

Problem of the Week

Proposed by Bernardo Ábrego and Silvia Fernández.

March 7-14

Consider an arbitrary circle of radius 2 in the coordinate plane. What is the largest possible number of *lattice* points inside, but not on, the circle? Justify your answer.

Note: A lattice point is a point whose coordinates are both integer numbers.

Deadline: March 14, 2005 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 "Brain Teasers Super Star" 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