

Well Ordering Principle.

Every nonempty subset S of the positive integers contains a least number, that is, a number c in S such that $c \leq n$ for all n in S .

Principle of Mathematical Induction.

Let P_n be a statement associated With the positive integer n .

If P_1 is true, and

P_{k+1} is true whenever P_k is true,

then P_n is true for all n in \mathbb{N} .

Theorem 1.4.1.

There is no positive integer between 0 and 1. Thus 1 is the smallest positive integer.