Why

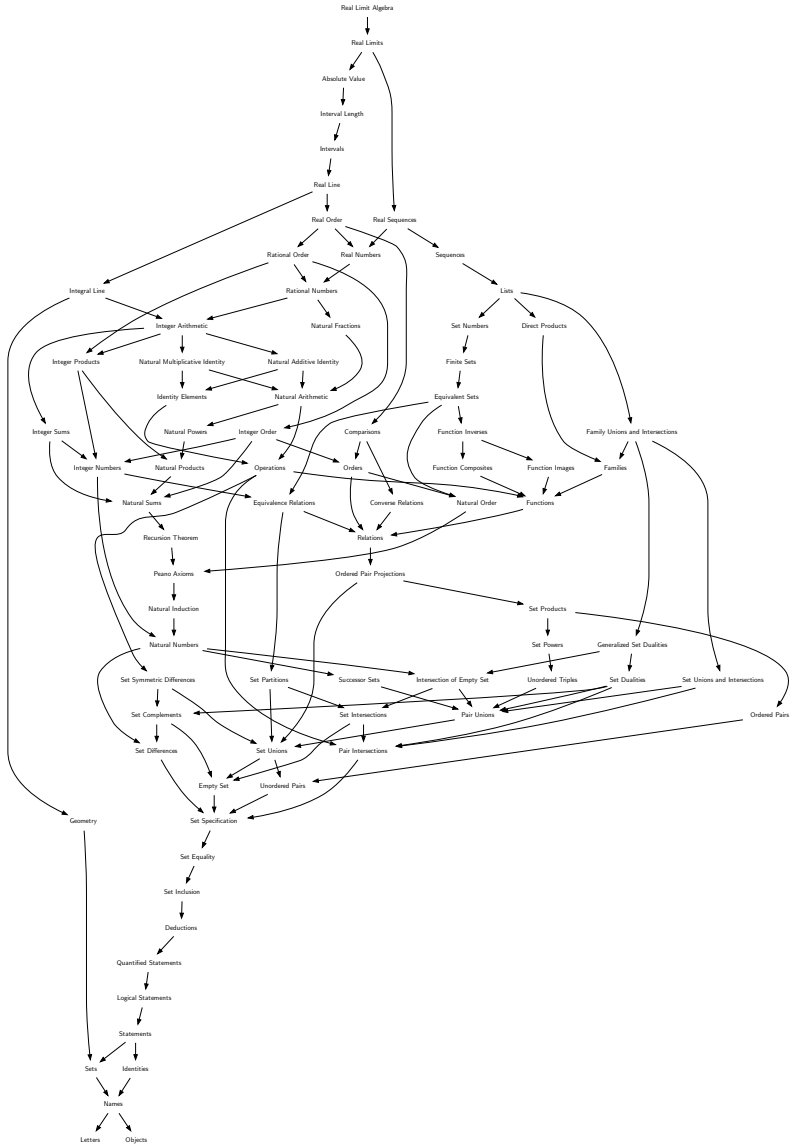
Consider two convergent sequences. What if we add them termwise? Or multiply?

Main results

Proposition 1. *Let* $(x_n)_{n\in\mathbf{N}}$ *and* $(y_n)_{n\in\mathbf{N}}$ *be two limits with* x_0 *and* y_0 *in* $\mathbf{R}$. *Then the sequence* (s_n) *defined by* $s_n = x_n + y_n$ *converges to the limit* $x_0 + y_0$ *and the sequence* $m_n = x_n y_n$ *converges to the limit* $x_0 y_0$.[1]

In particular for $a \in \mathbf{R}$, the sequence (c_n) defined by $c_n = ax_n$ converges to the limit ax_0.

[1] Future editions will include the account.


Real Limit Algebra
Real Limits
Absolute Value
Interval Length
Intervals
Real Line
Real Order
Real Sequences
Rational Order
Real Numbers
Sequences
Integral Line
Rational Numbers
Lists
Integer Arithmetic
Natural Fractions
Set Numbers
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Integer Products
Natural Multiplicative Identity
Natural Additive Identity
Finite Sets
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Equivalent Sets
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Comparisons
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Generalized Set Dualities
Set Symmetric Differences
Set Partitions
Successor Sets
Intersection of Empty Set
Unordered Triples
Set Dualities
Set Unions and Intersections
Set Complements
Set Intersections
Pair Unions
Ordered Pairs
Set Differences
Set Unions
Pair Intersections
Empty Set
Unordered Pairs
Geometry
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Set Inclusion
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Logical Statements
Statements
Sets
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