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PROBLEM OF THE WEEK

3/27/12 due NOON 4/9/12

CAN YOU GIVE US A SOLUTION?

Problem No. 11 (Spring 2012 Series)

Find a one to one area preserving map from the interior of a rectangle onto that part of the interior of the unit circle which lies above the x axis. Area preserving means the area of the image of a subregion of the rectangle is the area of the subregion, so the interior of your rectangle will have to have area $\pi/2$.

A panel in the Mathematics Department publishes a challenging problem once a week and invites college & pre-college students, faculty, and staff to submit solutions. The objective of this is to stimulate and cultivate interest in good mathematics, especially among younger students. Solutions are due within two weeks from the date of publication. They can be faxed to (765) 494-0548 or sent by campus or U.S. mail (no E-mail please) to:

PROBLEM OF THE WEEK, **5th Floor**, Math Sciences Bldg., Purdue Univ.,
150 North University St., West Lafayette, IN 47907-2067

Solvers should include their name, address, and **status at the University or school**.

The names of those who submitted correct solutions will be posted in the Math. Library, along with the best solution. Every Purdue student who submits three or more correct solutions will receive a Certificate of Merit. A prize fund of \$300.00 will be distributed among the Purdue undergraduates who have contributed at least six correct solutions for the total Spring 2012 series.