

Problem of the Week

Proposed by Bernardo Ábrego and Silvia Fernández

December 4-11

Let A, B, C, D , and P be five points on a circle O such that $AB=CD$.

Let X and Y be the incenters of the triangles PAB and PCD . The lines PX and PY cut the circle O again at E and F respectively.

Show that $XE=YF$.

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 December 11th, 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