# t1_qc_lang1 (TMG4XJR37br6nfKJkt9gPPCfYP8it8XmHnZ)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(r1\_tarski\ X0\ X1) \Rightarrow ((r1\_tarski\ (k2\_zfmisc\_1\ X0\ X2)\ (k2\_zfmisc\_1\ X1\ X2)) \wedge (r1\_tarski\ (k2\_zfmisc\_1\ X2\ X0)\ (k2\_zfmisc\_1\ X2\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ (k1\_tarski\ X0)\ X1) \Leftrightarrow (X0 \in X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \Rightarrow ((m1\_subset\_1\ X1\ X0) \Leftrightarrow (X1 \in X0))) \wedge ((v1\_xboole\_0\ X0) \Rightarrow ((m1\_subset\_1\ X1\ X0) \Leftrightarrow (v1\_xboole\_0\ X1))) \tag{3}$$

**Theorem 1**

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.\forall X2.(m1\_subset\_1\ X2\ X0) \Rightarrow (r1\_tarski\ (k2\_zfmisc\_1\ (k1\_tarski\ X2)\ X1)\ (k2\_zfmisc\_1\ X0\ X1)))$$