

Homework 2–21-124, Calculus II for Biologists and Chemists

Name: _____
Section: _____

Instructions: Complete the following problems, clearly labeling the problems. Staple this sheet, with your name and section filled in, to the top of your work. Failure to attach this sheet will result in a one point deduction in the grade. The assignment will be graded out of twenty points.

DUE: Friday, January 29, 2016

Book Problems

- Section 7.3: 38, 44, 53
- Section 7.4: 4, 8, 12, 20, 22, 26, 28, 32, 36, 38
- Section 7.5: 4, 8, 14, 18, 24

Other Problems

In addition to the endpoint, midpoint, and trapezoid approximations, we can combine the trapezoid and midpoint approximations into another approximation: Simpson's Rule. We use both the midpoints and the endpoints of the sections of the partition to find the Simpson's Rule approximation:

$$S_{2n} = \frac{T_n + 2M_n}{3}.$$

1. Find M_3 and T_3 for

$$\int_0^1 e^{x^2} dx.$$

2. Use the result above to find S_6 for

$$\int_0^1 e^{x^2} dx.$$