Mathematics 133 – Calculus with Fundamentals 1
Information on Final Examination
December 1, 2017

General Information

- The final examination for this class will be given during the scheduled period 11:30am to 2:00pm on Friday, December 15.
- Like the midterms, this one will be given *in our regular classroom*, Swords 359 (where our class has met).
- The final will be similar in format to the midterm exams but perhaps 1.5 times as long. I expect that if you are well prepared and you work steadily, then you should be able to finish the exam in about 1.75 hours. However, you will have the full 2.5 hour period to work on the exam if you need that much time.
- As on the midterms, you may use a calculator.
- No cell-phones, computers, or other electronic devices beyond a basic calculator may be used during the exam. Please do not bring them with you; they will be subject to confiscation for the period of the exam if you use them.
- I'm happy to try to find a time for a pre-final review session run either by me or by Tori. We can discuss this in class on Friday, December 8.
- I will also be available during exam week at the following times for "last minute" questions:

- Monday, December 11, 3:00pm - 4:45pm
- Tuesday, December 12, 8:00am - 12:00noon
- Thursday, December 14, 8:00am - 10:00am

Topics to be Covered

- This will be a *comprehensive* final – it will cover all the topics we have studied this semester, with roughly equal weight given to the four sections of the course corresponding to the four midterm exams, although material from earlier parts of the course may turn up as facts you need to know about certain functions in other types of questions, etc.
- The final exam from the last time I taught this course in 2015, and solutions for those problems, are posted on the course homepage so you can see the length and range of topics to expect.
- See the review sheets for the four midterms for a detailed breakdown of the topics we studied earlier. Those review sheets are now reposted on the course homepage if you need another copy of any of them.

Philosophical Comments and Suggestions on How to Prepare

- The reason we give final exams in almost all mathematics classes is to encourage students to "put whole courses together" in their minds. Also, preparing for the final

should help to make the ideas "stick" so you will have the material at your disposal to use in later courses. *This is especially important if you are preparing to continue to MATH 134 or 136 – everything we will do there is based on material from this semester's course and it will be difficult or impossible to do well in that course unless you have the material from this one under very good control.*

- It may not be necessary to say this, but here goes anyway: *You should take this exam seriously* – it is worth 20% of your course average and it can pull your course grade up *or down* depending on how you do.
- Get started reviewing early and do some work on this *every day* between now and the date of the final. Don't try to "cram" at the end. There's too much stuff that you need to know to approach preparing that way!
- Review videos and your class notes in addition to the text, especially for topics where you lost points on the midterms. There are a lot of worked-out examples and discussions of all of the topics we have covered there.
- Look over the midterm exams with the solutions. Go over your corrected problem sets. If there were questions where you lost a lot of points, be sure you understand why what you did was not correct, and how to solve those questions.
- Be sure you actually do enough practice problems so that you have the facility to solve exam-type questions in a limited amount of time. *Even if you have saved solutions for practice problems from the midterms*, it is going to be much more beneficial to do practice problems starting "from scratch" rather than just reading old solutions. Remember, the goal of the course is to get you to be able to develop solutions to these problems yourselves, not just to understand solutions that someone else (that includes you, one or more months ago!) has written down. Another analogy – as most of you know from your study of languages, it's much easier to understand another language passively than it is to actually use a language actively yourself (for instance, to form your own complete, grammatically correct sentences). The goal of this course is to make you reasonably proficient "calculus speakers" and there's no substitute for active practice on those skills.