

t35_compl_sp
(TMT1DnB66MUqn5sV835htm1ctpphDPXyLZA)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_metric_1 : \iota \Rightarrow o$ be given. Let $v7_metric_1 : \iota \Rightarrow o$ be given. Let $v8_metric_1 : \iota \Rightarrow o$ be given. Let $v9_metric_1 : \iota \Rightarrow o$ be given. Let $l1_metric_1 : \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $k3_pcomps_1 : \iota \Rightarrow \iota$ be given. Let $v8_compl_sp : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v5_waybel23 : \iota \Rightarrow o$ 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 $m1_setfam_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_card_3 : \iota \Rightarrow o$ be given. Let $v1_tbsp_1 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ &X0))) \Rightarrow ((v5_waybel23 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ &(k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (m1_setfam_1 X1 (u1_struct_0 \\ &X0)) \wedge ((v1_tops_2 X1 X0) \wedge (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ &(k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (r1_tarski X2 X1) \wedge ((m1_setfam_1 \\ &X2 (u1_struct_0 X0)) \wedge (v4_card_3 X2)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\ &X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow \\ &((v1_tbsp_1 X0) \Rightarrow (v5_waybel23 (k3_pcomps_1 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v8_metric_1 \\ &X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))) \Rightarrow ((v8_compl_sp (\\ &k3_pcomps_1 X0)) \Rightarrow (v1_tbsp_1 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow ((v1_compts_1 X0) \Rightarrow (v8_compl_sp X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarSKI X0 X1)\wedge(r1_tarSKI X1 X2))\Rightarrow(r1_tarSKI X0 X2) \quad (5)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(((r1_tarSKI X1 X2)\wedge(v1_tops_2 X2 X0))\Rightarrow(v1_tops_2 X1 X0)))) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_metric_1 X0))\Rightarrow(\neg v2_struct_0 (k3_pcomps_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(l1_metric_1 X0)\Rightarrow((v1_pre_topc (k3_pcomps_1 X0))\wedge(v2_pre_topc (k3_pcomps_1 X0))) \quad (8)$$

Assume the following.

$$\forall X0.(l1_metric_1 X0)\Rightarrow(l1_pre_topc (k3_pcomps_1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow((v8_compl_sp X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(\neg(m1_setfam_1 X1 (u1_struct_0 X0))\wedge((v1_tops_2 X1 X0)\wedge((v4_card_3 X1)\wedge(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(\neg(r1_tarSKI X2 X1)\wedge((m1_setfam_1 X2 (u1_struct_0 X0))\wedge(v1_finset_1 X2)))))))))) \quad (10)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow((v1_compts_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(\neg(m1_setfam_1 X1 (u1_struct_0 X0))\wedge((v1_tops_2 X1 X0)\wedge(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(\neg(r1_tarSKI X2 X1)\wedge((m1_setfam_1 X2 (u1_struct_0 X0))\wedge(v1_finset_1 X2)))))))))) \quad (11)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v6_metric_1 X0)\wedge((v7_metric_1 X0)\wedge((v8_metric_1 X0)\wedge((v9_metric_1 X0)\wedge(l1_metric_1 X0))))))\Rightarrow((v1_compts_1 (k3_pcomps_1 X0))\Leftrightarrow(v8_compl_sp (k3_pcomps_1 X0)))$$