Why

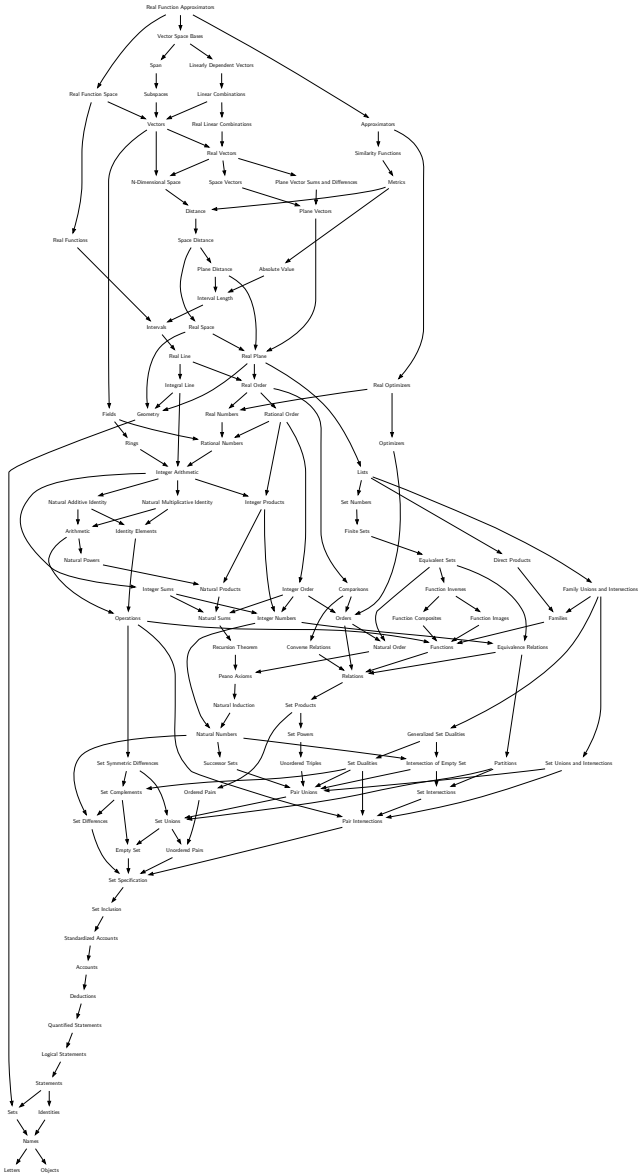
Since the function space $\mathbf{R} \to \mathbf{R}$ is a vector space, can we approximate a "complex" element of this set by some basis of "simpler" functions in $\mathbf{R} \to \mathbf{R}$.

Of course, there may be no set that can represent f. So instead we may be interested in an element $g \in \text{span}\{g_1, \ldots, g_d\}$ which approximates f.[1]

Definition

A *real function approximator* for a function $f : \mathbf{R} \to \mathbf{R}$ is a function $g : \mathbf{R} \to \mathbf{R}$.

[1] Future editions will modify.


Real Function Approximaton
Vector Space Bases
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Set Products
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Generalized Set Dualities
Set Symmetric Differences
Successor Sets
Unordered Triples
Set Dualities
Intersection of Empty Set
Partitions
Set Unions and Intersections
Set Complements
Ordered Pairs
Pair Unions
Set Intersections
Set Differences
Set Unions
Pair Intersections
Empty Set
Unordered Pairs
Set Specification
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Standardized Accounts
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Statements
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