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Thomas Philip Wakefield* (TomWakefield@gmail.com), Department of Mathematics and Statistics, Youngstown State University, One University Plaza, Youngstown, OH 44555. *Useful Generalizations in Arguments Verifying Huppert's Conjecture*. Preliminary report.

In the late 1990s, Bertram Huppert conjectured that if G is a finite group and H a finite nonabelian simple group such that the sets of character degrees of G and H are the same, then $G \cong H \times A$, where A is an abelian group.

Huppert verified the conjecture for many nonabelian simple groups, including many of the sporadic simple groups. His method of proof relies upon a five step procedure which ultimately requires properties of the character degrees and maximal subgroups of the simple group in question. We will examine modifications to Huppert's arguments that can be used to establish his conjecture for many other simple groups. (Received August 30, 2009)