1106-05-1185 **Linda L Eroh*** (eroh@uwosh.edu), **Cong X Kang** and **Eunjeong Yi**. *A Comparison between the metric dimension and zero-forcing number of trees and unicyclic graphs.*

We say that a set of vertices $W \subseteq V(G)$ is a *resolving set* for G if it has the property that for every pair of distinct vertices $x, y \in V(G)$, there is a vertex $w \in W$ such that $d(x,w) \neq d(y,w)$. The *metric dimension* of G, $dim(G)$, is the minimum number of vertices in a resolving set for G. To define the zero-forcing number, we consider a graph with each vertex colored either blue or red. The color-change rule says that a red vertex is recolored blue if it is the only red neighbor of some blue vertex. Then the *zero-forcing number* $Z(G)$ of a graph G is the minimum number of vertices which must be colored blue initially so that, after a finite number of iterations of the rule, every vertex is colored blue. We show that $dim(T) \leq Z(T)$ for every tree T. For every tree T and edge $e \in E(\overline{T})$, we show $dim(T) - 2 \leq dim(T+e) \leq dim(T) + 1$. For any unicyclic graph G, we show $dim(G) \leq Z(G) + 1$. (Received September 11, 2014)