
TCU Math News Letter

Volume 3, Number 7 April 1995

In all science, error precedes the truth, and it is better it should go first than last.

-Horace Walpole

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

Integration Bee On April 11

The TCU Mathematics Department will hold the annual Integration Bee on Tuesday, April 11, 1995. The competition will begin at 4:00 p.m. in WSH 145, and we will serve refreshments at 3:30 p.m. in WSH 171.

All TCU undergraduate students are eligible to enter. The cash prizes awarded will be \$50 for first place, \$25 for second place, and \$15 for third place. Last year, Ted Strout, who graduated last May with a mathematics and English double major, took first place.

If you are interested in participating in the Integration Bee, please sign up in the Math Department Office in WSH 112.

Interested in Problem Solving Next Fall?

If you might like to work next fall on developing skills in problem solving and writing, please contact Professor George Gilbert, WSH 141, x7335. Dr. Gilbert would like to organize a problem solving group of undergraduate students focusing on contest problems such as those appearing on the William Lowell Putnam Mathematical Competition and in mathematics journals. Students may be able to earn a one hour Special Topics credit (Math 2970), depending on their level of commitment.

TCU Lectureship Talk

Professor Alan Adolphson will be the last speaker in the TCU Research Lectureship schedule. He will give a talk entitled "Exponential Sums, Newton Polyhedra, and Hypergeometric Differential Equations" on Tuesday, April 4 at 4 p.m. in Winton Scott Hall 145, with refreshments at 3:30 p.m. in Winton Scott Hall 171.

Professor Charles Deeter

Honored by Texas Section of the MAA

Professor Charles Deeter of the TCU Mathematics Department received a Distinguished Service Award by the Texas Section of the Mathematical Association of America. This award was given in recognition of his many years of service to the Association. It was presented at the Annual Meeting of the Texas Section at

Baylor University on March 31.

Congratulations Dr. Deeter!

Mathematics Department Picnic on Sunday, April 30

The annual Mathematics Department Picnic, sponsored by Parabola, the TCU Undergraduate Mathematics Club, will begin at 2 p.m. on Sunday, April 30 at the home of Dr. Rhonda Hatcher and Dr. George Gilbert at 4204 Harlanwood Drive. Their home is only about one and a half miles from the TCU campus. If you need a ride, let Dr. Hatcher or Dr. Gilbert know and they will arrange one for you.

All undergraduate students and faculty are invited to come. A sign-up sheet and maps to the picnic are in the Math Department Office in WSH 112.

New Parabola Officers

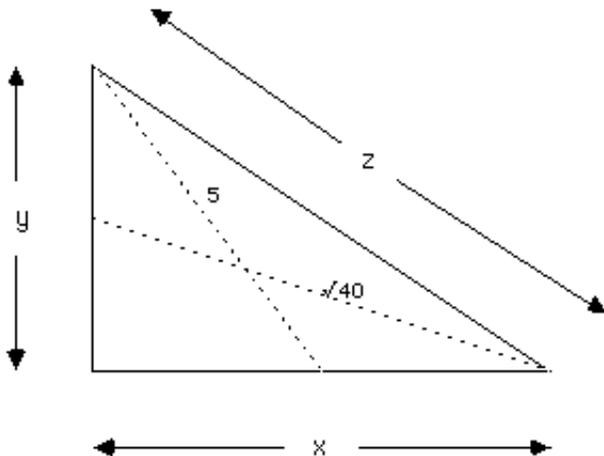
The officers for Parabola for the 1994-1995 academic year were elected at the March 28 meeting of Parabola. The three new officers, called the Focus of Parabola, are Teddy Donevska, Kristi Eggleston, and Anna Mueller.

TCU undergraduates interested in joining Parabola should contact Professor Hatcher in WSH 142.

Solution to the March 1995 Problem of the Month

Problem: The medians from the acute angles of a right triangle have lengths 5 and $\sqrt{40}$. Find the length of the hypotenuse of the triangle. (A median is the line segment from a vertex of a triangle to the midpoint of its opposite side.)

Solution: Two applications of the Pythagorean theorem yield $x^2 + (y/2)^2 = 40$ and $(x/2)^2 + y^2 = 25$. Adding the equations, we find $(5/4)(x^2 + y^2) = 65$, hence $x^2 + y^2 = 52$, hence $z = \sqrt{52}$. (One may also find $x = 6$, $y = 4$.) This month's problem was solved by students Manoj Gopalan, Diana Horst, and Debbie Leedy. Thanks go to Dr. Charles Deeter for this solution and diagram.



Problem of the Month

This month's problem comes from the March-April issue of Quantum magazine, by way of Macalester College's Problem of the Week. Alice, Bob, and Mikhail play in a chess tournament among themselves that consists of many rounds. Each round consists of 3 games: Alice vs. Bob, Bob vs. Mikhail, and Alice vs. Mikhail. Construct the results of such a tournament so that:

- Alice had fewer defeats than the other two.
- Bob had the greatest number of wins.
- Mikhail had the highest score.

Note: Chess scoring is identical to hockey scoring, except divided by two: games can be won (1 point), lost (0 points), or drawn ($1/2$ point).

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 via e-mail.