

t29_qc_lang1
(TMSBetBAsp6QTLz3MiA3LzirxtGnBlyjJWt)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $r1_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_qc_lang1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_qc_lang1 X0)) \Rightarrow ((r2_qc_lang1 \\ X0 X1 X2) \Leftrightarrow (\neg r1_qc_lang1 X0 X2 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_qc_lang1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_qc_lang1 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (k1_qc_lang1 X0)) \Rightarrow (((r1_qc_lang1 X0 X1 X2) \wedge (r1_qc_lang1 \\ X0 X2 X3)) \Rightarrow (r1_qc_lang1 X0 X1 X3)))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_qc_lang1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_qc_lang1 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (k1_qc_lang1 X0)) \Rightarrow (((r1_qc_lang1 X0 X1 X2) \wedge (r2_qc_lang1 \\ X0 X2 X3)) \Rightarrow (r2_qc_lang1 X0 X1 X3)))))) \end{aligned}$$