

t109_zf_lang1 (TMK-
fiN3mZT3zXBYf14w7MBDH3h1SHsddcXV)

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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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zf_lang : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_zf_model : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_zf_model : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k1_zf_lang X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_zf_lang X0)))) \Rightarrow (\forall X2.((v1_zf_lang X2) \wedge (m2_finseq_1 \\ & X2 k5_numbers)) \Rightarrow (\forall X3.((v1_zf_lang X3) \wedge (m2_finseq_1 X3 \\ & k5_numbers)) \Rightarrow ((r1_zf_model X0 X1 (k11_zf_lang X2 X3)) \Leftrightarrow ((r1_zf_model \\ & X0 X1 X2) \Rightarrow (r1_zf_model X0 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k1_zf_lang X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_zf_lang X0)))) \Rightarrow (\forall X2.((v1_zf_lang X2) \wedge (m2_finseq_1 \\ & X2 k5_numbers)) \Rightarrow (\forall X3.((v1_zf_lang X3) \wedge (m2_finseq_1 X3 \\ & k5_numbers)) \Rightarrow ((r1_zf_model X0 X1 (k7_zf_lang X2 X3)) \Leftrightarrow ((r1_zf_model \\ & X0 X1 X2) \wedge (r1_zf_model X0 X1 X3)))))) \end{aligned} \quad (2)$$

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.

$$\forall X0.\forall X1.((m1_finseq_1 X0 k5_numbers)\wedge(m1_finseq_1 X1 k5_numbers))\Rightarrow(m2_finseq_1 (k7_zf_lang X0 X1) k5_numbers) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_zf_lang X0)\wedge(m1_finseq_1 X0 k5_numbers))\wedge((v1_zf_lang X1)\wedge(m1_finseq_1 X1 k5_numbers)))\Rightarrow((v1_zf_lang (k11_zf_lang X0 X1))\wedge(m2_finseq_1 (k11_zf_lang X0 X1) k5_numbers)) \quad (6)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_zf_lang X1)\wedge(m2_finseq_1 X1 k5_numbers))\Rightarrow((r2_zf_model X0 X1)\Leftrightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 k1_zf_lang X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_zf_lang X0))))))\Rightarrow(r1_zf_model X0 X2 X1)))) \quad (7)$$

Theorem 1

$$\forall X0.(((v1_zf_lang X0)\wedge(m2_finseq_1 X0 k5_numbers))\Rightarrow(\forall X1.(((v1_zf_lang X1)\wedge(m2_finseq_1 X1 k5_numbers))\Rightarrow(\forall X2.(\neg v1_xboole_0 X2)\Rightarrow(\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 k1_zf_lang X2)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_zf_lang X2))))))\Rightarrow((r1_zf_model X2 X3 (k11_zf_lang (k7_zf_lang X0 X1) (k7_zf_lang X1 X0)))\wedge(r2_zf_model X2 (k11_zf_lang (k7_zf_lang X0 X1) (k7_zf_lang X1 X0))))))))))$$