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On prime labeling of union of tadpole graphs

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Abstract: A graph G of order n is said to be a prime graph if its vertices can be labeled with the first n positive integers in such a way that the labels of any two adjacent vertices in G are relatively prime. If such a labeling on G exists then it is called a prime labeling. In this paper we seek prime labeling for union of tadpole graphs. We derive a necessary condition for the existence of prime labelings of graphs that are union of tadpole graphs and further show that the condition is also sufficient in case of union of two or three tadpole graphs.

Keywords: prime labeling; tadpole graph; union of graphs

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