

L'Augarithms



vol. 23.11

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April 21, 2010

Mathematics Colloquium Spring Lineup

Colloquia are held Wednesdays 3:40–4:40 in Oren 113. Refreshments will be served.

Jan.	27	Pat Van Fleet, University of St. Thomas
Feb.	10	The Proof, BBC production about Andrew Wiles's solving of Fermat's Last Theorem.
Feb.	24	Sudipto Banerjee, Div. of Biostatistics, U. of Minn.
Mar.	8-12	Speaker(s) to be announced
Mar.	24	Victor Addona, Macalester College
Apr. →	21	Su Dorée, Augsburg College ¹ (Sampson talk postponed)

The Coins Go 'Round 'n 'Round: Bulgarian Solitaire and Exchange,

by Su Dorée, Augsburg College



One player begins with coins arranged in piles. At each turn she rearranges the coins according to the following rule: remove the top coin from each pile, possibly eliminating piles, and form a new collected pile of coins. The game continues until she revisits a previously encountered (unordered) arrangement, having reached a terminal cycle. Where are fixed points, if any? Where are two cycles, if any? Which states are cyclic?

And what happens when we generalize to two players?

Su is an Associate Professor of Mathematics at Augsburg College in Minneapolis where she has taught since 1989. She earned her Ph.D. in Character Theory from the University of Wisconsin – Madison. Her research interests include curriculum and materials development and directing undergraduate research in abstract algebra and combinatorics. Su is an active member of the Mathematical Association of America, serving on national committees, organizing sessions, and teaching workshops both for the MAA and Project NExT. She is a past recipient of the MAA North Central Section Distinguished Teaching Award and currently serves as its Past-President. Su enjoys teaching mathematics at all levels, using pedagogies that support active learning, and teaching mathematical thinking, writing, and speaking skills.

❖As usual, high quality refreshments will be served. This is the last colloquium of the academic year. See you in September.

Problem of the summer...

The last POTW was solved by **Alex Pinaire**, **Michael Janas**, **Bill Arden**, and generalized by **Abraham Gadalla** of the Wolfram Demonstration Project. The next problem has to hold you until September when next issue comes out until. BTW, the answer was $R = r / (2/\sqrt{3} - 1)$.

A gambler has in his pocket a fair coin and a two-headed coin. He pulls one of the coins at random from his pocket and flips it. It shows heads.

a) What is the probability that it's the fair coin? Suppose he flips the same coin a second time and again it shows heads.

b) Now what is the probability that it's the fair coin?

Suppose that he flips the same coin a third time and it shows tails.

c) And now what is the probability that it's the fair coin?

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Puzzle of the summer...

Last issue's puzzle was solved by **Al Jibra** and **Polly Nomial**. The *notable* chef was *not able* to serve the meal because he had *no table*. Here's the last puzzle until September:

Linda has a hall carpet measuring 3×12 feet. She is moving into a space having a hallway requiring a carpet measuring 2×18 feet. How can she cut her carpet into two sections which can be joined to exactly fit the 2×18 foot space?

❖Submit puzzle & problem solutions to kaminsky@augzburg.edu, or under Ken Kaminsky's door at SCI 137E, or in the puzzles and problems box just outside of Su's office.

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The approximately bi-weekly
newsletter of the
Department of Mathematics
at Augsburg College
Editor.....Kenneth Kaminsky
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A Little Math (and other) Humor

~.~.~.~.

Theorem: Horses have an infinite number of legs.

Proof: A horse has an even number of legs, of course.

In the front it has Forelegs.

Behind it has two legs.

Six is an odd number of legs for a horse, of course.

The only number that is both odd and even is infinity.

Thus, horses have an infinite number of legs. QED_{So sorry}

There are 10 kinds of mathematicians in the world..... Those who understand Binary, and those who don't.

~.~.~.~.

It was mentioned on CNN that a new prime number discovered recently is four times bigger than the previous record.

~.~.~.~.

"Math was always my bad subject. I couldn't convince my teachers that many of my answers were meant ironically."

- Calvin Trillin

~.~.~.~.

"As long as algebra is taught in school, there will be prayer in school."- Cokie Roberts

~.~.~.~.

"Always go to other people's funerals, otherwise they won't come to yours."- Yogi Berra

~.~.~.~.

"No wonder no one goes there anymore. It's so crowded."
- Yogi Berra

~.~.~.~.

Heisenberg might have slept here.

Comedy Corner



Escher/Kaminsky

From a few of the voices of Augsburg

HAVE A GOOD SUMMER

See you all in the fall

Fins aviat!

Bonnes Vacances

VI SES I EFTERÅRET

PE CURÂND

Schöne Ferien

До скоро виждане

Prettige Vakantie

na brzkou shledanou!

Que pasen un buen verano

AV SASTO

Trevlig sommar