

1056-53-99

Alexander Diaz* (alexander.diaz1@upr.edu), Urb. Estancias del Bosque, 363 Calle Nogales G7, Cidra, PR 00739, and **Nate Harman, Sean Howe and David Thompson.** *The Isoperimetric Problem in Sectors with Disk Density.*

A manifold with density is a manifold with a positive function weighting both perimeter and area. I consider the isoperimetric problem in planar sectors with density a inside the unit disk and density 1 outside. There are ten types of solutions, depending on a , the sector angle, and the prescribed area. Another interesting feature of this problem is that it deals with a noncontinuous density.

(Received July 27, 2009)