THE UPPER BOUNDS FOR MULTIPLICATIVE SUM ZAGREB INDEX OF SOME GRAPH OPERATIONS

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Abstract. Let G be a simple graph with vertex set V(G) and edge set E(G). In [7], Eliasi et al. introduced the multiplicative sum Zagreb index of a graph G which is denoted by $\Pi_1^*(G)$ and is defined by

$$\Pi_1^*(G) = \prod_{uv \in V(G)} (d_G(u) + d_G(v)).$$

In this paper, we present some upper bounds for the multiplicative sum Zagreb indices of the join, rooted product, corona product, tensor product, Cartesian product, strong product, hierarchical product, lexicographic product of graphs.

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