

Sinclair Mathnet

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FROM THE ACTING CHAIR



It took almost forty years, but I finally made the front page! Okay, perhaps the *Sinclair Mathnet* is not on a par with *The New York Times*, but in our little corner of the campus, it doesn't get any better than this! Just in case some of our avid readers don't recognize that distinguished

looking gentleman on the FRONT PAGE of *Mathnet*, I am not Al Giambone. My name is Tony Ponder and I have the privilege, nay, the honor of serving as the acting chair of the Mathematics Department here at Sinclair; Al is currently on sabbatical leave and will return to the department Spring Quarter 2006.

While serving as the acting department chair I have been involved in seemingly innumerable activities, such as serving on the Academic Policies Committee, preparing the schedule for winter quarter, resolving student complaints, learning and using the Curriculum Management Tool (CMT), completing payroll sheets (so everyone gets paid on time), administering Faculty Performance Reviews, overseeing department initiatives such as the new three-quarter algebra sequence, and of course answering countless e-mails and phone calls.

What types of skills are needed to accomplish these tasks? The short list includes critical thinking and problem solving, the ability to collect and organize data, the ability to plan and organize tasks, the ability to work independently, oral communication, listening, reading and writing skills, and computer skills—to name but a few. Do any of those skills sound familiar? They should. Many of those skills are either general education outcomes or Liberal Arts and Sciences (LAS) division outcomes. You might be surprised to learn that mathematics can improve your level of mastery of any of those skills I just mentioned!

But I thought the reason why I took Algebra I was so that I could take Algebra II. Moreover, didn't I take Trigonometry so that I could then take Calculus? Of course. Unless your employer is a math teacher, engineer, scientist, etc., you probably won't have to compute the second derivative of a transcendental function. But you may have to determine the best mutual fund for a client. You may have to determine why the "Check Engine" light on your Jeep Liberty started to flash two weeks ago. In essence, once you get out in the "real world" you will have to solve problems and to solve problems you will need many of the skills I listed previously! Further, if you possess these skills already, mathematics can help you refine them.

Is mathematics the only subject that will teach students how to become effective problem solvers? Well, no. But if you recall, the name of this newsletter is "*Sinclair MATHnet*"! ☺ So please don't interrupt while I pontificate on the importance of mathematics. The study of other subjects such as literature, sociology, physics, or psychology can also assist students in becoming effective problem solvers, yet most people use mathematics, in some form, every day. Counting back change, for example, or determining which roll of paper towels is the better buy, or even balancing your checkbook are common tasks that require an understanding of mathematics. Thus another benefit of learning mathematics is that it provides students with skills which allow them to make informed decisions in matters that personally affect them.

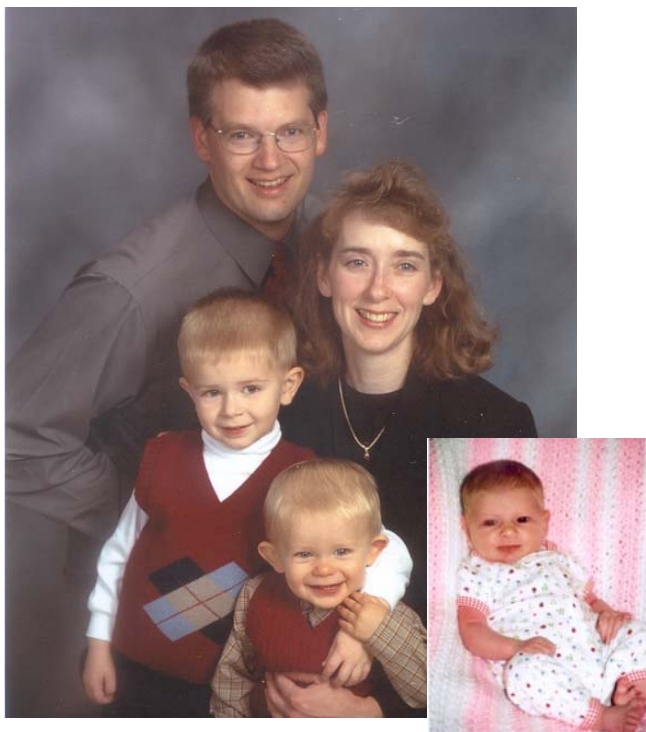
At this point I may be "preaching to the choir" since a large portion of *Mathnet's* readership is members of the Math Department and they already appreciate the value of learning mathematics. If you happen to be a student, however, I encourage you to continue your study of mathematics here at Sinclair Community College. Furthermore, please take advantage of the many resources Sinclair has to offer, such as the Math Lab (1315), the Math Help Room (1341), Student Services (8024), and most of all the dedicated faculty of the Mathematics Department!

