Contents

0.1 Implications of axiom schema of specification

0.1.1 All finite subsets exist

Finite subsets. Don't know about infinite subsets

If we can define a subset, by the axiom of specification it exists.

For example if set $\{a, b, c\}$ exists, we can define a preterite to select any subset of this.

For example we can use define a $P(x)$ as $x = a \vee x = b$ to extract the subset $\{a, b\}$.

If a subset is infinitely large,

0.1.2 Intersections of finite sets exist

Can prove exists from this axiom

0.1.3 If any set exists, the empty set exists

$\forall x \forall a \exists s[(P(x) \wedge x \in a) \leftrightarrow (x \in s)]$