Why

We want sums to follow those of natural numbers.[1]

Definition

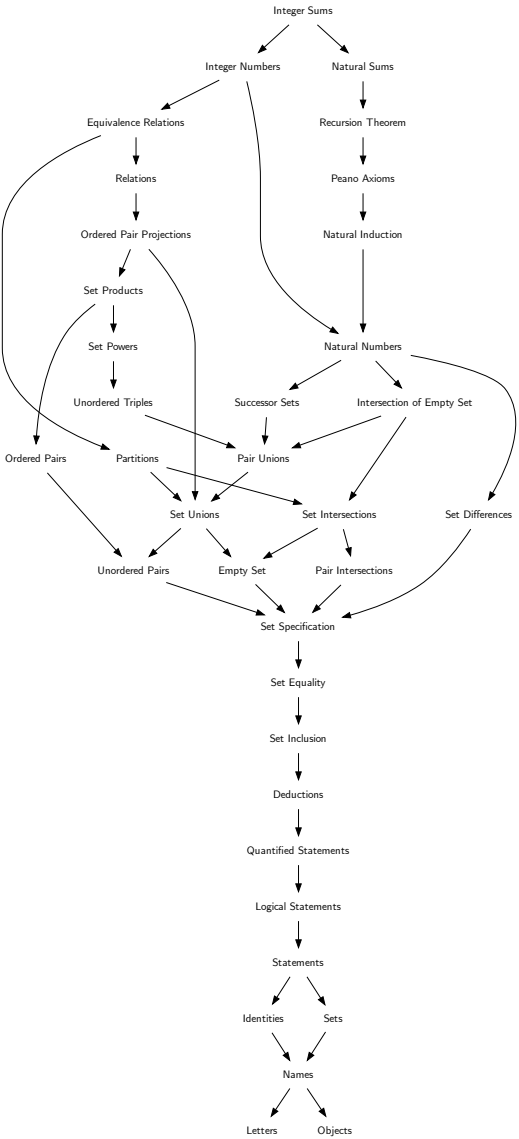
Consider $[(a,b)], [(c,d)] \in \mathbf{Z}$. We define the *integer sum* of $[(a,b)]$ with $[(c,d)]$ as $[(a+c, b+d)]$.[2]

Notation

We denote the sum of $[(a,b)]$ and $[(c,d)]$ by $[(a,b)] + [(b,c)]$ So if $x, y \in \mathbf{Z}$ then the sum of x and y is $x + y$.

[1] Future editions will modify this.

[2] One needs to show that this is well-defined. The account will appear in future editions.


Integer Sums
Integer Numbers
Natural Sums
Equivalence Relations
Recursion Theorem
Relations
Peano Axioms
Ordered Pair Projections
Natural Induction
Set Products
Set Powers
Natural Numbers
Unordered Triples
Successor Sets
Intersection of Empty Set
Ordered Pairs
Partitions
Pair Unions
Set Unions
Set Intersections
Set Differences
Unordered Pairs
Empty Set
Pair Intersections
Set Specification
Set Equality
Set Inclusion
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects