

# Numerical Analysis Homework #5

due 2021 DEC 21, 9:50 a.m.

## Caution:

- To get full credit, *you must write down sufficient intermediate steps*, only giving the final answer earns you no credit!
- Please make sure that your handwriting is recognizable, otherwise you only get partial credit for the recognizable part.

## 1 Theoretical problems

Answer all questions in Section 5.5.1 in the notes.

The first three problems weigh 6 points each while the last problem weighs 12 points. Thus the number of total points in this subsection is 30.

## 2 C++ programming

Answer all questions in Section 5.5.2 in the notes. Each of the two problems weighs 10 points.

## 3 Extra credits

Additional 10% credits will be given to you if you typeset your solutions in  $\text{\LaTeX}$ . You are welcome to use the  $\text{\LaTeX}$  template available on my webpage. You can also get partial extra credit for typesetting solutions of *some* problems.

**Note:** If you choose to typeset your solutions in  $\text{\LaTeX}$ , you still need to turn in a hard copy in class. In addition, please upload your latex source (.tex) and supporting files in a single zip file (**format:** YourName\_Homework5.zip) to the course email NumApproximation@163.com.