

1011-57-152

Violeta Vasilevska* (vvasilev@usd.edu), The University of South Dakota, Department of Mathematical Sciences, 414 E Clark Street, Vermillion, SD 57069. *Ultra Hopfian Groups*. Preliminary report.

A group is *ultra Hopfian* if all self homomorphisms with non-trivial normal image are isomorphisms. We show that every non-abelian group of order pq where p, q are distinct primes is ultra Hopfian. Also we show that the free product of non-trivial, finitely generated, residually finite groups ($\neq \mathbb{Z}_2 * \mathbb{Z}_2$) are ultra Hopfian. As a consequence, a free product ($\neq \mathbb{Z}_2 * \mathbb{Z}_2$) of non-trivial, finitely generated, ultra Hopfian groups is ultra Hopfian provided that the free product is a Hopfian group and at least one of the groups is non-cyclic. (Received August 23, 2005)