

t54_cohsp_1

(TMdgX8LNQQnJ3e2HJRXsMp1b4zFemaFBZNE)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_classes1 : \iota \Rightarrow o$ be given. Let $v1_coh_sp : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_cohsp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_cohsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k10_cohsp_1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k7_cohsp_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_cohsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & (k4_tarski X1 X2 \in k10_cohsp_1 X0) \Leftrightarrow (k4_tarski (k1_tarski X1) X2 \in \\ & \quad k7_cohsp_1 X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski (k1_tarski X0) (k1_tarski X1)) \Rightarrow (X0 = X1) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_classes1 X0) \wedge (v1_coh_sp \\ & X0))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_classes1 X1) \wedge (v1_coh_sp \\ & X1)))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge ((\\ & v7_cohsp_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow \\ & (\forall X3. \forall X4. (k2_xboole_0 X3 X4 \in X0) \Rightarrow (\forall X5. ((\\ & k4_tarski X3 X5 \in k8_cohsp_1 X0 X1 X2) \wedge (k4_tarski X4 X5 \in k8_cohsp_1 \\ & X0 X1 X2)) \Rightarrow (X3 = X4)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski X0 X1 = k2_xboole_0 (k1_tarski X0) (k1_tarski X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski\ X0\ X0 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge((\neg v1_xboole_0 \\ & X1)\wedge((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X0\ X1)\wedge(m1_subset_1\ X2\ (\\ & k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))))))\Rightarrow(k8_cohsp_1\ X0\ X1\ X2 = k7_cohsp_1 \\ & X2) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge((\neg v1_xboole_0 \\ & X1)\wedge((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X0\ X1)\wedge(m1_subset_1\ X2\ (\\ & k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))))))\Rightarrow(k11_cohsp_1\ X0\ X1\ X2 = k10_cohsp_1 \\ & X2) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski\ X0\ X1 = k2_tarski\ (k2_tarski\ X0\ X1)\ (k1_tarski\ X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0\ X0\ X1 = k2_xboole_0\ X1\ X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0\ X0)\wedge((v1_classes1\ X0)\wedge(v1_coh_sp \\ & X0)))\Rightarrow(\forall X1.((\neg v1_xboole_0\ X1)\wedge((v1_classes1\ X1)\wedge(v1_coh_sp \\ & X1))))\Rightarrow(\forall X2.((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X0\ X1)\wedge((\\ & v7_cohsp_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))))))\Rightarrow \\ & (\forall X3.\forall X4.(k2_tarski\ X3\ X4 \in X0)\Rightarrow(\forall X5.((k4_tarski \\ & X3\ X5 \in k11_cohsp_1\ X0\ X1\ X2)\wedge(k4_tarski\ X4\ X5 \in k11_cohsp_1\ X0\ X1\ X2))\Rightarrow \\ & (X3 = X4)))) \end{aligned}$$