

t42_ltlaxio1

(TMEp8sm79HnqphBebKRRK1Eb54xADQABpzfG)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_hilbert1 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k13_ltlaxio1 : \iota$ be given. Let $r8_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ 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 $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r7_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r6_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$(k2_finseq_1\ np_1 = k1_tarski\ np_1) \wedge (k2_finseq_1\ np_2 = k2_tarski\ np_1\ np_2) \tag{1}$$

Assume the following.

$$\forall X0.(v1_xxreal_0\ X0) \Rightarrow (\forall X1.(v1_xxreal_0\ X1) \Rightarrow ((r1_xxreal_0\ X0\ X1) \wedge (r1_xxreal_0\ X1\ X0)) \Rightarrow (X0 = X1)) \tag{2}$$

Assume the following.

$$((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0 : \iota \Rightarrow \iota \Rightarrow o. \forall X1. \forall X2. (\forall X3. (\\ v7_ordinal1\ X3) \Rightarrow (\neg (X3 \in k2_finseq_1\ X2) \wedge (\forall X4. (m1_subset_1 \\ X4\ X1) \Rightarrow (\neg X0\ X3\ X4)))) \Rightarrow (\exists X3. (m2_finseq_1\ X3\ X1) \wedge ((k4_finseq_1 \\ X3 = k2_finseq_1\ X2) \wedge (\forall X4. (v7_ordinal1\ X4) \Rightarrow ((X4 \in k2_finseq_1 \\ X2) \Rightarrow (X0\ X4\ (k1_funct_1\ X3\ X4)))))) \end{aligned} \quad (4)$$

Assume the following.

$$r1_xxreal_0\ np_1\ np_1 \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow \\ (k4_finseq_1\ X0 = k9_xtuple_0\ X0) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (m2_finseq_1\ X1\ X0) \Rightarrow ((v1_funct_1\ X1) \wedge (\\ (v1_finseq_1\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers \\ X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow \\ (\forall X1. (m2_subset_1\ X1\ k1_numbers\ k5_numbers) \Rightarrow ((X1 = k3_finseq_1 \\ X0) \Leftrightarrow (k2_finseq_1\ X1 = k9_xtuple_0\ X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1\ X0\ (k1_zfmisc_1\ k1_hilbert1)) \Rightarrow (\forall X1. \\ (m1_subset_1\ X1\ k1_hilbert1) \Rightarrow ((r8_ltlaxio1\ X0\ X1) \Leftrightarrow (\exists X2. \\ (m2_finseq_1\ X2\ k1_hilbert1) \wedge ((k1_funct_1\ X2\ (k3_finseq_1\ X2) = \\ X1) \wedge ((r1_xxreal_0\ np_1\ (k3_finseq_1\ X2)) \wedge (\forall X3. (v7_ordinal1 \\ X3) \Rightarrow (((r1_xxreal_0\ np_1\ X3) \wedge (r1_xxreal_0\ X3\ (k3_finseq_1\ X2))) \Rightarrow \\ (r7_ltlaxio1\ X3\ X2\ X0)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ k1_hilbert1) \Rightarrow \\
& (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ k1_hilbert1)) \Rightarrow ((r7_ltlaxio1 \\
& X0\ X1\ X2) \Leftrightarrow (\neg(\neg k1_funct_1\ X1\ X0 \in k13_ltlaxio1) \wedge (\neg k1_funct_1\ X1 \\
& X0 \in X2) \wedge (\forall X3.(v7_ordinal1\ X3) \Rightarrow (\forall X4.(v7_ordinal1 \\
& X4) \Rightarrow (\neg(r1_xxreal_0\ np_1\ X3) \wedge (\neg r1_xxreal_0\ X0\ X3) \wedge ((r1_xxreal_0 \\
& np_1\ X4) \wedge (\neg r1_xxreal_0\ X0\ X4) \wedge ((r5_ltlaxio1\ (k7_partfun1\ k1_hilbert1 \\
& X1\ X3)\ (k7_partfun1\ k1_hilbert1\ X1\ X4)\ (k7_partfun1\ k1_hilbert1 \\
& X1\ X0)) \vee (r6_ltlaxio1\ (k7_partfun1\ k1_hilbert1\ X1\ X3)\ (k7_partfun1 \\
& k1_hilbert1\ X1\ X4)\ (k7_partfun1\ k1_hilbert1\ X1\ X0)))))) \wedge (\forall X3. \\
& (v7_ordinal1\ X3) \Rightarrow (\neg(r1_xxreal_0\ np_1\ X3) \wedge (\neg r1_xxreal_0\ X0 \\
& X3) \wedge (r4_ltlaxio1\ (k7_partfun1\ k1_hilbert1\ X1\ X3)\ (k7_partfun1 \\
& k1_hilbert1\ X1\ X0)))))))))
\end{aligned} \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \tag{12}$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \tag{13}$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xxreal_0\ X0) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))) \Rightarrow (v1_relat_1\ X2) \tag{15}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1\ X0\ k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1\ (k1_zfmisc_1\ k1_hilbert1)) \Rightarrow (((X0 \in k13_ltlaxio1) \vee (X0 \in X1)) \Rightarrow \\
& (r8_ltlaxio1\ X1\ X0)))
\end{aligned}$$