

MATH 170B: Discussion 2

Apr 2018

1 Bisection method

This Discussion we will talk about Bisection method.

1. What's the pros and cons of Bisection method?
2. What is the convergence rate of Bisection method?
3. If the bisection method is used starting with the interval $[8, 32]$, how many iterations we need to get the absolute error smaller than 10^{-5} ?
4. **Section 3.1.5** Determine the formula

$$n \geq \frac{\log(b_0 - a_0) - \log \varepsilon - \log a_0}{\log 2} - 1$$

5. Using the pseudo code provided in Page 76, write down a MATLAB function implementing Bisection method.