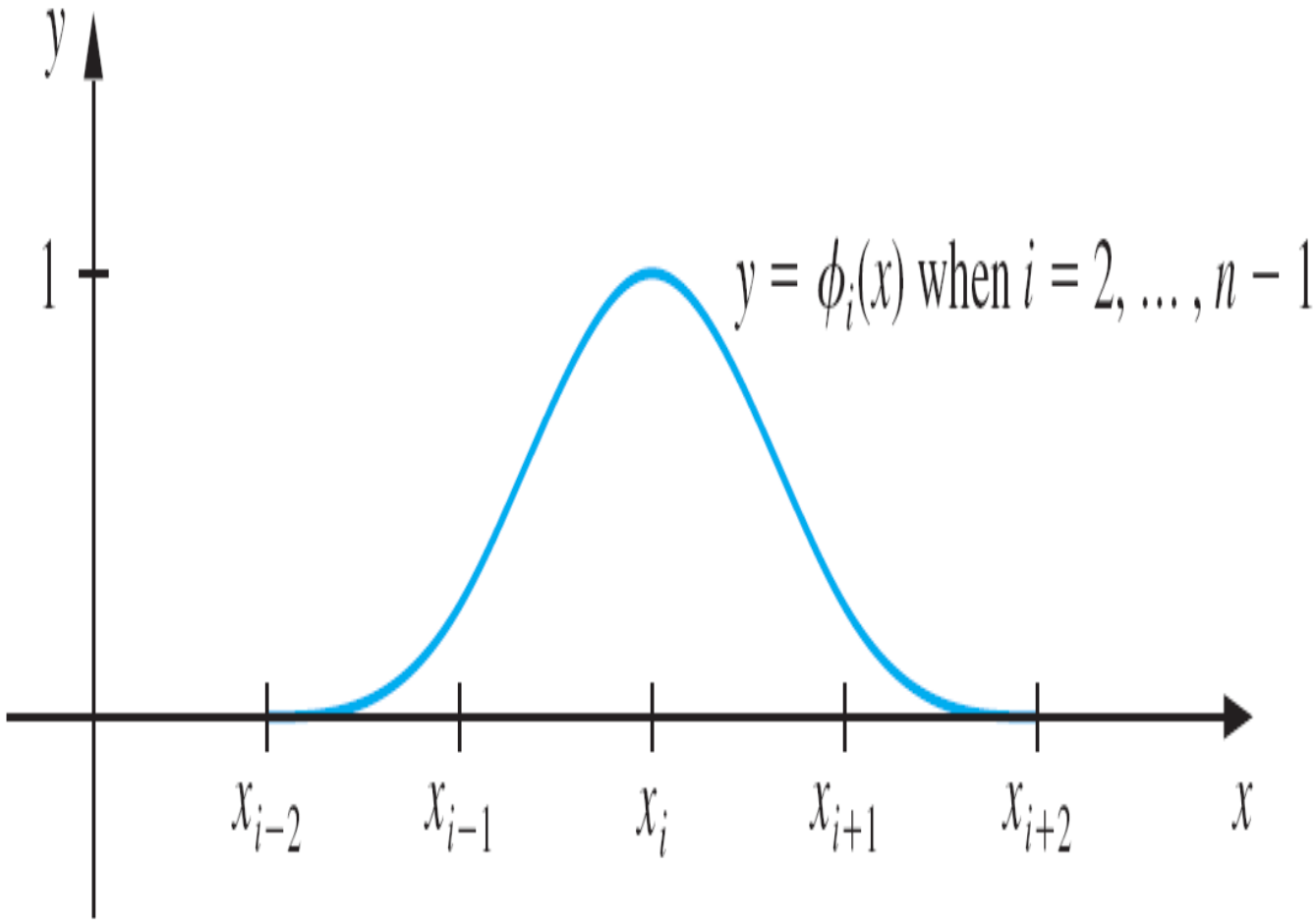
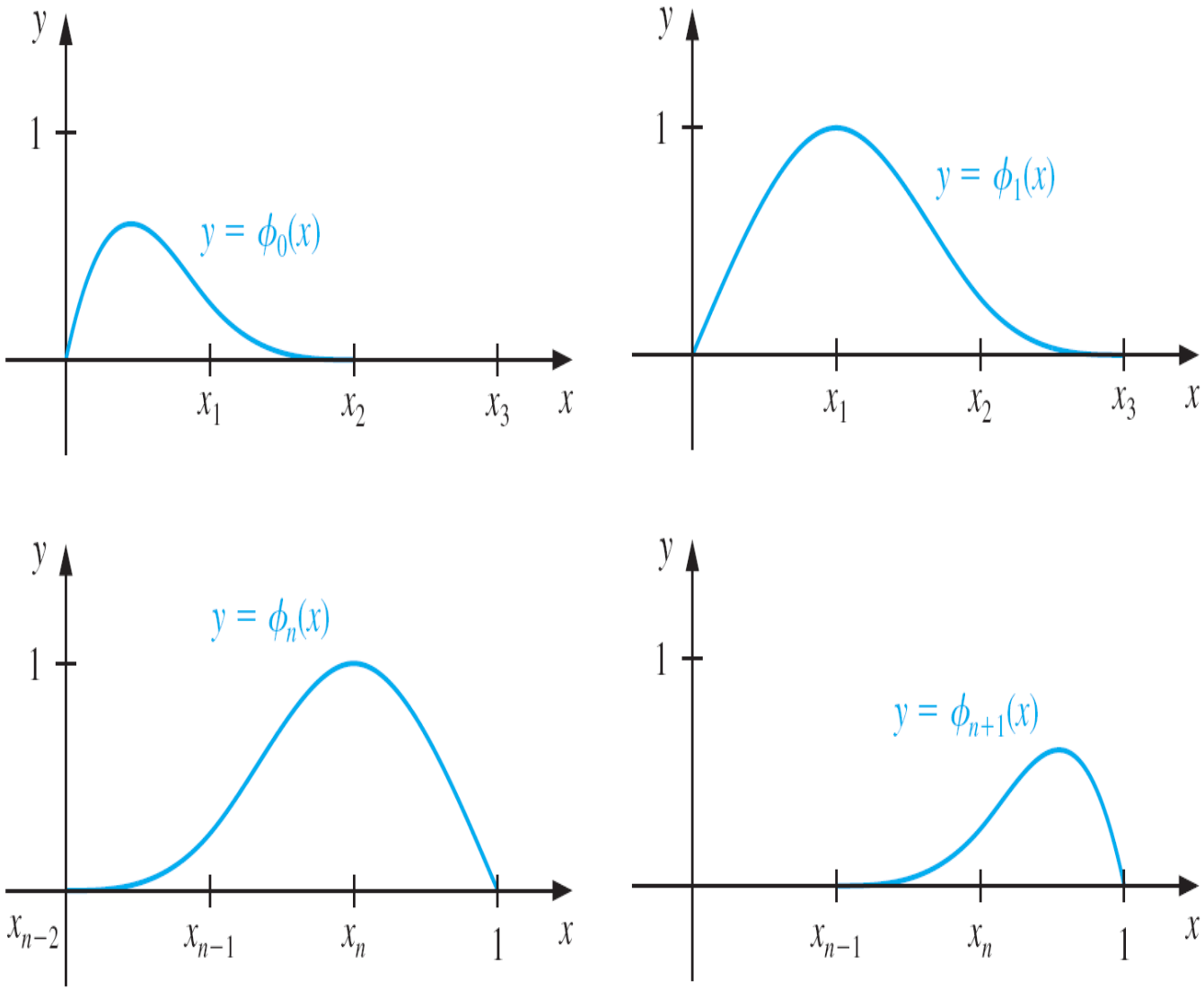


Figure 11.7


y
1
$y = \phi_0(x)$
x_1
x_2
x_3
x
y
1
$y = \phi_1(x)$
x_1
x_2
x_3
x
y
1
$y = \phi_n(x)$
x_{n-2}
x_{n-1}
x_n
1
x
y
1
$y = \phi_{n+1}(x)$
x_{n-1}
x_n
1
x