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Neil Hindman and **Lakeshia R. Legette*** (l1egette@jcsu.edu), 100 Beatties Ford Rd.,
Charlotte, NC 28216, and **Dona Strauss**. *The Number of Minimal Left and Minimal Right Ideals
in βS* . Preliminary report.

Given an infinite discrete semigroup S , its Stone-Čech compactification βS has a natural operation extending that of S and making βS into a compact right topological semigroup. As such, βS has a smallest two sided ideal $K(\beta S)$, which is the union of all of the minimal left ideals and is the union of all of the minimal right ideals. It has been known that some weak cancellation assumptions on S guarantee the existence of many minimal left ideals and many minimal right ideals. We present here a couple of new results in that direction, but we are primarily interested in providing information about the existence of a large number of minimal right or minimal left ideals in an arbitrary semigroup (with no cancellation assumptions). For example, we show that for any infinite semigroup S , one of the following three statements holds: (1) S has a finite ideal, in which case $K(\beta S) \subseteq S$ and is finite; (2) βS has at least 2^c minimal left ideals; or (3) βS has at least 2^c minimal right ideals. (Received September 15, 2010)