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George F McNulty* (mcnulty@math.sc.edu), Department of Mathematics, University of South Carolina, Columbia, SC 29208. *The computational complexity of deciding whether a finite algebra generates a minimal variety.* Preliminary report.

In the mid-1950's Dana Scott pointed out a brute-force algorithm for deciding whether a finite algebra of finite signature generates a minimal variety. This algorithm is very expensive in terms of computational resources. In this talk, I will provide some upper and lower bounds on the computational complexity of this problem and an overview of related open problems. (Received December 13, 2011)