

Metoda Banachiewicza-Cholesky'ego

Handwritten matrix A and the word "Sym" indicating it is symmetric:

$$A = \begin{bmatrix} 11 & -1 & 2 & 3 \\ -1 & 13 & 1 & -2 \\ 2 & 1 & 15 & 1 \\ 3 & -2 & 1 & 17 \end{bmatrix}$$

Sym

$$A := \begin{pmatrix} 11 & -1 & 2 & 3 \\ -1 & 13 & 1 & -2 \\ 2 & 1 & 15 & 1 \\ 3 & -2 & 1 & 17 \end{pmatrix}$$

$$L_{i,i} = \sqrt{A_{i,i} - \sum_{k=1}^{i-1} (L_{i,k})^2}$$

$$L_{i,j} = \left[A_{i,j} - \sum_{k=1}^{j-1} (L_{i,k} \cdot L_{j,k}) \right] \cdot \frac{1}{L_{j,j}}$$

$j < i$

$L =$

	1	2	3	4
1	3.3166	0	0	0
2	-0.3015	3.5929	0	0
3	0.603	0.3289	3.8116	0
4	0.9045	-0.4807	0.1607	3.9906