



NEIGHBOURHOOD CONTRACTION OF SOME IRREGULAR GRAPHS

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ABSTRACT

A connected graph $G(V,E)$ is said to be a neighbourly irregular graph, if no two adjacent vertices of G have the same degree. G is said to be a highly irregular graph if for every vertex of G no two neighbours are of same degree. G is said to be neighbourhood highly irregular, for any vertex v , if any two distinct vertices in the open neighbourhood of v , have distinct closed neighbourhood sets. The neighbourhood contracted graph G_v of G , with respect to the vertex v in G is the graph with the vertex set $V-N(v)$, where two vertices u, w are adjacent in G_v , if either $w = v$ and u is adjacent to any vertex of $N(v)$ in G or $u, w \in N[v]$ and u, w are adjacent in G . In this paper, we discuss the conditions needed for both G and G_v to be irregular graphs of same kind.

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