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Josh Roberts* (jroberts@ms.uky.edu), Department of Mathematics, 719 Patterson Office Tower, University of Kentucky, Lexington, KY 40506-0027. *On an algorithm for low dimensional group homology.* Preliminary report.

Given a finitely presented group G , Hopf's formula expresses the second integral homology of G in terms of its generators and relators. We give an algorithm that exploits Hopf's formula to compute (or at least estimate) $H_2(G)$ with coefficients in a finite field, and give an example using SL_2 of a specific ring of integers. This example is related to a conjecture of Quillen. (Received September 15, 2008)