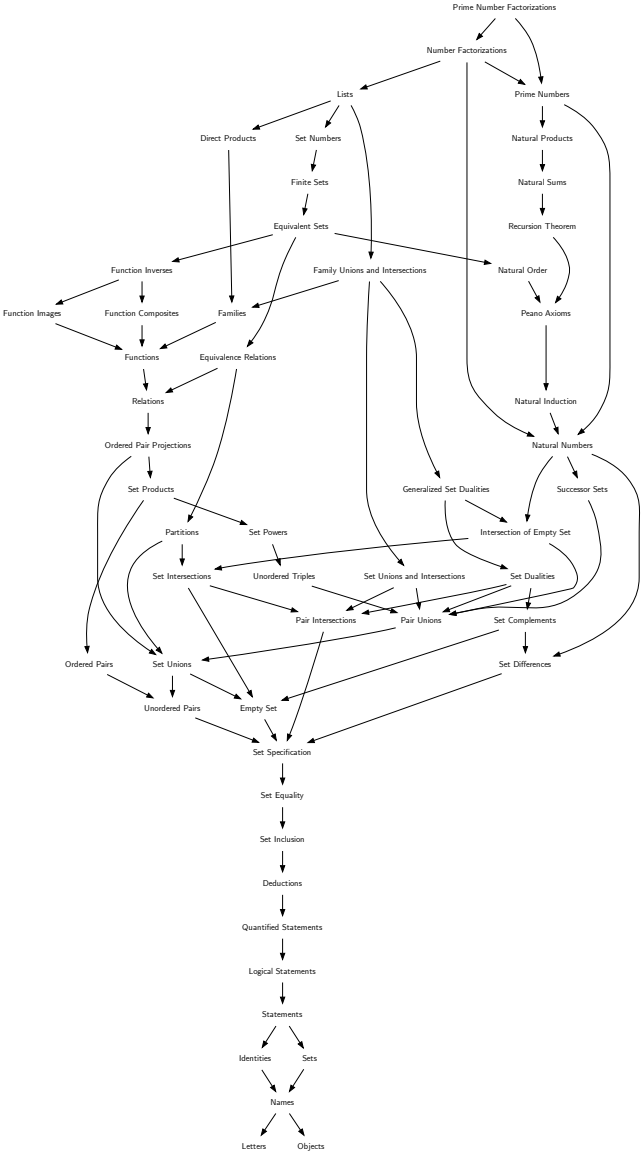
Result

Proposition 1. *Suppose* $n \in \mathbf{N}$ *and* $n > 1$. *Then there exists a factorization* $(\pi_1, \ldots, \pi_p)$ *of* n *where* π_i *is prime for* $i = 1, \ldots, p$. *In other words,*

$$n = \pi_1 \pi_2 \cdots \pi_p$$

The above result is known as the *fundamental theorem of arithmetic* and the *prime factorization theorem.* Future editions will include the proof.


Prime Number Factorizations
Number Factorizations
Lists
Prime Numbers
Direct Products
Set Numbers
Natural Products
Finite Sets
Natural Sums
Equivalent Sets
Recursion Theorem
Function Inverses
Family Unions and Intersections
Natural Order
Function Images
Function Composites
Families
Peano Axioms
Functions
Equivalence Relations
Relations
Natural Induction
Ordered Pair Projections
Natural Numbers
Set Products
Generalized Set Dualities
Successor Sets
Partitions
Set Powers
Intersection of Empty Set
Set Intersections
Unordered Triples
Set Unions and Intersections
Set Dualities
Pair Intersections
Pair Unions
Set Complements
Ordered Pairs
Set Unions
Set Differences
Unordered Pairs
Empty Set
Set Specification
Set Equality
Set Inclusion
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects