THE GRIGORCHUK GROUP, C. L. Waddle, University of Chicago, Chicago, IL 60637, may@math.uchicago.edu

In this introduction, we will define the Grigorchuk group and prove some of its properties. The Grigorchuk group is an unusual subgroup of the automorphism group of a binary tree. By looking at the words formed by the group's generators, we will show that the Grigorchuk group is finitely generated, that every element has finite order, but that the group itself is infinite. This, along with Burnside's Theorem, gives that the Grigorchuk group is not linear.