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

Senior Presentations

The senior presentations begin next week with talks every **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, March 12th

Samantha Kellogg: *The Knapsack Cipher*

Jon Young: *The Perfect Number Theorem*

Tuesday, March 19th

Megan Jurek: *Pythagorean Tuning*

Amy Kaufman: *The Museum Problem*

Tuesday, March 26th

Caitlin Closs: *The Pythagorean Theorem*

Russell Hope: *Cardano's Solution to the Cubic*

Tuesday, April 2nd

Andrew Snoblen: *Heron's Formula*

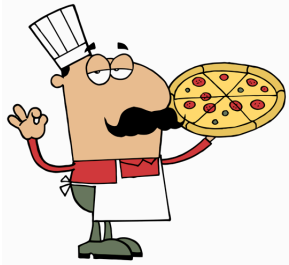
Zach Felton: *Boosting*

Senior Dinner on Tuesday, March 12

Our annual dinner for senior mathematics and computer science majors will be held on **Tuesday, March 12th** at 5:30 in the Heather Room. Our dinner has always been a fun event with lots of good food, laughter, and reminiscing. So, please make sure you attend. If you've not yet responded to the invitation sent to you, please contact Deb Smith by **Friday, March 8th**.

Problem Solving and Pizza Course

If you enjoy a good struggle with an interesting and non-routine math problem, then consider signing up for MTH 180, appropiately named ***Problem Solving and Pizza***. This course, offered in Fall 2013, is a one-credit, 7-week course that introduces you to a variety of problem solving techniques and prepares you to compete in the MATH Challenge, a team-oriented competition that occurs in November. The class will meet once a week at a time that's suitable for everyone. It will likely be around dinner time; so, pizza will be provided at each class meeting. There are no tests—you'll be expected to work on problems throughout the week and present your solutions during class. Grades are S/F. For more info, see Prof. Sipka.



Looking Ahead: Fall 2013 Courses

Registration for fall classes is just a few weeks away, and we thought you might be interested in knowing what upper-level courses will be offered next fall.

Mathematics

MTH 210 *Multivariable Calculus* (required for major)
MTH 310 *Linear Algebra* (required for major)
MTH 341 *Probability & Statistics I*
MTH 323 *Complex Analysis*
MTH 390 *Combinatorics*

Required for the math teaching major.

Computer Science

CSC 230 *Software Engineering* (required for major)
CSC 420 *Operating Systems*

Papers are due on Friday!

Attention all seniors! Your papers are due on Friday.

March 8: Your paper is due.

Here's An Interesting Pattern

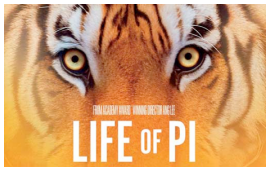
$$1\times 8+1=9$$
$$12\times 8+2=98$$
$$123\times 8+3=987$$
$$1234\times 8+4=9876$$
$$12345\times 8+5=98765$$
$$123456\times 8+6=987654$$
$$1234567\times 8+7=9876543$$
$$12345678\times 8+8=98765432$$
$$123456789\times 8+9=987654321$$

Math Club Stuff

The ***Alma College Math Club*** is sponsoring the following events.

March 14: To celebrate Pi Day, the Math Club will be showing the movie, *Life of Pi*, in SAC 215 from 7-9 pm. Homemade pies, baked by Emma Patmore's grandpa, will be consumed.

March 15: The Science Blowout will be held in Dow from 12:30 to 2:30, and club members will be giving a presentation.



Pres: **Emma Patmore**
VP: **Phil Ryskamp**
Treas: **LeeAnne Carr**
Sec: **Katie Dwenger & Aaron Colamorino**

Solution to Previous Problem

There were no solutions submitted for the previous problem. So, we'll pose it again: a game is played by tossing a single coin onto a large table on which a grid of congruent squares is drawn. Each square is 25 mm on a side, and the coin has a diameter of 10 mm. If the coin lands entirely within one of the squares, the player wins a prize. If the game is designed so that the coin always lands somewhere on the table (the coin can't roll off the table) **what's the probability** that a player wins a prize?

Puzzle of the Bi-week

Here's an interesting problem that I found in the most recent issue of the *Pi Mu Epsilon* Journal. It's the type of problem that you may see on the MATH Challenge, the team-oriented math competition that we sponsor and compete in each fall.

Suppose the polynomial $p(x)=ax^3+bx+c$ has a single real zero d. Given that $a>0$ and $b<0$, **show** that $d\notin\left[-2\sqrt{\frac{-b}{3a}},2\sqrt{\frac{-b}{3a}}\right]$.

The first student to submit a correct solution will receive \$1, the second will receive $\$\frac{1}{2}$, the third will receive $\$\frac{1}{4}$, and so on.

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).