PHYS3142 Lab 3 Solution

Suggested solution by NG Ka Ho, Tony

ps: for solutions of the other parts, please refer to the .py file

Part 1, c, i

(5 marks)

Part 1, c, ii

We prove by Taylor’s expansion:

(10 marks, accept alternatives)

Result parts:

We compare the best result obtained from parts (a) and (b) respectively with the result in part c (2.0348053268)

|  |  |  |
| --- | --- | --- |
|  | Value | Fractional Error |
| Results in (a) | 2.03463119859 | 8.6x10-5 |
| Results in (b) | 1.97156026655 | 0.031 |

(5 marks)