

962-20-859

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We construct a non-amenable finitely presented group without non-abelian free subgroups. This solves the finitely presented version of the von Neumann problem. This version of the problem was proposed, in particular, by Grigorchuk in 1980. Our group is a cyclic extension of a group of odd exponent  $n \gg 1$ , so it satisfies the identity  $[x, y]^n = 1$ . (Received September 28, 2000)