

t15\_tex.3 (TM-  
byRAQ1mZuWi9B3P6qwL2DoXJXjYFE6Fhj)

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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  $g1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_pre\_topc : \iota \Rightarrow \iota$  be given. Let  $v1\_tex\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_pre\_topc : \iota \Rightarrow o$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(l1\_pre\_topc X1) \Rightarrow (( \\ & m1\_pre\_topc X0 X1) \Leftrightarrow (m1\_pre\_topc X0 (g1\_pre\_topc (u1\_struct\_0 \\ & X1) (u1\_pre\_topc X1)))))) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.((v1\_tex\_3 X1 X0) \wedge (m1\_pre\_topc X1 X0)) \Rightarrow (\forall X2. \\ & (m1\_pre\_topc X2 X0) \Rightarrow ((m1\_pre\_topc X1 X2) \Rightarrow (v1\_tex\_3 X2 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow \\ & ((v1\_pre\_topc (g1\_pre\_topc (u1\_struct\_0 X1) (u1\_pre\_topc X1))) \wedge \\ & (m1\_pre\_topc (g1\_pre\_topc (u1\_struct\_0 X1) (u1\_pre\_topc X1)) \\ & X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (m1\_pre\_topc (g1\_pre\_topc (u1\_struct\_0 X0) (u1\_pre\_topc X0)) X0) \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_pre\_topc X1) \wedge (l1\_pre\_topc \\ & X1))) \Rightarrow (\forall X2.((\neg v2\_struct\_0 X2) \wedge ((v2\_pre\_topc X2) \wedge (l1\_pre\_topc \\ & X2))) \Rightarrow ((X2 = g1\_pre\_topc (u1\_struct\_0 X1) (u1\_pre\_topc X1)) \Rightarrow ( \\ & ((v1\_tex\_3 X1 X0) \wedge (m1\_pre\_topc X1 X0)) \Leftrightarrow ((v1\_tex\_3 X2 X0) \wedge (m1\_pre\_topc \\ & X2 X0)))))) \end{aligned}$$