

Definition 3.17. [1x2] Given two variables x, y we will write $x \in y$ to say that “ x is an element of the set y ”. Equivalent expressions are “ x is a member of y ”, “ x belongs to y ” or just simply “ x is in y ”.

The formula $(x \in y)$ is equivalent to $(y \ni x)$; the negations are $(x \notin y) \doteq \neg(x \in y)$ and $(y \not\ni x) \doteq \neg(y \ni x)$.

The formula $(x \in y)$ (as all other variants) takes value of truth/falsehood and therefore can be used as atom in the construction of a well-formed formula.