

Sinclair Mathnet

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FROM THE CHAIR



The need for more classroom space on campus has motivated the college to make plans for renovation of the Learning Resources Center (LRC). It shouldn't be too hard for anyone who has visited the LRC lately to understand why the college might have its eye on this space. First of all it is a vast amount of space. It occupies over 110,000 square feet. Compare this to the typical classroom that occupies 550 square feet. That makes the LRC the equivalent of more than 200 classrooms. Secondly, some would argue that the space isn't used very efficiently. Consider that 33 students and a teacher in a typical classroom use 16.2 square feet apiece. At 16.2 square feet per person, 6790 people could fit in the LRC. When was the last time you saw 6790 people in the LRC? Add to this the fact that students are increasingly using the Internet instead of books to access the information they need and it is easy to understand why the college has the LRC on its mind.

Now how significant is this need for classrooms? Well, believe me it is significant. Every quarter I spend an enormous number of hours trying to get solutions to room problems for our classes. The lack of leeway in the number of rooms available relative to the number of classes offered leads to an enormous amount of room schedule manipulating to fit all the required classes into the available rooms. This results in numerous room changes (some classes having to be changed more than once). In the winter quarter, sixteen math classes met in rooms

different than the ones printed in the bulletin. That's nearly a 12% error rate. While students are struggling to locate their classes, lots of class time is lost. And after all the maneuvering is done and the quarter begins, still we are left with cases of classes meeting in rooms that are too small, rooms that are too large, rooms that are not suitable for teaching mathematics, rooms that have another class in them and classes that have no rooms at all!

Now you would think that for someone who regularly pays a price for the college's room problems, I would be ecstatic to hear about the

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plan to access the LRC space to alleviate the classroom shortage. But you would only be partially correct. While I recognize the need for more space, and, perhaps, the need to upgrade the LRC facilities, I am also keenly aware of the unparalleled importance of books in the educational process. Hence I am very concerned about the notion that has been put forth to reduce the book and periodical collection by 30% or more. It is true, and not without advantage, that students can get needed information from computers rather than books. But that is just the problem. Getting information is not the same as getting an education. Computers are good for reading an article, looking up a reference, finding current real life data, in short, acquiring small packets of information. And, in addition to playing games, this is how students use them.



But this is vastly different from spending an hour or two per day for two weeks or a month or more in the company of Descartes or Dickens or Chesterton or Dumas. This kind of extended exposure to the full development of themes and ideas and principles that we can get from books is what changes us into educated people, not the short bursts of facts and information that computers give.

And neither am I persuaded that it is okay to rid ourselves of a book because it hasn't been used frequently or for a long time. Probably there are some books that could be eliminated without loss. But when we as students and educators need a book it needs to be there no matter how long it has been since someone else needed it. When a faculty member came to me for some suggestions on the math component of a Freshman Experience course she was preparing, I recommended the book "Men of Mathematics" by E.T. Bell that I read thirty years ago. I am sure this book has been used only infrequently, if at all, since it has been in our library. With a 1937 copyright, a politically incorrect title and a lack of utilization, who would have anticipated that this book would be needed to help carry out a new divisional initiative. But it was and I'm glad the LRC still had it. I certainly hope that the length of time since a book has been used or the frequency of its use would never be used as criteria for eliminating it. This would be tantamount to saying that we wanted to confine our thinking to only those ideas and trends of thought that have been popular in recent years, a frightening prospect.

But do we really have to choose between books and classrooms? I think not. Assuming dimensions of 1"x6"x9" for the average book, our 146,000 volumes would occupy 4562 cubic feet. That's less than the volume of one typical classroom, which is about 5500 cubic feet. In other words, we could store them all in one classroom! (And remember the LRC is the equivalent of 200 classrooms.) Of course storing our books in a 4562 cubic foot pile wouldn't work very well. But if we focused

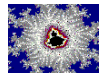
energy on finding more efficient ways to store our books, maybe we could keep almost all of them. They don't all have to be within arms length of every patron. Compact shelving units and regional storage centers from which our books would be easily accessible are tools well known to librarians that could enable us to keep more books. Perhaps some English books could be stored in the English Department, history books in the Humanities Department, etc. I would gladly keep some of the math books in the Math Department. And, by the way, while a pleasant environment is important to the LRC, if an educational institution has to choose between a 2000 square foot indoor garden and books, I think it should choose the books.

I was pleased to hear that the administration is establishing a process for seeking input from the academic side about these important decisions and I hope we will all share our views and that precious books will not be unnecessarily lost to this project.

