

t11_coh_sp (TMXnNsHmZDpJYnYohvw- FaZkHdq2Qdsvh9hX)

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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 $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_coh_sp : \iota \Rightarrow \iota$ be given. Let $k1_eqrel_1 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski\ X0\ X1 \in k2_zfmisc_1\ X2\ X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0) \wedge ((v1_classes1\ X0) \wedge (v1_coh_sp\ X0))) \Rightarrow (\forall X1.((v1_partfun1\ X1\ (k3_tarski\ X0)) \wedge ((v1_relat_2\ X1) \wedge ((v3_relat_2\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k3_tarski\ X0)\ (k3_tarski\ X0)))))) \Rightarrow ((r2_relset_1\ (k3_tarski\ X0)\ (k3_tarski\ X0)\ X1\ (k1_coh_sp\ X0)) \Leftrightarrow (\forall X2.\forall X3.(k4_tarski\ X2\ X3 \in X1) \Leftrightarrow (k2_tarski\ X2\ X3 \in X0)))) \end{aligned} \quad (2)$$

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.

$$\forall X0.\forall X1.\forall X2.(r1_tarski\ (k2_tarski\ X0\ X1)\ X2) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X2)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X1 \in X0) \wedge (X2 \in X0)) \Rightarrow (k4_tarski\ X1\ X2 \in k1_eqrel_1\ X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1)\Rightarrow((v1_xboole_0 X1)\vee (X0 \in X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(m1_subset_1 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((r2_relset_1 X0 X1 X2 X3)\Leftrightarrow(X2 = X3)) \quad (8)$$

Assume the following.

$$\forall X0.k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (9)$$

Assume the following.

$$\forall X0.(v3_relat_2 (k1_eqrel_1 X0))\wedge((v8_relat_2 (k1_eqrel_1 X0))\wedge(v1_partfun1 (k1_eqrel_1 X0) X0)) \quad (10)$$

Assume the following.

$$\forall X0.(v1_relat_2 (k1_eqrel_1 X0))\wedge(v1_partfun1 (k1_eqrel_1 X0) X0) \quad (11)$$

Assume the following.

$$\forall X0.m1_subset_1 (k1_eqrel_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge((v1_classes1 X0)\wedge(v1_coh_sp X0)))\Rightarrow((v1_partfun1 (k1_coh_sp X0) (k3_tarski X0))\wedge((v1_relat_2 (k1_coh_sp X0))\wedge((v3_relat_2 (k1_coh_sp X0))\wedge(m1_subset_1 (k1_coh_sp X0) (k1_zfmisc_1 (k2_zfmisc_1 (k3_tarski X0) (k3_tarski X0))))))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (14)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 X0)\wedge((v1_classes1 X0)\wedge(v1_coh_sp X0)))\Rightarrow((X0 = k9_setfam_1 (k3_tarski X0))\Rightarrow(r2_relset_1 (k3_tarski X0) (k3_tarski X0) (k1_coh_sp X0) (k1_eqrel_1 (k3_tarski X0))))$$