

## Andrew's Teaching Portfolio

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Most of what follows is a collection of quizzes that I wrote for my classes. While they are not perfect, there are parts of them that I think worked well. Note that the course coordinator wrote the tests and chose most of the homework (which was online and graded automatically). Occasionally, I also assigned additional handwritten homework.

### Linear Algebra: Spring 2016

In the likely event that the following list is too long, I recommend looking at quizzes 1 and 2 (and a couple other random quizzes). Note that “rref” stands for reduced row echelon form.

(Sorry, the quizzes are not currently available. I am teaching Linear Algebra at another university and plan to reuse some of the problems from some of the quizzes.)

### Calculus I: Fall 2015

Here is the programming project that the class did.

*My reasons for the assignment:* For applications, understanding definite integrals is crucial. Also, some of them can only be calculated by use of a computer (or tables/tedious calculations). Hence, I wanted to make sure that my students (a) understood definite integrals, and (b) were comfortable with the fact that a computer can easily compute certain definite integrals. Also, one thing I like about group work is that more challenging assignments can be tackled by a group than by an individual. Further, it is important to learn how to work well on a team.

*Notes on the challenge problems:* The first challenge problem at the end was *not* very well thought out, especially the “hint.” Certainly there is a much better way of obtaining upper and lower bounds than the method I had in mind. One thing I like about the third challenge problem is that a popular online computational engine could not compute it, saying “Standard computation time exceeded...”

### Calculus II: Spring 2015

Quiz 2, Quiz 4, Quiz 7, Quiz 11

I try to include as many things as is reasonable in a quiz. For example, problem 4(b) in quiz 2 tests several basic properties of logarithms. Normally, each problem has fewer ingredients, but a somewhat tricky logarithms question seemed appropriate for a calculus class.

A more typical quiz where I try to include a lot is quiz 4. In lectures, I try to emphasize the different growth rates of different functions. Hence, I want my students to eventually be able to efficiently “figure out” problems 3 and 4 (from quiz 4). In those problems, the lesson is that exponential functions grow much faster than polynomials. Similarly, polynomials grow much faster than logarithms.

### Calculus I: Fall 2014

Quiz 7, Quiz 10, Quiz 12:

The bonus problems at the end of quiz 12 begin with the paragraph preceding problem 5. Also, on quiz 10 problem 1, I gave full credit if they wrote a definition that works for continuous functions  $f$ . (I have since specifically added that hypothesis in the problem.)

At the beginning of the semester, I gave this review quiz (for no points).

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Also, feel free to browse my previous courses. The quiz study guides are at the "Old Announcements." Some were detailed, and some weren't.

Here are some of my student evaluations.

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