Why

We want symbols for talking about some object of a set or all objets of a set.

Definition

ßExistential Quantifier

Consider the symbol $\exists$. We agree that it means "there exists an object". We write $\exists a \in A$. We read this as "there exists an object in the set denoted by A, and denote that very same object by a". We call $\exists$ the existential quantifier.

ßUniversal Quantifier

Consider the symbol $\forall$. We agree that it means "for every object". We write $\forall a \in A$. We read this as "for every object in the set denoted by A, and denote one such object by a".

Quantified Statements

$\downarrow$

Logical Statements

$\downarrow$

Statements

$\downarrow$

Objects