Why[1]

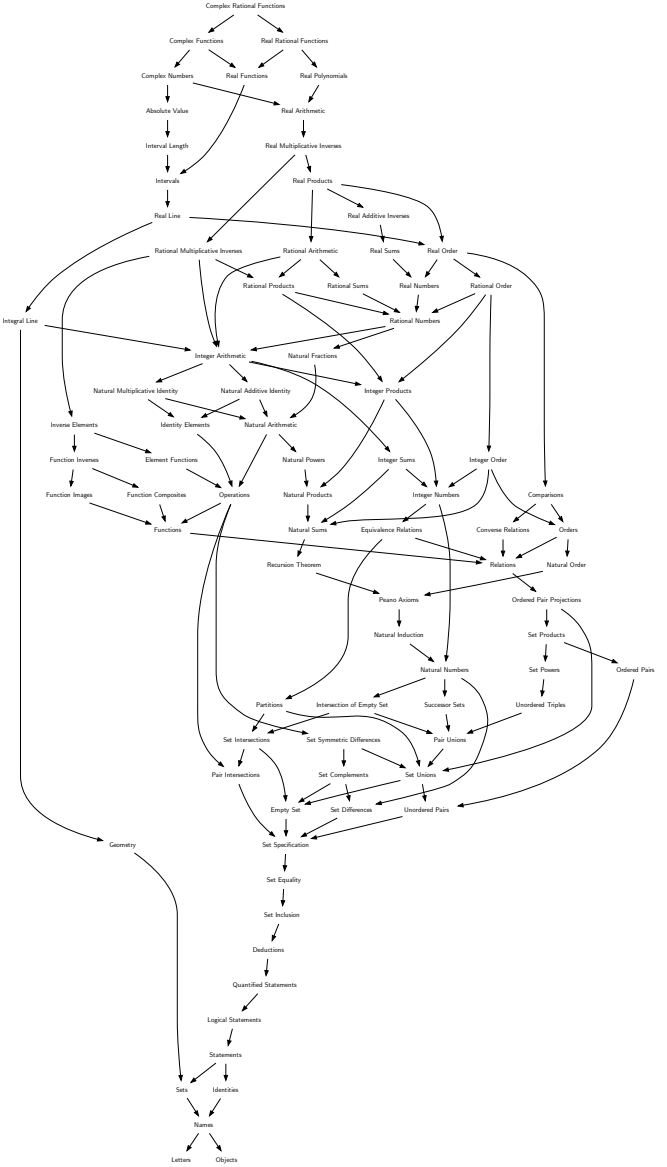
Definition

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
Rational Multiplicative Inverses
Rational Arithmetic
Real Sums
Real Order
Rational Products
Rational Sums
Real Numbers
Rational Order
Integral Line
Rational Numbers
Integer Arithmetic
Natural Fractions
Natural Multiplicative Identity
Natural Additive Identity
Integer Products
Inverse Elements
Identity Elements
Natural Arithmetic
Function Inverses
Element Functions
Natural Powers
Integer Sums
Integer Order
Function Images
Function Composites
Operations
Natural Products
Integer Numbers
Comparisons
Functions
Natural Sums
Equivalence Relations
Converse Relations
Orders
Recursion Theorem
Relations
Natural Order
Peano Axioms
Ordered Pair Projections
Natural Induction
Set Products
Natural Numbers
Set Powers
Ordered Pairs
Partitions
Intersection of Empty Set
Successor Sets
Unordered Triples
Set Intersections
Set Symmetric Differences
Pair Unions
Pair Intersections
Set Complements
Set Unions
Empty Set
Set Differences
Unordered Pairs
Set Specification
Geometry
Set Equality
Set Inclusion
Deductions
Quantified Statements
Logical Statements
Statements
Sets
Identities
Names
Letters
Objects