Why

TODO. I wanted principal submatrix.

Definition

An *index set* of $\{1, 2, \ldots, n\}$ is a subset of $\{1, 2, \ldots, n\}$. A *submatrix* of an $m \times n$ matrix is a matrix whose are selected according to (TODO) an index set of $\{1, 2, \ldots, m\}$ and index set of $\{1, 2, \ldots, n\}$; we call the first index set the *row index set* and the second index set the *column index set*. A *principal submatrix* is the submatrix selected when the row and column index sets are identical.

A *sequential partition* of $\{1, 2, \ldots, n\}$ is a sequence of index sets such that all elements of a later piece of the partition are larger (in the natural order) than all elements in all previous pieces.

Submatrices

Matrices

Vectors

N-Dimensional Space

Space   Real Numbers   Fields

Rational Numbers   Groups

Integer Arithmetic   Integer Additive Inverses

Integer Sums   Natural Additive Identity   Natural Multiplicative Identity   Inverse Elements

Arithmetic   Identity Elements   Element Functions

Integer Products   Natural Exponents   Algebras   Function Inverses

Integer Numbers   Natural Products   Operations   Function Composites   Function Images

Natural Sums   Functions

Equivalence Relations   Recursion Theorem

Peano Axioms   Relations

Natural Induction   Cartesian Products

Natural Numbers   Set Powers

Partitions   Intersection of Empty Set   Successor Sets   Unordered Triples

Set Intersections   Pair Unions   Ordered Pairs

Set Differences   Set Unions

Pair Intersections   Empty Set   Unordered Pairs

Set Specification

Set Inclusion

Standardized Accounts

Definitions   Accounts

Deductions   Quantified Statements

Logical Statements

Statements

Identities   Sets

Names

Objects   Letters

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