Why

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

Definition

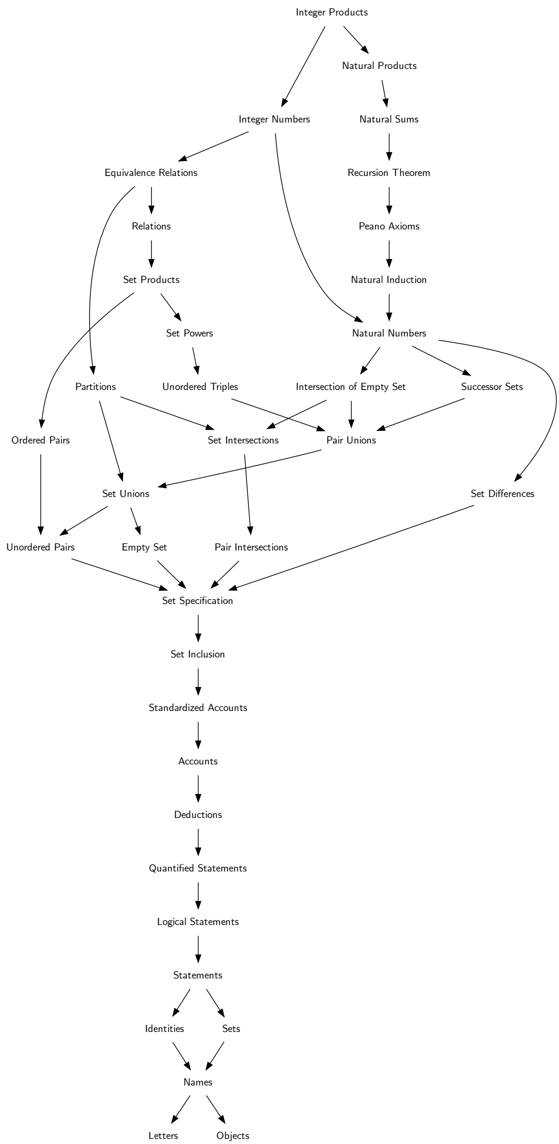
Consider $[(a, b)], [(b, c)] \in \mathbf{Z}$. We define *integer product* of $[(a, b)]$ with $[(b, c)]$ as $[(ac + bd, ad + bc)]$.[2]

Notation

We denote the product of $[(a, b)]$ and $[(c, d)]$ by $[(a, b)] \cdot [(b, c)]$ So if $x, y \in \mathbf{Z}$ then the sum of x and y is $x \cdot y$. As with natural products, we often drop the $\cdot$ and write xy for $x \cdot y$.

[1] Future editions will modify this.

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


Integer Products
Natural Products
Integer Numbers
Natural Sums
Equivalence Relations
Recursion Theorem
Relations
Peano Axioms
Set Products
Natural Induction
Set Powers
Natural Numbers
Partitions
Unordered Triples
Intersection of Empty Set
Successor Sets
Ordered Pairs
Set Intersections
Pair Unions
Set Unions
Set Differences
Unordered Pairs
Empty Set
Pair Intersections
Set Specification
Set Inclusion
Standardized Accounts
Accounts
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