

t22_zf_lang1 (TMGbo-
QUB5HS4FQMt98aBY2kMY4QhmNFeECi)

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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 $v11_zf_lang : \iota \Rightarrow o$ be given. Let $k17_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k23_zf_lang : \iota \Rightarrow \iota$ be given. Let $k24_zf_lang : \iota \Rightarrow \iota$ be given. Let $k15_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & (m2_subset_1 X1 k5_numbers k1_zf_lang) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 k5_numbers k1_zf_lang) \Rightarrow (\forall X3.(m2_subset_1 X3 k5_numbers \\ & k1_zf_lang) \Rightarrow ((k17_zf_lang X1 X2 X3 X0 = k13_zf_lang X1 (k13_zf_lang \\ & X2 (k13_zf_lang X3 X0))) \wedge (k17_zf_lang X1 X2 X3 X0 = k15_zf_lang X1 \\ & X2 (k13_zf_lang X3 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & (m2_subset_1 X1 k5_numbers k1_zf_lang) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 k5_numbers k1_zf_lang) \Rightarrow ((v11_zf_lang (k15_zf_lang X1 X2 X0)) \wedge \\ & ((k23_zf_lang (k15_zf_lang X1 X2 X0) = X1) \wedge (k24_zf_lang (k15_zf_lang \\ & X1 X2 X0) = k13_zf_lang X2 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{4}$$

Assume the following.

$$\neg v1_xboole_0 \ k1_zf_lang \quad (5)$$

Assume the following.

$$m1_subset_1 \ k1_zf_lang \ (k1_zfmisc_1 \ k5_numbers) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_subset_1 \ X0 \ k1_zf_lang)\wedge((v1_zf_lang \\ X1)\wedge(m1_finseq_1 \ X1 \ k5_numbers)))\Rightarrow((v1_zf_lang \ (k13_zf_lang \\ X0 \ X1))\wedge(m2_finseq_1 \ (k13_zf_lang \ X0 \ X1) \ k5_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_subset_1 \ X0 \ k5_numbers \ k1_zf_lang)\Rightarrow(\forall X1. \\ (m2_subset_1 \ X1 \ k5_numbers \ k1_zf_lang)\Rightarrow(\forall X2.((v1_zf_lang \\ X2)\wedge(m2_finseq_1 \ X2 \ k5_numbers))\Rightarrow(k15_zf_lang \ X0 \ X1 \ X2 = k13_zf_lang \\ X0 \ (k13_zf_lang \ X1 \ X2)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0)\Rightarrow(\forall X1.(m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0))\Rightarrow(v1_xboole_0 \ X1)) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_zf_lang \ X0)\wedge(m2_finseq_1 \ X0 \ k5_numbers))\Rightarrow(\forall X1. \\ (m2_subset_1 \ X1 \ k5_numbers \ k1_zf_lang)\Rightarrow(\forall X2.(m2_subset_1 \\ X2 \ k5_numbers \ k1_zf_lang)\Rightarrow(\forall X3.(m2_subset_1 \ X3 \ k5_numbers \\ k1_zf_lang)\Rightarrow((v11_zf_lang \ (k17_zf_lang \ X1 \ X2 \ X3 \ X0))\wedge((k23_zf_lang \\ (k17_zf_lang \ X1 \ X2 \ X3 \ X0) = X1)\wedge(k24_zf_lang \ (k17_zf_lang \ X1 \ X2 \ X3 \\ X0) = k15_zf_lang \ X2 \ X3 \ X0)))))) \end{aligned}$$