

t34\_qc\_lang3  
(TMb4SfKkK8fKW2utgms8qyubRYaeLqyWJfP8)

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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  $k5\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k3\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k3\_qc\_lang3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k2\_qc\_lang3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $np\_6 : \iota$  be given. Let  $np\_4 : \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m2\_subset\_1 X1 (k2\_qc\_lang1 \\ X0) (k5\_qc\_lang1 X0)) \Rightarrow (\exists X2.(m1\_subset\_1 X2 k5\_numbers) \wedge \\ (k3\_qc\_lang3 X0 X2 = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m2\_subset\_1 X1 (k2\_qc\_lang1 \\ X0) (k3\_qc\_lang1 X0)) \Rightarrow (\exists X2.(m1\_subset\_1 X2 (k1\_qc\_lang1 \\ X0)) \wedge (k2\_qc\_lang3 X0 X2 = X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.(k4\_tarski X0 X1 = \\ k4\_tarski X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.k4\_tarski X0 X1 = k2\_tarski (k2\_tarski X0 \\ X1) (k1\_tarski X0) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k5\_numbers) \Rightarrow \\ (k3\_qc\_lang3 X0 X1 = k4\_tarski np\_6 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_qc\_lang1 \\ X0)) \Rightarrow (k2\_qc\_lang3 X0 X1 = k4\_tarski np\_4 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarSKI X0 X1 = k2\_tarSKI X1 X0 \quad (7)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m2\_subset\_1 X1 (k2\_qc\_lang1 \\ X0) (k5\_qc\_lang1 X0)) \Rightarrow (\forall X2.(m2\_subset\_1 X2 (k2\_qc\_lang1 \\ X0) (k3\_qc\_lang1 X0)) \Rightarrow (X1 \neq X2))) \end{aligned}$$