generalized Vandermonde matrix

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Synonym	generalised Vandermonde matrix

A *generalized Vandermonde matrix* is a square matrix with entries in $\mathbb{R}$ of the form:

$$(a_i^{b_j})_{i,j=1}^n = \begin{pmatrix} a_1^{b_1} & a_1^{b_2} & \cdots & a_1^{b_n} \\ a_2^{b_1} & a_2^{b_2} & \cdots & a_2^{b_n} \\ \vdots & \vdots & & \vdots \\ a_n^{b_1} & a_n^{b_2} & \cdots & a_n^{b_n} \end{pmatrix}$$

with real numbers $0 < a_1 < a_2 < \cdots < a_n$ and $b_1 < b_2 < \cdots < b_n$.