

AERE 361 Lab 11 Report

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2022-04-30

1 Exercise 1: Gauss Quad

- The big O notation is $O(n^2)$, which means execution is proportionally quadratic to input.
- Explanation: The code Gauss method and the other computational method have many embedded for loops, and if loops as well. The formula includes a for loop which causes the execution steps to grow proportionally to the the input squared
- Equation:

$$\int_a^b f(x)dx = m \sum_{i=1}^n ((w_i)(f(c + mt_i)))$$

2 Sources

2.1 Course Material:

- Lab 11 Manual
- Lecture Notes

2.2 Online Sources:

- <https://valgrind.org/info/> : via lab manual
- medium.com/algorithm-time-complexity-and-big-o-notation : via lab manual