

ON THE CROSSING NUMBERS OF PRODUCTS OF STARS AND SPECIAL SMALL GRAPHS

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Let G be a simple and undirected graph with vertex set $V(G)$ and edge set $E(G)$. The *crossing number* $cr(G)$ of the graph G is the minimum number of pairwise intersections of edges in all drawings of G in the plane. The structure of Cartesian products of two graphs makes Cartesian products of special graphs one of few graph classes for which the exact values of crossing numbers were obtained. In [1], Beineke and Ringelsen asked on the crossing numbers of Cartesian products of small graphs with paths, cycles and stars.

There are known the crossing numbers of stars and all graphs of order three or four. The latest results concerning the crossing numbers of Cartesian products of stars with graphs on five vertices are collected in [2]. We extend these results and we give the crossing numbers for Cartesian products of stars with some graphs of order six.

Keywords: graph, drawing, crossing number, Cartesian product.

AMS Subject Classification: 05C10.

References

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