On Cartesian products with small crossing numbers

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ABSTRACT.

Kulli at al. started to characterize line graphs with crossing number one. In this paper, the similar problems were solved for the Cartesian products of two graphs. The necessary and sufficient conditions are given for all pairs of graphs $G_1$ and $G_2$ for which the crossing number of their Cartesian product $G_1 \times G_2$ is one or two.

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