Why

The entire functions "extend" the polynomial functions. For polynomial in $\mathbf{C}$, we can extend the class to the (complex) rational functions in $\mathbf{C}$. Can we similarly extend the class entire functions?[1]

Definition

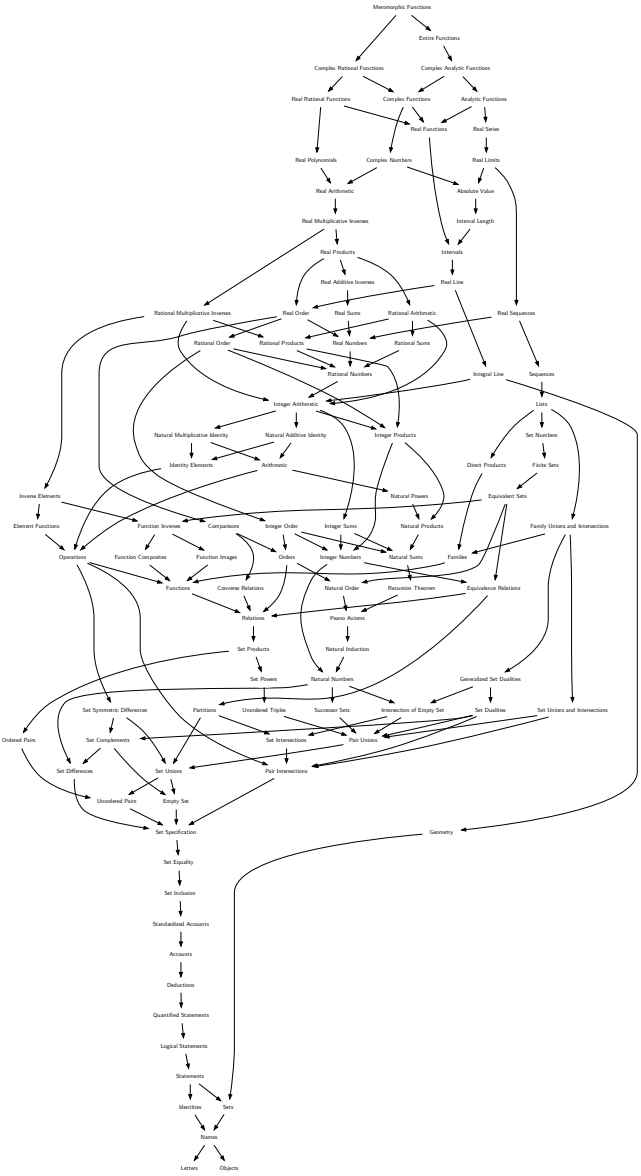
A *meromorphic function* (or *fractional function*) is a function $f : \mathbf{C} \to \mathbf{C}$ for which there exists entire functions $g : \mathbf{C} \to \mathbf{C}$ and $h : \mathbf{C} \to \mathbf{C}$ so that

$$f(z) = \frac{g(z)}{h(z)}$$

for all $z \in \mathbf{C}$.[2]

[1] Future editions may modify.

[2] Future editions will continue the development.


Meromorphic Functions
Entire Functions
Complex Rational Functions
Complex Analytic Functions
Real Rational Functions
Complex Functions
Analytic Functions
Real Functions
Real Series
Real Polynomials
Complex Numbers
Real Limits
Real Arithmetic
Absolute Value
Real Multiplicative Inverses
Interval Length
Real Products
Intervals
Real Additive Inverses
Real Line
Rational Multiplicative Inverses
Real Order
Real Sums
Rational Arithmetic
Real Sequences
Rational Order
Rational Products
Real Numbers
Rational Sums
Rational Numbers
Integral Line
Sequences
Integer Arithmetic
Lists
Natural Multiplicative Identity
Natural Additive Identity
Integer Products
Set Numbers
Identity Elements
Arithmetic
Direct Products
Finite Sets
Inverse Elements
Natural Powers
Equivalent Sets
Element Functions
Function Inverses
Comparisons
Integer Order
Integer Sums
Natural Products
Family Unions and Intersections
Operations
Function Compositions
Function Images
Orders
Integer Numbers
Natural Sums
Families
Functions
Converse Relations
Natural Order
Recursion Theorem
Equivalence Relations
Relations
Peano Axioms
Set Products
Natural Induction
Set Powers
Natural Numbers
Generalized Set Dualities
Set Symmetric Differences
Partitions
Unordered Triples
Successor Sets
Intersection of Empty Set
Set Dualities
Set Unions and Intersections
Ordered Pairs
Set Complements
Set Intersections
Pair Unions
Set Differences
Set Unions
Pair Intersections
Unordered Pairs
Empty Set
Set Specification
Geometry
Set Equality
Set Inclusion
Standardized Accounts
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects