



A User Guide for Your Mathematics Class

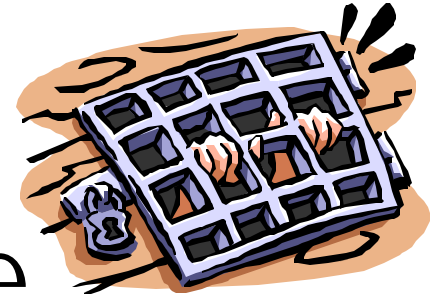
by
Alberto Corso

Tuesday, 26 August 2008

A session on how to excel in introductory
math courses such as MA 108R, 109, 110,
111, 113, and 123.

Mathematics faculty will share tips and advice
on how to succeed in their classes.

High Schools vs. College



- You will NOT be checked every day on homework assignments
- You will NOT be given practice tests almost identical to the actual exams
- Professors are different from high school teachers.

You have to learn how to be responsible.



Myself?

From the K-book of last year

Dr. Alberto Corso



Department: Mathematics
Hometown: Verona, Italy
Favorite Vacation Spot: Brazil
Favorite Food: Ethnic Food
Favorite TV Show: *Grey's Anatomy*
Car: Volkswagen Golf
Hobbies: Watching movies, travel, reading



What are you most proud of?
When I finished college, I decided that I wanted to go to the United States, and I did!

What are your pet peeves?
Squeaky noises at night, like a dripping faucet.

What are your retirement plans?
Go back to Italy and travel.

If you could change one thing about the world, what would it be?
Change the people who live in the world; make them more reasonable and less judgmental, more open-minded.

If you could change one thing about UK, what would you change?
I would like for students to be on campus all weekend, and I would build a new Student Center.

If you were a cartoon, who would you be?
Someone in the Donald Duck family, Donald Duck or Uncle Scrooge.

Which superhero would you be?
Spiderman, definitely not Superman!

What advice would you give to students that you learned the hard way?
Have a good balance between academics and fun.

What is one interesting thing about you that students do not know?
I am an excellent cook!



How NOT to Impress Your Professor: Some Tongue-in-Cheek Tips

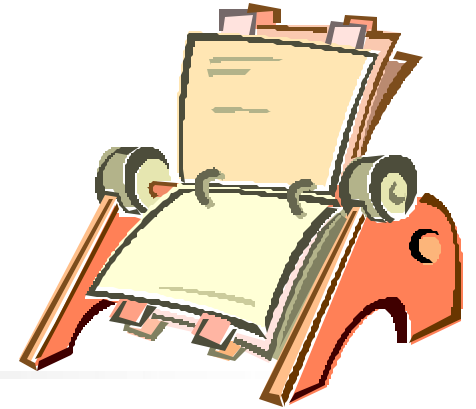
- Class time is a good opportunity for catching up on your work in other classes. It can also be well-spent reading the newspaper, talking with a friend, or taking a nap. Professors love to see students use their time efficiently.
- Avoid coming to class prepared. Reading the text in advance, for instance, means you'll lose a sense of spontaneity. You wouldn't want to "spoil" a lecture, would you?
- Professors are really flexible about assignment due dates. If you turn something in late, don't worry. It actually helps them to spread out the workload. Penalties? Never.
- When someone asks a question in class, pay no attention. The professor will be happy to answer the same question when you ask it a minute later.
- Professors need help remembering what time it is, so begin packing your books five minutes before class is over. They will appreciate the reminder and be impressed with your concern.
- Don't drop by a professor's office to chat—they will be far too busy to be concerned with you. Remember, they are not in the profession because they love working with students, they are in it for the money.

Read!!!!



- Familiarize yourself with the online class website (syllabus, course policy, etc.)
- Read the textbook before going to class
- Read all handouts you are given
- Use the library and other textbooks

Make friends in class and in the dorms



- You can trade class notes when you have to miss a class
- It is easier to study in a small team
- Explaining to somebody else helps you understand the material better
- Ask advice from more senior students

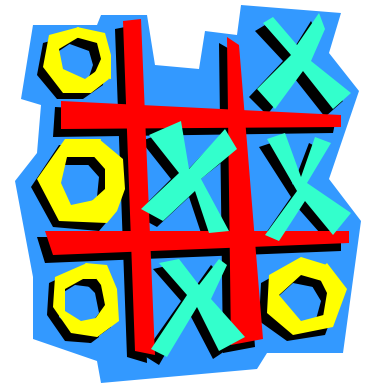


...You never know...



