

Contents

0.1	Axiom of pairing	1
0.1.1	For each set, there exists a set containing only that set . .	1
0.1.2	For any finite number of sets, there is a set containing only those sets	1
0.1.3	For any finite number of sets, there is a set containing the intersection of those sets	1

0.1 Axiom of pairing

For any pair of sets, x and y there is another set z which containing only x and y .

$$\forall x \forall y \exists z \forall a [a \in z \leftrightarrow a = x \vee a = y]$$

0.1.1 For each set, there exists a set containing only that set

Take the axiom, but replace all instance of y with x .

$$\forall x \exists z \forall a [a \in z \leftrightarrow a = x \vee a = x]$$

$$\forall x \exists z \forall a [a \in z \leftrightarrow a = x]$$

0.1.2 For any finite number of sets, there is a set containing only those sets

0.1.3 For any finite number of sets, there is a set containing the intersection of those sets