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Jason P Huffman* (jason.huffman@gcsu.edu), Department of Mathematics, CBX 017, Georgia College & State University, Milledgeville, GA 31061. *Classifications of Pseudo-Local Rings.*

Let R be an associative ring, not necessarily commutative and not necessarily having unity. We say R is a **local** ring if the Jacobson radical of R is a unique maximal left ideal. Such rings have been studied primarily in the category of rings with identity. Here, we consider a similar definition, but in the context of rings without unity. We call a ring R **(left) pseudo-local** if and only if R has a unique maximal left ideal. If R has unity, this definition coincides with the definition of "local." However, a pseudo-local ring without unity may have properties that differ significantly from those for local rings, e.g. a Jacobson radical ring may be pseudo-local but is never local. Here, we characterize the structure of the Jacobson radical inside a pseudo-local ring and give conditions that guarantee a ring is either pseudo-local or not pseudo-local. Connections for such rings to algebraic geometry are also explored. (Received September 20, 2007)