LANZHOU INVARIANTS OF NEW TYPES OF GRAPHS

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Abstract: Lanzhou invariant is one of the important topological invariant which is better than the existing ones to predicting a chemically relevant property. In this paper, we study the Lanzhou invariant for four new operation of graphs which are related to some special well-known graphs which is introduced by Sarkar et al. [5] in 2017.

1. Introduction

All the graphs considered in this paper are connected and simple. For vertex $a \in V(\Omega)$, the degree of the vertex a in Ω, denoted by $\gamma_\Omega(a)$, is the number of edges incident to a in Ω. A topological invariant of a graph is a parameter related to the graph; it does not depend on labeling or pictorial representation of the graph. In theoretical chemistry, molecular structure descriptors are used for modeling physicochemical, pharmacologic, toxicologic, biological and other properties of chemical compounds [3]. Several types of such indices exist, especially those based on vertex and edge distances. Two of these invariants are known under various names, the most commonly used ones are the first and second Zagreb invariants. They