IAM 550 Introduction to Engineering Computing
Computer Lab 7
Loops redux, integration
J. Raeder, October 22/24

Objectives:

- Understand for loops
- Learn to use functions and function handles.
- Use simple integration algorithms

Deliverables **due no later than 2 days after the end of your lab session:**

A MATLAB diary for your laboratory session (25% of your laboratory grade). This should be submitted via blackboard as an assignment no later than 2 days after your lab.

Deliverables **due at the beginning of your next lab session (October 29 or 31):**

No lab report this time, except for the header page, and the m-files as appendices.

Task 1 of 1

Write MATLAB code to calculate the integral

$$\int_{-10}^{10} \frac{1}{x^6 + x^2 + 1} dx \ .$$

using the left, right, and midpoint Riemann sum, as well as the composite trapezoidal rule. In each case use N=100 function evaluations. The integrand should be a separate function file, and you should use *for* loops to compute the sums.