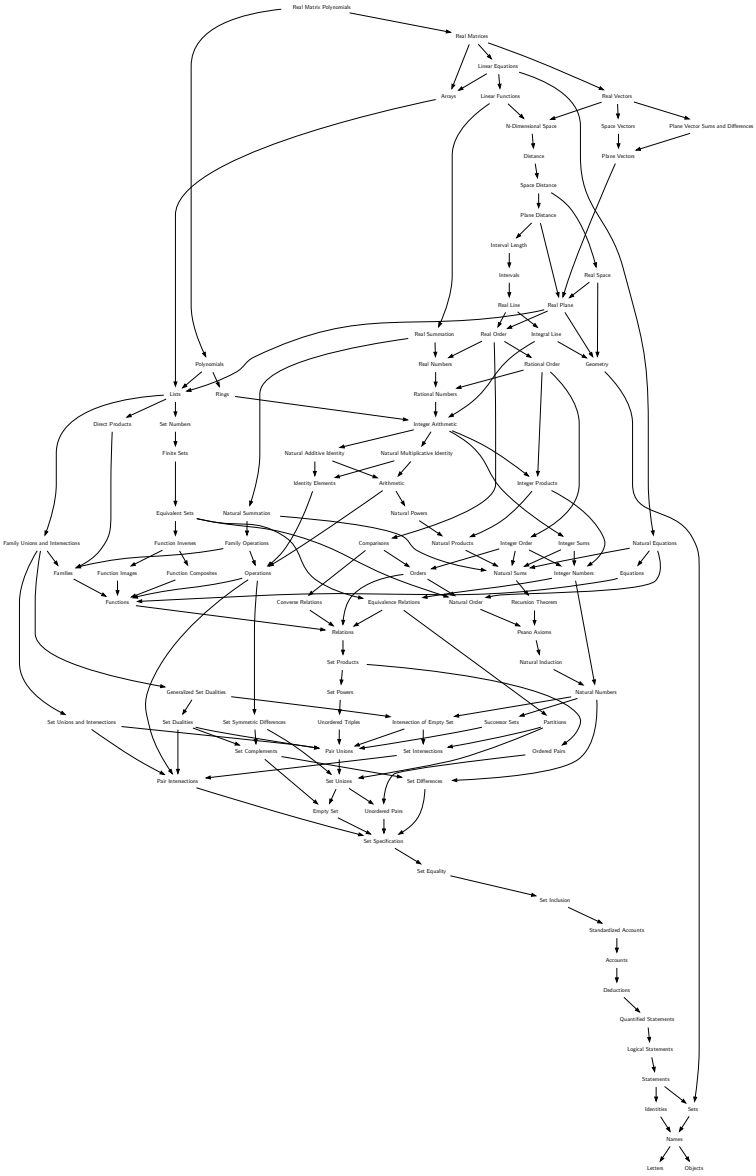
Definition

A *(real) matrix polynomial* of *degree* d is a function $p : \mathbf{R}^{n\times n} \to \mathbf{R}^{n\times n}$ for which there exists a finite sequence $(c_0, c_1, \ldots, c_{d-1}, c_d) \in \mathbf{R}^{d+1}$ satisfying,

$$p(A) = c_0 I + c_1 A^1 + c_2 A^2 + \cdots + c_d A^d,$$

for all $A \in \mathbf{R}^{n\times n}$.


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