Phương pháp tính MAT1099

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Chapter 1

Error analysis

Exercise 1

Use the Bisection method to find p_3 for $f(x) = \sqrt{x} - \cos x$ on $[0, 1]$.

Solution 1

as hey

Chapter 2

Solution approximation

2.1 The Bisection Method

Exercise 1

Use the Bisection method to find p_3 for $f(x) = \sqrt{x} - \cos x$ on $[0, 1]$.

Solution 1

Table of iteration for $f(x) = \sqrt{(x)} - \cos x$ on $[0, 1]$:

n	a_n	b_n	p_n	$f(p_n)$
1	0	1	0.5	$-0.170\,475\,781$
2	0.5	1	0.75	$0.134\,336\,535$
3	0.5	0.75	0.625	$-0.020\,393\,704$

So $p_3 = 0.625$.