

t28_tmap_1

(TMM3jSWXYVtJdZcHawPSFM3Y1bt3vMhFN7R)

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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 $r1_tsep_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tsep_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tsep_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow ((\neg r1_tsep_1 \\ & X1 X2) \Rightarrow (((m1_pre_topc X1 X2) \Rightarrow (k2_tsep_1 X0 X1 X2 = g1_pre_topc (\\ & u1_struct_0 X1) (u1_pre_topc X1))) \wedge (((k2_tsep_1 X0 X1 X2 = g1_pre_topc \\ & (u1_struct_0 X1) (u1_pre_topc X1)) \Rightarrow (m1_pre_topc X1 X2)) \wedge (((m1_pre_topc \\ & X2 X1) \Rightarrow (k2_tsep_1 X0 X1 X2 = g1_pre_topc (u1_struct_0 X2) (u1_pre_topc \\ & X2))) \wedge ((k2_tsep_1 X0 X1 X2 = g1_pre_topc (u1_struct_0 X2) (u1_pre_topc \\ & X2)) \Rightarrow (m1_pre_topc X2 X1)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (\forall X3. \\ & ((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X0)) \Rightarrow ((\neg((r1_tsep_1 X1 X2) \vee \\ & (r1_tsep_1 X2 X1)) \wedge ((\neg(r1_tsep_1 X3 X2) \wedge (r1_tsep_1 X2 X3)) \wedge (\neg \\ & (k2_tsep_1 X0 (k1_tsep_1 X0 X1 X3) X2 = k2_tsep_1 X0 X3 X2) \wedge (k2_tsep_1 \\ & X0 X2 (k1_tsep_1 X0 X1 X3) = k2_tsep_1 X0 X2 X3)))) \wedge (\neg(\neg(r1_tsep_1 \\ & X1 X2) \wedge (r1_tsep_1 X2 X1)) \wedge (((r1_tsep_1 X3 X2) \vee (r1_tsep_1 X2 X3)) \wedge \\ & (\neg(k2_tsep_1 X0 (k1_tsep_1 X0 X1 X3) X2 = k2_tsep_1 X0 X1 X2) \wedge (k2_tsep_1 \\ & X0 X2 (k1_tsep_1 X0 X1 X3) = k2_tsep_1 X0 X2 X1)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & k2_tsep_1 X0 X1 X1 = g1_pre_topc (u1_struct_0 X1) (u1_pre_topc X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & k1_tsep_1 X0 X1 X1 = g1_pre_topc (u1_struct_0 X1) (u1_pre_topc X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow ((m1_pre_topc \\ & X1 X2) \Rightarrow ((\neg r1_tsep_1 X1 X2) \wedge (\neg r1_tsep_1 X2 X1)))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (\forall X3. \\ & ((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X0)) \Rightarrow ((m1_pre_topc X1 X2) \Rightarrow \\ & (((\neg r1_tsep_1 X2 X3) \wedge (\neg r1_tsep_1 X3 X2)) \vee ((k2_tsep_1 X0 X2 (k1_tsep_1 \\ & X0 X1 X3) = g1_pre_topc (u1_struct_0 X1) (u1_pre_topc X1)) \wedge (k2_tsep_1 \\ & X0 X2 (k1_tsep_1 X0 X3 X1) = g1_pre_topc (u1_struct_0 X1) (u1_pre_topc \\ & X1)))))))))) \end{aligned}$$