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STRONGLY REGULAR GRAPHS: VALUES OF λ AND μ FOR WHICH THERE ARE ONLY FINITELY MANY FEASIBLE (v, k, λ, μ)*

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Dedicated to the memory of Prof. Dom de Caen

Abstract. Given λ and μ, it is shown that, unless one of the relations $(\lambda-\mu)^2 = 4\mu,\ \lambda-\mu = -2,\ (\lambda-\mu)^2 + 2(\lambda-\mu) = 4\mu$ is satisfied, there are only finitely many parameter sets (v, k, λ, μ) for which a strongly regular graph with these parameters could exist. This result is used to prove as special cases a number of results which have appeared in previous literature.

Key words. Strongly Regular Graph, Adjacency Matrix, Feasible Parameter Set.

AMS subject classifications. 05C50, 05E30.

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