1145-15-1204   **Derek D Young*** (`ddyoung@iastate.edu`). *Determining the maximum nullity and minimum rank field independence for some graphs.*

In 2008, it was shown that the maximum nullity of a graph could be bounded above by the zero forcing number of the graph. We study techniques for determining the value of the maximum nullity for some graphs such as the extended cube graphs and Circulant graphs. One technique consists of determining the Colin de Verdiére number of the graph. It is known that the Colin de Verdiére number is a lower bound for the maximum nullity but the value is not easily determined. We also use equitable partitions of the graph's vertex set to determine the nullity of the adjacency matrix. Lastly, equitable decompositions on the adjacency matrix is used determine minimum rank field independence for some graphs. (Received September 20, 2018)