GRAPHS IN WHICH LOCAL SUBGRAPHS ARE STRONGLY REGULAR WITH SECOND EIGENVALUE 5[1]

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J. Koolen proposed the problem of studying distance-regular graphs in which the neighborhoods of vertices are strongly regular graphs with second eigenvalue $\leq t$ for a given positive integer t. Earlier Koolen's problem was solved for $t = 4$. We complete the classification of distance-regular graphs in which the neighborhoods of vertices are strongly regular graphs with second eigenvalue r, where $4 < r \leq 5$.

Keywords: strongly regular graph, eigenvalue, distance-regular graph.

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