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**Cayley A. Pendergrass\*** (cpendergrass@albion.edu), Albion College, Dept of Math/CS, 611 E Porter St, Albion, MI 49224. *Extending Herstein's Theorems for Simple Rings to Just Infinite Rings.*

An algebra,  $A$ , is said to be just infinite if each non-zero two-sided ideal has finite codimension. This condition generalizes the notion of a simple ring; we allow ideals, but only "large" ones. Here, we consider a collection of Herstein's theorems about simple rings and their related Jordan and Lie algebras and extend these results to just infinite algebras. In particular, we show that if  $A$  is a just infinite associative ring without 2,3, or 5-torsion and  $Z$  is the center of  $A$ , then  $[A, A]/(Z \cap [A, A])$  is a just infinite Lie algebra. (Received January 22, 2007)