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*.

Triangular Matrices

Diagonal Matrices

Matrices

Real Matrices

Vectors

Real Linear Equations

Linear Functions

Real Vectors

Arrays

N-Dimensional Space

Space Vector

Plane Vector Sums and Differences

Distance

Plane Vectors

Space Distance

Plane Distance

Interval Length

Intervals

Real Space

Real Line

Real Plane

Real Order

Real Summation

Integral Line

Rational Order

Fields

Real Numbers

Natural Summation

Geometry

Rings

Rational Numbers

Lists

Integer Arithmetic

Natural Fractions

Set Numbers

Direct Products

Integer Products

Natural Additive Identity

Natural Multiplicative Identity

Finite Sets

Identity Elements

Natural Arithmetic

Equivalent Sets

Natural Powers

Integer Sums

Integer Order

Natural Equations

Comparisons

Function Inverses

Family Operations

Family Unions and Intersections

Natural Products

Integer Numbers

Orders

Equations

Operations

Function Composites

Function Images

Families

Natural Sums

Equivalence Relations

Natural Order

Converse Relations

Relations

Functions

Recursion Theorem

Peano Axioms

Ordered Pair Projections

Natural Induction

Set Products

Natural Numbers

Set Powers

Generalized Set Dualities

Set Symmetric Differences

Set Partitions

Successor Sets

Intersection of Empty Set

Unordered Triples

Set Dualities

Set Unions and Intersections

Set Complements

Set Intersections

Pair Unions

Ordered Pairs

Set Differences

Set Unions

Pair Intersections

Empty Set

Unordered Pairs

Set Specification

Set Equality

Set Inclusion

Deductions

Quantified Statements

Logical Statements

Statements

Identities

Sets

Names

Letters

Objects