Bounds for Component Order Edge Connectivity
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The component order edge connectivity parameter, \( \lambda_c^{(k)} \), is defined as the minimum number of edges that must be deleted from a graph so that all components of the resulting subgraph have order less than \( k \), where \( k \) is a predetermined threshold value. Formulas for \( \lambda_c^{(k)} \) have been derived for paths, cycles, stars, and complete graphs; but no formula has been found for an arbitrary graph \( G \). In this work we look at several bounds that can be applied to find the range of possible values for any graph. We then derive from these bounds formulas for \( \lambda_c^{(k)} \) of the fan and the wheel.