Written Assignment 6

Due by the beginning *of class on Monday, October 2, 2017.*

1 Putting all the integration techniques together!

Chapter 7.5: 8, 13, 14, 22, 25, 26, 27, 37, 38, 51, 58, 63, 64, 75, 81.

2 Approximate integration.

- Finish the problem we began in class by calculating $\ln 2$ with error of less that .001 using Simpson's rule. Write your answer as a fraction in lowest terms. (So don't use a calculator, unless it adds fractions without converting them to decimals. Anyway, using a calculator would miss the point!)

- Calculate $\ln \frac{3}{2}$ with error less than .001. Be sure to justify that your error is within the required limit, and use the minimal number of subintervals necessary to do so! (You may find it makes the calculation a little easier to use the fact that $\ln \frac{3}{2} = \ln 3 - \ln 2$, but it doesn't make much difference, and you will get the same answer either way.)

- Chapter 7.7: 30, 39.

3 Improper integrals.

Chapter 7.8: 5, 11, 12, 14, 22, 25, 26, 33, 34, 39, 53, 59, 65, 77, 81.

If you need more practice, you know what to do! Feel free to ask in class about any problem.