

t33_zf_lang1
(TMQqv9MWg8tDimv99Yq1hwz9fssqKcYVNNv)

October 27, 2020

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 $k20_zf_lang : \iota \Rightarrow \iota$ be given. Let $k13_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_zf_lang : \iota \Rightarrow \iota$ be given. Let $k9_zf_lang : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Leftrightarrow (X0 \in k9_zf_lang) \quad (1)$$

Assume the following.

$$\forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (k20_zf_lang (k6_zf_lang X0) = X0) \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\neg v1_xboole_0 k9_zf_lang \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((X0 = k9_zf_lang) \Leftrightarrow ((\forall X1. \\
& (X1 \in X0) \Rightarrow (m2_finseq_1 X1 k5_numbers)) \wedge ((\forall X1.(m2_subset_1 \\
& X1 k5_numbers k1_zf_lang) \Rightarrow (\forall X2.(m2_subset_1 X2 k5_numbers \\
& k1_zf_lang) \Rightarrow ((k4_zf_lang X1 X2 \in X0) \wedge (k5_zf_lang X1 X2 \in X0)))))) \wedge \\
& ((\forall X1.(m2_finseq_1 X1 k5_numbers) \Rightarrow ((X1 \in X0) \Rightarrow (k6_zf_lang \\
& X1 \in X0))) \wedge ((\forall X1.(m2_finseq_1 X1 k5_numbers) \Rightarrow (\forall X2. \\
& (m2_finseq_1 X2 k5_numbers) \Rightarrow (((X1 \in X0) \wedge (X2 \in X0)) \Rightarrow (k7_zf_lang \\
& X1 X2 \in X0)))))) \wedge ((\forall X1.(m2_subset_1 X1 k5_numbers k1_zf_lang) \Rightarrow \\
& (\forall X2.(m2_finseq_1 X2 k5_numbers) \Rightarrow ((X2 \in X0) \Rightarrow (k8_zf_lang \\
& X1 X2 \in X0)))))) \wedge (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (((\forall X2.(X2 \in \\
& X1) \Rightarrow (m2_finseq_1 X2 k5_numbers)) \wedge ((\forall X2.(m2_subset_1 \\
& X2 k5_numbers k1_zf_lang) \Rightarrow (\forall X3.(m2_subset_1 X3 k5_numbers \\
& k1_zf_lang) \Rightarrow ((k4_zf_lang X2 X3 \in X1) \wedge (k5_zf_lang X2 X3 \in X1)))))) \wedge \\
& ((\forall X2.(m2_finseq_1 X2 k5_numbers) \Rightarrow ((X2 \in X1) \Rightarrow (k6_zf_lang \\
& X2 \in X1)))) \wedge ((\forall X2.(m2_finseq_1 X2 k5_numbers) \Rightarrow (\forall X3. \\
& (m2_finseq_1 X3 k5_numbers) \Rightarrow (((X2 \in X1) \wedge (X3 \in X1)) \Rightarrow (k7_zf_lang \\
& X2 X3 \in X1)))))) \wedge (\forall X2.(m2_subset_1 X2 k5_numbers k1_zf_lang) \Rightarrow \\
& (\forall X3.(m2_finseq_1 X3 k5_numbers) \Rightarrow ((X3 \in X1) \Rightarrow (k8_zf_lang \\
& X2 X3 \in X1)))))) \Rightarrow (r1_tarski X0 X1))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k5_numbers k1_zf_lang) \Rightarrow (\forall X1. \\
& ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (k13_zf_lang \\
& X0 X1 = k6_zf_lang (k8_zf_lang X0 (k6_zf_lang X1))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\
& (m2_subset_1 X1 k5_numbers k1_zf_lang) \Rightarrow (k20_zf_lang (k13_zf_lang \\
& X1 X0) = k8_zf_lang X1 (k6_zf_lang X0)))
\end{aligned}$$