

t36\_tsep\_2  
(TMVT4WK2SFcT47Z83xLrKptsjcDueZcKt2b)

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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  $r4\_tsep\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k2\_tsep\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_pre\_topc : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 X0)) \Rightarrow ( \\ & \forall X2.((\neg v2\_struct\_0 X2) \wedge (m1\_pre\_topc X2 X0)) \Rightarrow (\forall X3. \\ & ((\neg v2\_struct\_0 X3) \wedge (m1\_pre\_topc X3 X0)) \Rightarrow (\forall X4.((\neg v2\_struct\_0 \\ & X4) \wedge (m1\_pre\_topc X4 X0)) \Rightarrow (((r4\_tsep\_2 X0 X1 X3) \wedge (r4\_tsep\_2 X0 \\ & X2 X4)) \Rightarrow ((r1\_tsep\_1 X1 X2) \vee (r4\_tsep\_2 X0 (k2\_tsep\_1 X0 X1 X2) (k1\_tsep\_1 \\ & X0 X3 X4)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc \\ & X0) \wedge (l1\_pre\_topc X0))) \wedge (((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 \\ & X0)) \wedge ((\neg v2\_struct\_0 X2) \wedge (m1\_pre\_topc X2 X0)))) \Rightarrow ((r4\_tsep\_2 \\ & X0 X1 X2) \Rightarrow (r4\_tsep\_2 X0 X2 X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc \\ & X0)) \wedge (((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 X0)) \wedge ((\neg v2\_struct\_0 \\ & X2) \wedge (m1\_pre\_topc X2 X0)))) \Rightarrow ((\neg v2\_struct\_0 (k2\_tsep\_1 X0 X1 X2)) \wedge \\ & ((v1\_pre\_topc (k2\_tsep\_1 X0 X1 X2)) \wedge (m1\_pre\_topc (k2\_tsep\_1 X0 \\ & X1 X2) X0))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc \\ & X0)) \wedge (((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 X0)) \wedge ((\neg v2\_struct\_0 \\ & X2) \wedge (m1\_pre\_topc X2 X0)))) \Rightarrow ((\neg v2\_struct\_0 (k1\_tsep\_1 X0 X1 X2)) \wedge \\ & ((v1\_pre\_topc (k1\_tsep\_1 X0 X1 X2)) \wedge (m1\_pre\_topc (k1\_tsep\_1 X0 \\ & X1 X2) X0))) \end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0)) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 X0)) \Rightarrow ( \\ & \forall X2. ((\neg v2\_struct\_0 X2) \wedge (m1\_pre\_topc X2 X0)) \Rightarrow (\forall X3. \\ & ((\neg v2\_struct\_0 X3) \wedge (m1\_pre\_topc X3 X0)) \Rightarrow (\forall X4. ((\neg v2\_struct\_0 \\ & X4) \wedge (m1\_pre\_topc X4 X0)) \Rightarrow (((r4\_tsep\_2 X0 X3 X1) \wedge (r4\_tsep\_2 X0 \\ & X4 X2)) \Rightarrow ((r1\_tsep\_1 X1 X2) \vee (r4\_tsep\_2 X0 (k1\_tsep\_1 X0 X3 X4) (k2\_tsep\_1 \\ & X0 X1 X2)))))))))) \end{aligned}$$