

# t23\_parsp\_2

(TMFKN41k2hR9hpvE8k5brUU7gtLCPjCnXJw)

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

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_parsp\_1 X0) \wedge (l1\_parsp\_1 \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 \\ & (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow \\ & (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\forall X6.(m1\_subset\_1 \\ & X6 (u1\_struct\_0 X0)) \Rightarrow (\forall X7.(m1\_subset\_1 X7 (u1\_struct\_0 \\ & X0)) \Rightarrow (((r1\_parsp\_1 X0 X1 X2 X4 X5) \wedge ((r1\_parsp\_1 X0 X1 X3 X4 X6) \wedge \\ & (r1\_parsp\_1 X0 X1 X3 X4 X7) \wedge ((r1\_parsp\_1 X0 X2 X3 X5 X6) \wedge (r1\_parsp\_1 \\ & X0 X2 X3 X5 X7)))))) \Rightarrow ((r1\_parsp\_1 X0 X1 X2 X1 X3) \vee (X6 = X7))))))))) \end{aligned} \tag{1}$$

Assume the following.

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

## Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_parsp\_1 X0) \wedge ((v1\_parsp\_2 \\ & X0) \wedge (l1\_parsp\_1 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 \\ & (u1\_struct\_0 X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow \\ & (\forall X6.(m1\_subset\_1 X6 (u1\_struct\_0 X0)) \Rightarrow (((r1\_parsp\_2 \\ & X0 X1 X2 X4) \wedge ((r1\_parsp\_2 X0 X1 X3 X5) \wedge ((r1\_parsp\_2 X0 X1 X3 X6) \wedge \\ & (r1\_parsp\_1 X0 X2 X3 X4 X5) \wedge (r1\_parsp\_1 X0 X2 X3 X4 X6)))))) \Rightarrow ((r1\_parsp\_2 \\ & X0 X1 X2 X3) \vee (X5 = X6))))))))) \end{aligned}$$