Tony Ponder ■



Faculty Feature - David Hare

You may have heard that we hired the entire full-time math department from Clark State Community College. This is no rumor! His name is **David Hare**, and he is the newest full-time tenure track member of the Math Department here at Sinclair.



David taught for Clark State for six years before taking the position here. Other teaching experience includes eight years as a chemistry and physics teacher for a high school in Zanesville, and one year at an outdoor education center in Morrow County. When asked what brought him to Sinclair, he cites being part of a math department focused on helping students learn, with a multitude of resources and opportunities for students.

Besides bringing 15 years of teaching experience, David has had experience acting as the Coordinator for the Assessment of Student Learning while at Clark State. He headed a committee that aided all degree and certificate programs at the college with their assessment of student learning. In this capacity, he helped author a progress report to the Higher Learning Commission (of NCA) in the area of general assessment for the Associate of Arts and Associate of Science degree programs.

David earned a BA in Chemistry with a secondary education certification from Capital University in Columbus, Ohio, in 1990. He also holds a MS in Mathematics from Ohio University, which was conferred in 1997.

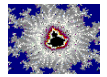
David lives in Springfield with his wife Holly, two sons - Adam (four years), and Andrew (two years), and their new daughter Heather (two weeks, at the writing of this article). He adds, "All three children are employed full-time in the home making sure their mother has plenty to keep her busy." He and his wife are both active with the youth group at their church. David also says, "I have more hobbies and other interests than I do time to devote to them: running, biking, canoeing, fishing, hiking, camping, (if it ends in "ing" and involves being outdoors, add it to the list)."

Welcome to the department, David!

Susan Harris ■

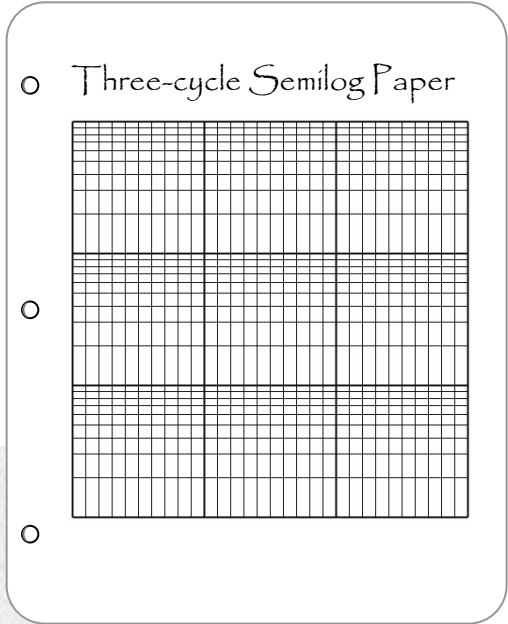
REMINDERS

- Help us in providing instructors with desk copies by returning texts that you will not be using next quarter so that we can have them available for instructors who need them.
- Please do not skip material on the syllabus or modify the number of tests given without consulting with your course coordinator.
- Remember the Testing Center requires 24 hours lead time and that all exams for the end of the quarter must be submitted by Wednesday, November 16.
- Please do not cancel classes even if you have completed the material. Find some way to make good use of the time. If it is impossible for you to make a class, please get a substitute.
- If you would like your name added to (or deleted from) the Substitute List, please contact the Math office and let us know what courses you can substitute for.



Printable Graph Paper

In a previous issue of *Mathnet* we described the extremely useful website www.mathematicshelpcentral.com, which supplies us with a wide variety of printable graph papers. The only drawback to the site is that we cannot control certain aspects of the graphs - for instance, how many rows or columns a grid has, or how many radial lines a polar graph has. In this issue we'll highlight a site that handles semilog and polar graph paper. We'll look at constructing rectangular grids in the next *Mathnet*.



<http://www.richardmartino.com/math/semilog.htm>

This web site creates very nice semilog graph papers. The settings shown to the right result in a three-cycle semilog grid.

