

t72_zf_lang1

(TMQdt4GGrNpxYosFjSMLfuawed1ZeBLBSBa)

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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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $k8_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zf_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k2_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & (m2_subset_1 X1 k5_numbers k1_zf_lang) \Rightarrow (\forall X2. (\neg v1_xboole_0 \\ & X2) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k1_zf_lang \\ & X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_zf_lang X2)))))) \Rightarrow \\ & ((r1_zf_model X2 X3 (k8_zf_lang X1 X0)) \Leftrightarrow (\forall X4. (m1_subset_1 \\ & X4 X2) \Rightarrow (r1_zf_model X2 (k2_zf_lang1 X2 X3 X1 X4) X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & \forall X3. k2_funct_7 (k2_funct_7 X0 X3 X1) X3 X2 = k2_funct_7 X0 \\ & X3 X2) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k1_zf_lang X0) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_zf_lang X0)))))) \wedge ((m1_subset_1 \\ & X2 k1_zf_lang) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k2_zf_lang1 X0 X1 X2 X3 = \\ & k2_funct_7 X1 X2 X3) \end{aligned} \quad (4)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 \ X0) \wedge \\ & (((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k1_zf_lang \ X0) \wedge (m1_subset_1 \\ & \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_zf_lang \ X0)))))) \wedge ((m1_subset_1 \\ & \ X2 \ k1_zf_lang) \wedge (m1_subset_1 \ X3 \ X0))) \Rightarrow ((v1_funct_1 \ (k2_zf_lang1 \\ & \ X0 \ X1 \ X2 \ X3)) \wedge ((v1_funct_2 \ (k2_zf_lang1 \ X0 \ X1 \ X2 \ X3) \ k1_zf_lang \ X0) \wedge \\ & (m1_subset_1 \ (k2_zf_lang1 \ X0 \ X1 \ X2 \ X3) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & \ k1_zf_lang \ X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$m1_subset_1 \ k1_zf_lang \ (k1_zfmisc_1 \ k5_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (v1_xboole_0 \ X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(((v1_zf_lang \ X0) \wedge (m2_finseq_1 \ X0 \ k5_numbers)) \Rightarrow (\forall X1. \\ & (m2_subset_1 \ X1 \ k5_numbers \ k1_zf_lang) \Rightarrow (\forall X2.(\neg v1_xboole_0 \\ & \ X2) \Rightarrow (\forall X3.(m1_subset_1 \ X3 \ X2) \Rightarrow (\forall X4.((v1_funct_1 \\ & \ X4) \wedge ((v1_funct_2 \ X4 \ k1_zf_lang \ X2) \wedge (m1_subset_1 \ X4 \ (k1_zfmisc_1 \\ & \ (k2_zfmisc_1 \ k1_zf_lang \ X2)))))) \Rightarrow ((r1_zf_model \ X2 \ X4 \ (k8_zf_lang \\ & \ X1 \ X0)) \Leftrightarrow (r1_zf_model \ X2 \ (k2_zf_lang1 \ X2 \ X4 \ X1 \ X3) \ (k8_zf_lang \ X1 \\ & \ X0)))))) \end{aligned}$$