An Alternative Proof That the Fibonacci Group $F(2, 9)$ is Infinite

Derek Holt

Abstract

This note contains a report of a proof by computer that the Fibonacci group $F(2, 9)$ is automatic. The automatic structure can be used to solve the word problem in the group. Furthermore, it can be seen directly from the word-acceptor that the group generators have infinite order, which of course implies that the group itself is infinite.