



Definition

A first square matrix is *similar* to a second square matrix if there exists a nonsingular matrix such that the first matrix is identical to the product of the inverse of the nonsingular matrix the second square matrix and the nonsingular matrix.

S Notation

Let $A, B \in \mathbf{R}Matnn$. B is similar to A if there exists a nonsingular matrix $S \in \mathbf{R}Matnn$ such that

$$B = S^{-1}AS.$$

Equivalence Relation

Prop. 1. *Similarity is an equivalence relation.*

