Interpolation polynomials

A

1. Construct the interpolation polynomial P corresponding to the information below. Specify the type of interpolation.

a)

x_k	0	1	2
y_k	0	1	0
y'_k	0	0	0

b) $P(0) = f(0),\ P'(1) = f'(1),\ P''(2) = f''(2)$

c)

x_k	5	6	9	11
y_k	12	13	14	16

d) $x_0 = 0$ simple node, $x_1 = 1$ triple node.

B

1. Construct the interpolation polynomial P corresponding to the information below. Specify the type of interpolation.

a)

x_k	0	1	2
y_k	1	3	21
y'_k	0	3	36

b) $P''(-2) = f''(-2),\ P'(-1) = f'(-1),\ P(0) = f(0)$

c)

x_k	1	2	4	6
y_k	14	15	5	9

d) $x_0 = 0$ simple node, $x_1 = 1$ triple node.