

t40_tmap_1
(TMFL41tC5MdvbHxa9uCCjVGYQjoUXN2MHM1)

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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 $v1_borsuk_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tsep_1 : \iota \Rightarrow \iota \Rightarrow o$ 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. Let $k2_tsep_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & ((v2_pre_topc X1) \wedge (l1_pre_topc X1)) \Rightarrow (\forall X2.((v2_pre_topc \\ & X2) \wedge (l1_pre_topc X2)) \Rightarrow ((X2 = g1_pre_topc (u1_struct_0 X1) (u1_pre_topc \\ & X1)) \Rightarrow (((v1_borsuk_1 X1 X0) \wedge (m1_pre_topc X1 X0)) \Leftrightarrow ((v1_borsuk_1 \\ & X2 X0) \wedge (m1_pre_topc X2 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge ((v1_borsuk_1 X2 X0) \wedge (m1_pre_topc \\ & X2 X0))) \Rightarrow ((\neg r1_tsep_1 X2 X1) \Rightarrow ((v1_borsuk_1 (k2_tsep_1 X0 X2 X1) \\ & X1) \wedge (m1_pre_topc (k2_tsep_1 X0 X2 X1) X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (\forall X3. \\ & ((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X0)) \Rightarrow ((m1_pre_topc X1 X2) \Rightarrow \\ & (((\neg r1_tsep_1 X2 X3) \wedge (\neg r1_tsep_1 X3 X2)) \vee ((k2_tsep_1 X0 X2 (k1_tsep_1 \\ & X0 X1 X3) = g1_pre_topc (u1_struct_0 X1) (u1_pre_topc X1)) \wedge (k2_tsep_1 \\ & X0 X2 (k1_tsep_1 X0 X3 X1) = g1_pre_topc (u1_struct_0 X1) (u1_pre_topc \\ & X1)))))))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (m1_pre_topc \\ & X1 (k1_tsep_1 X0 X1 X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (\forall X3. \\ & ((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X0)) \Rightarrow ((m1_pre_topc X1 X2) \Rightarrow \\ & (((r1_tsep_1 X1 X3) \wedge (r1_tsep_1 X3 X1)) \vee ((\neg r1_tsep_1 X2 X3) \wedge (\neg \\ & r1_tsep_1 X3 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow ((m1_pre_topc \\ & X1 X2) \Rightarrow ((\neg r1_tsep_1 X1 X2) \wedge (\neg r1_tsep_1 X2 X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l1_pre_topc \\ & X0)) \wedge (((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \wedge ((\neg v2_struct_0 \\ & X2) \wedge (m1_pre_topc X2 X0)))) \Rightarrow ((\neg v2_struct_0 (k1_tsep_1 X0 X1 X2)) \wedge \\ & ((v1_pre_topc (k1_tsep_1 X0 X1 X2)) \wedge (m1_pre_topc (k1_tsep_1 X0 \\ & X1 X2) X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l1_pre_topc \\ & X0)) \wedge (((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \wedge ((\neg v2_struct_0 \\ & X2) \wedge (m1_pre_topc X2 X0)))) \Rightarrow (k1_tsep_1 X0 X1 X2 = k1_tsep_1 X0 X2 \\ & X1) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow (v2_pre_topc X1)) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (\forall X3. \\ & ((\neg v2_struct_0 X3) \wedge ((v1_borsuk_1 X3 X0) \wedge (m1_pre_topc X3 X0))) \Rightarrow \\ & (((m1_pre_topc X1 X3) \wedge (r1_tsep_1 X3 X2)) \Rightarrow (((v1_borsuk_1 X1 (k1_tsep_1 \\ & X0 X1 X2)) \wedge (m1_pre_topc X1 (k1_tsep_1 X0 X1 X2))) \wedge ((v1_borsuk_1 \\ & X1 (k1_tsep_1 X0 X2 X1)) \wedge (m1_pre_topc X1 (k1_tsep_1 X0 X2 X1)))))))))) \end{aligned}$$