

t51_zf_lang1
(TMNGhJoBZAfjYWng2qpzGA4snrXuiUxvte5)

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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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zf_lang : \iota$ be given. Let $r3_zf_lang : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_zf_lang : \iota \Rightarrow \iota$ be given. Let $k13_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zf_misc_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zf_misc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_zf_lang)\wedge((v1_zf_lang X1)\wedge(m1_finseq_1 X1 k5_numbers)))\Rightarrow(v1_zf_lang (k8_zf_lang X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.((v1_zf_lang X0)\wedge(m1_finseq_1 X0 k5_numbers))\Rightarrow(v1_zf_lang (k6_zf_lang X0)) \quad (6)$$

Assume the following.

$$\neg v1_xboole_0 k1_zf_lang \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_zf_lang)\wedge(m1_finseq_1 X1 k5_numbers))\Rightarrow(m2_finseq_1 (k8_zf_lang X0 X1) k5_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(m1_finseq_1 X0 k5_numbers)\Rightarrow(m2_finseq_1 (k6_zf_lang X0) k5_numbers) \quad (9)$$

Assume the following.

$$m1_subset_1 k1_zf_lang (k1_zf_misc_1 k5_numbers) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_zf_lang X0)\wedge(m2_finseq_1 X0 k5_numbers))\Rightarrow(\forall X1. \\ ((v1_zf_lang X1)\wedge(m2_finseq_1 X1 k5_numbers))\Rightarrow((r1_zf_lang \\ X0 X1)\Leftrightarrow(\neg(X1\neq k6_zf_lang X0)\wedge((\forall X2.((v1_zf_lang X2)\wedge \\ m2_finseq_1 X2 k5_numbers))\Rightarrow((X1\neq k7_zf_lang X0 X2)\wedge(X1\neq k7_zf_lang \\ X2 X0))))\wedge(\forall X2.(m2_subset_1 X2 k5_numbers k1_zf_lang)\Rightarrow \\ (X1\neq k8_zf_lang X2 X0)))))) \quad (11) \end{aligned}$$

Assume the following.

$$\forall X0.(m2_subset_1 X0 k5_numbers k1_zf_lang)\Rightarrow(\forall X1. \\ ((v1_zf_lang X1)\wedge(m2_finseq_1 X1 k5_numbers))\Rightarrow(k13_zf_lang \\ X0 X1 = k6_zf_lang (k8_zf_lang X0 (k6_zf_lang X1)))) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zf_misc_1 \\ X0))\Rightarrow(v1_xboole_0 X1)) \quad (13)$$

Theorem 1

$$\forall X0.((v1_zf_lang X0)\wedge(m2_finseq_1 X0 k5_numbers))\Rightarrow(\forall X1. \\ (m2_subset_1 X1 k5_numbers k1_zf_lang)\Rightarrow((r3_zf_lang (k8_zf_lang \\ X1 (k6_zf_lang X0)) (k13_zf_lang X1 X0))\wedge(r3_zf_lang (k6_zf_lang \\ X0) (k13_zf_lang X1 X0))))$$