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CONSTRUCTION OF THE A-OPTIMAL 19×17 WEIGHING DESIGN: DISPROVING THE CONJECTURE

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SUMMARY

Farmakis (1991) formulated the conjecture that the A-optimal 19×17 design, whose corresponding information matrix is of the block form that Sathe and Shenoy (1989) proved, does not exist by randomly examining 20% of the cases. We apply a specific procedure during the construction algorithm, achieving an exhaustive search, and so we construct the A-optimal 19×17 design that Farmakis (1991) conjectured its non-existence.

Keywords and phrases: A-optimal designs; weighing designs; construction; algorithm.

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