Al Giambrone ■

REMINDERS

- Tests should not exceed one hour in length.
- Please make sure all students attending your class are on your roster. If you allow them to attend unregistered, it creates problems for them and for the college.
- Please do not skip material on the syllabus or modify the number of tests without consulting with your course coordinator.
- Please remember that students should memorize the course formulas (the ones included with the department syllabi) and should not be permitted to use formula sheets for them or store them on their calculator.



Z-Drive Resources

If you look under Math 116G (Handouts) on the Z-Drive, you will find a handout that can be used to introduce students to the TI-83 graphing calculator. It is called **INTRODUCTION TO THE GRAPHING CALCULATOR**. The six-page handout can be used as an in-class activity in the graphing calculator sections of Math 116. It covers some of the basic keys and functions that students will need to use throughout the quarter in that class:

- The basic operation keys
- Entering an equation so that it can be graphed
- Viewing a graph
- The Zoom options: ZoomStandard, ZoomDecimal, and ZoomSquare
- Setting a window
- The Trace feature
- The Zero-finder

The activity takes a full fifty-minute period to complete. It could also be given as a take-home assignment, of course.

Hints when using this handout:

1. Generally students will need assistance with entering the expressions to be computed in the first exercise of the handout. They will be unsure of where to use parentheses, and may have trouble finding the absolute value function.
2. In the third exercise, they may need to be reminded that their equation must be expressed in the form "y = ..." in order to enter it into the equation list.
3. When using the Zero-finder in exercise #12, students will often not place their cursor correctly to the left or to the right of the desired intercept.

INTRODUCTION TO THE GRAPHING CALCULATOR

Though your calculator is capable of performing a vast array of functions, there are really only a few skills that you will need for this course.

You will need to be able to perform basic arithmetic operations. This means you will need to know when and how to use parentheses, the difference between negation and subtraction, and how to locate special operations, such as roots, powers, and absolute value.

1. Check to see if you can correctly evaluate the following expressions. Use your calculator – do not perform any operations in your head.

a. $-8 + (-9) - (-20) =$

d. $\frac{-3^2 + (-5)^2}{4 \cdot 2^3} =$

b. $-(2^2 + 3^2) - 16^{1/2} =$

e. $\sqrt{\frac{1 + \sqrt{2}}{4 - \sqrt{3}}} =$

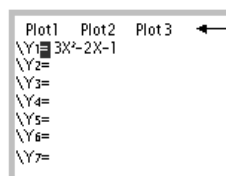
c. $\sqrt{6^2 + 8^2} =$

f. $|-17| =$

Compare your results with the answers on page 4 of this handout.

You will need to know how to enter an equation into the equation list. This is generally done by pressing the key that looks like **Y=**. Use the **2nd** key when entering the variable x. (If the given variable is t or some other letter, we still use an x on the calculator.)

2. Enter the equation $y = 3x^2 - 2x - 1$.

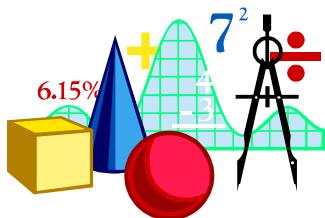


Make sure that nothing on the top row is highlighted (unless you are doing a stat plot).



Test Your Skills

In the grid provided, place the numbers 1 through 9 so that each row, column, and nine-square subsection (there are nine of them separated by thick black lines) contains each number exactly once. A few numbers have been placed to start you off.



			8	5		7	9	
3			2	6			5	1
		8						9
1					6	9		4
	1							2
			6	9				
		5			9		6	
7				8				
						2		

2003 Prime Minister Election to be held at Sinclair

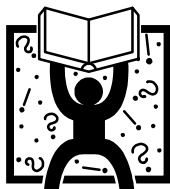
The two leading candidates for the office of Prime Minister of the Primes are Two and Three. In a news conference held earlier today, Three claimed to represent all of his prime followers, being the leading odd prime. Three criticized his opponent Two, the only even prime, as being too different from all of his odd associates. Two, however, stated that Three is "too critical" and that, being even, he is "the oddest prime of all."

Check pages 2 and 3 of your local listing for a primetime debate to be televised on channels 2, 3, 5, 7, etc. Then go to the voting booths set up in buildings 2 and 3 to vote for the candidate of your choice. May the oddest prime win!



Harvey Chew

DEPARTMENT COLLOQUIUM



We will have a Department Colloquium on Friday, May 9, 2003 at 2:30 p.m. in Room 1001. All members of our full- and part-time faculty are welcome, as well as students who are interested in mathematics. The speaker and title are as follows:

Mr. Tom Wilson, Professor of Mathematics "Surds, gradients, trapeziums, and other things; Is mathematics truly a universal language?"

Student awards and the Part-time Faculty Member of the Year Award will also be presented.

Refreshments will be served.