New Majors Trivia

Our newly-declared math majors are a rather surprising bunch! Below are listed nine of our record-setting 36 new math majors. Test how well you know them by matching each new major below to an interesting fact about them. Send your answers to Gabe Davis (davisg); the top guessers will be announced in the next Gazette, with a modest prize for one of the winners.

MAJORS
1. Cristophe Dethier
2. Chas Karch
3. Asim Manizada
4. Cassie Mullen
5. Gabriella Newman
6. Laurel Orr
7. Jun Young Park
8. Ben Strasser
9. Justin Troyka

FACTS
A. Grossed out by band-aids
B. Steve’s jokes changed this person’s mind from Econ to Math
C. Took no math in high school higher than Algebra 2
D. Once enjoyed the smell of a skunk
E. Can touch shoulders together due to a rare genetic disorder
F. Has a pterodactyl tattoo
G. Secretly obsessed with Viking history
H. Defined a coordinate system on the LDC cubbies
I. Only sets alarm clock to numbers that are divisible by 3

And don’t cheat by just asking everyone!

Words from the Wise?

Are you a junior (or sophomore) math major? Do you know what you’re doing after graduation? If so, do you know how to go about doing it? Come join us on Tuesday, May 24 at 4:30 PM in the Faculty Lounge on 3rd CMC for an informal discussion with graduating seniors about where they are going and how they decided to go there. Bring all your questions about finding a job in industry or teaching, going to grad school, applying for fellowships, and just plain figuring out what to do with your life. All students are welcome to attend. Light refreshments provided.

Department Job for Next Year

Do you enjoy working in and around the Mathematics and Computer Science Departments? You might be just the student Sue Jandro is looking for. We are in need of an Office Assistant for next year. The position is for eight hours a week, and you’ll have the chance to work with the friendliest departments on campus! If you are interested, please stop by CMC 217 or e-mail sjandro for an application.

New SDAs Announced

Next year’s Student Departmental Advisers (SDAs) will be Ben Anderson and Erika Warrick. SDAs provide advice for current and prospective majors on course selection, requirements for the major, and what to do with your major after you graduate. Have a question about math? Ben, Erika, or this year’s SDAs Gabe Davis and Anna Zink would be more than happy to answer it.
**Lighten Your Load, Warm Your Heart**

Do you have a copy of Stewart’s Calculus (6th Edition, Early Transcendentals) weighing you down? Can’t imagine why you’d want to keep moving it each year? The bookstore won’t buy it back because it will be out of print, so why not donate it to a good cause? Deanna would love to accept your used copies of Stewart to create a textbook loaning library for Math 101. Just think: your math book would be lovingly used for (hopefully) years to come! Drop your books by Deanna’s office anytime and receive a hearty thank-you and good karma as you head toward finals.

**Department Picnic**

Math majors are invited to the Mathematics Department annual picnic for majors, faculty, and staff. Lunch will be provided by the Mathematics Department and faculty will be bringing a dish to pass. You are all welcome to try out your cooking skills and bring a dish as well. The picnic will be on Tuesday, May 31 at noon behind the CMC near the volleyball area. Rain location will be Evans Dining Hall. Please RSVP to Sue Jandro by Wednesday, May 25. Be sure to let Sue know if you are a vegetarian.

**Math (Stats) Joke of the Week**

Q: What do you call a tea party with more than 30 people?

A: A Z party!

**Problems of the Week**

1. The pattern of white and black squares shown has a lot of symmetry; it looks the same whether you view it from the top, bottom, left, or right, and if the page were transparent the pattern would also look the same if you turned over the page and looked from the other side. How many such patterns of white and black squares (of equal size, and with the same symmetry) exist
   a) that form a large $7 \times 7$ square (like the one above) and
   b) that form a large $n \times n$ square?

2. Let $f$ and $g$ be odd functions (that is, $f(-x) = -f(x)$ and $g(-x) = -g(x)$ for all $x$) that are infinitely differentiable at $x = 0$, and assume that $f'(0) = g'(0) = 1$. Consider the compositions $F = f \circ g$ and $G = g \circ f$; we’ll be comparing their derivatives at $x = 0$. ($F$ is defined by $F(x) = f(g(x))$ for all $x$.)
   a) Show that $F'(0) = G'(0)$, $F^{(3)}(0) = G^{(3)}(0)$, and $F^{(5)}(0) = G^{(5)}(0)$.
   b) Show that for all even $n$, $F^{(n)}(0) = G^{(n)}(0)$.
   c) Is it always true that for all odd $n$, $F^{(n)}(0) = G^{(n)}(0)$? If so, prove it; if not, give a counterexample.

The first problem posed May 6 was solved by Frank Firke, as well as by Mathematica expert John Snyder in Oconomowoc. (Frank should stop by CMC 217 to pick up a B.B.O.P. item.) There’s no word yet on the second problem from May 6. John also solved both problems from last week; so far, no “local” solutions to those problems have come in.

- Mark Krusemeyer

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Subscriptions & Web: Sue Jandro