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]

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[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 Polynomials

Complex Numbers

Real Arithmetic

Absolute Value

Interval Length

Real Multiplicative Inverse

Intervals

Real Products

Real Line

Real Additive Inverses

Rational Multiplicative Inverse

Rational Arithmetic

Real Sums

Real Order

Rational Products

Rational Sums

Real Numbers

Rational Order

Integral Line

Rational Numbers

Integer Arithmetic

Natural Additive Identity

Natural Multiplicative Identity

Integer Products

Arithmetic

Identity Elements

Inverse Elements

Natural Powers

Function Inverses

Element Functions

Integer Sums

Natural Products

Integer Order

Comparisons

Function Images

Function Composites

Operations

Natural Sums

Integer Numbers

Orders

Converse Relations

Functions

Recursion Theorem

Natural Order

Equivalence Relations

Peano Axioms

Relations

Natural Induction

Set Products

Natural Numbers

Set Powers

Ordered Pairs

Intersection of Empty Set

Successor Sets

Partitions

Unordered Triples

Set Symmetric Differences

Set Intersections

Pair Unions

Pair Intersections

Set Complements

Set Unions

Set Differences

Empty Set

Unordered Pairs

Geometry

Set Specification

Set Equality

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Sets

Identities

Names

Letters

Objects