

TCU Math Newsletter

I shall never flaunt the little learning that I have acquired through the care and help my father has given me. If I have learned anything, it is only because he took care to teach me. Had he not taken upon himself the trouble of instructing me, I would be as ignorant as many other children.

- Augustin-Louis Cauchy

Frank Stones Colloquium Talk

Professor Vaughn Climenhaga of the University of Houston will present the next talk in the Frank Stones Colloquium talk series. He will present the talk "Thermodynamic Formalism for Dynamical Systems," on Tuesday, October 8 at 3:30 pm in TUC 352 with refreshments at 3:00 pm in TUC 300.

Putnam Mathematics Contest

The 74th Annual William Lowell Putnam Mathematical Competition will be held on Saturday, December 7, 2013, from 9:00 am to noon and 2:00 to 5:00 pm. The questions require different levels of mathematical background, and all require a bit of ingenuity to solve. The competition is open to undergraduates enrolled in colleges and universities of the United States and Canada who have not yet received a college degree. For more information about the contest visit <http://math.scu.edu/putnam/>.

Those interested in signing up to take the Putnam exam this year should contact Professor George Gilbert at g.gilbert@tcu.edu by 4:00 pm on Monday, October 7.

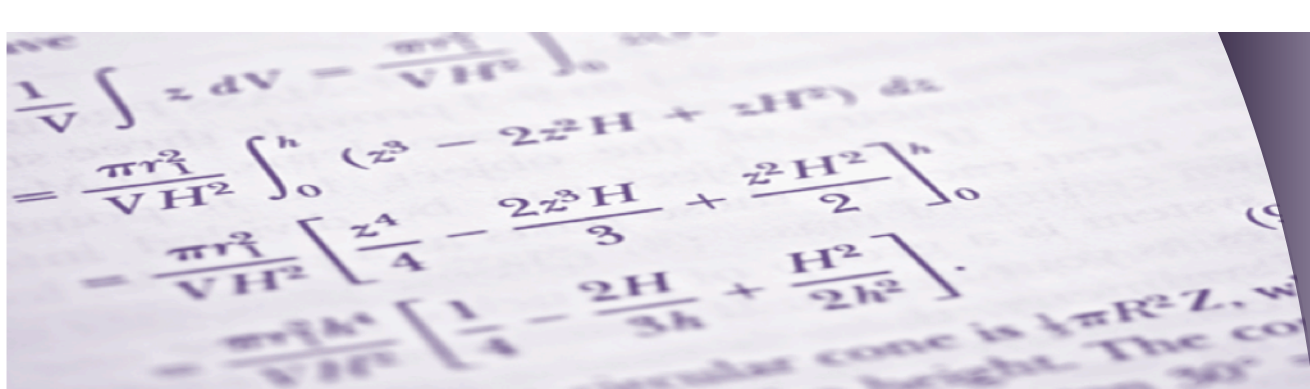
October Actuarial Talk

William Strange from Fidelity Investments will present the actuarial talk "Benefits Consulting" Wednesday, October 16 at 3:30 pm in TUC 352 with refreshments at 3:00 pm in TUC 300.

The TCU actuarial talk series features talks of particular interest to students in the actuarial program. Also, many of the talks will be useful in general for any students interested in careers in industry or finance.

University of Texas Master of Science in Finance Program Representative on Campus on Monday, October 7

A representative from the University of Texas McCombs School of Business Master of Science in Finance (MSF) program will be on campus to talk with TCU students interested in the program on Monday, October 7. The MSF program prepares students for careers in finance, especially those requiring analytic rigor and quantitative skills, so it is especially suitable for math majors. The Texas MSF representative will be at the "Earn Your Master's Degree in Business" session, which begins with a short presentation at 5:00 pm, and is followed by the opportunity to meet representatives from various schools. The session will be in Scharbauer Hall Room 1011.



Solution to the September 2013 Problem of the Month

Problem: You are sitting at a table, blindfolded. You have been told that scattered about on the table, there are 52 playing cards, and exactly 31 of them are face-up. Your goal is to form two piles of cards, both of which have the same number of face-down cards. How do you do this, without taking off the blindfold? (Michigan Math Challenge)

Solution: Form one pile with 21 cards and the other with the remaining 31. Flip the pile of 21 cards over. If it now has c cards face-down, they were originally face-up. Thus, the second pile with 31 cards has $31 - c$ face-up and hence also has c cards face-down.

The September Problem of the Month was solved by Brad Beadle ('96).

October 2013 Problem of the Month

In its early days, Putnam problems often involved geometry and calculus. This month's problem is a typical example. A solid has a cylindrical middle with a conical cap at each end. The height of each cap equals the length of the middle. For a given surface area, what shape maximizes the volume?

Students and others are invited to submit solutions to Dr. George Gilbert by e-mail (g.gilbert@tcu.edu) or hard copy (Math Dept. Office or TCU Box 298900). Correct solutions submitted by persons who are not members of the TCU math faculty will be acknowledged in the next issue of the newsletter. Note that a correct solution is an answer and a justification of its correctness. The solution to the problem will be published in the next edition of the newsletter.