Why

If we have a norm, then we have a metric.

Motivating Result

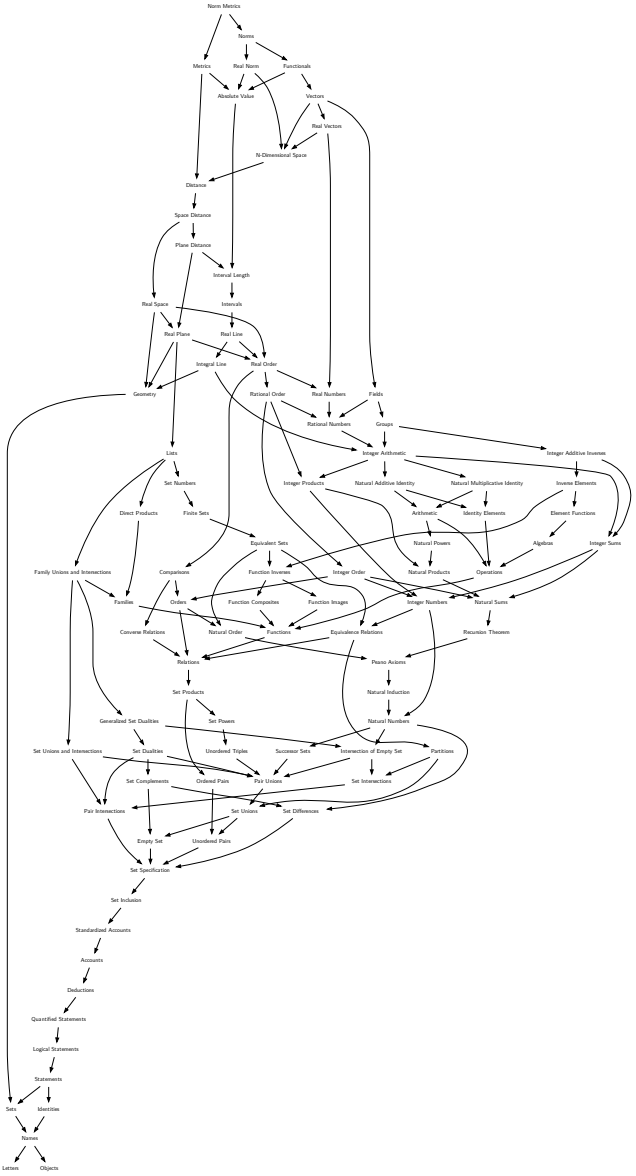
Let R be the set of real numbers.

Prop. 1. *Let (V, F) be a vector space. Let $f : V \to R$ be a norm. Let $g : V \times V \to R$ such that*

$$g(x, y) = \|x - y\|.$$

Then g is a metric.[1]

[1] Future editions will include an account.


Norm Metrics
Norms
Metrics
Real Norm
Functionals
Absolute Value
Vectors
Real Vectors
N-Dimensional Space
Distance
Space Distance
Plane Distance
Interval Length
Real Space
Intervals
Real Plane
Real Line
Integral Line
Real Order
Geometry
Rational Order
Real Numbers
Fields
Rational Numbers
Groups
Integer Arithmetic
Integer Additive Inverses
Lists
Set Numbers
Integer Products
Natural Additive Identity
Natural Multiplicative Identity
Inverse Elements
Direct Products
Finite Sets
Arithmetic
Identity Elements
Element Functions
Equivalent Sets
Natural Powers
Algebras
Integer Sums
Family Unions and Intersections
Comparisons
Function Inverses
Integer Order
Natural Products
Operations
Families
Orders
Function Composites
Function Images
Integer Numbers
Natural Sums
Converse Relations
Natural Order
Functions
Equivalence Relations
Recursion Theorem
Relations
Peano Axioms
Set Products
Natural Induction
Generalized Set Dualities
Set Powers
Natural Numbers
Set Unions and Intersections
Set Dualities
Unordered Triples
Successor Sets
Intersection of Empty Set
Partitions
Set Complements
Ordered Pairs
Pair Unions
Set Intersections
Pair Intersections
Set Unions
Set Differences
Empty Set
Unordered Pairs
Set Specification
Set Inclusion
Standardized Accounts
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Sets
Identities
Names
Letters
Objects