

Problem of the Week

Proposed by Bernardo Ábrego and Silvia Fernández

March 27-April 3

Let $ABCD$ be a rectangle. Construct P on BD such that AP is perpendicular to BD . Construct E and F on BC and CD respectively such that PE is perpendicular to BC and PF to CD . Prove that

$$\left(\frac{PE}{BD}\right)^{2/3} + \left(\frac{PF}{BD}\right)^{2/3} = 1.$$

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 April 3rd, 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