

1135-VM-2107      **Daniel Camacho\***, 701 North C Street, Indianola, IA 50125, and **Addison Grant** and **Sara Lawson**. *Mathematical Billiards and the search for a finite number of shapes.*

We follow the methods of Henk Don to find a maximum of 39 polygons produced by a billiard flow on an L-shaped table. We use the result on the number of gaps produced by arc exchanges on the circle which generalizes the Three Gap Theorem for Rotations. (Received September 25, 2017)