If $P$ is a polynomial of degree $d$ define $\Lambda(P)$ to be the product of $2^d$ with the sum of the absolute value of the coefficients of $P$. In a 1971 paper Kurt Mahler defined the “order function” of each complex number $\alpha$ by $O(u|\alpha) = \sup \log |\frac{1}{P(\alpha)}|$ where the supremum is taken over all integer polynomials $P$ satisfying $\Lambda(P) \leq u$ and $P(\alpha) \neq 0$. By placing a partial order on the order functions Mahler induced a classification of the complex numbers. We will consider the properties of order functions when $\alpha$ is a $p$-adic number. Many of the results previously obtained in the real case still hold for the $p$-adics. However, the unique properties of the $p$-adic numbers result in several exceptions. (Received September 03, 2008)