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Rank restricting functions.

Linear Algebra Appl. 372, 305-323 (2003).

The authors determine real-valued functions f such that whenever (a_{ij}) has rank at most k , $(f(a_{ij}))$ has rank at most d . These functions for $k \geq 2$ are polynomials the degrees of whose terms are small compared with d , which is typically considerably larger than k ; for $k = 1$ the class is given as elementary functions satisfying a differential equation. Similar results are proved for complex functions. *Ki Hang Kim (Montgomery)*

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