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Kropholler*, Department of Mathematics, Bromfield-Pearson Hall, 503 Boston Avenue, Medford, MA 02155, and **Gilman** and **Schleimer**. *Groups whose word problem is not multiple context free.*

We study the class of groups with multiple context free word problem (MCF). This contains the class of context free groups which, by work of Lyndon and Schupp, is equivalent to the class of virtually free groups.

In recent work Salvati has shown that \mathbb{Z}^2 is in MCF. This result has been recently strengthened by Meng-Che “Turbo” Ho to show that all finitely generated abelian groups are in MCF.

The class is also closed under taking subgroups, finite index overgroups, and free products.

We show that this class is not closed under direct products by considering which RAAGs are in the class. We also show that hyperbolic 3-manifold groups are not in the class and that the only virtually nilpotent groups in the class are virtually abelian. (Received September 26, 2017)