

Definition 3.52. [1Y3] *Axiom of pairing.* Given any two sets X and Y there exists a set Z , denoted by $Z = \{X, Y\}$, whose only two elements are X and Y . In formula

$$\forall X, Y \exists Z : \forall W (W \in Z) \iff (W = X) \vee (W = Y) \quad .$$

Again, by the axiom of extensionality [1Y8], the set Z is unique.