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Natasha Komarov and **Reagin Taylor McNeill*** (rmcneill@email.smith.edu), 1 Chapin Way, Box 6675, Northampton, MA , and **Justin Webster**. *Normal Subgroups of the Free Group*.

We present a method of producing normal subgroups of the free group on r generators not containing a given word, by inspection of covering spaces of the wedge of r circles. Special attention is given to the normal subgroups of the free group on two generators. In considering the exponent sum of the generators in a given word, we produce such subgroups and clearly state for what class of words these subgroups are not easily obtainable. We also analyze certain infinite families of covers and show their relevance in enumerating covers of a given fold. This research was done through the 2007 Oregon State University REU program. (Received September 19, 2007)