1068-05-67 **Patrick Allen**, **Bruce M Landman*** (landman@westga.edu) and **Holly Meeks**. *New Bounds on van der Waerden-type Numbers for Generalized 3-term Arithmetic Progressions.* Preliminary report.

Let a and b be positive integers, with $a \leq b$. An (a, b)-triple is a set of positive integers $\{x, y, z\}$ such that $y = ax + d$ and $z = bx + 2d$ for some positive integer d. Define $T(a, b; r)$ to be the least positive integer such that every r-coloring of $\{1, 2, \ldots, T(a, b; r)\}$ must contain a monochromatic (a, b)-triple. It is known that $T(a, b; 2)$ is bounded above by a fourth degree polynomial in b and a, and below by a quadratic. The main result is an improvement of the upper bound to a quadratic. We also give modest improvements to lower bounds and to the list of known values of $T(a, b; r)$. (Received January 11, 2011)