Kendra E Pleasant* (kendra.pleasant@morgan.edu). Central Sets Theorem in Adequate Partial Semigroups.

Let $S$ be a nonempty set and $*$ be an associate partial operation on $S$ in the sense that for all $x, y, z$ in $S$ if either $x*(y*z)$ or $(x*y)*z$ is defined then so is the other and they are equal. We define the pair $(S, *)$ to be a partial semigroup. A partial semigroup is said to be adequate if for any finite subset, $F$, of $S$ there exists $x$ in $S$ such that $x*y$ is defined for all $y$ in $F$. We will prove the Central Sets Theorem in this new setting. (Received September 19, 2017)