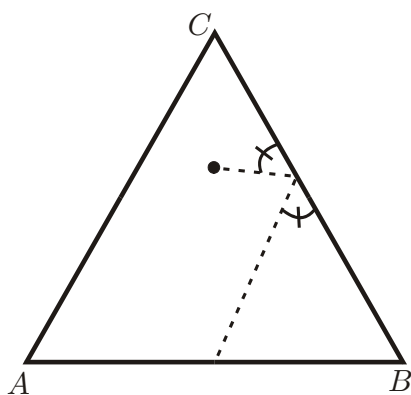


Problem of the Week

Proposed by Bernardo Ábrego and Silvia Fernández.

October 18-25



Consider a billiard table in the shape of an equilateral triangle. Each of the sides of the table is 40 inches long and the corners are labeled A , B , and C . A billiard ball, represented by a single point, is placed in the midpoint of side AB . The ball is hit so that it first bounces on side BC . Determine which point on side BC the ball must first hit in order to come back to its initial position at the time of the fifth bounce. Explain your answer.

Deadline: October 25, 2004 before 9:00 PM.

Look for the “Problem of the Week” every Monday in the Daily Sundial (Daily Spotlight section) or in our web site www.csun.edu/math/probweek

Rules:

1. Open to all enrolled undergraduate and graduate CSUN students.
2. The first complete and correct solution will be awarded a diploma and the choice of a magnetic building set or a five dollar prize.
3. The winner solution and the names of the authors of all correct solutions will be published in our web site (www.csun.edu/math/probweek). All authors whose solutions are complete and correct will receive certificates.
4. All solutions must be typed and sent electronically. PDF, Latex, or Word files are preferred.
5. All steps of the solution must be clearly justified.
6. Email your solution with subject “Problem of the week” to Bernardo.Abrego@csun.edu
7. Late solutions will not be considered.
8. For any questions contact the organizers Bernardo.Abrego@csun.edu, Silvia.Fernandez@csun.edu

If you like puzzles and challenging problems ... join the Mathematics Department Problem Solving Workshop. We meet every Friday at 2:00 PM in FOB room 108. For more information visit our web site: www.csun.edu/math/workshop.