

Midterm 1

APPM 4600 Numerical Analysis, Fall 2025

Exam date: Wednesday, October 8, 6 to 7:30 PM.

Instructor: Prof. Becker

Revision date: 10/8/2025

Instructions You have 1.5 hours. You may use a calculator (but not on your phone); no other electronics are allowed. You may use a 3"×5" notecard, handwritten front-and-back, with notes, but no other notes (nor textbook) are allowed. You may write directly on the test, and use extra blank paper as needed. When finished, please upload to Gradescope. Note that not all problems are equally weighted (and the weight may not be related to difficulty), so we suggest you use your time strategically.

Problem 1: [15 points].

Problem 2: [20 points].

- a) ...
- b) ...
- c) ...
- d) ...

Problem 3: [20 points].

- a) ...
- b) ...

Problem 4: [15 points].

- a) ...
 - i. ...
 - ii. ...
- b) ...

Problem 5: [10 points]. (this question is on the next page)

figs/2025_Midterm1_a.pdf

figs/2025_Midterm1_b.pdf

Figure 1: Plots for Problem 5

No justification is needed for this question

- a) ...
- b) ...

Problem 6: [20 points].

- a) ...
- b) ...