

The Almagest

The bi-weekly newsletter of the Department of Mathematics and Computer Science. Your trusted source for news.

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Alma College
Alma, MI 48801

Math Colloquium

Dr. **Mark Bollman**, Professor of Mathematics at Albion College, will be giving a *really interesting* talk on **Tuesday, October 5th** about some *really interesting* Fibonacci numbers. The Fibonacci sequence $\{0,1,1,2,3,5,8,13,\dots\}$, where each term past the first two is determined by adding the previous two terms together, has been a source of mathematical interest since 1202. In this talk, Dr. Bollman will look at the search for Fibonacci numbers with other interesting mathematical properties—squares, cubes, primes, factorials, perfect numbers, and so forth. Some of these problems have been solved through early and recent efforts in experimental mathematics; some remain open. Please come.

*“Some Really Interesting
Fibonacci Numbers”*

Presenter: Dr. Mark Bollman

Date: **Tuesday, October 5th**

Time: 3:40

Place: SAC 216

Refreshments at 3:30.



MATH Challenge

Problem-solvers: *Your department needs you!* You are invited to participate in the 16th annual MATH Challenge, held on **Saturday, November 6th**. The MATH Challenge is a 3-hour exam consisting of ten interesting problems. Teams consist of 2 or 3 students, and you'll take the exam from 9:30 to 12:30. Before the exam, you'll have a hearty breakfast. If you're interested, please contact Professor Sipka.

Big Opportunity, Early Deadline

The National Security Agency is offering undergraduate math students a unique opportunity to work directly with NSA mathematicians on mission-critical (what does that mean?) problems and experience the excitement of the NSA community. The program runs from late May through mid-August and pays students a competitive salary. If you'd like more info, visit the NSA web site at www.nsa.gov. The deadline for applying is **October 15th**, so if you're interested, get moving!

MXit Helps Students in South Africa with Math

MXit, a program on a widely used cell phone platform in South Africa, currently helps 12,000 students study for their math exams. Due to a nation-wide teacher's strike, graduating students have been left without anyone to prepare them for their upcoming math final exams. This caused many students to protest all over the country. To remedy the situation, an effort called Dr. Math has been established. 100 registered volunteer tutors use the MXit program to exchange messages with the students and send them exam preparation material. Laurie Butgereit oversees this effort. She came up with the idea after helping her son and his friends with homework over MXit. Dr. Math is very effective because it only costs 15 cents (U.S. currency) to send and receive 1000 messages. It's simple to access and encourages students to learn by offering personal support during hours outside of school sessions. The program wants more volunteer tutors so that many additional students can get the help they need. S^2

Born Around this Date

Enrico Fermi (1901-1954) was born in Rome, as the youngest of three children. Fermi's mother, Ida de Gattis, was a large influence on his childhood, as she was very intelligent and trained as a schoolteacher. While Fermi was in college his advisor, Luigi Puccianti, openly admitted he had few opportunities to teach Fermi; in fact, he found himself asking Fermi to teach him. Enrico studied probability and its applications for his graduate work. Fermi eventually won a Nobel Prize in Physics in 1938 for his work with nuclear fission. He did a lot of work involving the statistics of physics, specifically atoms and nuclei. During World War II, he moved to the United States and taught at Columbia University. After many scientific accomplishments, in the summer of 1954 he was diagnosed with stomach cancer and passed away while attempting to write a nuclear physics textbook. M^2



Puzzle of the Bi-week

Though not obvious at all, there is a definite pattern in the following table of numbers. Can you fill in the last column?

1	3	7	3	11	13	13	19	19	55	
2	5	2	7	11	8	17	17	34	29	
3	1	5	9	5	13	15	21	23	21	

Hint: Come to Dr. Mark Bollman's talk on Tuesday, October 5th.

Student assistants: Matt Mansell = M^2
Stephen Sorensen = S^2
Distribution: Deb Smith
Faculty advisor: Tim Sipka

Math Humor

"Black holes are where God divided by zero." -- Steven Wright

If you would like to submit an announcement or a short article, please send it via e-mail to Matt Mansell (11mgmans) or Tim Sipka (sipka).

Solution to the Last Puzzle

The sum of the areas of the two crescents (lunes) equals the area of the right triangle, which is 6.

