

**Undergraduate Math Club
Winter 2006
2nd floor Nesbitt Common Room
March 9, 4:10-5:00pm
(free pizza and pop, as always)**

Fernando Delgado
Van der Waerden's theorem

Abstract

In the late 1920's, Baudet proposed the following problem: if the set of integers is divided into two disjoint subsets, show that one can find an arithmetic progression of any specified length that is contained in at least one of the two subsets. This problem quickly gained attention in Gottingen (a world center of mathematics at the time) because its simple-looking statement resisted immediate attempts from well-known mathematicians over the course of a few weeks. Bartel Van der Waerden, an amateur at the time, finally tackled the problem via elementary methods. In fact, he solved a more general problem. In this talk, we discuss an elementary (but not simple!) proof of this result.