Northridge

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problem of the Week

Department of Mathematics

Proposed by Bernardo Ábrego and Silvia Fernández

November 13-20

Prove that the deadline cannot be written as the sum of three cubes. That is, prove that the equation

$$x^3 + y^3 + z^3 = 11 \cdot 20 \cdot 2006 = 441,320.$$

has no solutions with integers x,y, and z.

This contest is sponsored by the Mathematics Department. Open to all CSUN students.

Winner gets \$5 or an equivalent prize. All complete and correct solutions get a certificate.

Type and send your solution before November 20th, 9:00PM to silvia.fernandez@csun.edu.

All steps of the solution must be clearly justified.

For rules, winners, solutions, and more information visit: www.csun.edu/math/probweek