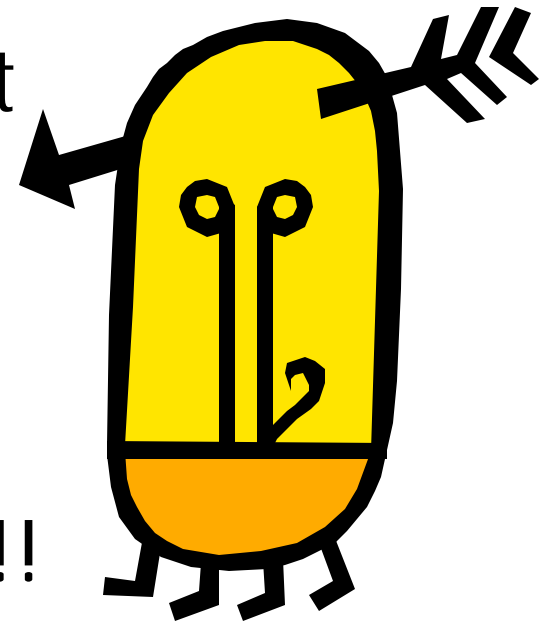
Classroom attendance

- Go to class on a regular basis
- Quit saying: "It is a waste of time to go to class because the instructor can't teach"
- Class time is not flexible: Don't come late and do not leave early. It is disruptive (disrespectful) to other students!
- Don't use class time to text message friends or catch up on missed sleep!!!!
- Don't bring wireless laptops to chat online or to work on other classes!!!!



Class participation

- Don't be shy!!!!
- Ask questions...within reason
(otherwise seek outside help)
- You are not alone!!! If you didn't catch a concept it is likely that other people in the class didn't catch it either.
- Teachers are human(?) beings!!!!



Different point of view

- Try to be flexible
- Learn a different way to solve problems
- Don't say "My high school teacher taught me in such and such way...I don't get what you guys are saying"
- In general, we will not teach short cuts but we will emphasize "concepts"





Foreign Professors and TAs

- UK is a research institution and attracts many scholars from all over the world.
- You should take advantage of this fact, since (after all) we live in a global society.
- Different accents ... are “cute” ... and you will get used to them in a short time.

Online Homework



- Major courses such as MA 109, 123, 113 have online homework managed by WHS (=Web Homework System)
- You can attempt to answer questions MULTIPLE times
- If it takes multiple attempts to solve many of the problems, then you are not ready for the test

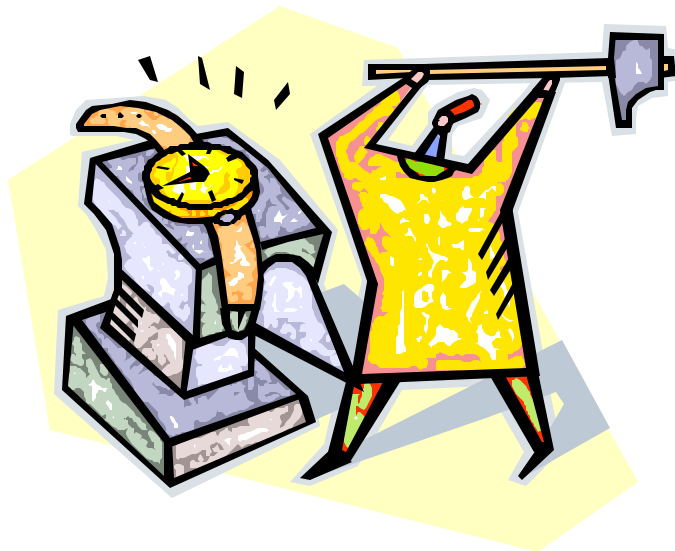
Time Management

- Online homework for MA 109, 123, 113 is due at midnight
- Don't wait until the last minute to do your homework
- It is unlikely that you will get online feedback from your instructor at 11:57pm of the due date



