## Letters of Recommendation

At this time of the year many students ask professors to write letters of recommendation. If you're planning to do this, here are a few helpful suggestions.

1. Ask professors who know you well academically. They will be most able to identify your strengths and weaknesses, to compare your abilities to those of your peers, and to defend your natural ability despite that low grade you may have received in a course.

2. Make an appointment with each professor to discuss your application. Simply leaving a note or sending an e-mail is discourteous and dangerous.

3. Give your professors ample time to write the letter. I like to have at least two weeks to complete the task.

4. Provide your professors with a short and informal résumé. This may include a summary of your grades, goals, honors or awards, math related activities (*e.g.* R.E.U.'s), and any relevant work experience.

Puzzle of the bi-week

What is the ratio of the areas of the two equilateral triangles?
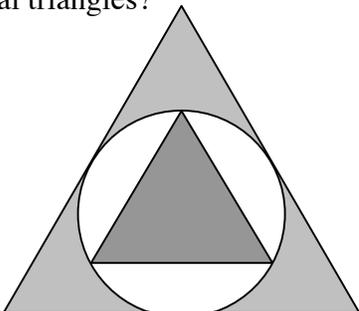
Welcome Dr. Thall

In case you haven't noticed our department has a new computer scientist. Dr. Andrew Thall joined our department this year after teaching stints at Allegheny College and the University of Minn.-Morris. He completed his Ph.D. at the University of North Carolina in Chapel Hill specializing in computer graphics and medical imaging. His research interests include: scientific and numerical computing, media computation, image analysis and geometric modeling, and game design. Outside of class he enjoys spending time with his family and playing the guitar. If you're interested in computer games, you might want to check out the course he'll be teaching this spring: *An Introduction to Computer Game Programming*.

First Call for Problem Solvers

The 2009 *Lower Michigan Mathematics Competition* (**LMMC**) will be held on Saturday, April 4th, at Albion College. This is friendly, team-oriented competition among mostly small colleges from Michigan. Teams of two or three students will take the ten-problem exam from 9:30 to 12:30. After the exam we'll have lunch and head back to campus. We should be back on campus around 3:30. If you enjoy solving interesting math problems and aren't opposed to riding in a van with one of your math professors, then participating in the LMMC might be fun for you. If you're interested, please let Professor Sipka know.

Important Dates for Seniors

February 13: Senior presentation papers due.

March 3: Senior presentations begin.

Born Around This Date

Nicolaus(II) Bernoulli (1695-1726) was born on the 6th of February in Basel, Switzerland. He was the favorite of three sons of Johann Bernoulli, the Swiss mathematician who studied reflection and refraction of light. At age thirteen Nicolaus attended the University of Basel to study mathematics and law. After graduating he worked as his father's assistant. He was involved with letters concerning the famous dispute between Isaac Newton and Gottfried Leibniz as to who invented calculus. Bernoulli also made important mathematical contributions to the problem of trajectories, curves, differential equation, and probability. Unfortunately, unlike his father who had a long life, Nicolaus died at the very young age of thirty-one of a fever.

Does 1=0?

Find the flaw in the following "proof" that $1 = 0$.

Proof:
$$a = b + 1$$
$$(a - b)a = (a - b)(b + 1)$$
$$a^2 - ab = ab + a - b^2 - b$$
$$(a^2 - ab) - a = (ab + a - b^2 - b) - a$$
$$a(a - b - 1) = b(a - b - 1)$$
$$a = b$$
$$b + 1 = b$$
$$1 = 0 \quad Q.E.D.$$

A New Chair

Starting in January, Dr. Molina became the chair of the Department of Mathematics and Computer Science. So, the next time you need the chair's signature on some college document, look for Dr. Molina (SAC 249).

Answer To Last Week's Puzzle

Which of the numbers are in the wrong order?

2	7	9	3	8	4
3	6	4	2	6	9
9	8	6	7	7	3
4	4	8	6	2	2
8	9	7	8	3	7
6	3	2	4	9	6

Several people (ok, there were two) asked me about the answer to last week's puzzle. So, here it is: if you begin in the lower right hand corner, you should notice that the sequence 6, 7, 2, 3, 9, 4, 8 is repeated as you weave your way through the square of numbers. When you arrive at the 6 and 8 in the third column, the two numbers are reversed.