Math Mess

This Week's Mathematics Colloquium

Title: The Problem Guys Show
Speakers: Cliff Corzatt and Dave Molnar
Time: Tuesday, October 1st, 1:30 pm
Place: SC 182

This Week's Colloquium

This week's multimedia extravaganza will feature Cliff Corzatt and Dave Molnar—the world-famous Problem Guys, live and in Technicolor—discussing problems from last week's Carlson Contest. The winners of the contest will be announced and cash prizes will be awarded as well. The focus of the discussion will be on the techniques that are used, how to recognize when a problem requires a particular technique, and how the same ideas can be applied in different situations. There will be something for everybody, even if you did not participate in the contest.

After a very popular 50-year hiatus, the Problem Guys brought their big show back to the colloquium stage last year. Let it not be said that these guys do not have problems. As we all remember, the Problem Guys hit the top of the Billboard charts in 1957 with "Who Put the Pigeon in the Pigeonhole?" and again in 1983 with "Problem Guys Just Wanna Have Fun(damental theorem of arithmetic)".

Putnam Exam

The 63rd annual William Lowell Putnam Mathematical Competition, sponsored by the Mathematical Association of America, will be held on December 7th of this year. This competition is open to all undergraduates in the U.S. and Canada. The winner gets a scholarship to Harvard. The contest runs from 9 to 12 and from 2 to 5, with six problems in each session. Pizza and scintillating conversation will be provided by the Math Department during intermission. This is a national contest, and **you must sign up** in order to take the exam. Please notify *Professor Molnar* (molnar@stolaf.edu) of your interest **by October 11!** Copies of old exams are available, and practice sessions will be organized.

Meet the Newcomers

The Math Mess provides you with one more installment of biographical analysis on newcomers to the department. Now that you're familiar with these folks, give them a hearty welcome. Let's make them feel like real elements in the set of St. Olaf mathematicians.

Jim Halverson is this year's Visiting Master Teacher, joining us from Eastview High School in Apple Valley. Jim holds a BS from the U of M and an MS from Northern Illinois U. He has taught high school for 27 years, but describes his "real job" as deep-fat frying under the Golden Arches of Nimrod, Minn.

Craig Solid graduated from Saint Olaf in 1997 with majors in Mathematics and Economics; in 1999 he received his master's degree in Statistics from Iowa State. When not teaching, Craig does statistical research for Nephrology Analytic Services, a division of the Minneapolis Medical Research Foundation.

Watson Wyatt Wants You!

Watson Wyatt Worldwide, a Human Resources Consulting firm located in Bloomington, MN, is in search of Oles with actuarial science interests. On Monday, October 14th, Wyatt will be on campus interviewing for both the positions of Actuarial Analyst in the Retirement practice and Developer in the HR practice. Senior Oles are encouraged to submit a resume for the full-time positions as well as sophomore and junior Oles for the intern positions. Resumes are due to the Career Development Center by **Tuesday, October 8th**. Questions and concerns should be emailed to Debby Pressnall (debby.pressnall@watsonwyatt.com).

CS Haiku of the Week

what could be love's spec?
3 arguments: you and me
with function call +
(by Peter Erling Sprangers)

Last Week's Problem

How many consecutive 9s are there after the decimal point in $\left(4 + \sqrt{15}\right)^{1,000,000}$?

Answer: 896,139. We did not receive any solutions. Note that for any n, $\left(4 + \sqrt{15}\right)^n + \left(4 - \sqrt{15}\right)^n$ is an integer. (Check small n to see why.) Since $\left(4 - \sqrt{15}\right)^n \to 0$ as n gets large, $\left(4 + \sqrt{15}\right)^n$ is just less than an integer. $\left(4 - \sqrt{15}\right)^{1,000,000} \approx 10^{-896139.3}$, so there are 896,139 nines.

Problem of the Week

By failing to homer this weekend, Vladimir Guerrero (who was robbed) and Alfonso Soriano joined Bobby Bonds in the exclusive "39-40 club" – 39 homeruns and at least 40 stolen bases. Rather than refer to silly clubs, sabermetrician Bill James introduced the idea of "power-speed number" to measure a player's (namely, Bonds') combination of those two skills. James' measure is 2(HR)(SB)/(HR+SB), which reflects the balance between a player's HR and SB more than the arithmetic mean, (HR+SB)/2. (Find out who the career leader is at http://www.baseballreference.com/leaders/PowSpd_career.shtml). Prove that power-speed number is always less than or equal to the arithmetic mean.
** Please submit all solutions to David Molnar (molnar@stolaf.edu) by noon on Sunday.

If you would like to receive a copy of the Math Mess in your P.O. Box weekly, please e-mail Donna Brakke at brakke@stolaf.edu.