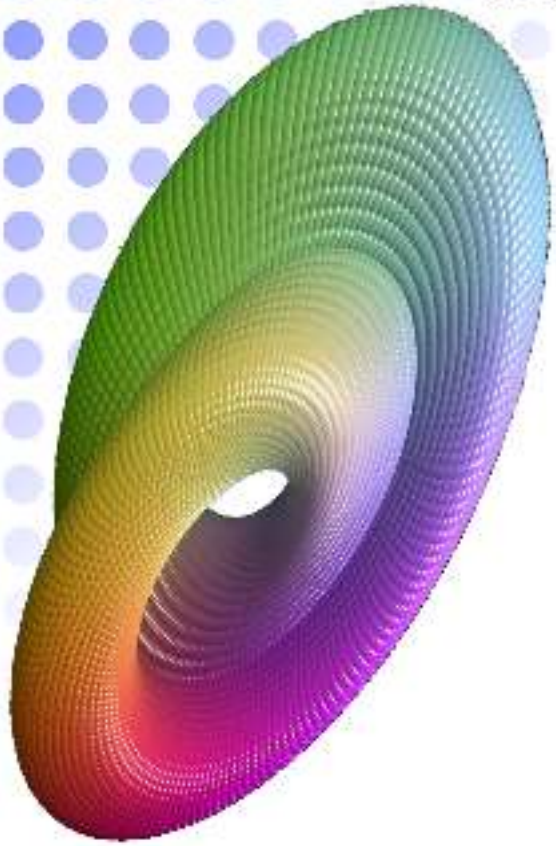
Michigan Math Club

Thursday at 4pm in the Commons

Free Pizza and Pop



Graphs and Free Groups

Brian Mann

Abstract for 31 March 2011

The *free group* on the set $\{a_1, a_2, \ldots, a_k\}$ is the algebraic object consisting of all finite strings of symbols $a_1, \ldots, a_k$ and $a_1^{-1}, \ldots, a_k^{-1}$ with the property that a_j and a_j^{-1} do not occur consecutively. We will use properties of finite graphs to prove several theorems about free groups, including the fact that the intersection of two finitely generated subgroups of a free group is finitely generated.