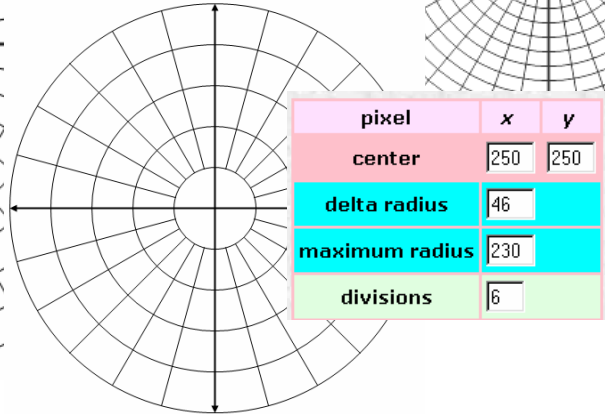
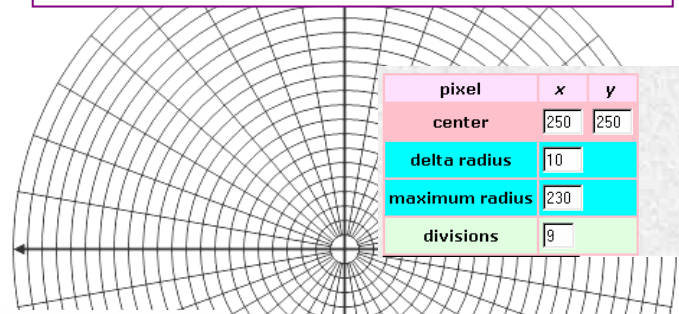
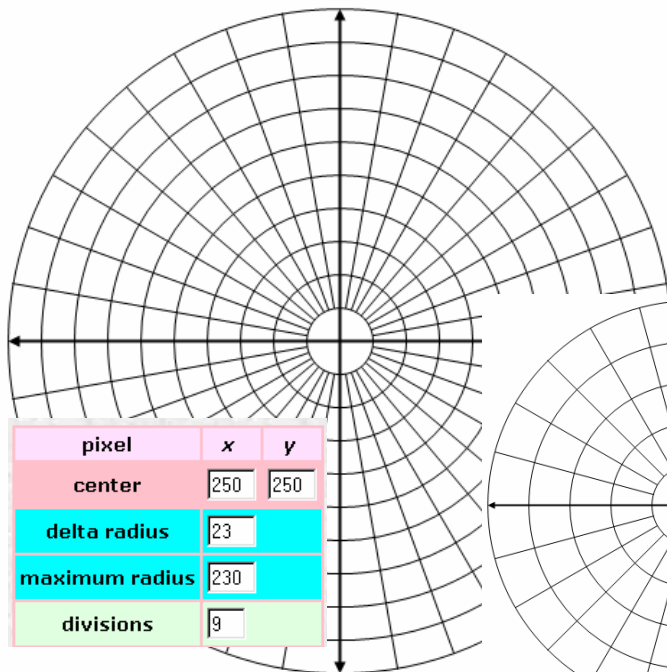
pixel	x	y
minimum	10	10
maximum	500	500
cell size	15	

Or, choose a preset set of values:

- Four orders of magnitude vertically by 30 units horizontally
- Five orders of magnitude vertically by 40 units horizontally
- Six orders of magnitude vertically by 40 units horizontally
- Seven orders of magnitude vertically by 50 units horizontally

The three very different polar graphs below were created using another program on the same site. The user can control the number of concentric circles and the number of radial lines. Note that the area near the pole is adjusted to improve the grid's appearance; many graph paper utilities do not have this feature. ■

This grid was lightened by right clicking on the image, selecting Format Picture, and changing the brightness level to 60%.





TEST YOUR HICKORY DOCK SKILLS

Sudoku puzzles are currently all the rage, but if you haven't had time to try one out, here is an opportunity to do so. We've provided two puzzles, one with the traditional grid and the other a little more interesting variation. Place the numbers 1 through 9 so that each row, column, and 9-square subsection contains each number exactly once.

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

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

There are many Sudoku sites on the Web; here are two: <http://www.scanraid.com/Sudoku.htm> and <http://www.guardian.co.uk/sudoku>.

We would like to congratulate **Barbara Carruth** on her nomination for the Ohio Association of Two Year Colleges' 2004-05 Teacher of the Year Award. Throughout her tenure at Sinclair, Barbara has been an innovative and talented faculty member. Moreover, Barbara's teaching ability and leadership skills earned her the respect of students and colleagues alike. As Barbara's friends and colleagues, we are well aware of the contributions she has made to Sinclair and feel that she is very deserving of this nomination. The award ceremony was held at Lakeland Community College.



Harvey's Joke Corner

The professor skipped class on a balmy day because he was "absent minded."



Hickory dickory dock,
Two mice ran up the clock,
The clock struck one,
But the other mouse got away.

At WPAFB all the new additions may create new "divisions."

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

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