

t12_compts_1 (TM-
TYjz52Q8h8LW4XCyPTi4vU8C4M5fFBRrea)

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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 $v8_pre_topc : \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $v9_pre_topc : \iota \Rightarrow o$ 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 $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((v1_compts_1 X0) \wedge (v4_pre_topc X1 X0)) \Rightarrow \\ (v2_compts_1 X1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow ((v8_pre_topc \\ X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ ((v2_compts_1 X1 X0) \Rightarrow ((X1 = k1_xboole_0) \vee (\forall X2.(m1_subset_1 \\ X2 (u1_struct_0 X0)) \Rightarrow (\neg(X2 \in k3_subset_1 (u1_struct_0 X0) X1) \wedge \\ (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ (\neg(v3_pre_topc X3 X0) \wedge (v3_pre_topc X4 X0) \wedge ((X2 \in X3) \wedge ((r1_tarski \\ X1 X4) \wedge (r1_xboole_0 X3 X4)))))))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow ((v9_pre_topc X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ (\neg(X2 \neq k1_xboole_0) \wedge ((v4_pre_topc X2 X0) \wedge ((X1 \in k3_subset_1 (\\ u1_struct_0 X0) X2) \wedge (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 \\ (u1_struct_0 X0)) \Rightarrow (\neg(v3_pre_topc X3 X0) \wedge (v3_pre_topc X4 X0) \wedge \\ ((X1 \in X3) \wedge ((r1_tarski X2 X4) \wedge (r1_xboole_0 X3 X4)))))))))))))) \end{aligned} \quad (3)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (((v8_pre_topc X0) \wedge (v1_compts_1 X0)) \Rightarrow (v9_pre_topc X0))$$