

# t30\_parsp\_2 (TMWSkfaQnL- NDzZ8DoHAGAvZbnUtuATsKCN8)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_parasp\_1 : \iota \Rightarrow o$  be given. Let  $v1\_parasp\_2 : \iota \Rightarrow o$  be given. Let  $l1\_parasp\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r2\_parasp\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_parasp\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_parasp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_parasp\_1 X0) \wedge ((v1\_parasp\_2 \\ & X0) \wedge (l1\_parasp\_1 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r1\_parasp\_2 X0 X1 X2 X3) \Rightarrow (( \\ & r1\_parasp\_2 X0 X1 X3 X2) \wedge ((r1\_parasp\_2 X0 X3 X2 X1) \wedge ((r1\_parasp\_2 X0 \\ & X2 X1 X3) \wedge ((r1\_parasp\_2 X0 X2 X3 X1) \wedge (r1\_parasp\_2 X0 X3 X1 X2)))))))) \\ & \hspace{15em} (1) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_parasp\_1 X0) \wedge ((v1\_parasp\_2 \\ & X0) \wedge (l1\_parasp\_1 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\ & (u1\_struct\_0 X0)) \Rightarrow ((r2\_parasp\_2 X0 X1 X2 X3 X4) \Leftrightarrow ((\neg r1\_parasp\_2 X0 \\ & X1 X2 X3) \wedge ((r1\_parasp\_1 X0 X1 X2 X3 X4) \wedge (r1\_parasp\_1 X0 X1 X3 X2 X4)))))) \\ & \hspace{15em} (2) \end{aligned}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_parasp\_1 X0) \wedge ((v1\_parasp\_2 \\ & X0) \wedge (l1\_parasp\_1 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\ & (u1\_struct\_0 X0)) \Rightarrow ((r2\_parasp\_2 X0 X1 X2 X3 X4) \Rightarrow (r2\_parasp\_2 X0 X1 \\ & X3 X2 X4)))))) \end{aligned}$$