

Problem of the Week

Proposed by Bernardo Ábrego and Silvia Fernández

February 27-March 6

Let $p < q < r$ be prime numbers such that $pqr + 1$ is a perfect fourth power. Prove that

$$(p + 1)(q - 1)(r - 1)$$

is also a fourth power.

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 March 6th, 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