Why

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

Motivating Result

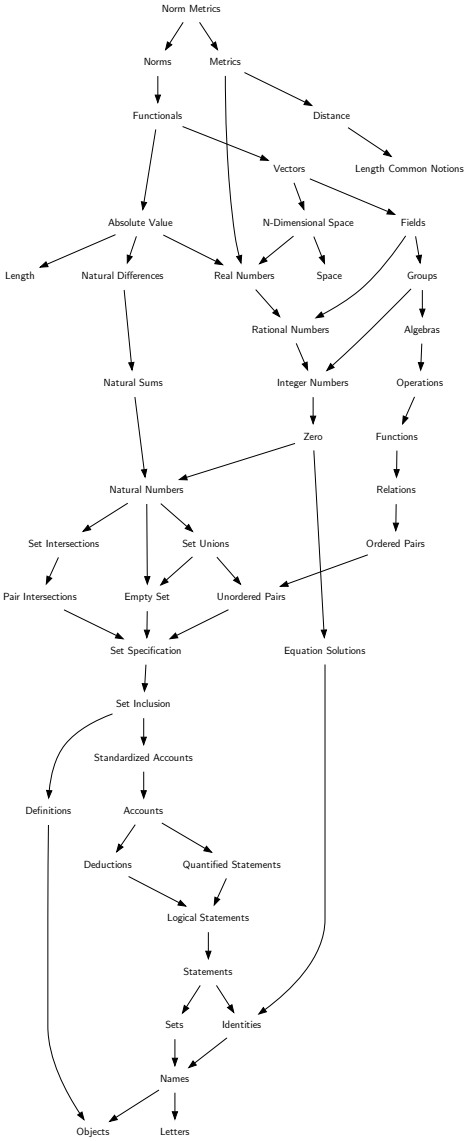
Let R be the set of real numbers.

Proposition **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.

Proof. □


Norm Metrics
Norms
Metrics
Functionals
Distance
Length Common Notions
Vectors
Absolute Value
N-Dimensional Space
Fields
Length
Natural Differences
Real Numbers
Space
Groups
Rational Numbers
Algebras
Natural Sums
Integer Numbers
Operations
Zero
Functions
Natural Numbers
Relations
Set Intersections
Set Unions
Ordered Pairs
Pair Intersections
Empty Set
Unordered Pairs
Set Specification
Equation Solutions
Set Inclusion
Standardized Accounts
Definitions
Accounts
Deductions
Quantified Statements
Logical Statements
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Names
Objects
Letters