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**Fikreab Solomon\*** (fsolomon@binghamton.edu). *The generating function for enumerating finite class-2-nilpotent groups on 2 generators.* Preliminary report.

In 2009, C. Voll computed the numbers  $g(n, 2, 2)$  of nilpotent groups of order  $n$ , of class at most 2 generated by at most 2 generators, by giving an explicit formula for the Dirichlet generating function  $\sum_{n=1}^{\infty} g(n, 2, 2)n^{-s}$ . Later in 2012, Ahmad, Magidin and Morse gave a direct enumeration of such groups building on works of M. Bacon, L. Kappe, et al. We use their enumeration to provide a natural multivariable extension of the generating function counting such groups and as a result rederive Voll's explicit formula. Similar formulas or enumerations for finite groups of nilpotency class 2 on more than 2 generators or of at least class 3 on 2 or more generators is currently unknown. (Received July 28, 2019)