

Axiom of infinity

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$$\exists y \{ (\forall z(z \notin y) \wedge y \in A$$

$$\emptyset \in A$$

$$\exists y \{ (\forall z(z \in y \Leftrightarrow z \in x \vee z=x)) \wedge y \in A$$

$$x \cup \{x\} \in A$$

$$\exists A (\emptyset \in A \wedge \forall x (x \in A \Rightarrow x \cup \{x\} \in A))$$

There is a set A such that the empty set is in A and such that whenever any x is a member of A, the set formed by taking the union of x with its single {x} is also a member of A.