1086-03-2349 **Steven M. VanDenDriessche*** (svandend@nd.edu). *Coding sets in abelian p-groups.*

The class of countable reduced abelian p-groups is of much interest to both algebraists and logicians. In the context of logic, p-groups are exciting for two reasons. First, the invariants for classification are ordinal sequences of cardinals. Secondly, there is a nice relation between the invariants and the complexity of the sentences describing them. We give an overview of how this relation can be exploited in order to code a set into the ordinal sequence associated to the group, and how some tools from computable structure theory guarantee that there is an algorithm capable of doing the coding. (Received September 25, 2012)