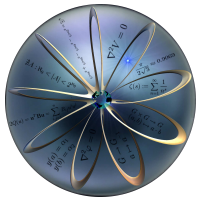

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well-ordering principle for natural numbers

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Every nonempty set S of natural numbers contains a least element; that is, there is some number a in S such that $a \leq b$ for all b belonging to S.

Beware that there is another statement (which is equivalent to the axiom of choice) called the *well-ordering principle*. It asserts that every set can be well-ordered.

Note that the well-ordering principle for natural numbers is equivalent to the principle of mathematical induction (or, the principle of finite induction).