

t21_tmap_1

(TMX11bJ9B33LwcRSzUCZvP97xWZsSSuET7V)

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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 $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tsep_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $r1_tsep_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (m1_pre_topc X0 X0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow ((\neg r1_tsep_1 \\ & X1 X2) \Rightarrow (((m1_pre_topc X1 X2) \Rightarrow (k2_tsep_1 X0 X1 X2 = g1_pre_topc (\\ & u1_struct_0 X1) (u1_pre_topc X1))) \wedge (((k2_tsep_1 X0 X1 X2 = g1_pre_topc \\ & (u1_struct_0 X1) (u1_pre_topc X1)) \Rightarrow (m1_pre_topc X1 X2)) \wedge (((m1_pre_topc \\ & X2 X1) \Rightarrow (k2_tsep_1 X0 X1 X2 = g1_pre_topc (u1_struct_0 X2) (u1_pre_topc \\ & X2))) \wedge ((k2_tsep_1 X0 X1 X2 = g1_pre_topc (u1_struct_0 X2) (u1_pre_topc \\ & X2)) \Rightarrow (m1_pre_topc X2 X1))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow ((m1_pre_topc \\ & X1 X2) \Rightarrow ((\neg r1_tsep_1 X1 X2) \wedge (\neg r1_tsep_1 X2 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & k2_tsep_1 X0 X1 X1 = g1_pre_topc (u1_struct_0 X1) (u1_pre_topc X1))) \end{aligned}$$