Let $R$ be a commutative ring. A zero product sequence (or zps) is a sequence $\{a_1, a_2, ..., a_n\} \subseteq R$ such that $a_1 \cdot a_2 \cdots a_n = 0$ with each $a_i \neq 0$. A minimal zps is a zps such that no subsequence is also a zps. Define the zps constant for $R$, denoted $D_z(R)$, to be the supremum of the lengths of every minimal zps of $R$. Several examples and consequences of this definition are given, as well as applications to the study of zero-divisor graphs. (Received September 16, 2008)