Why

We want to order the real numbers.[1]

Definition

For $R, S \in \mathbf{R}$ define the total order $\succeq$ by $R \succeq S$ if and only if $R \subset S$. As is usual with comparisons, we use the terms *less than* and *less than or equal to*.

Notation

If R is less than S we write $R < S$. If R is less than or equal to S we write $R \leq S$.

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[1] Future editions will expand

Real Order

Real Numbers Rational Order

Rational Numbers

Integer Arithmetic

Natural Additive Identity Natural Multiplicative Identity Integer Products

Identity Elements Arithmetic

Natural Powers

Natural Products Integer Sums Integer Order Comparisons

Operations Natural Sums Integer Numbers Orders

Functions Recursion Theorem Natural Order Equivalence Relations Converse Relations

Peano Axioms Relations

Natural Induction Set Products

Natural Numbers Set Powers Ordered Pairs

Intersection of Empty Set Successor Sets Partitions Unordered Triples

Set Intersections Set Symmetric Differences Pair Unions

Pair Intersections Set Complements Set Unions

Set Differences Empty Set Unordered Pairs

Set Specification

Set Equality

Set Inclusion

Deductions

Quantified Statements

Logical Statements

Statements

Identities Sets

Names

Letters Objects