Why

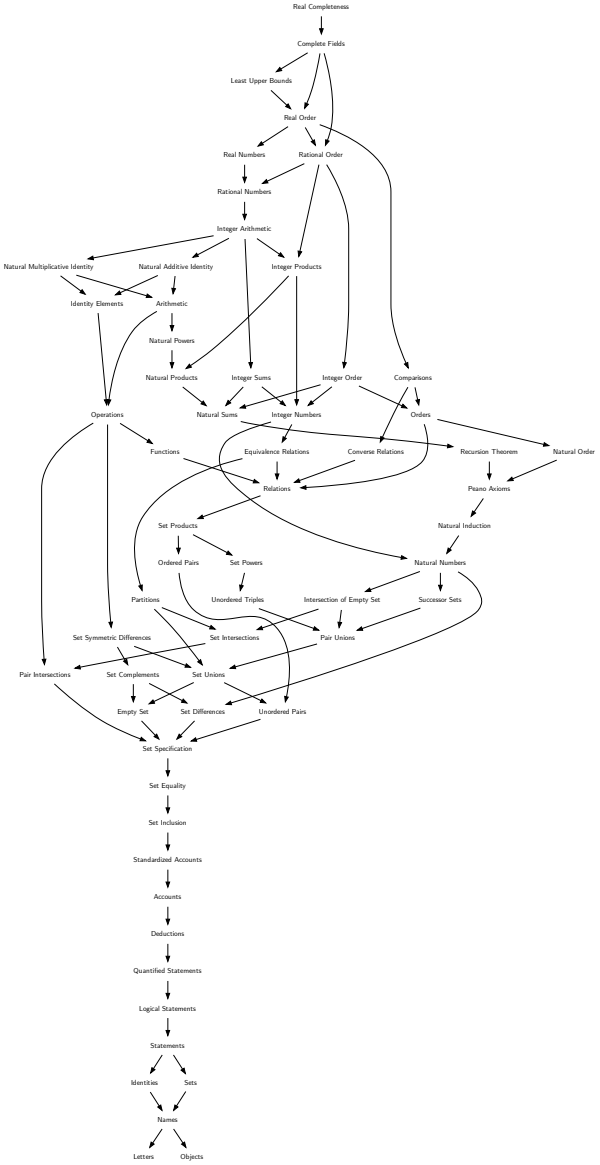
Is the set of real numbers a complete ordered field (in the sense of Complete Fields?

Main result

Proposition 1. $(\mathbf{R}, +, \cdot, <)$ *is a complete ordered field.*[1]

Proof. The supremum of a set of nonempty real numbers bounded from above R is $\cup R$. □

[1] The account will appear in future editions.


Real Completeness
Complete Fields
Least Upper Bounds
Real Order
Real Numbers
Rational Order
Rational Numbers
Integer Arithmetic
Natural Multiplicative Identity
Natural Additive Identity
Integer Products
Identity Elements
Arithmetic
Natural Powers
Natural Products
Integer Sums
Integer Order
Comparisons
Operations
Natural Sums
Integer Numbers
Orders
Functions
Equivalence Relations
Converse Relations
Recursion Theorem
Natural Order
Relations
Peano Axioms
Set Products
Natural Induction
Ordered Pairs
Set Powers
Natural Numbers
Partitions
Unordered Triples
Intersection of Empty Set
Successor Sets
Set Symmetric Differences
Set Intersections
Pair Unions
Pair Intersections
Set Complements
Set Unions
Empty Set
Set Differences
Unordered Pairs
Set Specification
Set Equality
Set Inclusion
Standardized Accounts
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects