Why

[1]

Definition

A matrix is *upper triangular* if all its entries below the diagonal are zero. A matrix is *lower triangular* if all its entries above the diagonal are zero. If, in addition, the diagonal is zero, then the matrix is *strictly upper triangular* and *strictle lower triangular* respectively.

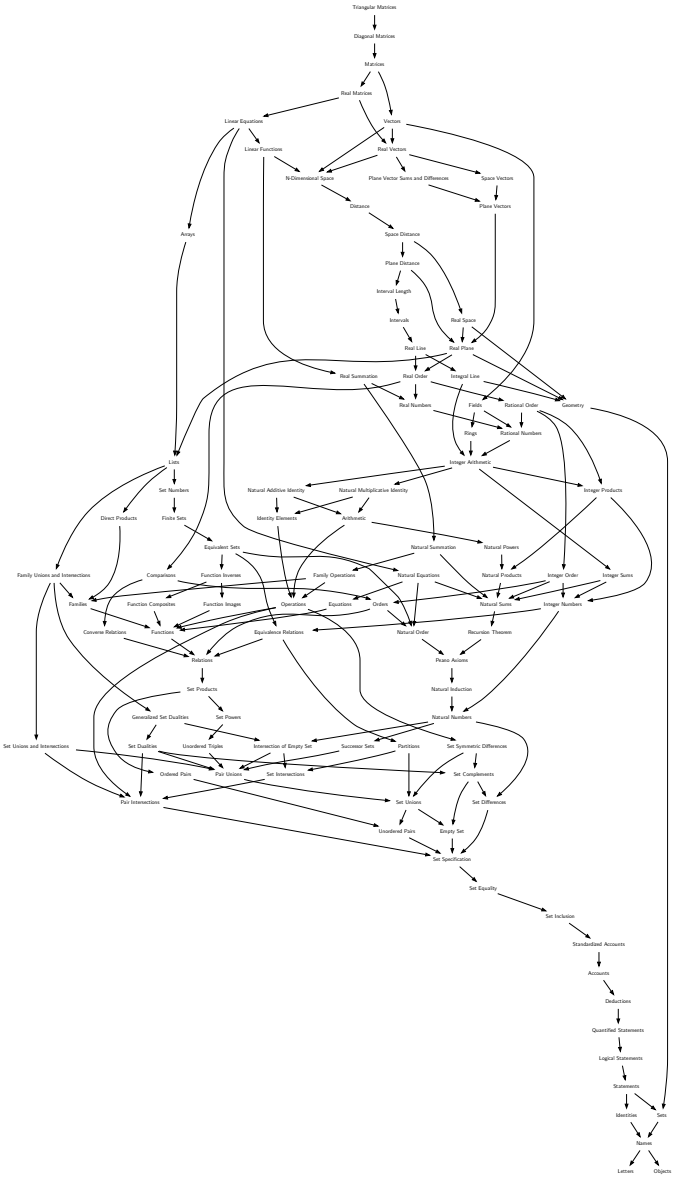
A *triangular* matrix is either upper or lower triangular. A *strictly triangular* matrix is either strictly upper triangular or strictly lower triangular.

A *unit triangular matrix* is a triangular matrix (upper or lower) whose diagonal entries are one. Somtimes such matrices are called *unitriangular* (a *unitriangular matrix*). So we speak of *lower unit triangular*, *upper unit triangular*, *lower unitriangular* and *lower unitriangular* matrices.

Other Terminology

Some authors call lower triangular matrices *left triangular* and upper triangular matrices *right triangular*. Historically, some authors have called triangular matrices *semidiagonal*.

[1] These arise often. Future editions will clarify.


Triangular Matrices
Diagonal Matrices
Matrices
Real Matrices
Linear Equations
Vectors
Linear Functions
Real Vectors
N-Dimensional Space
Plane Vector Sums and Differences
Space Vectors
Distance
Plane Vectors
Arrays
Space Distance
Plane Distance
Interval Length
Intervals
Real Space
Real Line
Real Plane
Real Summation
Real Order
Integral Line
Geometry
Real Numbers
Fields
Rational Order
Rational Numbers
Rings
Lists
Integer Arithmetic
Set Numbers
Natural Additive Identity
Natural Multiplicative Identity
Integer Products
Direct Products
Finite Sets
Identity Elements
Arithmetic
Equivalent Sets
Natural Summation
Natural Powers
Family Unions and Intersections
Comparisons
Function Inverses
Family Operations
Natural Equations
Natural Products
Integer Order
Integer Sums
Families
Function Composites
Function Images
Operations
Equations
Orders
Natural Sums
Integer Numbers
Converse Relations
Functions
Equivalence Relations
Natural Order
Recursion Theorem
Relations
Peano Axioms
Set Products
Natural Induction
Generalized Set Dualities
Set Powers
Natural Numbers
Set Unions and Intersections
Set Dualities
Unordered Triples
Intersection of Empty Set
Successor Sets
Partitions
Set Symmetric Differences
Ordered Pairs
Pair Unions
Set Intersections
Set Complements
Pair Intersections
Set Unions
Set Differences
Unordered Pairs
Empty Set
Set Specification
Set Equality
Set Inclusion
Standardized Accounts
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects