

t15_connsp_3
(TMT6LVW5FGEjL255ynM381LY62HD142cXjU)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_connsp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_connsp_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v3_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \Rightarrow ((v2_connsp_1 X1 X0) \Rightarrow ((X1 = k1_xboole_0) \vee (v3_connsp_1 \\ (k1_connsp_3 X0 X1) X0)))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((v3_connsp_1 \\ X1 X0) \wedge (X2 \in X1)) \Rightarrow (X1 = k1_connsp_1 X0 X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((\exists X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge ((v2_connsp_1 \\ X2 X0) \wedge (r1_tarski X1 X2))) \Rightarrow (r1_tarski X1 (k1_connsp_3 X0 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarSKI X0 X0 \quad (6)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((l1_pre_topc X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(m1_subset_1 (k1_connsp_3 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarSKI X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (9)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(((v2_connsp_1 X1 X0)\wedge(X2 \in X1))\Rightarrow(k1_connsp_1 X0 X2 = k1_connsp_3 X0 X1))))$$