matrix monotone

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A real function f on a real interval I is said to be *matrix monotone of* n, if

$$A \leq_L B \Rightarrow f(A) \leq f(B) \tag{1}$$

for all Hermitian $n \times n$ matrices A, B with spectra contained in I. Here $\leq_L$ denotes the Loewner order, and the notation $f(A)$ is explained in the entry functional calculus for Hermitian matrices.