Why

1

Definition

The *permanent* of a matrix $A \in \mathbf{R}^{n \times m}$ is

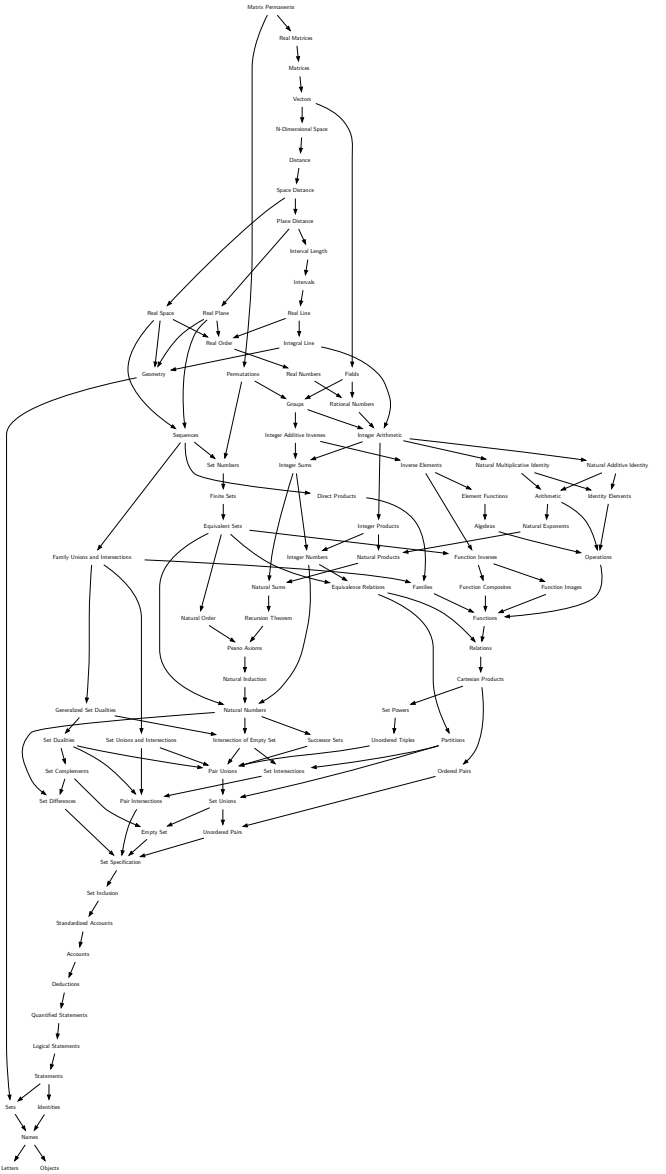
$$\sum_{\sigma \in S_n} \prod_{i=1}^{n} A_{i,\sigma(i)}$$

where S_n is the symmetric group of degree n (see Permutations).

Notation

We denote the permanent of A by $\mathbf{perm}(A)$.

[1] Future editions will include. The reasoning is that several counting problems to do with graphs reduce to permanents of the adjacency matrix.


Matrix Permanents
Real Matrices
Matrices
Vectors
N-Dimensional Space
Distance
Space Distance
Plane Distance
Interval Length
Intervals
Real Space
Real Plane
Real Line
Real Order
Integral Line
Geometry
Permutations
Real Numbers
Fields
Groups
Rational Numbers
Sequences
Integer Additive Inverses
Integer Arithmetic
Set Numbers
Integer Sums
Inverse Elements
Natural Multiplicative Identity
Natural Additive Identity
Finite Sets
Direct Products
Element Functions
Arithmetic
Identity Elements
Equivalent Sets
Integer Products
Algebras
Natural Exponents
Family Unions and Intersections
Integer Numbers
Natural Products
Function Inverses
Operations
Natural Sums
Equivalence Relations
Families
Function Composites
Function Images
Natural Order
Recursion Theorem
Functions
Peano Axioms
Relations
Natural Induction
Cartesian Products
Generalized Set Dualities
Natural Numbers
Set Powers
Set Dualities
Set Unions and Intersections
Intersection of Empty Set
Successor Sets
Unordered Triples
Partitions
Set Complements
Pair Unions
Set Intersections
Ordered Pairs
Set Differences
Pair Intersections
Set Unions
Empty Set
Unordered Pairs
Set Specification
Set Inclusion
Standardized Accounts
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Sets
Identities
Names
Letters
Objects