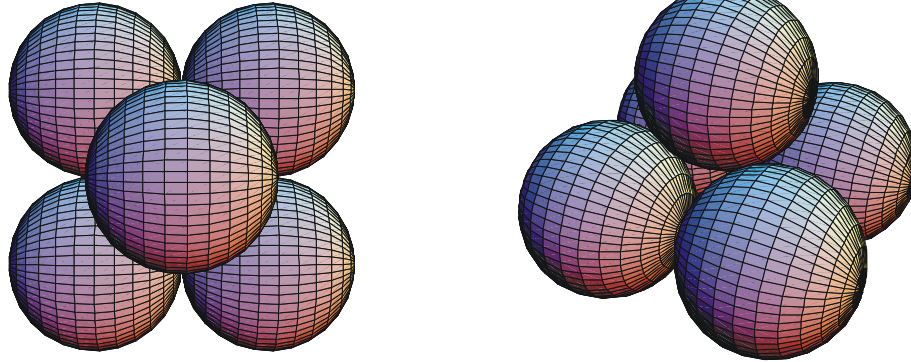


Problem of the Week.

August 23-30

Proposed by Bernardo Ábrego and Silvia Fernández.

Four basketballs, 12 inches in diameter, are placed on the floor forming a square. Any two balls forming a side of the square are touching (see figure below). A fifth basketball (same size) is placed on top of the previous four. It is perfectly centered and touches all other balls. What is the distance from the center of the fifth ball to the floor?



Deadline: August 30, 2004 before 9:00 PM.

Next problem of the week: Available in our web site on August 30 at 2:00 PM.

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 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.