

t59_zf_lang (TMTEX-
TQTnW4Wyxbk5JDwYa26jFVQ2YawPMQ)

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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 $r2_zf_lang : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_zf_lang : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((X1 = k9_finseq_1 X0) \Leftrightarrow ((k3_finseq_1 X1 = np_1) \wedge (k1_funct_1 X1 np_1 = X0))) \quad (1)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (2)$$

Assume the following.

$$r1_xxreal_0 np_1 np_1 \quad (3)$$

Assume the following.

$$\forall X0. k9_finseq_1 X0 = k5_finseq_1 X0 \quad (4)$$

Assume the following.

$$\forall X0. v1_finseq_1 (k5_finseq_1 X0) \quad (5)$$

Assume the following.

$$\forall X0. (v1_relat_1 (k9_finseq_1 X0)) \wedge (v1_funct_1 (k9_finseq_1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow((X1 = k9_finseq_1 X0)\Leftrightarrow((k9_xtuple_0 X1 = k2_finseq_1 np_1)\wedge(k1_funct_1 X1 np_1 = X0))) \quad (7)$$

Assume the following.

$$\begin{aligned} &\forall X0.((v1_zf_lang X0)\wedge(m2_finseq_1 X0 k5_numbers))\Rightarrow(\forall X1. \\ &((v1_zf_lang X1)\wedge(m2_finseq_1 X1 k5_numbers))\Rightarrow((r2_zf_lang \\ &X0 X1)\Leftrightarrow(\exists X2.(m1_subset_1 X2 k5_numbers)\wedge(\exists X3.(\\ &(v1_relat_1 X3)\wedge((v1_funct_1 X3)\wedge(v1_finseq_1 X3))))\wedge((r1_xxreal_0 \\ &np_1 X2)\wedge((k3_finseq_1 X3 = X2)\wedge((k1_funct_1 X3 np_1 = X0)\wedge((\\ &k1_funct_1 X3 X2 = X1)\wedge(\forall X4.(m1_subset_1 X4 k5_numbers)\Rightarrow \\ &(\neg(r1_xxreal_0 np_1 X4)\wedge(\neg r1_xxreal_0 X2 X4)\wedge(\forall X5.(\\ &(v1_zf_lang X5)\wedge(m2_finseq_1 X5 k5_numbers))\Rightarrow(\forall X6.((\\ &v1_zf_lang X6)\wedge(m2_finseq_1 X6 k5_numbers))\Rightarrow(\neg(k1_funct_1 X3 \\ &X4 = X5)\wedge((k1_funct_1 X3 (k2_nat_1 X4 np_1) = X6)\wedge(r1_zf_lang X5 \\ &X6))))))))))))))))) \quad (8) \end{aligned}$$

Theorem 1

$$\forall X0.((v1_zf_lang X0)\wedge(m2_finseq_1 X0 k5_numbers))\Rightarrow(r2_zf_lang X0 X0)$$