Why

[1]

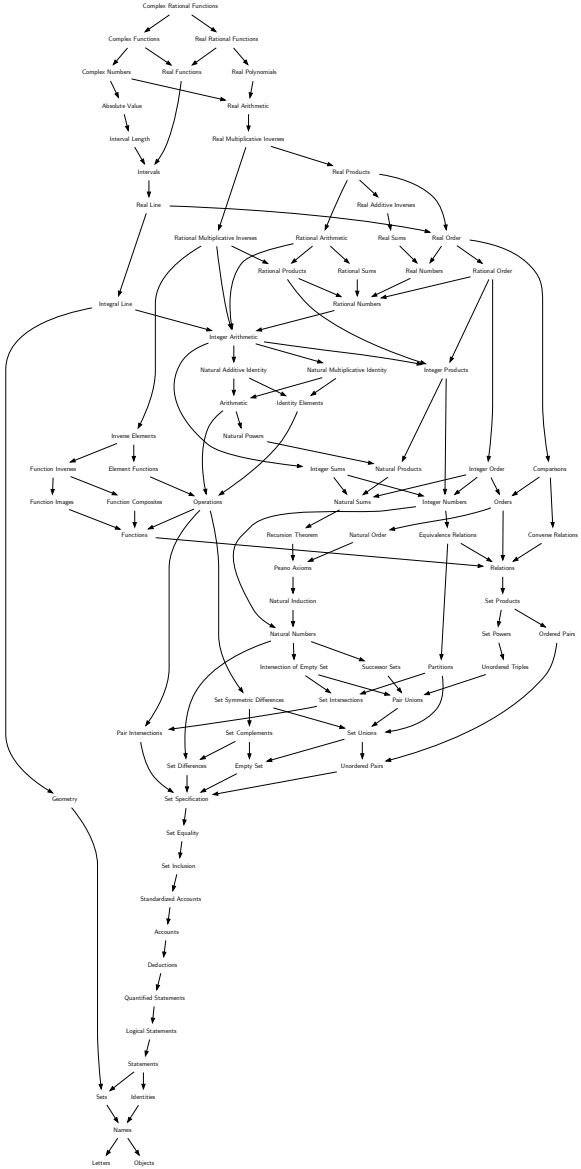
Definition

A *complex rational function* (or *rational function*, or *fractional function*) in $\mathbf{C}$ is a function $f : \mathbf{C} \to \mathbf{C}$ for which there exists polynomials $p : \mathbf{C} \to \mathbf{C}$ and $q : \mathbf{C} \to \mathbf{C}$ in $\mathbf{C}$ so that

$$f(z) = \frac{p(z)}{q(z)},$$

for all $z \in \mathbf{C}$. In other words, a rational function is a "quotient" (see Complex Products) of two polynomials in $\mathbf{C}$.

[1] Future editions will include.


Complex Rational Functions
Complex Functions
Real Rational Functions
Complex Numbers
Real Functions
Real Polynomials
Absolute Value
Real Arithmetic
Interval Length
Real Multiplicative Inverses
Intervals
Real Products
Real Line
Real Additive Inverses
Real Order
Rational Multiplicative Inverses
Rational Arithmetic
Real Sums
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
Recursion Theorem
Natural Order
Equivalence Relations
Converse Relations
Functions
Relations
Peano Axioms
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