

## Information Sheet for Math 5, Fall 2008

MWF 10, T 1–3, Seeley Mudd 206

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### The Philosophy of Math 5 and 6:

1. These courses cover the material of Math 11 at a slower rate. In particular, there is more time to absorb the ideas.
2. We review the necessary parts of algebra and trigonometry when they are needed. This is where the “Just-In-Time” book comes in.
3. Math 5 introduces the first major idea of calculus, the derivative. We will also review strategies for getting control of complicated algebraic expressions.
4. Math 6 introduces the second major idea of calculus, the integral. We will also study the calculus of trigonometric functions and exponentials.
5. Calculus is often best seen through its applications in other fields. Since some students in the course are interested in Chemistry and Economics, we will highlight these applications.

### Textbooks (for both Math 5 and Math 6):

1. *Single Variable Calculus, Chapters 1–7*, by James Stewart. This is available to Amherst Books (next to Subway). If you see a copy of *Calculus, Single Variable, Volume 1*, be careful, since this only includes Chapters 1–6. You really need the version that has Chapters 1–7, and this version is *only* available from Amherst Books. The version we use says “Amherst College” on the cover.

Note: If you end up be a different version of the book, *be sure* to show it to me.

2. *Just-In-Time Algebra and Trigonometry for Calculus*, 3rd Edition, by Guntram Mueller and Ronald Brent. This is also available at Amherst Books.

### Structure of the Course:

Every week there will be a quiz or a test. A quiz (10 of them during the semester) lasts 30 minutes and occurs on a Friday, while a test (three of them, on September 30, October 28 and December 9) is given in the 1–3 time slot on Tuesdays.

Also, every week (except for exam weeks) you will do a worksheet on Tuesdays. Doing a worksheet can take a while, which is why we need two hours on Tuesdays. You will do the worksheets in groups of three or four. As you do the worksheets, our lecture TA, Ben Krause, and I will circulate around the room to see how the groups are doing. Ben will also hold evening office hours and run review sessions for exams.

### Grading:

2 best exams, 100 points each	200 points	17% each
60% of worst exam, 60 points	60 points	10%
10 quizzes, 20 points each, drop 3 lowest	140 points	23%
Final exam	200 points	33%
Total	600 points	100%

The course is graded on a curve where the average grade is usually set between a B and B–. On each test, I give an *approximate curve* to give you an idea of how you are doing, but what counts is the *final curve*, which is based on the sum of all tests and quizzes.

On quizzes and tests, you are graded on both *the final answer* and *the clarity with which you show the work involved in getting the final answer*. This is very different from high school, where only the final answer counted. You need to make sure that you *communicate your work clearly and unambiguously*. If you are sloppy or misuse notation in the intermediate work, I will take off, even if the final answer is correct. The bottom line is that in this class, the notion of “answer” encompasses *all* of the work involved in doing the problem.

Note that homework does not play an explicit role in the grading scheme. Homework papers are graded as “√+”, “√” or “√-”, and I use these scores to help decide borderline cases. But homework is *crucial* because it is where you get an **active** knowledge of what’s going on, as opposed to the **passive** knowledge gained by listening to lectures or reading the text.

You will need to bring a similar **active** mentality to Tuesday classes when doing worksheets. You don’t want to fall into the trap of “just getting the work done.” The goal of a worksheet is to *fully understand the problems in the context of what’s going on in class*. Also be sure you can explain your solutions to the other people in the group. Being passive in a group doing a worksheet is a recipe for disaster.

### **Asking Questions and Coming to Office Hours**

Math 5 works best when it is a conversation between you and me. My part of the conversation begins during the lecture, but it also continues after class and in my office hours.

*Your part of the conversation is equally important.* This can happen during class (when you ask a question about an unclear point), after class (when you ask a question to clarify your understanding), in my office or via email. I like talking to students—please come by!

Office hours: TBA

Other times besides my listed office hours are available—just send me email to arrange a time.

### **Using Your Notes**

I encourage you to take careful notes and *read them over daily*. This is important because not everything of importance gets written on the board. If you have any questions about what I did during the class, please come by my office hours. As I said above, I like talking to students

### **Missing a Class or Test or Quiz**

Missing a class: If you miss a class, you need to get the notes, read them over, and also read the corresponding section of the book. If anything is unclear after doing this, come see me during office hours and we can talk over what’s bothering you.

Missing a test: If you are ill, notify me *as soon as possible*. If you have a conflict, you need to inform me well in advance, *preferably at least a week*. Note that the exam dates are listed above. Make-ups are possible for exams, *provided you follow these guidelines*.

Missing a quiz: There are *no* make-ups for quizzes. This is why I drop the three lowest. If you miss a quiz due to illness, a trip home, or an athletic contest, this will count as one of the quizzes you drop.