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CORDIAL LABELING FOR FIVE STAR GRAPH

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Abstract: In this paper, we proved that the five star graph $K_{1,\eta_1} \wedge K_{1,\eta_2} \wedge K_{1,\eta_3} \wedge K_{1,\eta_4} \wedge K_{1,\eta_5}$ is a cordial graph for all $\eta_1 \geq 1, \eta_2 \geq 1, \eta_3 \geq 1, \eta_4 \geq 1$ and $\eta_5 \geq 1$.

Keywords and Phrases: Star graph, Cordial graph and Wedge.
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1. Introduction and Preliminaries

In [4], we considered undirected, finite and simple graph $R = (N(R), L(R))$, where $N(R)$ denotes node set of R and $L(R)$ denotes link set of R. In [5], cordial graphs for smaller graphs are given. In [2], Cahit proved that the following graphs are cordial: Every tree is cordial; K_η is cordial if and only if $\eta \leq 3$; K_{η_1,η_2} is cordial for all η_1 and η_2; all fans are cordial; the wheel W_η is cordial if and only if $\eta \neq 3(mod4)$; maximal outerplanar graphs are cordial; and an Eulerian graph is not cordial if its size is congruent to $2(mod4)$. In [3], [6] and [7] they proved that the two star graph $K_{1,\eta_1} \wedge K_{1,\eta_2}$, three star graph $K_{1,\eta_1} \wedge K_{1,\eta_2} \wedge K_{1,\eta_3}$ and four star graph $K_{1,\eta_1} \wedge K_{1,\eta_2} \wedge K_{1,\eta_3} \wedge K_{1,\eta_4}$ is a cordial labeling. We provided some definitions which are used for our present study. After referring all these results we got inspired and found that every five star graph is cordial.

Wedge. A wedge is a link which is used for connecting two components of a graph.