

t89_cohsp_1 (TMHKd- KJk9gJANRycjUJgrmsRSwRMzpvW6W)

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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 $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_coh_sp : \iota \Rightarrow \iota$ be given. Let $k15_cohsp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_cohsp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ 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 $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_card_3 : \iota \Rightarrow \iota$ be given. Let $k2_card_3 : \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_classes1 X0) \wedge (v1_coh_sp \\ & X0))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_classes1 X1) \wedge (v1_coh_sp \\ & X1))) \Rightarrow (\forall X2. \forall X3. (k14_cohsp_1 X2 X3 \in k15_cohsp_1 \\ & X0 X1) \Leftrightarrow ((X2 \in X0) \wedge (X3 \in X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (k14_cohsp_1 X0 k1_xboole_0 = k2_zfmisc_1 X0 (k1_tarski \\ & np_1)) \wedge (k14_cohsp_1 k1_xboole_0 X0 = k2_zfmisc_1 X0 (k1_tarski \\ & np_2)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_classes1 X0) \wedge (v1_coh_sp \\ & X0))) \Rightarrow (\forall X1. ((v1_partfun1 X1 (k3_tarski X0)) \wedge ((v1_relat_2 \\ & X1) \wedge ((v3_relat_2 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k3_tarski X0) (k3_tarski X0)))))) \Rightarrow ((r2_relset_1 (k3_tarski \\ & X0) (k3_tarski X0) X1 (k1_coh_sp X0)) \Leftrightarrow (\forall X2. \forall X3. (\\ & k4_tarski X2 X3 \in X1) \Leftrightarrow (k2_tarski X2 X3 \in X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (k2_zfmisc_1 (k1_tarski X0) \\ & (k2_tarski X1 X2) = k2_tarski (k4_tarski X0 X1) (k4_tarski X0 X2)) \wedge \\ & (k2_zfmisc_1 (k2_tarski X0 X1) (k1_tarski X2) = k2_tarski (k4_tarski \\ & X0 X2) (k4_tarski X1 X2)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_classes1 X0) \wedge (v1_coh_sp X0))) \Rightarrow (k1_xboole_0 \in X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge ((v1_classes1 X0) \wedge \\ & (v1_coh_sp X0))) \wedge ((\neg v1_xboole_0 X1) \wedge ((v1_classes1 X1) \wedge (v1_coh_sp \\ & X1)))) \Rightarrow ((\neg v1_xboole_0 (k15_cohsp_1 X0 X1)) \wedge ((v1_classes1 (k15_cohsp_1 \\ & X0 X1)) \wedge (v1_coh_sp (k15_cohsp_1 X0 X1)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_classes1 X0) \wedge (v1_coh_sp \\ & X0))) \Rightarrow ((v1_partfun1 (k1_coh_sp X0) (k3_tarski X0)) \wedge ((v1_relat_2 \\ & (k1_coh_sp X0)) \wedge ((v3_relat_2 (k1_coh_sp X0)) \wedge (m1_subset_1 (\\ & k1_coh_sp X0) (k1_zfmisc_1 (k2_zfmisc_1 (k3_tarski X0) (k3_tarski \\ & X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. k14_cohsp_1 X0 X1 = k3_card_3 (k2_card_3 (k10_finseq_1 X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski X0 X1 = k2_tarski X1 X0 \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_classes1 X0) \wedge (v1_coh_sp \\ & X0))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_classes1 X1) \wedge (v1_coh_sp \\ & X1))) \Rightarrow (\forall X2. \forall X3. (k4_tarski (k4_tarski X2 np_1) \\ & (k4_tarski X3 np_1) \in k1_coh_sp (k15_cohsp_1 X0 X1)) \Leftrightarrow (k4_tarski \\ & X2 X3 \in k1_coh_sp X0))) \end{aligned}$$