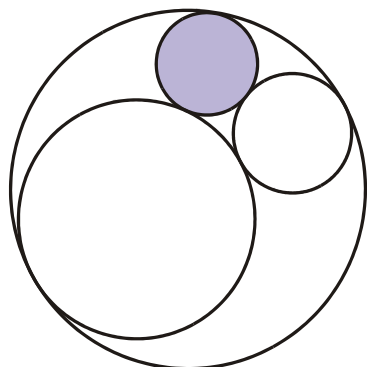


Problem of the Week

Proposed by Bernardo Ábrego and Silvia Fernández.

March 14-21



Circles of radii 1 and 2 are externally tangent to each other and internally tangent to a third circle of radius 3. A fourth circle is tangent to the other three circles according to the figure.

What is the radius of this fourth circle?

Deadline: March 21, 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