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

Linear Functions

Real Vectors

Plane Vector Sums and Differences

Space Vectors

N-Dimensional Space

Plane Vectors

Distance

Space Distance

Plane Distance

Arrays

Interval Length

Intervals

Real Space

Real Plane

Real Line

Integer Line

Real Order

Real Summation

Geometry

Rational Order

Real Numbers

Polynomials

Rational Numbers

Rings

Lists

Integer Arithmetic

Direct Products

Set Numbers

Natural Multiplicative Identity

Natural Additive Identity

Finite Sets

Integer Products

Arithmetic

Identity Elements

Natural Power

Natural Summation

Equivalent Sets

Comparisons

Natural Equations

Integer Order

Natural Products

Integer Sums

Family Operations

Function Inverses

Family Unions and Intersections

Order

Equations

Natural Sums

Integer Numbers

Operations

Families

Function Images

Function Composites

Converse Relations

Natural Order

Recursion Theorem

Functions

Equivalence Relations

Peano Axioms

Relations

Set Products

Natural Induction

Set Powers

Natural Numbers

Generalized Set Dualities

Set Unions and Intersections

Set Symmetric Difference

Unordered Triples

Successor Sets

Set Dualities

Intersection of Empty Set

Partitions

Ordered Pairs

Set Complements

Pair Unions

Set Intersections

Set Differences

Set Unions

Pair Intersections

Unordered Pairs

Empty Set

Set Specification

Set Equality

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Sets

Identities

Names

Letters

Objects