

1135-VL-1988      **Lance Bryant** and **James Hamblin\*** (jehamb@ship.edu). *The Position Vector of a Numerical Semigroup.*

A numerical semigroup is a subset of the natural numbers that is closed under addition. The smallest nonzero element of a numerical semigroup is its *multiplicity*. The least representative in the semigroup from each congruence class modulo the multiplicity is called the *Apéry set*, and the positions of these elements in the semigroup give the *position vector*. We prove that the position vector of a numerical semigroup uniquely determines it, though not every vector determines a semigroup. We also discuss various cases and properties of these position vectors. (Received September 25, 2017)