Assignment 4

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Absract: A few sentences summarizing the topics of each problem. The document should be in APS PRB format.

I. PROBLEM 1

Here I look to solve the following equation using the Numerov Algorithm:

$$u"(x) = -4\pi^2 u(x)$$

I created a python simulation that ran the algorithm along with an equivatent sine curve to compare to. The Numerov simulation is plotted in black and the sine curve in blue.
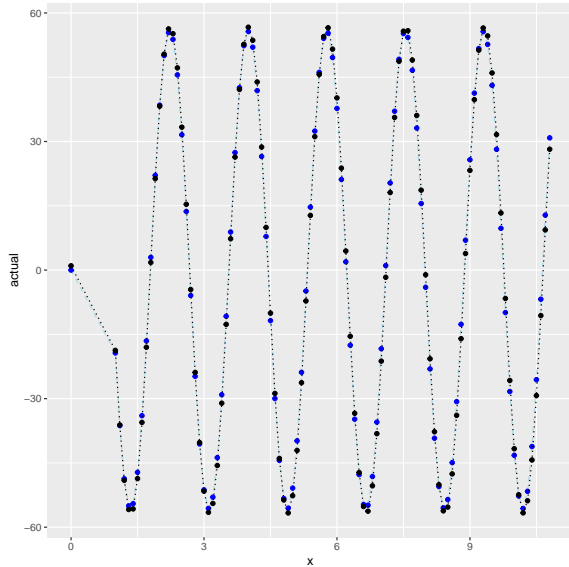

FIG. 1. Numerov vs. x

II. PROBLEM 2

III. PROBLEM 3A

IV. PROBLEM 3B

[1] T. Pang, *Introduction to Computational Physics*, Cambridge University Press (2006).