Time Management

- The pace at which each course progresses might be very fast
- The 1st test will be easier (review material)
the 2nd and 3rd tests will be harder



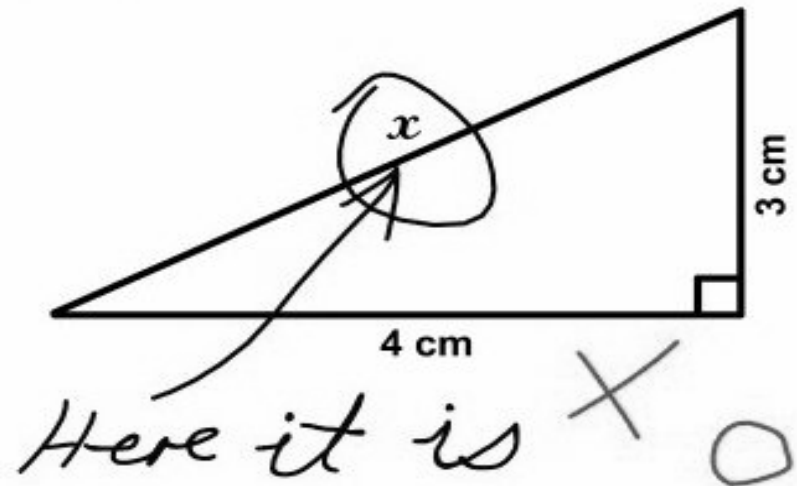
The final exam is always comprehensive...so it involves lots of reviewing.

So, plan ahead!!!

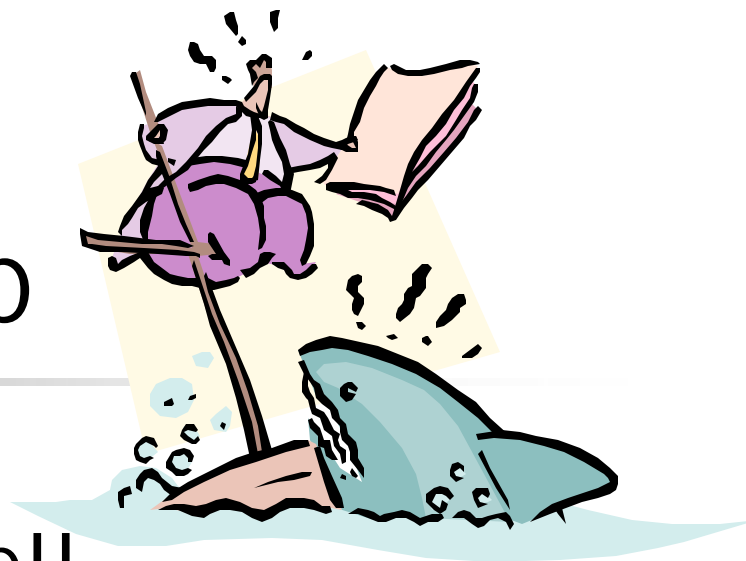
Read questions carefully!!!!

- Proofread your exams
- Don't finish your test in 40 minutes and then leave!!! You are given two hours.
- Read questions carefully and make sure you know what you are asked to do!!!

3. Find x .



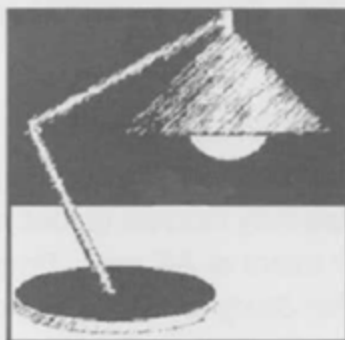
Where to get help



- DO NOT WAIT to seek help!!
- The Math Department and the College of A&S provide several venues where to get help:
 - The Study
 - Mathskeller
- I have brochures for you to pick up

Our Mission

Academic Enhancement provides programs and services to all students, free of charge, across all colleges in order to promote effective and efficient learning strategies that result in a more fruitful academic life. Academic Enhancement is dedicated to improving the academic experience of any and all students seeking to enhance their academic life at the University of Kentucky.



Academic Enhancement

The Study

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Lexington, KY 40526-0147
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Academic Enhancement

The Study

Study Smarter!

