

1052-20-186

Kevin Wortman* (wortman@math.utah.edu). *Reducing Dehn functions of arithmetic groups to the Dehn functions of parabolic groups.*

Young proved that $SL(n, \mathbb{Z})$ has a quartic Dehn function if $n > 4$.

I'll discuss a method for reducing the question of whether certain arithmetic groups have a polynomial Dehn function to a seemingly simpler question of whether certain loops in parabolic subgroups can be filled with polynomial disks in the ambient arithmetic group. The method applies to groups $G(\mathbb{Z})$ where G is a simple \mathbb{Q} -group of \mathbb{Q} -rank at least 3 with \mathbb{Q} -root system of type A_n , C_n , or D_n . (Received August 27, 2009)