

t73_tex_4 (TMJzfuDRnec- Ntnhm2nKpWDmJhTzzdHKfDCM)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tex_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_tex_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tex_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $k2_tex_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (r1_tarski (k6_domain_1 (u1_struct_0 \\ & X0) X1) (k5_setfam_1 (u1_struct_0 X0) (k1_tex_4 X0 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_pre_topc X1 X0) \Rightarrow (\forall X2.(m1_pre_topc X2 X0) \Rightarrow ((r1_tarski \\ & (u1_struct_0 X1) (u1_struct_0 X2)) \Rightarrow (m1_pre_topc X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((l1_pre_topc X0) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & X0))) \Rightarrow ((v1_pre_topc (k5_tex_4 X0 X1)) \wedge (m1_pre_topc (k5_tex_4 \\ & X0 X1) X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \wedge \\ & (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow ((\neg v2_struct_0 (k1_tex_2 \\ & X0 X1)) \wedge ((v1_pre_topc (k1_tex_2 X0 X1)) \wedge (m1_pre_topc (k1_tex_2 \\ & X0 X1) X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (k2_tex_4 X0 X1 = k5_setfam_1 (u1_struct_0 X0) (k1_tex_4 X0 \\ & X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.((\neg v2_struct_0 \\ & X2) \wedge ((v1_pre_topc X2) \wedge (m1_pre_topc X2 X0))) \Rightarrow ((X2 = k1_tex_2 X0 \\ & X1) \Leftrightarrow (u1_struct_0 X2 = k6_domain_1 (u1_struct_0 X0 X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.((v1_pre_topc X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow ((X2 = \\ & k5_tex_4 X0 X1) \Leftrightarrow (u1_struct_0 X2 = k2_tex_4 X0 X1)))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (m1_pre_topc (k1_tex_2 X0 X1) \\ & (k5_tex_4 X0 X1))) \end{aligned}$$