

t59_ltlaxio1
(TMWd1tStoCku95BTbsCB1MjWu6dQkrS4bK9)

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 $r8_ltlaxio1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_hilbert1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_ltlaxio1 : \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_ltlaxio1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_hilbert1 : \iota \Rightarrow o$ be given. Let $v1_hilbert1 : \iota \Rightarrow o$ be given. Let $v2_hilbert1 : \iota \Rightarrow o$ be given. Let $v3_hilbert1 : \iota \Rightarrow o$ be given. Let $v4_hilbert1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_hilbert1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 k1_hilbert1)) \Rightarrow \\ & ((r8_ltlaxio1 X2 X0) \Rightarrow (r8_ltlaxio1 (k4_subset_1 k1_hilbert1 X2 \\ & (k6_domain_1 k1_hilbert1 X1)) X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k1_zfmisc_1 k1_hilbert1)) \Rightarrow ((r8_ltlaxio1 X1 X0) \Rightarrow (r8_ltlaxio1 \\ & X1 (k6_ltlaxio1 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_hilbert1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 k1_hilbert1)) \Rightarrow \\ & (((r8_ltlaxio1 X2 X0) \wedge (r8_ltlaxio1 X2 (k3_hilbert1 X0 X1))) \Rightarrow (\\ & r8_ltlaxio1 X2 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_hilbert1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k1_zfmisc_1 k1_hilbert1)) \Rightarrow (((X0 \in k13_ltlaxio1) \vee (X0 \in X1)) \Rightarrow \\ & (r8_ltlaxio1 X1 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow \\ & (k6_domain_1 X0 X1 = k1_tarski X1) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(k4_subset_1 X0 X1 X2 = k2_xboole_0 X1 X2) \quad (6)$$

Assume the following.

$$v5_hilbert1 k1_hilbert1 \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_hilbert1)\Rightarrow(m1_subset_1 (k6_ltlaxio1 X0) k1_hilbert1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow(m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(m1_subset_1 (k4_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_hilbert1)\wedge(m1_subset_1 X1 k1_hilbert1))\Rightarrow(m1_subset_1 (k3_hilbert1 X0 X1) k1_hilbert1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\vee(X3 \in X1))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(X2 = X0)) \quad (13)$$

Assume the following.

$$\forall X0.(v5_hilbert1 X0)\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_hilbert1 X0)\wedge((v2_hilbert1 X0)\wedge((v3_hilbert1 X0)\wedge(v4_hilbert1 X0))))) \quad (14)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k1_hilbert1)\Rightarrow(\forall X1.(m1_subset_1 X1 k1_hilbert1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 k1_hilbert1))\Rightarrow((r8_ltlaxio1 X2 (k3_hilbert1 (k6_ltlaxio1 X0) X1))\Rightarrow(r8_ltlaxio1 (k4_subset_1 k1_hilbert1 X2 (k6_domain_1 k1_hilbert1 X0)) X1))))$$