Review for Final Exam

Part I: Previous Exams

At least 90% of your final exam will look very much like your first three exams.

- Your first priority is to make sure that you can work all the problems on the old exams, including the takehome problem. Blank exams are posted on the final exam web page.

- In case it wasn’t clear, you WILL have to do Min/Max word problems on the final.

- Note that Chapter 2 requires you to compute derivatives using the limit definition. You MUST know the definition and you WILL see this problem on the final. You should also know that you CANNOT use L’Hospital’s rule on such a problem.

- After you make sure you can do all the problems on old exams you should practice on problem types. For instance, it’s not enough to be able to do the related rates problem on Exam 2. You have to know how to do any related rates problem. Similarly for Min/Max problems.

Part II: Section 5.5 and 5.6

There will be one or two problems from these sections.

- Be able to execute the substitution procedure. Know that you are locked in once you choose $u = \ldots$

- Know how to make appropriate choices of $u = \ldots$

- Be aware that these problems can be either “guess an antiderivative” or “compute an integral”. You need to know the difference and you need to be able to recognize the notation for each. As a reminder:

  $$\int f(x) \, dx \text{ means guess an antiderivative}$$

  $$\int_a^b f(x) \, dx \text{ means compute an integral.}$$