### Why

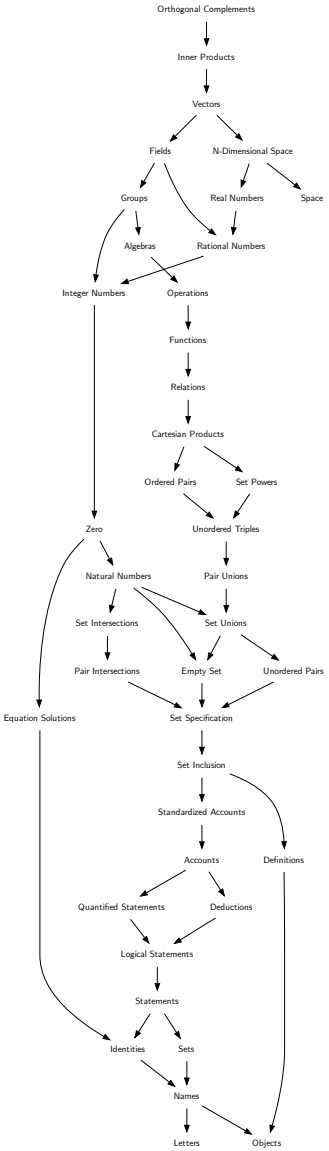
TODO

### Definition

The *orthogonal complement* of a subset of an inner product space is the set of vectors which are orthogonal to every vector in the subset.

### Notation

Let $(V, \mathsf{F})$ be a vector space and $U \subset V$. We denote the orthogonal complement of $U$ by $U^{\perp}$.


Orthogonal Complements
Inner Products
Vectors
Fields
N-Dimensional Space
Groups
Real Numbers
Space
Algebras
Rational Numbers
Integer Numbers
Operations
Functions
Relations
Cartesian Products
Ordered Pairs
Set Powers
Zero
Unordered Triples
Natural Numbers
Pair Unions
Set Intersections
Set Unions
Pair Intersections
Empty Set
Unordered Pairs
Equation Solutions
Set Specification
Set Inclusion
Standardized Accounts
Accounts
Definitions
Quantified Statements
Deductions
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects