



Coprime and Prime Labelings of Graphs

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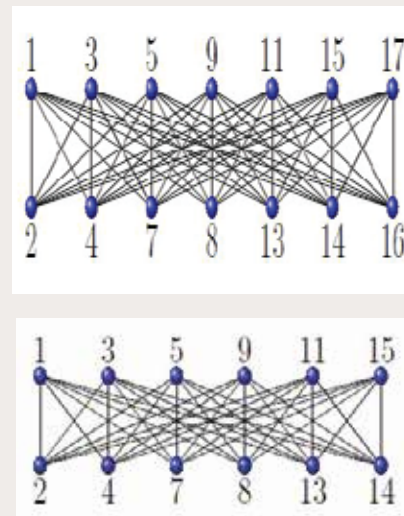
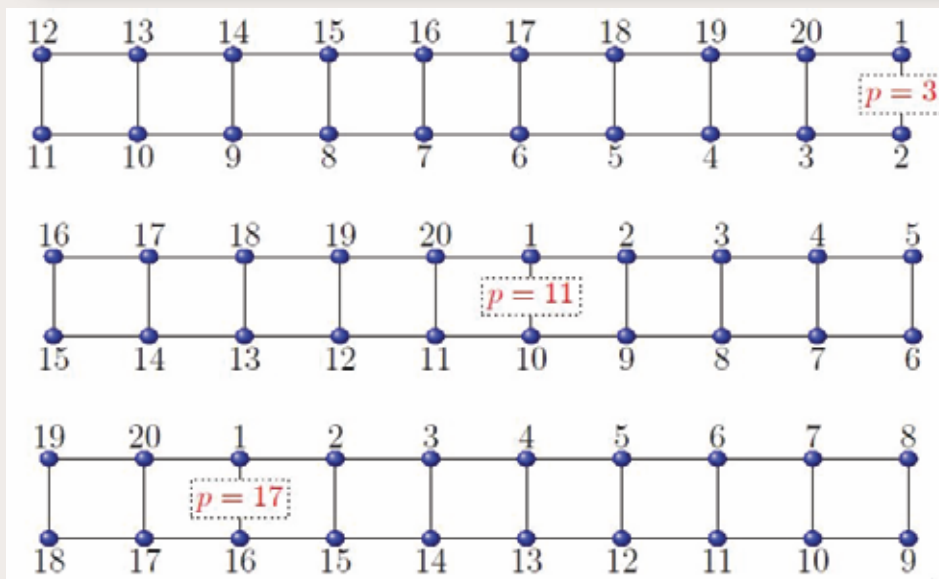
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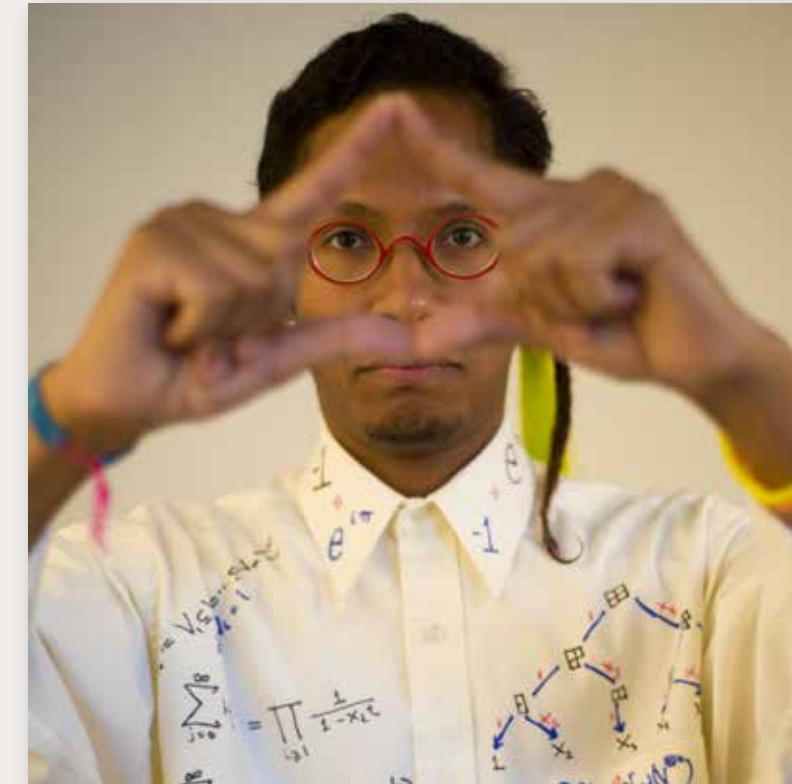
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Consider a graph G with n vertices. A coprime labeling of G is a labeling of the vertices with distinct integers from the set $\{1, 2, \dots, k\}$ for some $k \geq n$ such that the labels on any two adjacent vertices are relatively prime. It is a prime labeling if $k=n$. In particular we investigate ladder graphs and complete bipartite graphs. For ladders, we determine instances when a prime labeling exists where the labels occur in numerical order around the vertices of the ladder. For certain complete bipartite graphs, it is known that there is no prime labeling, so we find minimal coprime labelings.