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(l1auderdale@towson.edu). *On the Intersection Numbers of Finite Groups*. Preliminary report.

In 1994, Cohn introduced the concept of a covering number of a group. The *covering number* of a nontrivial finite group G is the smallest number of proper subgroups of G whose set-theoretic union equals G . To date numerous authors have researched covering numbers and establishing the covering numbers of nonsolvable groups remains a topic of ongoing research. In this talk, we will focus on a dual problem to that of covering numbers of groups, which involves maximal subgroups of finite groups. For a nontrivial finite group G , we define the *intersection number* of G , denoted $\iota(G)$, to be the minimum number of maximal subgroups whose intersection equals the Frattini subgroup of G . We will elucidate some basic properties of this invariant, and give an exact formula for $\iota(G)$ when G is a nontrivial finite nilpotent group. In addition, we will determine the intersection numbers of a few infinite families of non-nilpotent groups. We will conclude by discussing a generalization of the intersection number of a nontrivial finite group and pose some open questions about these invariants. (Received August 17, 2019)