

The Almagest

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

Volume 5, No. 12

April 1, 2013

Alma College
Alma, MI 48801

Senior Presentations

The senior presentations continue this week and next with talks on **Tuesday** at **4:00** in SAC 109. Please make an effort to attend the talks and support your classmates. And don't forget to come for refreshments at 3:50.

Tuesday, April 2nd

Andrew Snoblen: *Heron's Formula*

Tuesday, April 9th

Bryan Werther: *The Game of Nim*

Ed Burger Talk on Wednesday, April 3rd

Can birthday cakes lead to "B" horror films or world peace? Are strong negotiating skills required to share a pie or is it best to avoid all communication? How about a Bundt cake? How about the Middle East? On **Wednesday, April 3rd**, **Dr. Ed Burger** will consider these questions and others and, as the icing on the cake, he'll answer some. The talk requires no particular mathematical or negotiation skills, and it's open to everyone.



*The Texas Cake Cutting Massacre:
Can Conflicts be Resolved by Making Piece?*

Presenter: **Dr. Ed Burger**

Date: **Wednesday, April 3rd**

Time: 4:00

Place: Dow L1

Refreshments at 3:50

Dr. Burger is an exceptional mathematician and gifted teacher. You'll not want to miss his talk.

Seniors On The Move

In a few short weeks our seniors will be moving on to the next chapters of their lives, and we thought you'd like to know a little bit about their plans.

Caitlin Closs is finishing her student teaching at Alma High School and will be looking for a high school math teaching position.

Zach Felton is headed to the state of Washington to begin a job in Information Technology.

Russell Hope will join the military, most likely the U.S. Army. If possible, he'd like to teach math while serving in the military.

Megan Jurek has accepted a job as an Associate Software Developer at Auto-Owners Insurance. There's a possibility that she'll pursue a career as an actuary.

Amy Kaufman will be student teaching at St. Louis High School in the fall; then she'll look for a math teaching position.

Samantha Kellogg is headed to graduate school to study forensic science. She'll attend either Sam Houston State University or the University of Illinois – Chicago.

Andrew Snoblen will be student teaching at Shepherd High School in the fall. After that, he'll look for a teaching job.

Jon Young will begin a PhD program in mathematics at either CMU, WMU, or Southern Illinois University.

Bryan Werther isn't sure what he'll be doing after graduation.

The faculty in the Department of Mathematics and Computer Science wish you well.

Mathematics Honorary

Pi Mu Epsilon, the Mathematics Honorary, welcomed seven new members this spring. They are: sophomore **Katie Krauss** and juniors **Kirstyn Baker**, **Annie Bruce**, **Katie Dwenger**, **Alex Hegedus**, **Brandon Krause**, and **Emily Noble**. Other members of Pi Mu Epsilon are seniors **Megan Jurek** and **Samantha Kellogg**.



Yet Another Interesting Pattern

$$1 \times 1 = 1$$

$$11 \times 11 = 121$$

$$111 \times 111 = 12321$$

$$1111 \times 1111 = 1234321$$

$$11111 \times 11111 = 123454321$$

$$111111 \times 111111 = 12345654321$$

$$1111111 \times 1111111 = 1234567654321$$

$$11111111 \times 11111111 = 123456787654321$$

$$111111111 \times 111111111 = 12345678987654321$$

Math Club Stuff

The *Alma College Math Club* will be participating in an organization fair for first-year students on **Saturday, April 13th**.

Pres: **Emma Patmore**

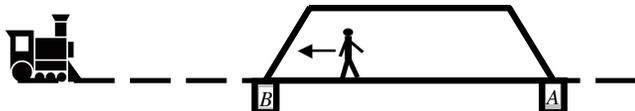
VP: **Phil Ryskamp**

Treas: **LeeAnne Carr**

Sec: **Katie Dwenger & Aaron Colamorino**

Solution to the Previous Problem

A man walks two-thirds of the distance across a railroad bridge from point *A* to point *B* when he sees a train approaching at the rate of 45 mph. He does a very quick calculation and realizes that if he runs at a certain speed, let's call it *r*, he can make it to **either end** of the bridge and avoid the train. What is this value of *r*?



Jason McKelvey claimed the \$1 prize for this problem, showing that $r = 15$ mph.

Puzzle of the Bi-week

During Russell Hope's senior presentation last week, he solved the cubic $x^3 + 6x = 20$, finding that $x = \sqrt[3]{\sqrt{108} + 10} - \sqrt[3]{\sqrt{108} - 10}$ was a solution. Interestingly, he claimed that this weird difference of two cube roots equals 2.

Without using a calculator, computer, slide rule, or any other type of computing device, PROVE that this calculation equals 2.

$$\text{PROVE: } \sqrt[3]{\sqrt{108} + 10} - \sqrt[3]{\sqrt{108} - 10} = 2.$$

A reward of \$10 will be given to the first student who submits a correct proof.



Thank You Jon Young

I want to say thank you to **Jon Young** for doing such a great job the past **two** years as the student assistant for the *Almagest*. You will be missed.

Student assistant:	Jonathan Young
Faculty advisor:	Tim Sipka
Distribution:	Deb Smith

If you would like to submit an announcement or a short article, please send it via e-mail to Tim Sipka (sipka@alma.edu).