1023-03-495 **Jeremy F Alm*** (almjf@iastate.edu), Department of Philosophy, 402 Catt Hall, Iowa State University, Ames, IA 50011. *Lyndon's algebras and the equational complexity of RRA.* Preliminary report.

Roger Lyndon's relation algebras from projective geometries have been used many times since their original appearance in his 1961 paper. Jónsson used Lyndon algebras of projective lines to show that the variety RRA of representable relation algebras has no n-variable basis for $n < \omega$. This implies that the equational complexity function for RRA is not bounded above by a constant. We will use Lyndon algebras of projective lines along with a theorem of McNulty, Székely, and Willard to show that the equational complexity function is bounded below by a log-log function. (Received September 14, 2006)