Why

What is the multiplicative inverse of $[(a, b)]$ in the rationals?

Result

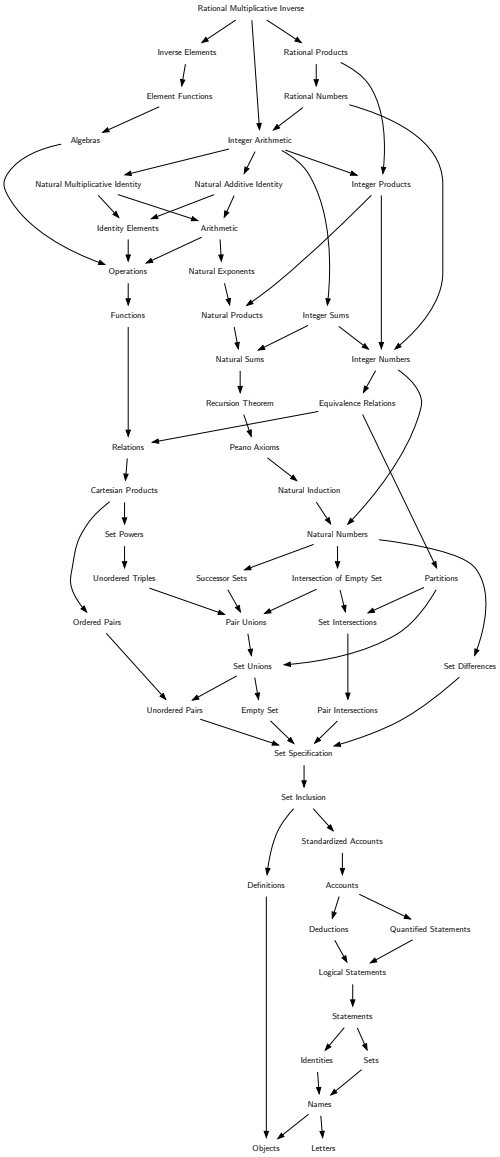
Proposition 1. *The additive inverse of* $[(a, b)] \in \mathbf{Q}$ *if* $b \neq 0_{\mathbf{Z}}$ *is* $[(b, a)]$.

Notation

We denote the multiplicative inverse of $q \in \mathbf{Q}$ by q^{-1}. We denote $q \cdot (r^{-1})$ by q/r.

Division

We call the operation $(a, b) \mapsto a/b$ *rational division.*


Rational Multiplicative Inverse
Inverse Elements
Rational Products
Element Functions
Rational Numbers
Algebras
Integer Arithmetic
Natural Multiplicative Identity
Natural Additive Identity
Integer Products
Identity Elements
Arithmetic
Operations
Natural Exponents
Functions
Natural Products
Integer Sums
Natural Sums
Integer Numbers
Recursion Theorem
Equivalence Relations
Relations
Peano Axioms
Cartesian Products
Natural Induction
Set Powers
Natural Numbers
Unordered Triples
Successor Sets
Intersection of Empty Set
Partitions
Ordered Pairs
Pair Unions
Set Intersections
Set Unions
Set Differences
Unordered Pairs
Empty Set
Pair Intersections
Set Specification
Set Inclusion
Standardized Accounts
Definitions
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Objects
Letters