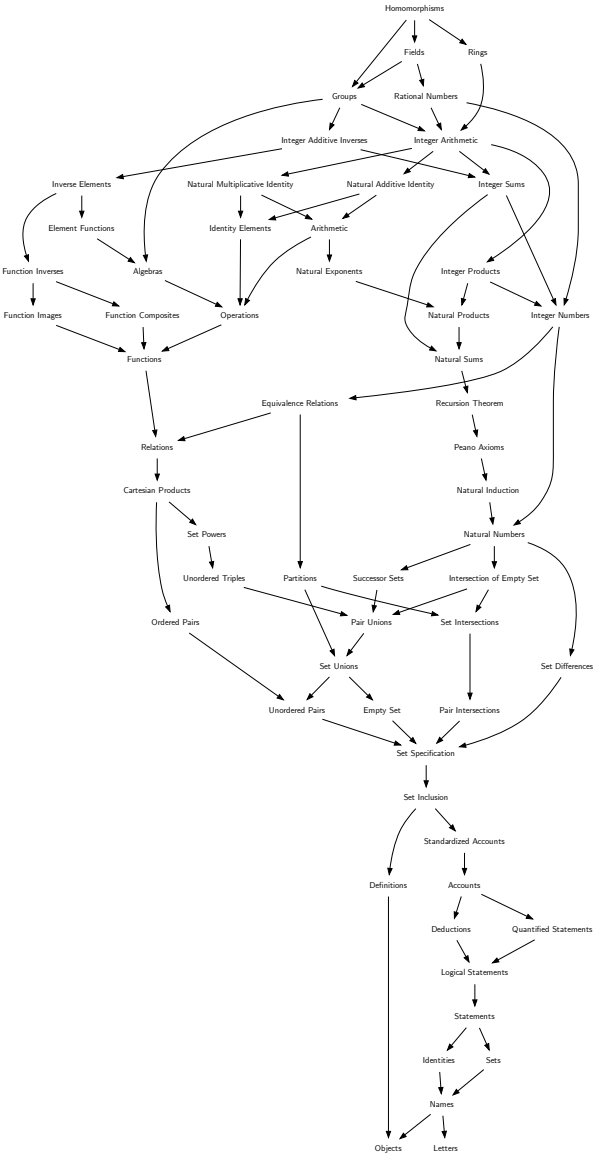
Why

We name a function which preserves algebraic structure.

Definition

A *group homomorphism* between two groups is a function $(A, +)$ and $(B, \tilde{+})$ is a bijection $f : A \to B$ such that $f(1_A) = f(1_B)$ for $1_A \in A$ and $1_B \in B$ and $f(a + a') = f(a)\tilde{+}f(a')$ for all $a, a' \in A$. Similarlly we define *ring homomorphism* and *field homomorphisms*.


Homomorphisms
Fields
Rings
Groups
Rational Numbers
Integer Additive Inverses
Integer Arithmetic
Inverse Elements
Natural Multiplicative Identity
Natural Additive Identity
Integer Sums
Element Functions
Identity Elements
Arithmetic
Function Inverses
Algebras
Natural Exponents
Integer Products
Function Images
Function Composites
Operations
Natural Products
Integer Numbers
Functions
Natural Sums
Equivalence Relations
Recursion Theorem
Relations
Peano Axioms
Cartesian Products
Natural Induction
Set Powers
Natural Numbers
Unordered Triples
Partitions
Successor Sets
Intersection of Empty Set
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