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Decomposition of Cartesian product of complete graphs into paths and stars with four edges

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Abstract: Let P_k and S_k denote a path and a star, respectively, on k vertices. We give necessary and sufficient conditions for the existence of a complete $\{P_5, S_5\}$ -decomposition of Cartesian product of complete graphs.

Keywords: graph decomposition; path; star graph; product graph

AMS Subject Classification: 05C51, 05C70

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