

Examination project in Practical Programmin

Implementation of Fifth root

D.V. Fedorov

March 11, 2016

Abstract

The fifth root is implemented via a solution of the quation $t^5 - z = 0$.

1 Introduction

2 Theoretical question

I got the theoretical question number 7 from homework number 10:

"Find the files `gsl-multimin.h` and `gsl-multiroots.h` in your box."

The answer is:

`/usr/local/include/gsl/gsl_multiroots.h`.

3 Implementation

Inline math is like that: $\alpha_5^2 = \beta$.

Displayed math is like this:

$$\int_{-\infty}^{+\infty} e^{-x^2} dx \approx \sqrt{\pi}. \quad (1)$$

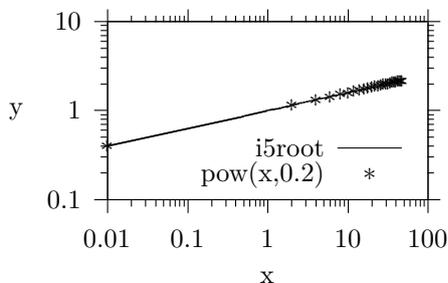


Figure 1: The implemented `i5root(x)` compared to the `pow(x,0.2)` from C standard library.

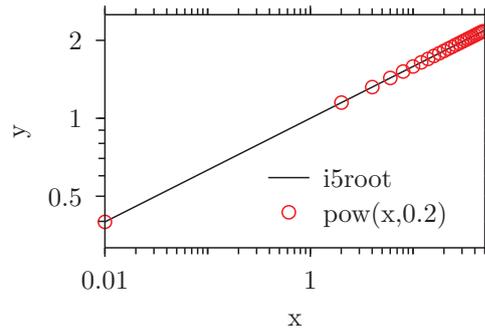


Figure 2: The implemented `i5root(x)` compared to the `pow(x,0.2)` from C standard library.

4 Results

5 Conclusion

6 Appendix