

# t32\_qc\_lang3 (TMVZUJU- ZoW6obK5PGgepdPoR9eU2ubLEyuP)

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Let  $m1\_qc\_lang1 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k4\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k5\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $np\_6 : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $np\_5 : \iota$  be given. Let  $k1\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4\_tarski X0 X1 = k4\_tarski X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0. (m1\_qc\_lang1 X0) \Rightarrow (\neg v1\_xboole\_0 (k5\_qc\_lang1 X0)) \quad (4)$$

Assume the following.

$$\forall X0. (m1\_qc\_lang1 X0) \Rightarrow (\neg v1\_xboole\_0 (k4\_qc\_lang1 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (m1\_qc\_lang1 X0) \Rightarrow (m1\_subset\_1 (k5\_qc\_lang1 X0) (k1\_zfmisc\_1 (k2\_qc\_lang1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (m1\_subset\_1\ (k4\_qc\_lang1\ X0)\ (k1\_zfmisc\_1\ (k2\_qc\_lang1\ X0))) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (k5\_qc\_lang1\ X0 = k2\_zfmisc\_1\ (k1\_tarski\_np\_6)\ k5\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (k4\_qc\_lang1\ X0 = k2\_zfmisc\_1\ (k1\_tarski\_np\_5)\ (k1\_qc\_lang1\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_zfmisc\_1\ X0\ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.\exists X5.(X4 \in X0) \wedge ((X5 \in X1) \wedge (X3 = k4\_tarski\ X4\ X5)))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \Rightarrow (v1\_xboole\_0\ X1)) \quad (12)$$

**Theorem 1**

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (k2\_qc\_lang1\ X0)\ (k4\_qc\_lang1\ X0)) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ (k2\_qc\_lang1\ X0)\ (k5\_qc\_lang1\ X0)) \Rightarrow (X1 \neq X2)))$$