

t49_zf_lang1
(TMURgcG9qfDoktAhDseQxwfMG3pj2a5Fejh)

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Let $v1_zf_lang : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $r3_zf_lang : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_zf_lang : \iota \Rightarrow \iota$ be given. Let $k11_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_zf_lang : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_zf_lang : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zf_lang : \iota$ be given. Let $k8_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow ((r1_zf_lang \\ & X0 X1) \Rightarrow (r3_zf_lang X0 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\forall X2. (\\ & (v1_zf_lang X2) \wedge (m2_finseq_1 X2 k5_numbers)) \Rightarrow ((\neg(\neg(r3_zf_lang \\ & X0 X1) \wedge (r2_zf_lang X1 X2)) \wedge (\neg(r2_zf_lang X0 X1) \wedge (r3_zf_lang \\ & X1 X2)) \wedge ((\neg(r2_zf_lang X0 X1) \wedge (r1_zf_lang X1 X2)) \wedge ((\neg(r1_zf_lang \\ & X0 X1) \wedge (r2_zf_lang X1 X2)) \wedge ((\neg(r3_zf_lang X0 X1) \wedge (r1_zf_lang \\ & X1 X2)) \wedge (\neg(r1_zf_lang X0 X1) \wedge (r3_zf_lang X1 X2)))))) \Rightarrow (r3_zf_lang \\ & X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_zf_lang X0) \wedge (m1_finseq_1 X0 k5_numbers)) \wedge \\ & ((v1_zf_lang X1) \wedge (m1_finseq_1 X1 k5_numbers))) \Rightarrow (v1_zf_lang \\ & (k7_zf_lang X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. ((v1_zf_lang X0) \wedge (m1_finseq_1 X0 k5_numbers)) \Rightarrow (v1_zf_lang (k6_zf_lang X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_finseq_1 X0 k5_numbers)\wedge(m1_finseq_1 X1 k5_numbers))\Rightarrow(m2_finseq_1 (k7_zf_lang X0 X1) k5_numbers) \quad (6)$$

Assume the following.

$$\forall X0.(m1_finseq_1 X0 k5_numbers)\Rightarrow(m2_finseq_1 (k6_zf_lang X0) k5_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_zf_lang X0)\wedge(m2_finseq_1 X0 k5_numbers))\Rightarrow(\forall X1. \\ ((v1_zf_lang X1)\wedge(m2_finseq_1 X1 k5_numbers))\Rightarrow((r1_zf_lang \\ X0 X1)\Leftrightarrow(\neg(X1\neq k6_zf_lang X0)\wedge(\forall X2.((v1_zf_lang X2)\wedge \\ m2_finseq_1 X2 k5_numbers))\Rightarrow((X1\neq k7_zf_lang X0 X2)\wedge(X1\neq k7_zf_lang \\ X2 X0))))\wedge(\forall X2.(m2_subset_1 X2 k5_numbers k1_zf_lang)\Rightarrow \\ (X1\neq k8_zf_lang X2 X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.((v1_zf_lang X0)\wedge(m2_finseq_1 X0 k5_numbers))\Rightarrow(\forall X1. \\ ((v1_zf_lang X1)\wedge(m2_finseq_1 X1 k5_numbers))\Rightarrow(k11_zf_lang \\ X0 X1 = k6_zf_lang (k7_zf_lang X0 (k6_zf_lang X1)))) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_zf_lang X0)\wedge(m2_finseq_1 X0 k5_numbers))\Rightarrow(\forall X1. \\ ((v1_zf_lang X1)\wedge(m2_finseq_1 X1 k5_numbers))\Rightarrow((r3_zf_lang \\ (k7_zf_lang X0 (k6_zf_lang X1)) (k11_zf_lang X0 X1))\wedge((r3_zf_lang \\ X0 (k11_zf_lang X0 X1))\wedge((r3_zf_lang (k6_zf_lang X1) (k11_zf_lang \\ X0 X1))\wedge(r3_zf_lang X1 (k11_zf_lang X0 X1)))))) \end{aligned}$$