The Teacher's Circle

Why should I be interested?

Many teachers, like their students, enjoy discovering great mathematics. The aim of The Teacher's Circle is to immerse a group of educators in engaging topics and equip them with an effective problem-solving approach to teaching mathematics. Those who take part will receive room and board for the week as well as further support and resources in the form of monthly follow-up sessions spread throughout the school year. Teachers will also be eligible for continuing education credit, professional development units, or college course credits.

What happens during the week-long summer workshop?

The core of the summer program consists of the morning and afternoon sessions led by course instructors from Monday through Thursday. This time will be devoted to discovery, problem solving, and interactive learning. At first, course content will focus on problem solving techniques like symmetry, mathematical patterns, induction, parity, and invariants. These will be complemented by topics including geometry, tiling, graph theory, recursion, sequences, number theory, counting, and probability on later days. A major theme throughout the week will be incorporating a problem-solving approach to math education into the existing curriculum. To this end the instructors will supply participants with handouts or short modules based on the material covered during their classes.

What are the monthly follow-up sessions?

An important component of the program consists of seven follow-up events which occur once a month throughout the school year. Teachers will gather at San Jose State University on Thursday evenings to enjoy dinner, participate in a math circle, and discuss experiences in their classes over the prior few weeks. The purpose is to provide support for teachers who are working to incorporate a new, interactive, problem-solving style of teaching into their class.

How can I apply?

Information for applicants is summarized on the back of this brochure. Once all application materials are prepared, they can be submitted via a straight-forward form at

http://www.theteacherscircle.org

AIM

The summer workshop will be held at the American Institute of Mathematics located in Palo Alto, CA.

Sam Vandervelde has a Ph.D. in math from the University of Chicago. He organizes the Stanford Math Circle and will teach at the summer program.

Mary Fay-Zenk was coach of the national champion California MATHCOUNTS team in 2000. She is an assistant principal at Miller Middle School and will work with teachers at the summer program.

Problem Corner

1. If we arrange nine points in a three by three grid, then we can draw eight different lines, each of which pass through exactly three of the points. How should we position the nine points so that it is possible to draw ten such lines?

2. Alice wishes to purchase a candy bar but is one penny short of enough money, while Bob is a dollar short. When they pool their money, they still can't afford the chocolate. How much does it cost?

3. Ten students shake hands with some (but not necessarily all) of the other people in the group. Explain why there must be two students who each shook hands with the same number of people.