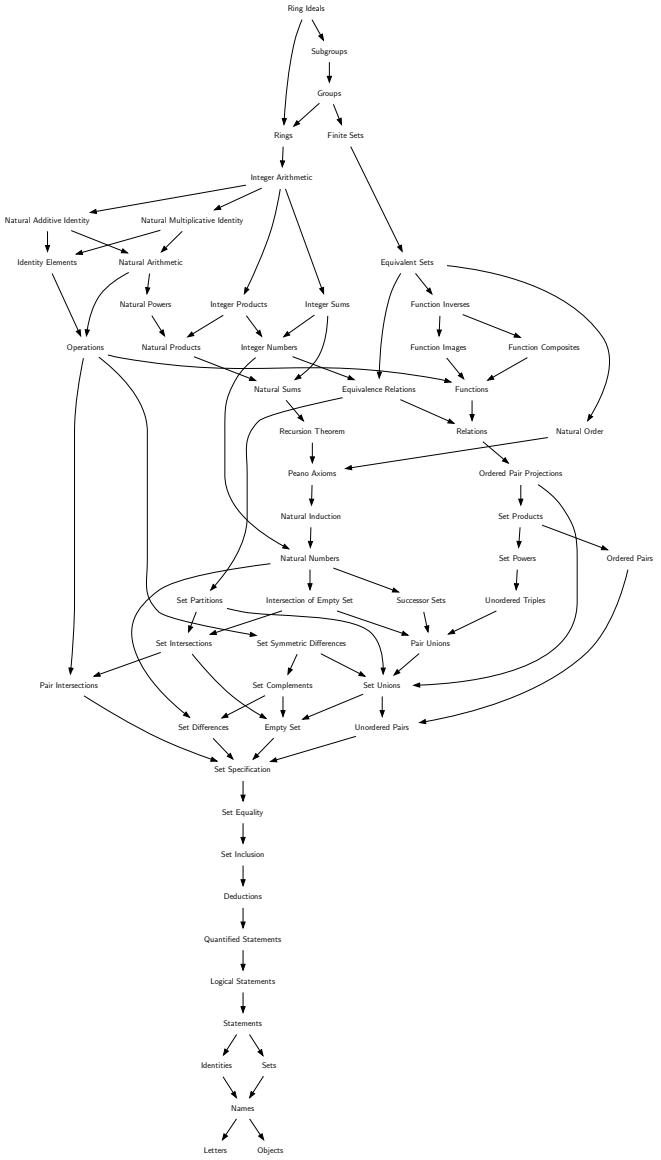
Definition

Given a ring $(R, +, \cdot)$ with additive group $(R, +)$. A subset $I \subset R$ is called a *left ideal* if

1. $(I, +)$ is a subgroup of $(R, +)$
2. $r \cdot x \in I$ for every $r \in R$ and $x \in I$

Similarly, it is called a *left ideal* if (2) is replaced with $x \cdot r \in I$ for every $r \in R$ and $x \in I$. If I is an *ideal* if it is both a left and right ideal.


Ring Ideals
Subgroups
Groups
Rings
Finite Sets
Integer Arithmetic
Natural Additive Identity
Natural Multiplicative Identity
Identity Elements
Natural Arithmetic
Equivalent Sets
Natural Powers
Integer Products
Integer Sums
Function Inverses
Operations
Natural Products
Integer Numbers
Function Images
Function Composites
Natural Sums
Equivalence Relations
Functions
Recursion Theorem
Relations
Natural Order
Peano Axioms
Ordered Pair Projections
Natural Induction
Set Products
Natural Numbers
Set Powers
Ordered Pairs
Set Partitions
Intersection of Empty Set
Successor Sets
Unordered Triples
Set Intersections
Set Symmetric Differences
Pair Unions
Pair Intersections
Set Complements
Set Unions
Set Differences
Empty Set
Unordered Pairs
Set Specification
Set Equality
Set Inclusion
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects