

TCU Math Newsletter

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May 1994

*A brain is as strong as
its weakest think.*

– Eleanor Doan

Jody Jolissant is selected the Mathematics Department Senior Scholar

Jody Jolissant was selected as the 1994 Mathematics Department Senior Scholar. The award is given each academic year to one mathematics major graduating in May or August or in the previous December. The senior scholar is selected from among those mathematics majors with an overall grade point average of 3.5 or better. Jody graduated in December and is currently living in Brazil. Her father accepted her award at the Honors Banquet on April 14.

Mathematics Department Hires New Full Time Faculty

The TCU Mathematics Department recently filled two full-time tenure-track faculty positions. One of the new members is Dr. Ken Richardson, who has been here during this academic year on a one-year appointment. He has now been appointed to a tenure-track position. Dr. Richardson received his Ph.D. from Rice University. The second new faculty member is Dr. Ze-Li Dou, who earned his Ph.D. at Princeton University. He is currently teaching at The College of Staten Island, City University of New York. Dr. Dou will begin teaching at TCU in the Fall 1994 semester.

A third new faculty member, Dr. Susan Staples, will begin teaching at TCU in the Fall 1995 semester. Dr. Staples, who has a Ph.D. from Michigan University, currently holds a position at The College of Staten Island.

Ted Strout Repeats as TCU Integration Bee Champion

Senior mathematics and English double major Ted Strout placed first in the TCU Integration Bee for the second year in a row. In addition to his two first place finishes, Ted placed second in his freshman year to his brother Doug Strout, who won for the fourth consecutive year.

Brad Beadle, a sophomore mathematics and English double major, and Azure Avery, a freshman biophysics major, placed second and third, respectively. Over twenty undergraduates participated in the competition, which was organized by Dr. Robert Doran and Dr. Ken Richardson.

Graders and Clinic Workers Needed for Fall 1994 Semester

Students interested in working during the Fall 1994 semester should let Dr. Deeter know as soon as possible. Work assignments will be made during registration in August.

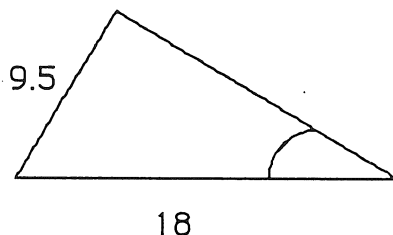
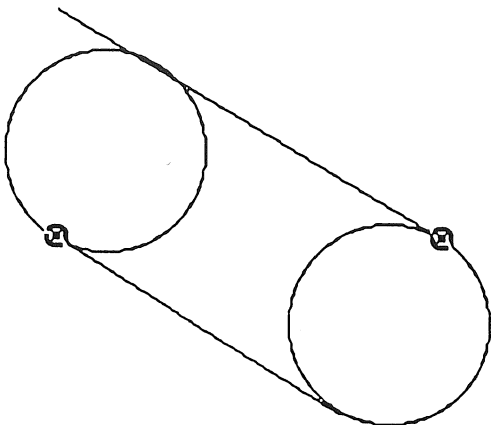
Students who plan to work in the Mathematics Clinic should be aware of the fact that many classes in the Fall will require students to purchase and use graphing calculators. This will mean that Clinic Assistants should have some knowledge and facility in the use of such technology in order to successfully assist students. Mathematics faculty will be using TI-82 and/or TI-85 graphing calculators in class, so concentration on their use will be stressed, but some students may have other brands of calculators.

Dr. Deeter can be reached in WSH 159 or by phone at 921-7335.

Solution to the April 1994 Problem of the Month

Problem: What is the smallest angle to the horizontal at which a basketball will travel cleanly through the hoop? Assume that the ball is 9.5 inches in diameter, the rim is 18 inches in (internal) diameter, and that the ball travels through the hoop in a straight line.

Solution: If the ball just passes through the hoop, one point on the ball will "graze" the front of the rim and its diametrically opposite point will "graze" the back (see figures). Thus, the minimal angle is $\sin^{-1}(9.5/18) \approx 31.86^\circ$.



Correct solutions were received from TCU undergraduates Manos Gopalan, Åsa Norinder, and Ted Strout.

Problem of the Month

As the end of the school year approaches, many students find themselves short on cash. Our records revealed the following unique appeal home.

$$\begin{array}{r} \text{S E . N D} \\ + \text{M O . R E} \\ \hline \text{M O N . E Y} \end{array}$$

If each letter represents a different digit, how much did the student request; i.e. what was the bottom line?

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.