The zero forcing span of a graph

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The zero forcing number of a graph, $Z(G)$ — that is, the minimum cardinality of any zero forcing set — has become a well-studied problem. For most graphs, some sets of vertices of order $Z(G)$ are zero forcing sets while others are not. However, between $Z(G)$ and the order of the graph $n = |V(G)|$, there exists a value k such that every set of vertices whose order is in $[k, n]$ is a zero forcing set of G. For some (rare) graphs, $k = Z(G)$, while for others, $k - Z(G)$ is large. We call $k - Z(G)$ the *zero forcing span* of G. In this talk, we introduce the zero forcing span and discuss some of its properties, including extreme values.