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Academic Enhancement (AE) is dedicated to improving students' overall academic experience at the University of Kentucky.

The Study, located on the 3rd floor of the Complex Commons building, is home to Academic Enhancement. *The Study* offers a welcoming environment and students are encouraged to come early in the semester and as often as they like to access any and all of our popular programs, including:

► Individual Academic Consultations

Free consultations with a learning specialist are available to any student in any college. Consultations usually last one hour, provide one-on-one discussion regarding effective study strategies, and can focus on any topics the student would like to address. To schedule your free appointment, please visit our website:

www.uky.edu/UGS/Study

► Peer Tutoring Program

A free, proactive, preventative model tutoring program provided by experienced, trained, supervised undergraduate students who have successfully navigated the courses for which they tutor. A regular schedule of tutoring is available for a wide variety of introductory-level courses including Math, Sciences, and Humanities.

► Guided Study Program

Students participating in group projects and study groups may request guided sessions led by peer tutors or AE staff. Bring your group to *The Study* to make the most efficient and productive use of your time.

► Customized Presentation Program

From all-day seminars to one-hour presentations, a learning specialist is available for a range of topics including time management, critical thinking, study strategies, and academic technology troubleshooting. These services are available to any group (Greek societies, clubs, teams, classes, residence halls, and community organizations).

► Study Smarter Seminar

An intensive, four-hour, non-credit earning seminar offered in several evening sessions each semester. The total cost of the seminar is \$25.00, which includes a formal learning assessment, four hours of instruction, and all course materials, which students may keep and use as a resource throughout the semester. Seminar topics may include time management, note taking, study skills, critical reading, memory enhancement, exam preparation, and more. Contact AE or visit our website for registration information.

► Tutor Referral Program

AE maintains a list of screened tutors that students or community members may contact in order to arrange for paid private tutoring.

Academic Enhancement

The Study
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Mathskeller

Hours: 9am to 5pm Monday to Friday when school is in session.

Location: CB 063, in the basement of the Classroom Building.

Web page: <http://www.mathskeller.org>

Ten reasons to visit the Mathskeller.

1. Stop by to study between classes.
2. Meet your instructor for office hours.
3. Ask for help from instructors in 100 level mathematics classes.
4. Meet with your study group in the seminar room.
5. Print out web homework.
6. Submit your answers to web homework.
7. Connect to the wireless network.
8. Have a cup of coffee.
9. Play a game of Scrabble.
10. Check your email (but only after you have completed your homework).



Yes, you can!

- Stop saying: “I was never good at math”
or “I am not a math person”
- You need to convince yourself that you can
succeed. It takes work!!
- Your teachers are here to help you.
Don't forget that!!



Why does math matter?

- If you want to succeed in math, you have to convince yourself that math matters.
- It is not just a set of rules or tricks, but it is a universal language that helps you describe phenomena around us.
- For example, Calculus describes how quantities change, and uses this description of change to give us extra information about the quantities themselves.

Example: Path of a ball

A ball is thrown across a playing field.
Its path is given by the equation:

$$y = -0.005x^2 + x + 5,$$

Where x is the distance the ball has traveled horizontally, and y is the height above ground level, both measured in feet.
What is the maximum height attained by the ball?



College Algebra Answer

- We use the method of completing the square:

$$y = \underline{-0.005 x^2 + x} + 5$$

- $= \underline{-0.005 (x^2 - 200 x)} + 5$

- $= -0.005 (x^2 - 200 x + 10000) + 55$

- $= -0.005 (x-100)^2 + 55$



Calculus solution

Given the function

$$y = -0.005 x^2 + x + 5,$$

we compute the derivative of the function

$$y' = -0.01 x + 1$$

and set it equal to zero

$$-0.01 x + 1 = 0 \rightarrow x = 100.$$

Now, find the value of the function when $x=100$

$$y(100) = -0.005 (100)^2 + 100 + 5 = 55$$



Consider majoring in math

- You could become a
 - math teacher
 - actuary
 - math economist
 - operations research analyst
 - cryptologist, etc...
- Visit our website:
www.math.uky.edu/~math/Undergrad

Enjoy the ride with us...



www.math.uky.edu/~corso