
TCU Math News Letter

Volume 5, Number 3 November 1996

A horizon is nothing save the limit of our sight.

- Rossiter Raymond

[Editor: Dr. Rhonda Hatcher](#) and [Archive of Newsletters](#)

The Mathematics Department Loses a Cherished Friend and Colleague

Professor Charles R. Deeter, a member of the TCU Mathematics since 1960, died of cancer on Saturday, October 27. Charlie was an active and vital member of our department and he will be greatly missed.

During his thirty-six years at TCU, Professor Deeter directed 11 Ph.D. theses and 3 masters theses. Charlie loved teaching and working with undergraduate students. He served many years as the faculty sponsor for Parabola. He was also a very active member of the Texas Section of the Mathematical Association of America, and in 1995 he received the Distinguished Service Award from the Texas Section.

Charlie is survived by his wife of 39 years, Shirley, and his two daughters, Connie Deeter and Lucy Deeter Jones, and a sister, Eleanor Janousek.

Although Charlie liked to play the role of the department curmudgeon, we all know that beneath that gruff exterior was a caring teacher, a dedicated family man, and a heart of gold.

TCU Lectureship Series Talk

On Tuesday, November 5, Professor Bob Williams of the University of Texas at Austin will present the talk "Chaos and Symbolic Dynamics" in the TCU Mathematics Department Research Lectureship Series. Refreshments will be served at 3:30 p.m. in Winton Scott Hall 171 and the talk will begin at 4:00 p.m. in Winton Scott Hall 145.

"Counting the Days" at the Next Parabola Meeting

We are on the threshold of a new century - but when will it really begin? Say you want the year you turn 30 to be a lucky year - will it be a year without a Friday the 13th? At the next meeting of Parabola, on Wednesday November 13, these and other interesting questions about our calendar system will be examined.

The presentation will be jointly given by Mr. Frank Stones, a great friend of the Mathematics Department,

and the students in the abstract algebra class at TCU. No mathematical background will be assumed.

Refreshments will be served at 3:30 p.m. in Winton Scott Hall 171, and the presentation will begin at 4:00 p.m. in Winton Scott Hall 145.

Mathematical Modeling Contest

The 13th annual Mathematical Contest in Modeling, an undergraduate contest, will be held from Friday, February 7, through Monday, February 10, 1997. Over 393 teams from 235 colleges took part last year.

Teams of three students work at their home institution on one of two problems. In 1996 the problems involved the detection of submarines in the ambient noise field of the oceans and the efficient scoring of papers in a contest. Contestants work on their chosen problem to the extent their schedules permit during the contest's three and a half days. Successful teams usually include students with skills in problem solving, computer programming, and word processing.

More details, including full statements of the 1996 problems, are on the Problem Solving bulletin board across from Winton Scott Hall 169. Problems and outstanding solutions appear in the UMAP journal. The Fall 1991 issue is available in the Colquitt Library adjoining Winton Scott 112. The Fall 1994 issue is shelved with the current mathematics periodicals in the Mary Coups Burnett Library.

Contact Professor George Gilbert, Winton Scott 141, 921-7335, before the end of November if you are interested. Since he is on leave this fall, you might have better luck contacting him at home (923-8146).

Solution to the September 1996 Problem of the Month

A professor has two copies each of three versions of an exam. If the professor passes these exams out at random to a row of six students, what is the probability that some two adjacent students receive the same version of the exam? Solution: The probability is $2/3$. It is probably easier to compute the probability that no adjacent students receive the same version of the exam. The probability that some two adjacent students receive the same version is found by subtracting the value obtained from 1. To begin, there is a $4/5$ probability that the first two students receive different versions. If this is so, denote the version received by the first student by A and that received by the second student by B, with C denoting the third version. If no adjacent students receive the same version, then the third student gets either version A or version C. If the third student gets version A, which happens with probability $1/4$ given that the first two students have received versions A and B, then the fourth, fifth, and sixth students must receive versions C, B, and C, respectively. The probability of this scenario is $(4/5)(1/4)(1/3) = 1/15$. In the other alternative where no adjacent students receive the same version, the third student gets version C. Given that the first two students have received versions A and B, this occurs with probability $2/4$. Now, as long as the fourth student does not receive version C, no adjacent students will get the same version. The probability of this scenario is $(4/5)(2/4)(2/3) = 4/15$. Therefore, the probability that no adjacent students will receive the same version of the exam is $1/15 + 4/15 = 1/3$, and the probability that some two adjacent students do receive the same version of the exam is $1 - 2/3 = 1/3$.

Problem of the Month

A polyhedron is a solid with polygonal faces, such as a cube, a pyramid, or a prism. Does there exist a

polyhedron that has an even number of faces with an odd number of sides (e.g. triangles, pentagons, ...)?

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

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. 298900).