Augarithms

The new fall schedule is revealed...
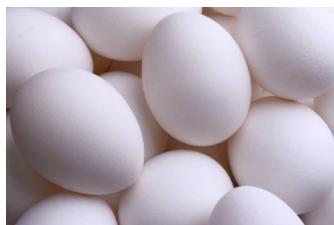
Mathematics Colloquium Series

Unless otherwise indicated, colloquia are held Wednesdays from 3:40 - 4:40. Refreshments are provided.

Sept.	14	Kenneth Kaminsky, Augsburg College
	28	TBA.
Oct.	12	TBA
	26	TBA
Nov.	9	Jennifer Geis, Augsburg College
	30	TBA

This Week's Colloquium...

Title: Kosher Eggs/Images of Spain

Eggs

This week's speaker is Ken Kaminsky, just back from a year's sabbatical in Spain. He will discuss a problem that came up during a recent Shabbat lunch in Madrid. According to Jewish kashrut laws, eggs containing blood are not kosher and should not be eaten. If eggs are being boiled and at least half of them contain blood, then neither are the eggs any longer kosher nor the pot containing them. Someone has suggested that if the number of eggs being boiled is even, adding an egg should reduce the chance of a bloody majority. Is this true? What assumptions should we make about the egg population? We will discuss these questions.

Ken will also show some photographs he made during his travels. Come see images from the Spanish communities of Andalucia, Aragón, Asturias, Canarias, Cantabria, Castilla-La Mancha, Castilla y León, Cataluña, Extremadura, Galicia, Madrid, Mallorca, and País Vasco.

The public is invited.

Masca, Canarias
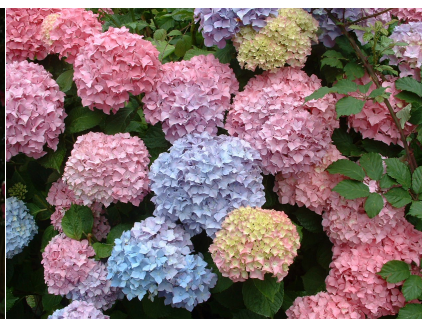
Comillas, Cantábria

Noteworthy...

Tracy Bibelnieks and **Matt Haines** participated in the International Conference of Mathematics Instruction - Study 15 in Águas de Lindóia, Brazil. Participation of mathematics educators from over 35 countries was by invitation only. Bibelnieks and Haines were in different groups discussing mathematics education research papers from around the world. Their paper on developing mathematical teaching communities was one of those that were discussed by conference participants.

Matt Haines participated in the workshop /Mathematics of Elections and Decisions/ led by Don Saari through the Center for Discrete Mathematics and Theoretical Computer Science. Participants are developing materials on mathematical voting to bring into undergraduate classrooms. Matt recommends Saari's book "Chaotic Elections! A mathematician looks at voting" to any interested in voting paradoxes. Matt also highly recommends attending a talk by Saari if you get the chance, "In just a short entertaining presentation, Saari makes clear some fascinating voting paradoxes that can occur in voting."

Problem of the week...

Here is the first Problem of the Week of the 2005-2006 problem-of-the-week season. Find all positive solutions b such that

$$\log_b 531,441 - (\log_b 3)(\log_b 9) = 16,$$

and show your solution.

Send solutions to the editor at kaminsky@augsburg.edu, or slip them under his door at Science Hall 137E.

Mathematician Biography: Nina Karlovna Bari

Nina Bari's father was a doctor. She attended L O Vyazemska's School for Girls and showed great potential in mathematics. In 1918 she entered the Faculty of Mathematics and Physics at Moscow State University.

In the Moscow School of Mathematics she came under the influence of Luzin. Also in this strong mathematical group were Stepanov, Aleksandrov and Urysohn. She graduated in 1921 and began teaching. However soon after this the Research Institute of Mathematics opened at Moscow State University and Bari became began research there in addition to her teaching posts.

Nina Karlovna Bari

Bari worked under Luzin for her doctorate on the theory of trigonometrical series. This was awarded in 1926 and after this Bari became a research assistant at the Institute of Mathematics and Mechanics in Moscow.

During 1927 - 29 she spent time in Paris, attending lectures by Hadamard, and also visited Lvov and Bologna. In 1932 she became a full professor at Moscow State University.

The year Bari graduated from Moscow State University, V V Nemytski entered there to read mathematics. They became close friends sharing not only mathematical interests but also a love of hiking in the mountains. They were eventually married.

Bari was an outstanding research mathematician who wrote over fifty research articles. In [1] her final publication, a research monograph on trigonometric series, is described as follows:-

The range and depth of topics covered is quite extensive, and most of her work in the field is included. But even within so long a monograph, the subject could not be completely exhausted. ... It has become a standard reference for mathematicians specializing in the theory of functions and the theory of trigonometric series.

Bari also wrote textbooks, *Higher Algebra* (1932) and *The Theory of Series* (1936). She edited the complete works of Luzin and was the editor of two important mathematics journals. She also translated Lebesgue's famous book on integration into Russian.

She died by falling in front of a train on the Moscow Metro. It has been claimed that this was suicide due to depression caused by Luzin's death eleven years earlier. One of her students wrote after her death:-

The untimely death of N K Bari is a great loss for soviet mathematics and a great misfortune for all who knew her. The image of Bari as a lively, straightforward person with an inexhaustible reserve of cheerfulness will remain forever in the hearths of all who knew her.

Article by: *J J O'Connor* and *E F Robertson*

Puzzle of the week...

Here is the first Puzzle of the Week of the 2005-2006 puzzle-of-the-week season. The shape you see below is made from a single rectangular piece of paper (like an index card). Nothing has been removed, separated or taped back in place. Your job is to try to duplicate the shape with several cuts with a pair of scissors*
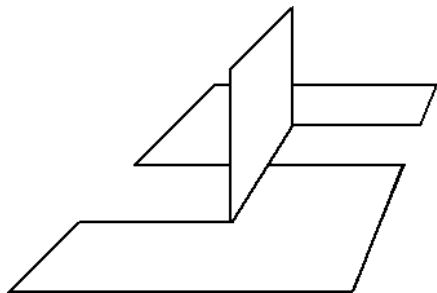
Send solutions to the editor at kaminsky@augsburg.edu, or slip them under his door at Science Hall 137E.

*Source: Giant Book of Challenging Thinking Puzzles, by M. A. DiSpezio

Canine Humor*

A guy is driving around and he sees a sign in front of a house, which reads: "Talking Dog For Sale." He rings the bell, and the owner tells him the dog is in the backyard. The guy goes into the backyard and sees a Labrador Retriever sitting here. "You Talk?" he asks, "Yep" the Lab replies. "So, what's your story?" The Lab looks up and says, "Well, I discovered that I could talk when I was pretty young, and I wanted to help the government; so I told the CIA about my gift, and in no time at all they had me jetting from country to country, sitting in rooms with spies and world leaders. Because no one figured a dog would be eavesdropping, I was one of their most valuable spies for eight years running. But the jetting around really tired me out, and I knew I wasn't getting any younger so I wanted to settle down. So, I signed up for a job at the airport to do some undercover security work, mostly wandering near suspicious characters and listening in. I uncovered some incredible dealings and was awarded a batch of medals. I finally quit, got married, had a mess of puppies, and now I'm just retired." The guy is amazed. He goes back in and asks the owner what he wants for the dog. "Ten dollars" The guy says, "This dog is amazing. Why on earth are you selling him so cheap?" The owner replies, "because he's a liar - he never did half the stuff he says he did."

*Thanks to our friend Stuart Klipper for sending us this joke.