TCU Math Newsletter

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There exists a passion for understanding just as there exists a passion for music. This passion is more common in children, and is usually lost with age. Without this passion there would be neither mathematics nor natural science. This passion which has always existed in me has never lost its sparkle.

- Albert Einstein

Math Department Holiday Buffet on December 13

The TCU Mathematics Department will hold its annual Holiday Buffet from 11:00 a.m. to 1:00 p.m. on Tuesday, December 13 in Winton Scott Hall 171. All TCU mathematics majors and graders are invited to come and enjoy the food and a break from studying.

If you would like to attend, please come to the Math Department office to sign up to bring an example of your cooking, or students can just make a $1.00 contribution toward buying the turkey. We hope you can join us.

First Spring Semester Parabola Meeting on January 31

Dr. George Gilbert of the TCU Mathematics Department will be the first Parabola speaker for the Spring 1995 semester. He will present a talk entitled "How Many Crayons Suffice?" In his talk, Dr. Gilbert will discuss how many different colors are required to color certain kinds of maps. The talk is related to the famous Four Color Theorem which states that you can always color a map with four colors in such a way that countries that share a boundary line have different colors. After remaining an unsolved problem for many years, the Four Color Theorem was finally proved in 1976 by Kenneth Apel and Wolfgang Haken. Their proof involved extensive use computer calculations. To date, no proof has been found which does not involve the use of a computer.

Dr. Gilbert will present his talk on Tuesday, January 31, 1995 at 3:30 p.m. in Winton Scott Hall 145. Refreshments will be served at 3:00 p.m. in Winton Scott Hall 171.

All TCU students are invited to attend meetings of Parabola, whether or not you are a member. If you are interested in joining Parabola, see Dr. Rhonda Hatcher.

Graders and Clinic Workers Needed For Spring Semester

If you are interested in working for the Mathematics Department as a grader or Math Clinic worker for the Spring 1995 semester you should let Professor Charlie Deeter know before leaving for the holiday break, and then see him again as early as possible after returning in January (preferably before classes begin). Dr. Deeter's office is Winton Scott Hall 159.

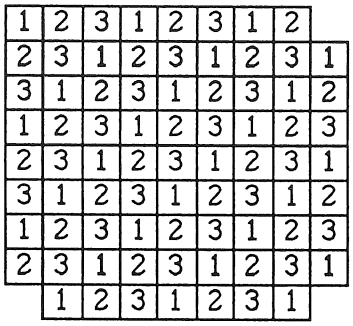
New Course Offerings for the Spring 1995 Semester

The Mathematics Department will offer two new courses for the Spring 1995 Semester: Math 5403 Introductory Complex Analysis which will meet on MWF 1-2 and Math 5703 Elementary Number Theory which will meet on MWF 12-1. These courses were not listed in the General Registration book.

Solution to the November 1994 Problem of the Month

Problem: *Consider a 9 x 9 checkerboard (consisting of 81 squares). If one removes three corners, can the remainder be covered with twenty-six 3x1 tiles?*

Solution: The remaining squares cannot be tiled. Rotate the checkerboard and number its squares as in the diagram below. There are 27 squares numbered 1, 26 numbered 2, and 25 numbered 3. Because a 3x1 tile covers one of each number, tiling the remainder of the checkerboard is impossible.



TCU student Allen Sulgrove submitted a correct solution.

Problem of the Month

Consider the 100 statements:

At least 1 of these statements is true.
At least 1 of these statements is false.
At least 2 of these statements are true.
At least 2 of these statements are false.
At least 3 of these statements are true.
At least 3 of these statements are false.
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At least 49 of these statements are true.
At least 49 of these statements are false.
At least 50 of these statements are true.
At least 50 of these statements are false.

If each statement is either true or false, how many of these statements are, in fact, true? (Explain.)

Students and others are invited to submit solutions to Dr. George Gilbert (Math Dept. Office or P.O. 32903). 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.

The TCU Math Newsletter will be published each month during the academic year.
Dr. Hatcher: Editor; Dr. Gilbert: Problem Editor; Dr. Doran: Thought of the Month Editor.
Items which you would like to have included should be sent to Dr. Hatcher (Math Dept. Office or P.O. 32903).