diagonally dominant matrix

Canonical name	DiagonallyDominantMatrix
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Entry type	Definition
Classification	msc 15-00
Synonym	diagonally dominant
Synonym	strictly diagonally dominant
Defines	strictly diagonally dominant matrix

Let A be a square matrix of order n with entries a_{ij} which are real or complex. Then A is said to be *diagonally dominant* if

$$|a_{ii}| \geq \sum_{j=1, j\neq i}^{n} |a_{ij}|$$

for i from 1 to n.

In addition A is said to be *strictly diagonally dominant* if

$$|a_{ii}| > \sum_{j=1, j\neq i}^{n} |a_{ij}|$$

for i from 1 to n.