

t25\_tmap\_1  
(TMQoAc38hycuoDmAwPvy6DSp2aLEWYodFwY)

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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. Assume the following.

$$\begin{aligned} & \forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_pre\_topc X1 X0) \Rightarrow (\forall X2.(m1\_pre\_topc X2 X1) \Rightarrow (m1\_pre\_topc \\ & X2 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 X0)) \Rightarrow ( \\ & \forall X2.((\neg v2\_struct\_0 X2) \wedge (m1\_pre\_topc X2 X0)) \Rightarrow ((\neg r1\_tsep\_1 \\ & X1 X2) \Rightarrow ((m1\_pre\_topc (k2\_tsep\_1 X0 X1 X2) X1) \wedge (m1\_pre\_topc (k2\_tsep\_1 \\ & X0 X1 X2) X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow (l1\_pre\_topc X1)) \quad (3)$$

Assume the following.

$$\forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. (m1\_pre\_topc X1 X0) \Rightarrow (v2\_pre\_topc X1)) \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 X0)) \Rightarrow ( \\ & \forall X2.((\neg v2\_struct\_0 X2) \wedge (m1\_pre\_topc X2 X0)) \Rightarrow (\forall X3. \\ & ((\neg v2\_struct\_0 X3) \wedge (m1\_pre\_topc X3 X0)) \Rightarrow (((m1\_pre\_topc X1 X3) \wedge \\ & (m1\_pre\_topc X2 X3)) \Rightarrow ((r1\_tsep\_1 X1 X2) \vee (m1\_pre\_topc (k2\_tsep\_1 \\ & X0 X1 X2) X3)))))) \end{aligned}$$