

t97_cohsp_1

(TMS6HVdnqk5v4MNKuY5p342V8RVQrmipFvr)

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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_cohsp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_classes1 X0) \wedge (v1_coh_sp \\ X0))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v1_classes1 X1) \wedge (v1_coh_sp \\ X1))) \Rightarrow (\forall X2.(X2 \in k17_cohsp_1 X0 X1) \Leftrightarrow (\exists X3.(m1_subset_1 \\ X3 X0) \wedge (\exists X4.(m1_subset_1 X4 X1) \wedge (r1_tarski X2 (k2_zfmisc_1 \\ X3 X4)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (r1_tarski X0 (k2_zfmisc_1 (k9_xtuple_0 X0) (k10_xtuple_0 X0))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(r1_tarski X0 (k2_zfmisc_1 X1 X2)) \Rightarrow ((r1_tarski (k9_xtuple_0 X0) X1) \wedge (r1_tarski (k10_xtuple_0 X0) X2)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v1_xboole_0 X0) \wedge ((v1_classes1 X0) \wedge \\ (v1_coh_sp X0))) \wedge ((\neg v1_xboole_0 X1) \wedge ((v1_classes1 X1) \wedge (v1_coh_sp \\ X1)))) \Rightarrow (\neg v1_xboole_0 (k17_cohsp_1 X0 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v1_classes1\ X0)\Leftrightarrow(\forall X1.\forall X2.((X1 \in X0)\wedge (r1_tarski\ X2\ X1))\Rightarrow(X2 \in X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (8)$$

Theorem 1

$$\begin{aligned} &\forall X0.((\neg v1_xboole_0\ X0)\wedge((v1_classes1\ X0)\wedge(v1_coh_sp \\ &\quad X0)))\Rightarrow(\forall X1.((\neg v1_xboole_0\ X1)\wedge((v1_classes1\ X1)\wedge(v1_coh_sp \\ &\quad X1)))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k17_cohsp_1\ X0\ X1))\Rightarrow((k9_xtuple_0 \\ &\quad X2 \in X0)\wedge((k10_xtuple_0\ X2 \in X1)\wedge(r1_tarski\ X2\ (k2_zfmisc_1\ (k9_xtuple_0 \\ &\quad X2)\ (k10_xtuple_0\ X2)))))) \end{aligned}$$