End-of-Year Departmental Picnic

Come for the food, the games, and the opportunity to enjoy the springtime with your fellow math majors, faculty, and staff. This year’s end-of-term picnic will be Tuesday, May 29th at noon behind the CMC. You should have received an email invitation and if you did not please contact Sue Jandro by May 21st. We hope to see you there!

Math Major Potluck

Come to the math department potluck at Deanna’s house (1000 Greenleaf Court)! It will be Wednesday, May 23rd at 6pm. Contact Ben Strasser (strasseb) or Daoji Huang (huangd) for questions or if you need or can help carpool. Bring a dish!

Summer Reading List

We have had two responses so far regarding additional books for the Summer Reading List.

Euler’s Gem: The Polyhedron Formula and the Birth of Topology by David S. Richeson

Gödel, Escher, Bach: an Eternal Golden Braid by Douglas Hofstadter

Thanks to Ben Anderson and Adam Zweber for the recommendations; we still welcome additional recommendations.

Faculty and Staff Trivia Game!

How well do you know your departmental faculty and staff? What do they listen to for music while grading or around the house? Match them with the answers below; students with the most correct answers will win fame and glory in the final Gazette of the year! The choices for faculty and staff are: Bob Dobrow, Laura Chihara, Katie St.Clar, Jack Goldfeather, Steve Kennedy, Eric Egge, Gail Nelson, Ted Vessey, Helen Wong, Deanna Haunsperger, Sue Jandro, Christine Kohnen, Sam Patterson, Mark Kruisey, Mike Tie, and Russ Petricka. Please email your guesses to Deanna (dhaunspe) by Wednesday the 23rd at noon.

Taylor Swift
Adele, Lyle Lovett, Bonnie Raitt
Lady Gaga, Roy Orbison
Madonna
MPR news
Bluegrass
Dvorak
Madeleine Peyroux, Beck, Soundtrack to Hitchhiker’s Guide to the Galaxy
Bach
Julie London
Sarah McLachlan, Michael Buble, Josh Groban
Idjut Boys, St. Germain, Jay Tripwire, Gotan Project
Helen Jane Long
Johnny Cash, Taylor Swift, Katy Perry, AC/DC
Nora Jones
Leonard Cohen, Bob Dylan
1. Consider a square grid of lattice points that are 1 unit apart (in each of two perpendicular directions).

a) Show that if $A, B, C$ are non-collinear points of the grid, then triangle $ABC$ has area at least $\frac{1}{2}$.

b) Now suppose the grid is 6 by 6 (so there are 36 lattice points in all). If a triangle $ABC$ has its vertices among those 36 points and it has area exactly $\frac{1}{2}$, then how many different shapes can it have? That is, how many different non-congruent triangles of area $\frac{1}{2}$ can be drawn using the grid points as vertices?

2. One of Wohascum College’s recent graduates seems to be on her way to a successful career in her chosen profession, which is TV reporting; she has been hired as a daily news reporter by a Chicago station. The station is fairly liberal about attire, and the new reporter intends to wear a blouse, a beret, and a kerchief each day as a kind of visual trademark. Fortunately, she already has a fair supply of blouses, berets and kerchiefs, and they all “match” in the sense that any combination of them looks good on her. However, she doesn’t have quite enough of them yet to carry out her full intention, which is never to repeat the same combination of two of the three articles of clothing at any time during her first year on the job. For example, while she might wear a blouse repeatedly during the year, it would never be with the same beret, nor would it be with the same kerchief. She expects to be on the air for 350 days out of the year. What is the minimal total number of the articles of clothing mentioned (blouses, berets, kerchiefs) that she could get by with, and why?

Another quiet week; John Snyder in Oconomowoc essentially solved last week’s first problem, and there was a serious attempt on the second problem. Good luck on problems old and new!

- Mark Krusemeyer